



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, February 01, 2017
WELL WORK PERMIT
Vertical / Plugging

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

Re: Permit approval for T-70
47-015-00413-00-00

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: T-70
Farm Name: SALISBURY, GEORGE
U.S. WELL NUMBER: 47-015-00413-00-00
Vertical / Plugging
Date Issued: 2/1/2017

Promoting a healthy environment.

02/03/2017

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: January 3, 2017
Operator's Well
Well No. 413011 (King T-70)
API Well No.: 47 015 - 00413

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

CK 22164
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: 1410 ft. Watershed: Buffalo Creek
Location: Henry County: Clay Quadrangle: Swandale 7.5'
District: _____

3) 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

3) Oil & Gas Jeremy James
Name: P. O. Box 36
Address: Clendenin, WV 25045

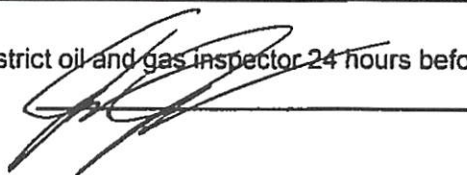
9) Plugging Contractor:
Name: HydroCarbon Well Service
Address: PO BOX 995
Buckhannon, WV 26201

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

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 1-18-17

PLUGGING PROGNOSIS

King, Mark "T" #70 (413011)

CLAY, COUNTY, WEST VIRGINIA

API # 47-015-00413

District: Henry

BY: Craig Duckworth

DATE: 1/07/13

Updated 1/3/17

CURRENT STATUS:

10" csg @ 15'
 8 7/8" csg @ 875'
 7" csg @ 1738' (Possible Pulled)
 5 1/2" csg @ 2118'
 2 3/8" tbg @ 2336' (Possible Pulled) (Packer 2 x 5 1/2)
 TD @ 2336'

Fresh Water @ None Reported

Salt Water @ 1325' & 1875'

1" Salt Sand @ 1325'

Coal @ 355' - 358' & 440' - 443'

Gas shows @ none reported

Oil Shows @ 1865'

Stimulation: Shot 10/31/44 @ 2256'-2306'

Elevation @ 1460'

1. Notify State Inspector, Jeremy James 304-951-2596, 24 hrs. prior to commencing operations.
2. Attempt to pull 2 3/8" & packer if unable to pull, free point and shoot or cut tbg at top of packer
3. TIH w/ tbg @ 2336'; Set 175' C1A Cement Plug @ 2336' to 2161' (Shot 2306' to 2256') *SPOT GEL BEFORE CEMENTING*
4. TOO H w/ tbg @ 2161'; gel hole @ 2161' to 2118'.
5. TOO H w/ tbg and attempt to pull 5 1/2" if unable to pull, free point shoot or cut 5 1/2"
6. Set a 100' C1A Cement Plug 50' In/Out of cut. Perf all FW, Coal, Oil, Gas Shows and 5 1/2". Do not omit any plugs.
7. TIH w/ tbg @ 2168'; Set 100' C1A Cement Plug @ 2168' to 2068' (5 1/2" csg)
8. TOO H w/ tbg @ 2068'; gel hole @ 2068' to 1865'.
9. TOO H w/ tbg @ 1875'; Set 110' C1A Cement Plug @ 1875' to 1765' (Oil Show 1865' & Salt Water 1875')
10. TOO H w/ tbg @ 1765'; gel hole @ 1765' to 1325'.
11. TOO H w/ tbg and attempt to pull 7" if unable to pull, free point shoot or cut 7"
12. Set a 100' C1A Cement Plug 50' In/Out of cut. Perf all FW, Coal, Oil and Gas Shows. Do not omit any plugs.
13. TIH w/ tbg @ 1765'; Set 100' C1A Cement Plug @ 1765' to 1665' (7" csg @ 1738')
14. TOO H w/ tbg @ 1665'; gel hole @ 1665' to 1325'
15. TOO H w/ tbg @ 1325'; Set 100' C1A Cement Plug @ 1325' to 1225' (Salt Sand & Water 1325').
16. TOO H w/ tbg @ 1225'; gel hole @ 1225' to 925'.
17. TOO H w/ tbg and attempt to pull 8 7/8" if unable to pull, free point shoot or cut 8 7/8"
18. Set a 100' C1A Cement Plug 50' In/Out of cut. Perf all FW, Coal, Oil, Gas Shows and 8 7/8". Do not omit any plugs.
19. TIH w/ tbg @ 925'; Set 100' C1A Cement Plug @ 925' to 825' (8 7/8").
20. TOO H w/ tbg @ 825'; gel hole @ 825' to 493'.
21. TOO H w/ tbg @ 493'; Set 193' C1A Cement Plug @ 493' to 300' (Coal 440 to 443' & Coal 355 to 358')
22. Set a 100' C1A Cement Plug 50' In/Out of cut. Perf all FW, Coal, Oil and Gas Shows. Do not omit any plugs.
23. TOO H w/ tbg @ 300'; gel hole @ 300' to 200'
24. TOO H w/ tbg @ 200'; Set 200' C1A Cement Plug @ 200' to 0 (Surface) (10" @ 15')
25. Top off as needed



