



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

February 24, 2014

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-3903468, 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: 2
Farm Name: HARDING, McKINLEY
API Well Number: 47-3903468
Permit Type: Plugging
Date Issued: 02/24/2014

Promoting a healthy environment.

3903468 P

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

Date: February 5, 2014
Operator's Well
Well No. 150201 (Harding #2)
API Well No.: 47 039 - 03468

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

CK # 00063112
\$100⁰⁰

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: 1021' Watershed: Coon Creek
Location: Poca 28 County: Kanawha 59 Quadrangle: Romance 7.5' 584
District: _____

6) Well Operator EQT Production Company
Address: 120 Professional Place
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.

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 [Signature] Date 2-17-14

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WV Department of
Environmental Protection

PLUGGING PROGNOSIS

Harding #2 (150201)

Kanawha County, West Virginia
API # 47-039-03468
Romance Quad

BY: Craig Duckworth
DATE: 2/18/13

CURRENT STATUS:

8 5/8" csg @ 235' cts
4 1/2" csg @ 2351' 135sks

TD @ 2434'

Fresh Water @ none reported Salt Water @ 1570'

Salt Sand @ 1570' Coal @ none reported

Gas shows @ Berea 2298'-2307'

Oil Shows @ none reported

Stimulation: Berea (2304'-2301'Perf.)

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 @ 2351'; Set 153' CIA Cement Plug @ 2351' to 2198' (Berea 2307'-2298')
4. TOOH w/ tbg @ 2198'; Gel hole @ 2198' to 1620'
5. TOOH w/ tbg and attempt to pull 4 1/2"; Freepoint 4 1/2" cut at freepoint. Set 150' CIA Cement Plug @ 1620' to 1470' (4 1/2" csg cut & Salt Sand 1570')
6. Set a 150' CIA Cement Plug 50' In/Out of cut. Perf all FW, Coal, Oil and Gas shows below 4 1/2" cut Do not omit any plugs
7. TOOH w/ tbg @ 1470'; Gel hole @ 1470' to 285'
8. TOOH w/ tbg @ 285'; Set 285' CIA Cement Plug @ 285' to 0 (surface, 8 5/8" @ 235')
9. Top off as needed
10. Set Monument to WV-DEP Specifications
11. Reclaim Location & Road to WV-DEP Specifications