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- 26. Set Monument to WV-DEP Specifications
- 27. Reclaim Location & Road to WV-DEP Specifications.

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WV Department of
Environmental Protection

02/03/2017

WEST VIRGINIA DEPARTMENT OF MINES
OIL & GAS DIVISION
WELL RECORD

1500413A

Permit No. Cla 413
Summersville Quad.
Company
Address
Farm
Location
Well No
District
Surface
Mineral
Commenced
Completed
Date shot

Open flow
Volume
Rock Pressure
Oil
Salt Water

Thompson Gas Company
Box 2347, Charleston, W.Va.
Lounna Salisbury et al A-
Buffalo Creek
T-70 Elev. 1460'
Henry Clay County
Lounna Salisbury
Salisbury Mark King et al, Clay, W.Va.
Aug. 28, 1944
Nov. 13, 1944
10-31-44 Depth 2256 to 2306
with 150 qts. glycorine
6/10ths W in 2"
103 MCF
386 lbs. 48 hrs.
Show 1865'
1325 H.F.; 1875 H.F.

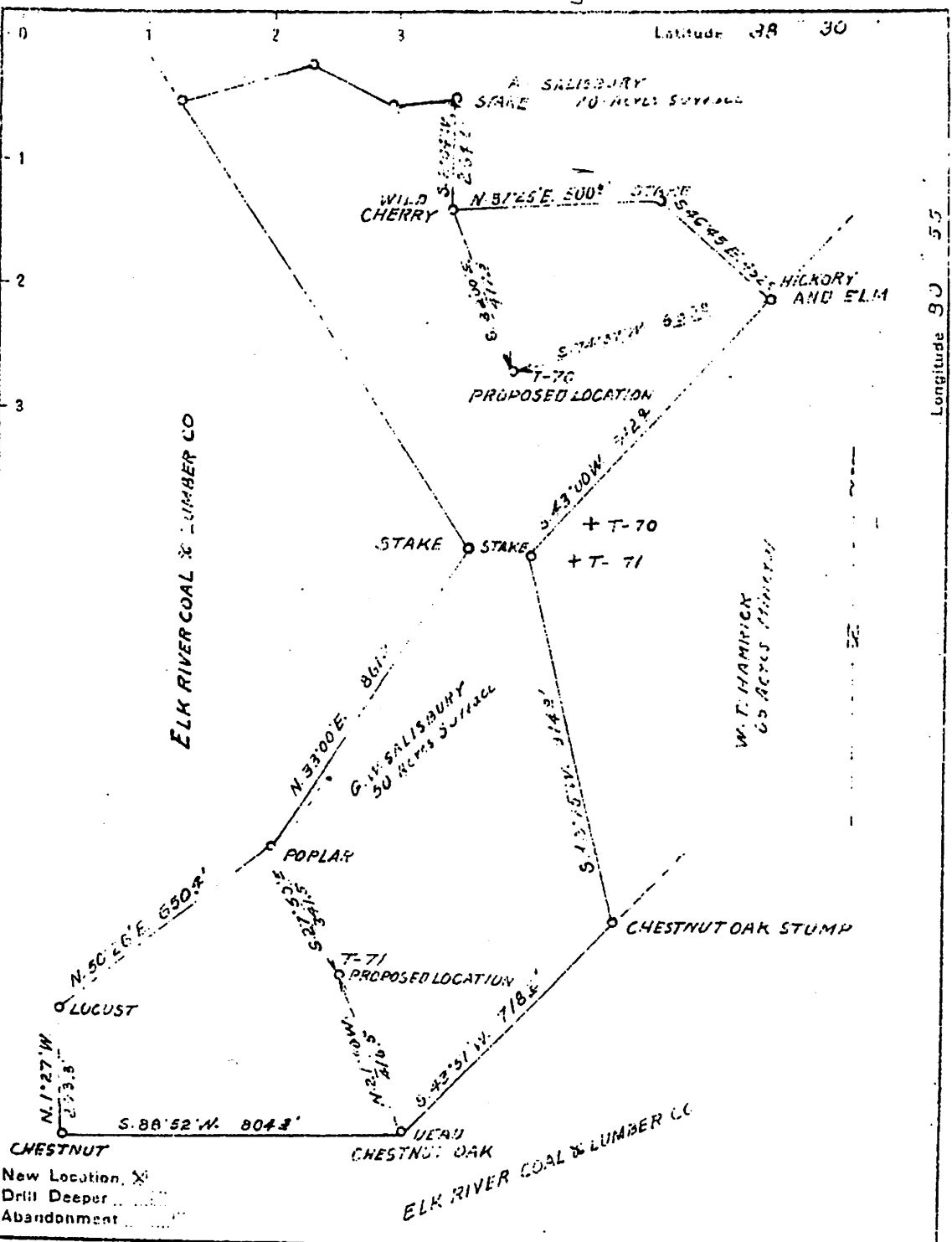
Gas Well
CASING & TUBING
10 1/2 OD 15 15
8 7/8 575 565
7 OD 1759 1738 Fl.
5 1/2 OD 2135 2118
2 3/8 2355 2336 7/16"

Comb. V & A Packer
Size 2 x 5 1/2 x 16"

Coal at 355' 36"
440' 36"

Clay	0	2
Sand	2	25
Slate & Shells	25	150
Sand	150	325
Slate & Shells	325	340
Sand	340	355
Coal	355	358
Slate & Shells	358	440
Coal	440	443
Sand	443	520
Slate & Shells	520	535
Sand	535	585
Slate	585	600
Lime Blk	600	630
Sand	630	695
Slate	695	750
Blk. Lime	750	875
Blk. Slate	875	900
Sand	900	940
Slate & Shells	940	1060
Sand	1060	1155
Slate	1155	1195
Sand	1195	1240
Slate	1240	1250
Sand	1250	1517
Blk. Lime	1517	1630
Sand	1530	1625
Blk. Lime	1625	1650
Slate & Shells	1650	1700
Blk. Lime	1700	1825
Sand	1825	1881
Blk. Lime	1881	1891
Red Lime	1891	1900
Maxon Sand	1900	1978
Blk. Lime	1978	2000
Slate	2000	2014
Little Lime	2014	2060
Blue Monday	2060	2096
Pencil Cave	2096	2111
Big Lime	2111	2291
Red Rock	2291	2325
Slate	2325	2336
TOTAL DEPTH		2336

1500413 P



+ New Location
 x Drill Deeper
 o Abandonment

Company THOMPSON GAS COMPANY
 Address CHARLESTON, WEST VIRGINIA
 Farm GEORGE SALISBURY SURFACE
 Tract ONE Acres 50 Lease No. WBT-165
 Well (Farm) No. 1 Serial No. T-70, T-71
 Elevation (Spirit Level) T-70, 1460.3 T-71, 1367.3
 Quadrangle SUMMERSVILLE
 County CLAY District HENRY
 Engineer JAS. S. CHASE
 Engineer's Registration No. 425
 File No. _____ Drawing No. _____
 Date MAY 5 1944 Scale 1" = 300'

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP
 FILE NO. CLA-413-T-70
CLA-414-T-71

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown.
 - Denotes one inch spaces on border lines of original tracing.

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WW-4-A
Revised 6/07

1) Date: January 3, 2017
2) Operator's Well Number 413011 (King T-70)
3) API Well No.: 47 015 - 00413
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 Michael and Veronica Butcher
Address 4600 Ivydale Road
Clay, WV 25043
(b) Name Allegheny Rural NMTC Forestlands LLC
Address Heartwood Forestland Group
19045 Stone Mountain Road
Abingdon, VA 24210
(c) Name _____
Address _____
6) Inspector Jeremy James
Address P. O. Box 36
Clendenin, WV 25045
Telephone (304) 951-2596

5) (a) Coal Operator:
Name None
Address _____
(b) Coal Owner(s) with Declaration
Name Michael and Veronica Butcher
Address 4600 Ivydale Road
Clay, WV 25043
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 3rd day of January, 2017
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 depprivacyoffice@wv.gov.