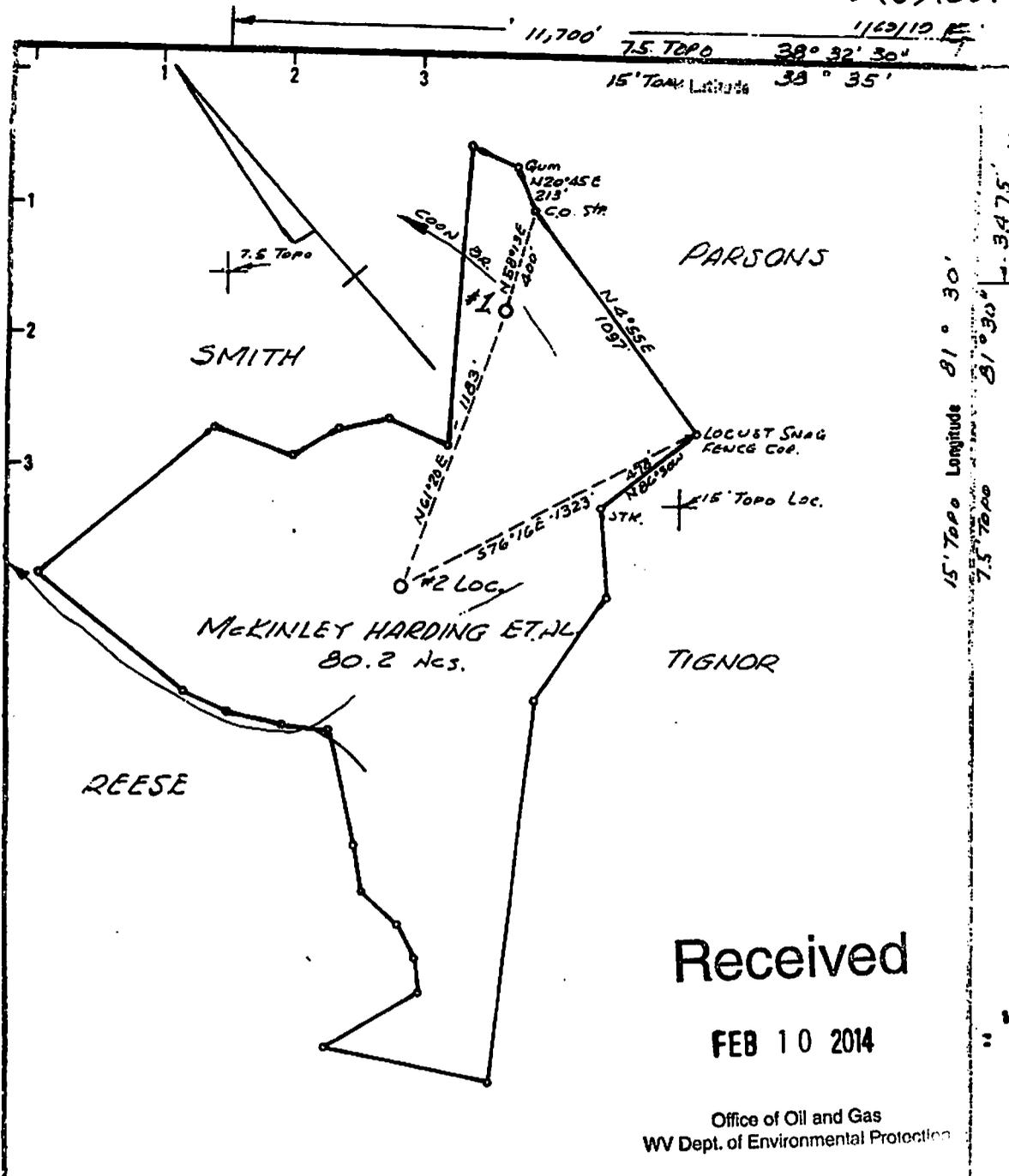
OK
OK
OK
set final plug from 450 to surface

[Handwritten Signature]
2/17/14

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15' Topo Longitude 81° 30'
 7.5' Topo Longitude 81° 30' L. 3475'

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 WV Dept. of Environmental Protection

New Location <input checked="" type="checkbox"/> Drill Deeper <input type="checkbox"/> Abandonment <input type="checkbox"/>	Minimum Error of Closure <u>1 IN 200</u> Source of Elevation <u>L. SGE ET. 965' ROAD INTERSECTION ARROWS Pt.</u> "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 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia."
---	--

Company	<u>D.C. MALCOLM INC.</u>
Address	<u>1006 Commerce St. CHARLESTON, W.VA.</u>
Farm	<u>MCKINLEY HARDING ET. AL.</u>
Tract	Acres <u>80.2</u> Lease No. _____
Well (Farm) No.	<u>2</u> Serial No. _____
Elevation (Spirit Level)	<u>995' 0</u>
Quadrangle	<u>7.5' ROMANCE</u> <u>15' BENNA</u>
County	<u>KANAWHA</u> District <u>POCA</u>
Engineer	<u>H. P. Defton</u>
Engineer's Registration No.	<u>1832</u>
File No.	Drawing No. _____
Date	<u>7-21-79</u> Scale <u>1" = 500'</u>

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

WELL LOCATION MAP
 FILE NO. 47-039-3468

+ 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 line of original tracing.



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OCT - 9 1979

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

OIL & GAS DIVISION
DEPT. OF MINES

Quadrangle Romance
Permit No. Kan 3468

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

Company D. C. Malcolm, Inc.
Address 1006 Commerce Square, Charleston, W. Va.
Farm McKinley Harding Acres 80.2
Location (waters) Coon Creek
Well No. 2 Elev 1005 KB
District Poca County Kanawha
The surface of tract is owned in fee by _____
T. E. Tignor
Address Blundon, W. Va.
Mineral rights are owned by McKinley Harding
et al Address _____
Drilling Commenced 8-2-79
Drilling Completed 8-10-79
Initial open flow _____ cu. ft. _____ bbls.
Final production 450000 cu. ft. per day _____ bbls.
Well open 12 hrs. before test 400 RP.