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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): Buffalo Creek Quadrangle: Swandale 7.5'
Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes___ No X

Will a pit be used? Yes X No___
If so, please describe anticipated pit waste: _____
Will a synthetic liner be used in the pit? Yes X No___ Is so, what ml.? 20 -10 ml

Proposed Disposal Method for Treated Pit Wastes:

Land Application (if selected provide a completed form WW-9-GPP)

Underground Injection (UIC Permit Number _____)
X Reuse (at API Number -- Various _____)
X Off Site Disposal Permit (Supply form WW-9 for disposal location. See attachment)

Other: (Explain _____)

Will closed loop system be 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, 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? _____

Permittee shall provide written notice to the Office of the Oil and Gas 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 Division 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 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

Company Official Signature _____

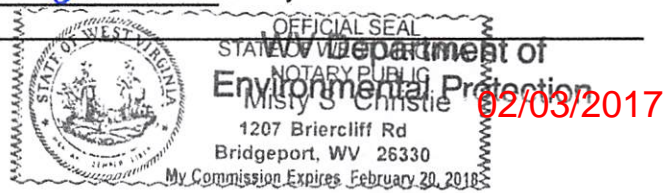
Company Official (Typed Name) Victoria J. Roark

Company Official Title Permitting Supervisor - WV

Subscribed and sworn before me this 4th day of January, 2018

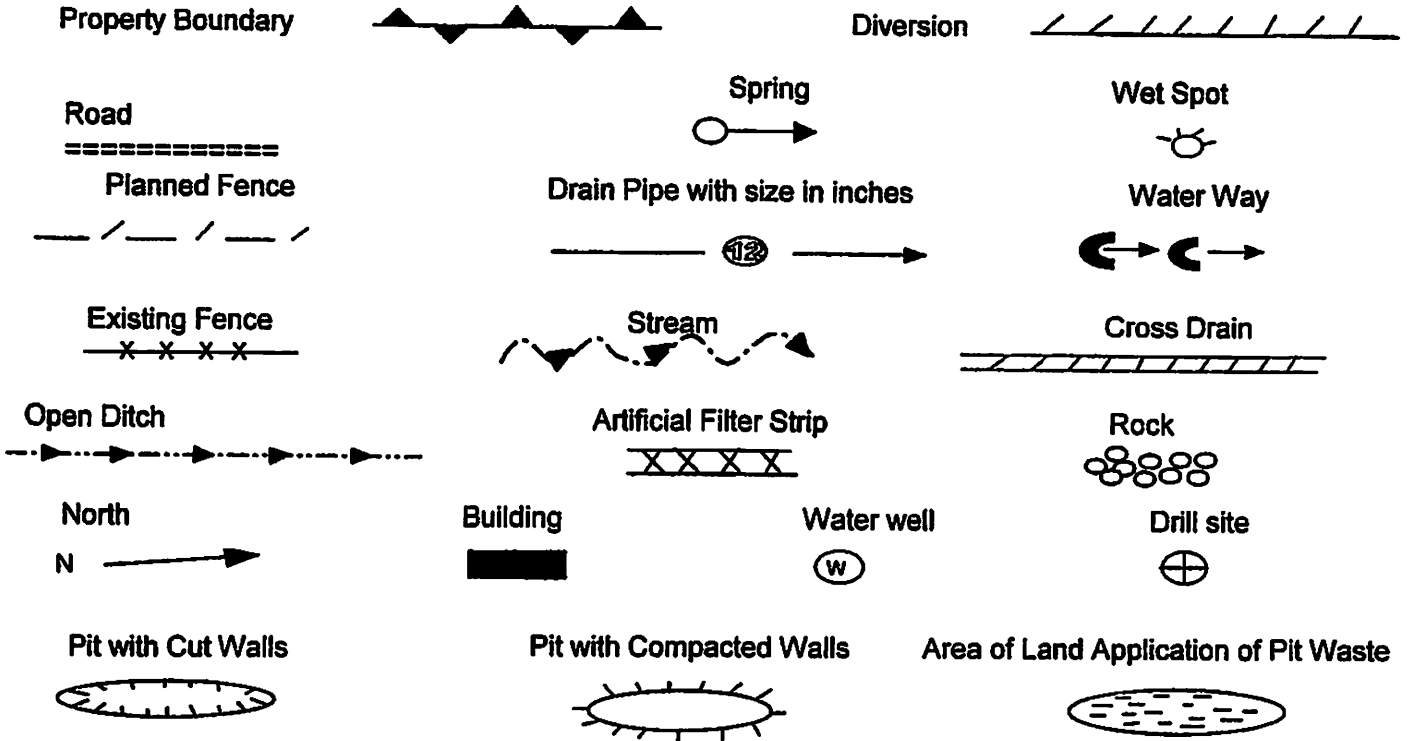
Misty S. Christie
My Commission Expires 2/20/18

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Office of Oil and Gas
JAN 11 2017
Notary Public



OPERATOR'S WELL NO.:
413011 (King T-70)

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: Inspector OOG Date: 1-18-16

Field Reviewed? Yes No

15 00 413P

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

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Environmental Protection

02/03/2017

1500413P

Topo Quad: Swandale 7.5'

Scale: 1" = 200'

County: Clay

Date: December 6, 2016

District: Henry

Project No: 53-05-00-07

WV 413011 Mark King T-70 47-015-00413

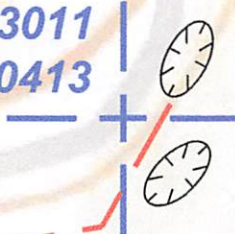
Topo

Pit Location Map



WV 413011
47-015-00413

Existing Well
Access Road



LEGEND

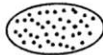
PIT-CUT WALLS



PIT-COMPACTED WALLS



AREA OF LAND APPLICATION
OF PIT WASTE



NAD27, South Zone

N: 526856.77

E: 2008570.47

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584

LAT: 38.42091

LONG: -80.969873

Elev: 1400

WV Department of
Environmental Protection



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

02/03/2017

Topo Quad: Swandale 7.5' Scale: 1" = 500'

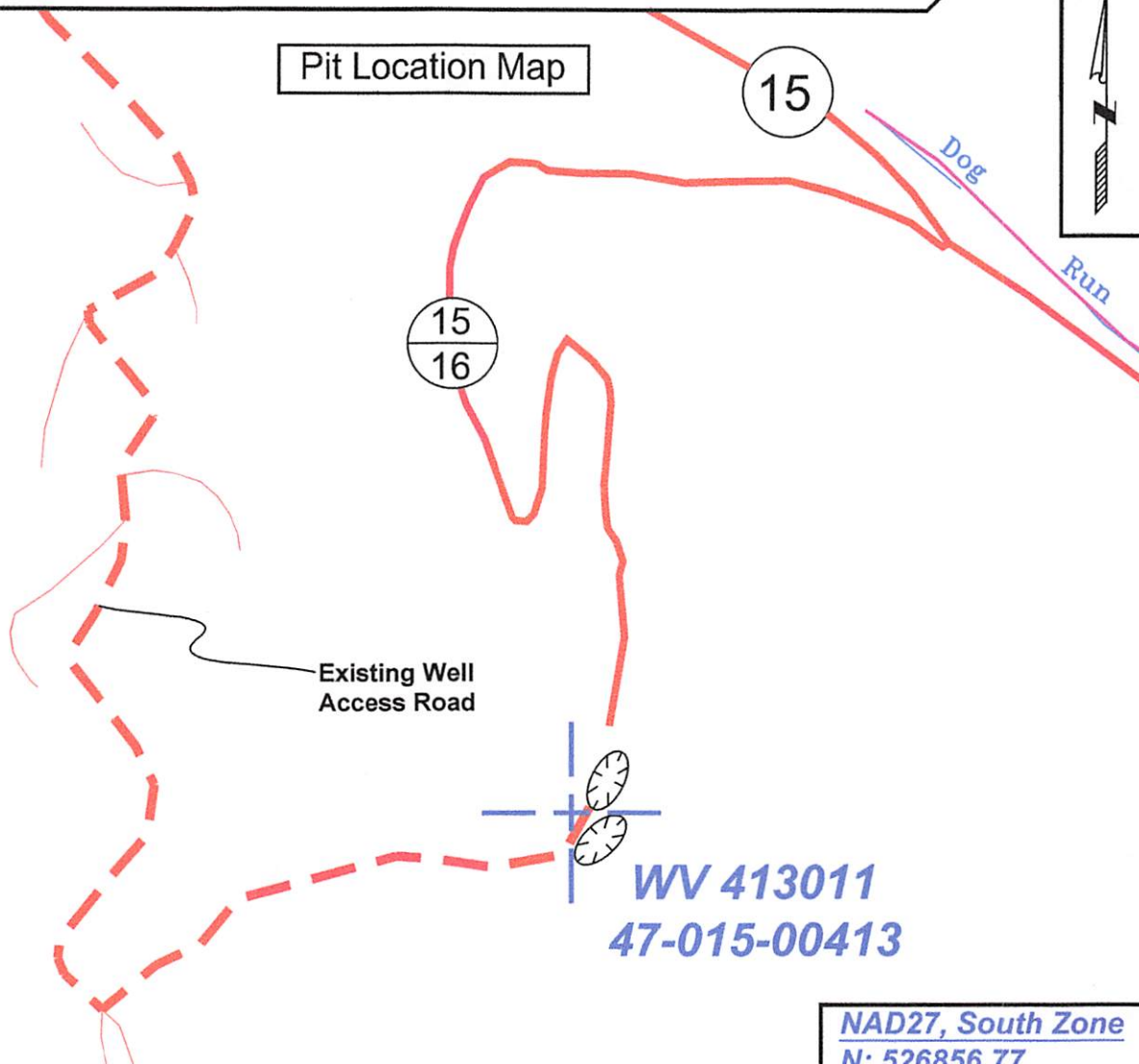
County: Clay Date: December 6, 2016

District: Henry Project No: 53-05-00-07

Highway

WV 413011 Mark King T-70 47-015-00413

Pit Location Map



Existing Well Access Road

**WV 413011
47-015-00413**

LEGEND

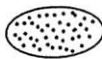
PIT-CUT WALLS



PIT-COMPACTED WALLS



AREA OF LAND APPLICATION OF PIT WASTE



NAD27, South Zone

N: 526856.77

E: 2008578.47

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 16384
 Office of Oil and Gas
 LON: 38.446991
 JAN 14 2017
 Elev: 1409.84'



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

WV Department of
 Environmental Protection

02/03/2017

1500413P

Topo Quad: Swandale 7.5'

Scale: 1" = 2000'