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size 20-16			
Cond. 13-10"			
9 5/8			
8 5/8	235	235	to surface
7			
5 1/2			
4 1/2	2351	2351	135 SX thixo-tropic
3			
2			
Lines Used			

Well treatment details: Frac Berea thru perms 2301-2304 (10 holes) w/500 gals acid, 5000# 80/100, 30,000# 20/40, 575 bbls water

Attach copy of cementing record.

Coal was encountered at _____ Feet _____ Inches
Fresh water _____ Feet _____ Salt Water 1570 Feet _____
Producing Sand Berea Depth 2298-2307

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	Remarks
Sand & shale			0	250		
Shale			250	324		
Sand & Shale			324	1262		
Sand			1262	1728		
Big Lime			1728	1880		
Sand (Injun)			1880	1898		
Shale			1898	2298		
Sand			2298	2307		
Shale			2307	2434		

Very Poor Records

T. D.

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WV Department of Environmental Protection

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

3903468P

WW-4-A
Revised 6/07

1) Date: February 5, 2014
2) Operator's Well Number
150201 (Harding #2)
3) API Well No.: 47 039 - 03468
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 Theodore E. & Ilene G. Tignor
Address 278 Thislebrook Rd ✓
Elkview, WV 25071
(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 Lanora J. Davis
108 Margaux Way ✓
Address Charleston, WV 25311-1595
Name see attached listing
Address _____
(c) Coal Lessee with Declaration
Name None
Address _____

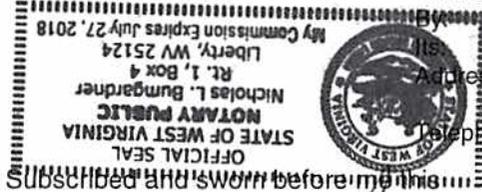
TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

- (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
Victoria J. Roark
Permitting Supervisor [Signature]
PO Box 280
Bridgeport, WV 26330
(304) 848-0076
Subscribed and sworn to before me this 5 day of FEBRUARY, 2014
Notary Public
My Commission Expires: 6/27/2018



Received
FEB 10 2014

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.

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: Coon Creek Quadrangle: Romance 7.5'
Elevation: 1021' County: Kanawha District: Poca

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:
X Land Application
____ Underground Injection - UIC Permit Number _____
____ Reuse (at API Number) _____
____ Offsite Disposal Permit #. _____
____ Other: Explain _____

(Handwritten circle containing "TW" and "2-17-14")

Drilling medium anticipated for this well? Air, freshwater, oil based, etc.
If oil based, what type? Synthetic, petroleum, etc. _____
Additives to be used? _____

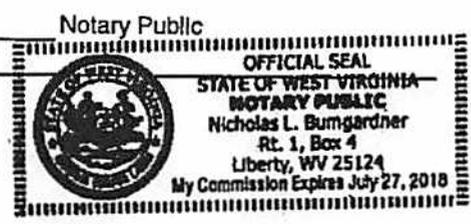
Will closed loop system be used? _____
Drill Cuttings disposal method? Leave in pit, landfill, remove offsite, etc. _____
If left in pit and plan to solidify what medium will be used? Cement, Lime, sawdust _____
Landfill or offsite name/permit number? _____

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 5 day of FEBRUARY, 2014

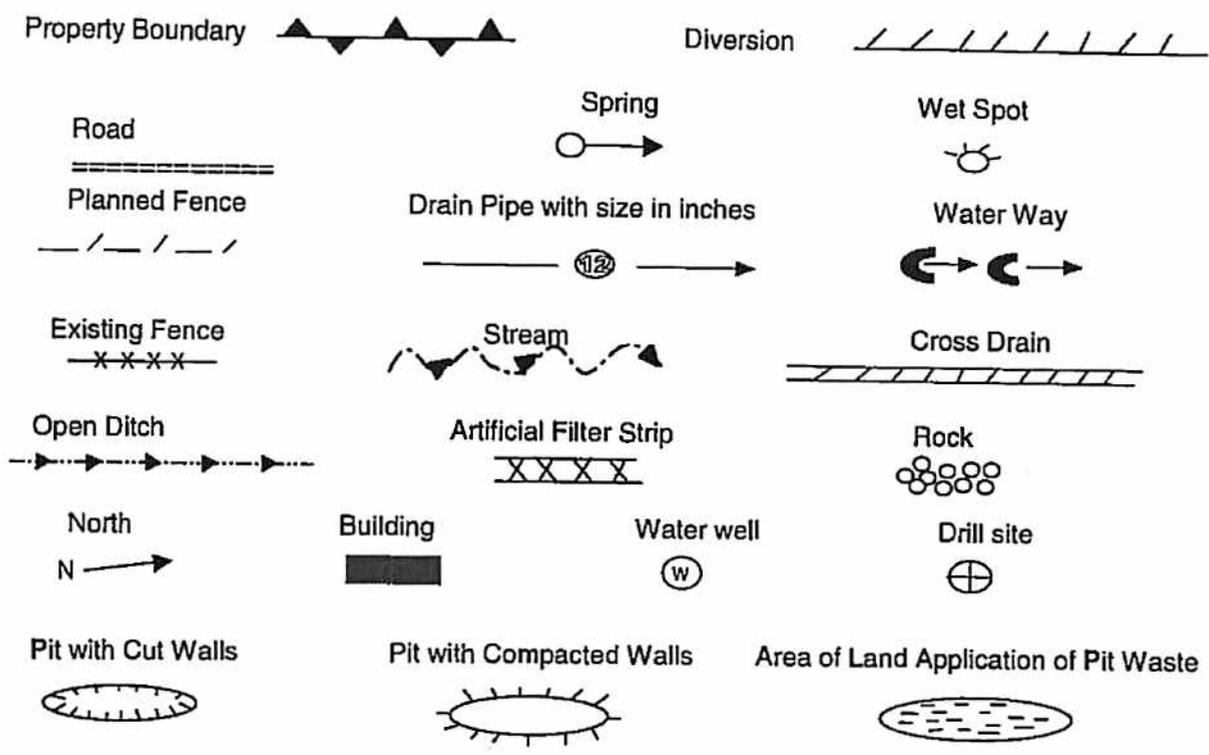
My Commission Expires 2/27/2018
Office of Oil and Gas

FEB 20 2014



OPERATOR'S WELL NO.:
150201 (Harding #2)

LEGEND



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		

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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: See Changes on Proj Page