County: Clay

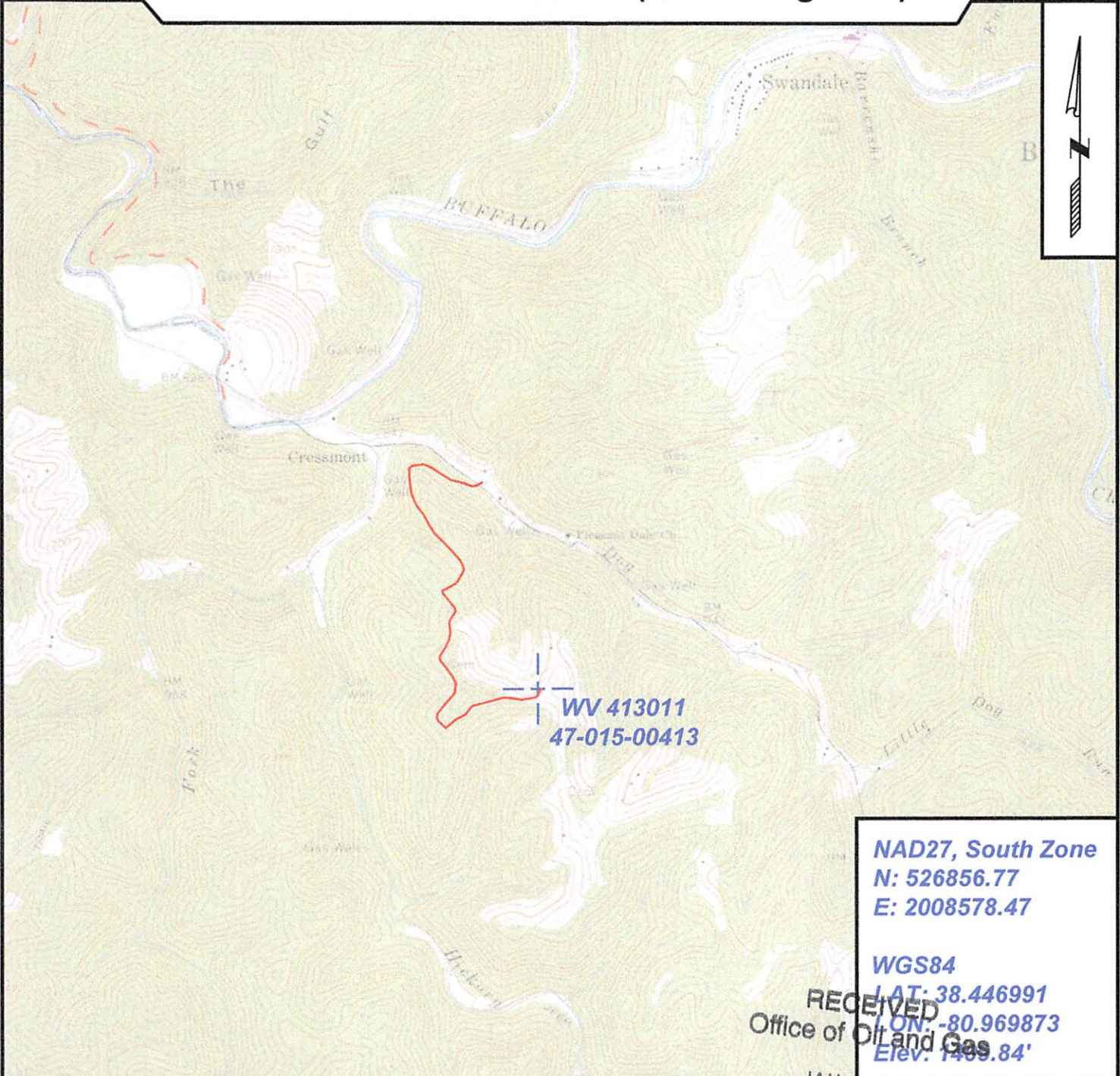
Date: December 6, 2016

District: Henry

Project No: 53-05-00-07

47-015-00413 WV 413011 (Mark King T-70)

Topo



NAD27, South Zone
N: 526856.77
E: 2008578.47

WGS84
LAT: 38.446991
LONG: -80.969873
Elev: 1409.84'

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JAN 11 2017



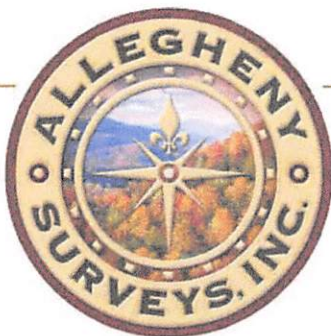
ALLEGHENY SURVEYS, INC.

SURVEYING AND MAPPING SERVICES PERFORMED BY:
1-800-482-8606
237 Birch River Road
Birch River, WV 26610
Phone: (304) 649-8606
Fax: (304) 649-8608

PREPARED FOR: JAN 11 2017

EQV Production Co. Inc.
Department of
Environmental Protection
1719 Pennsylvania Ave.
Charleston, WV 25301

02/03/2017



POTENTIAL WATER SAMPLE DATA SHEET

CLIENT: EQT PRODUCTION COMPANY INC.

LEASE NAME AND WELL No. Mark King T-70 - WV 413011 - 47-015-00413

POTENTIAL SAMPLE LOCATIONS

Site: 1 Spacing: 600' Owner: Michael and Veronica Butcher

Address: 4600 Ivydale Road, Clay, WV 25043 Phone No. _____

Comments _____

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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 Childers Rd.
Alum Creek, WV 25005
phone: 304-756-2949
fax: 304-756-2948

MARTINSBURG OFFICE
1000 Lincoln Drive
Martinsburg, WV 25404
phone: 304-291-1212
fax: 304-901-2182

WV Department of
Environmental Protection

Topo Quad: Swandale 7.5'

Scale: 1" = 2000'