Title: Inspect Oil Wells Date: 2-17-14

Field Reviewed? Yes No

FEB 20 2014

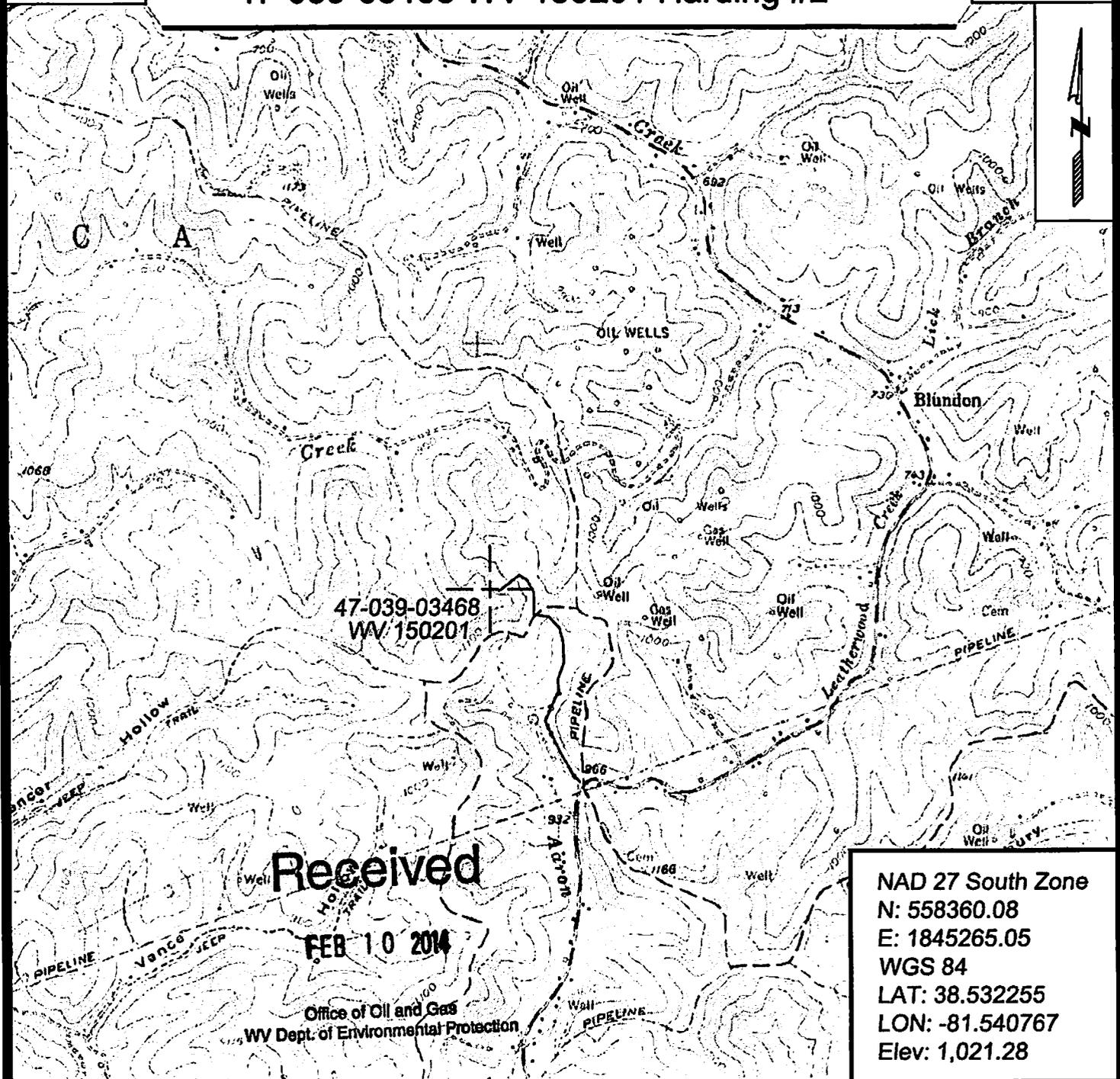
WV Environmental

39 03468 P

Topo Quad: Romance Scale: 1" = 2000'
 County: Kanawha Date: August 15, 2013
 District: Poca Project No: 52-14-00-07

47-039-03468 WV 150201 Harding #2

Topo



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

PREPARED FOR:
EQT Production Company
 P.O. Box 280
 Bridgeport, WV 26330

3903468P

WW-7
8-30-06



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

API: 47-039-03468 WELL NO.: WV 150201 (Harding #2)

FARM NAME: Harding

RESPONSIBLE PARTY NAME: EQT Production Company

COUNTY: Kanawha DISTRICT: Poca 8

QUADRANGLE: Romance 7.5' 584

SURFACE OWNER: Theodore and Ilene Tignor

ROYALTY OWNER: Lanora J. Davis, et al

UTM GPS NORTHING: 4265011.088

UTM GPS EASTING: 452867.111 GPS ELEVATION: 311m (1021 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 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.

Bern R. Snyders
Signature
8-15-13
Date

P.S. 2092
Title

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FEB 10 2014

3903468P

Topo Quad: Romance

Scale: 1" = 2000'