County: Clay

Date: December 6, 2016

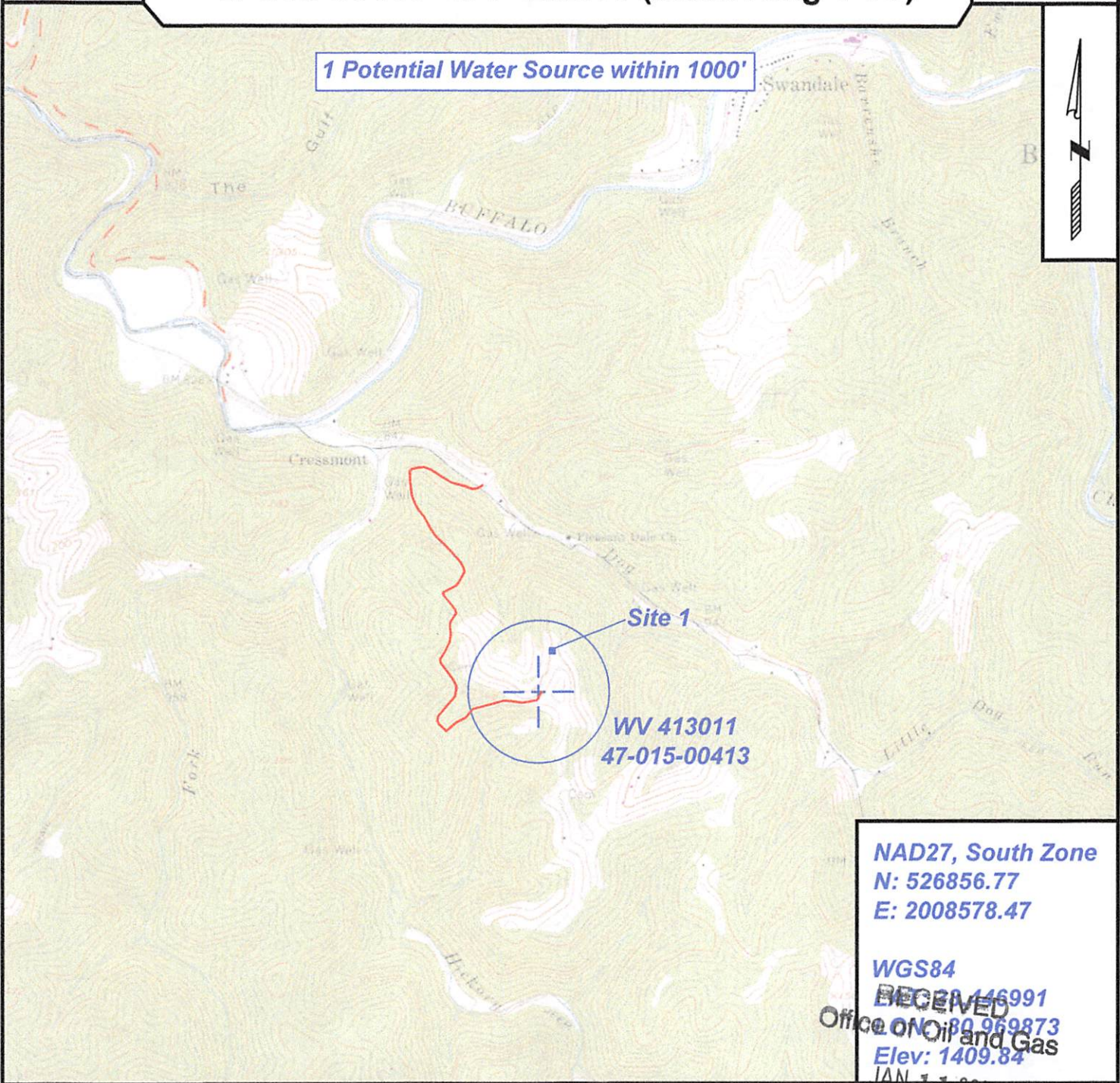
District: Henry

Project No: 53-05-00-07

Water

47-015-00413 WV 413011 (Mark King T-70)

1 Potential Water Source within 1000'



NAD27, South Zone
N: 526856.77
E: 2008578.47

WGS84
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Office of Oil and Gas
Elev: 1409.84
IAN 11 2017



SURVEYING AND MAPPING SERVICES PERFORMED BY:
ALLEGHENY SURVEYS, INC.

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

PREPARED FOR:

WV Department of
Environment and Protection
EQT Production Co., Inc.
 1710 Pennsylvania Ave.
 Charleston, WV 25302

02/03/2017