County: Kanawha

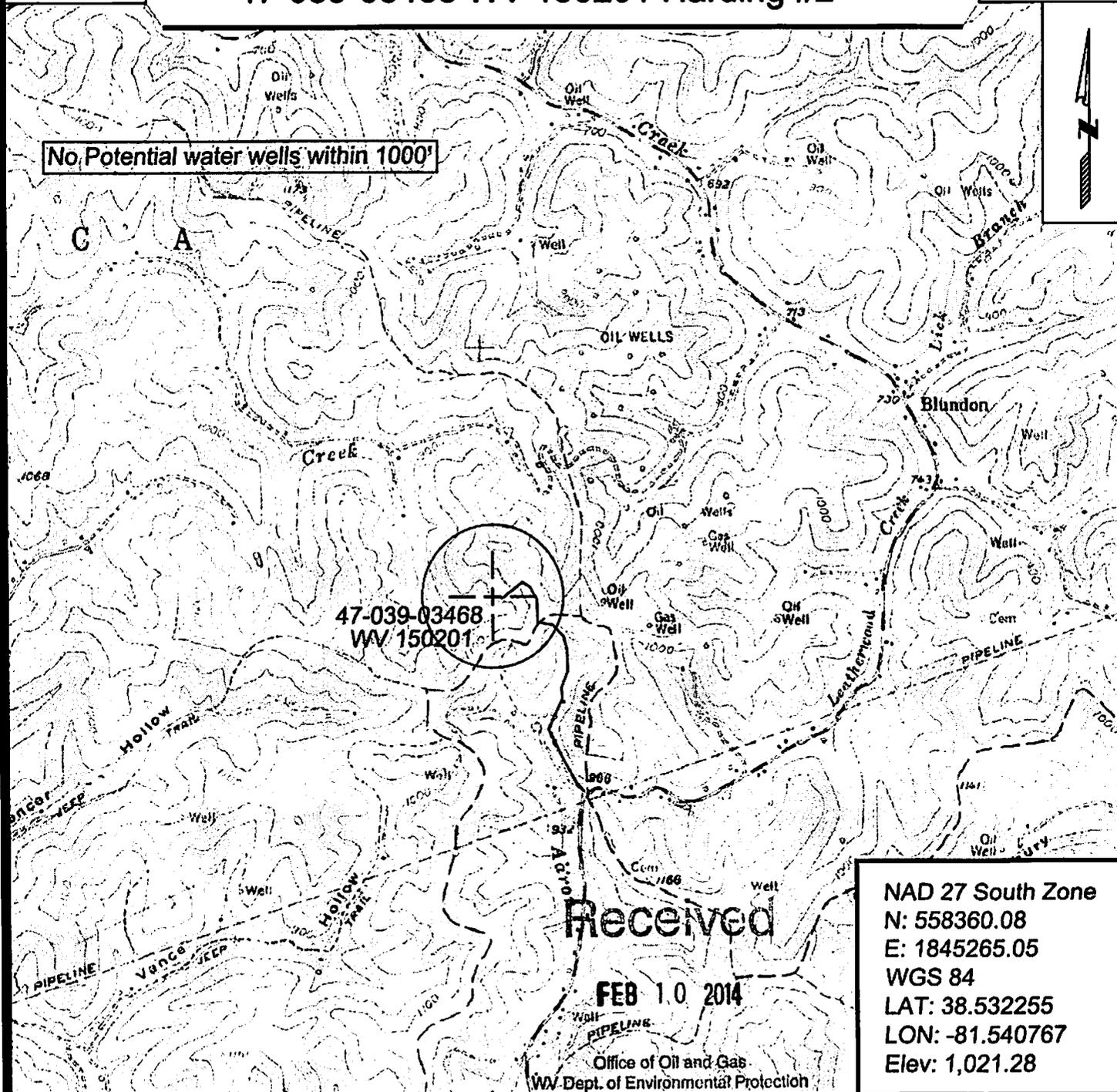
Date: August 15, 2013

District: Poca

Project No: 52-14-00-07

Water

47-039-03468 WV 150201 Harding #2



No Potential water wells within 1000'

47-039-03468
WV 150201

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Office of Oil and Gas
WV Dept. of Environmental Protection

NAD 27 South Zone
 N: 558360.08
 E: 1845265.05
 WGS 84
 LAT: 38.532255
 LON: -81.540767
 Elev: 1,021.28



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

1-800-482-8606
P.O. BOX 438
BIRCH RIVER, WV 26810
PH: (304) 649-8606
FAX: (304) 649-8608

PREPARED FOR:

EQT Production Company

P.O. Box 280
Bridgeport, WV 26330



POTENTIAL WATER SAMPLE DATA SHEET

CLIENT: EQT PRODUCTION COMPANY INC.

LEASE NAME AND WELL No. Harding #2 (47-039-03468) WV 150201

POTENTIAL SAMPLE LOCATIONS

There appears to be no known water samples within the required 1000' of the existing well WV 150201.

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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