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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

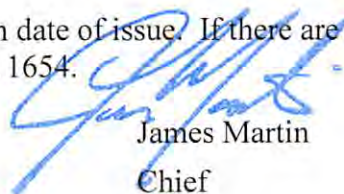
**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-2100925, 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: 159791(J.D. SMITH #6119)  
Farm Name: WV PUBLIC LAND CORP.  
**API Well Number: 47-2100925**  
**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.

Date: November 22, 2013  
Operator's Well  
Well No. 159791 (J.D. Smith #6119)  
API Well No.: 47 021 - 00925

2100925 P  
OK  
11/20/13  
1000

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: 1027' Watershed: Lower Run of Little Kanawha River  
Location: Dekalb 02 County: Gilmer 21 Quadrangle: Tanner 7.5' 634  
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 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

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

RECEIVED  
NOV 22 2013  
WV DEPT OF ENVIRONMENTAL PROTECTION

OFFICE USE ONLY

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

Work order approved by inspector \_\_\_\_\_

OK JNM

PLUGGING PROGNOSIS - Weston

**Smith, J.D. # 6119 (159791)**  
GILMER, COUNTY, WEST VIRGINIA  
API # 47-021-00925-D  
DeKalb District

BY: Craig Duckworth  
DATE: 10/28/13

REL 1027'

**CURRENT STATUS:**

10" csg @ None Reported  
8 1/4" csg @ 178'  
6 5/8" csg @ 1025'  
3" tbg @ 1991'

**TD @ 2006'**

**Fresh Water @ 70'**                      **Salt Water @ None reported**  
**1<sup>st</sup> Salt Sand @ 1145'**                      **Coal @ 84'-86'**  
**Gas shows @ 1561(2<sup>nd</sup> Salt Sand 1555'-1595'); 1812' & 1843' (Big Lime 1810'-1900'); 1914'-1940'**  
**(Big Injun 1900'-1953')**  
**Oil Shows @ None Reported**  
**Stimulation: Shot 1951'-1913' (120 qts.)**

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 @ 1991'; Set 260' C1A Cement Plug @ 1991' to 1768' ( Gas shows @ 1953'- 1900' Big Injun ;1810'-1900' Big Lime)
4. TOOH w/ tbg @ 1768; gel hole @ 1768' to 1555'.
5. TOOH w/tbg @ 1555'; Set 100' C1A Cement Plug @ 1555' to 1455' ( 2<sup>nd</sup> Salt Sand @ 1555' )
6. TOOH w/ tbg @ 1455; gel hole @ 1455' to 1145'.
7. TOOH w/ tbg @ 1145'; Set 170' C1A Cement Plug @ 1145' to 975' ( Salt Sand @ 1145' & 6 5/8" csg set 1025')
8. Set a 100' C1A Cement Plug 50' In/Out of cut. Perf. all FW, Coal, Oil and Gas shows below 6 5/8" cut. Do not omit any plugs
9. TOOH w/ tbg @ 975'; gel hole @ 975' to 230'
10. TOOH w/ tbg @ 230'; Set 230' C1A Cement Plug @ 230' to Surface ( 10" csg @ 178')
11. Top off as needed
12. Set Monument to WV-DEP Specifications
13. Reclaim Location & Road to WV-DEP Specifications

ATTEMPT TO REMOVE 6 5/8" casing.

RECEIVED  
OCT 28 2013  
Environmental Protection





STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

21000925A  
2100925A

111 1111

WELL RECORD

Permit No. GIL 925 D For Gas Well \_\_\_\_\_ (MIND)

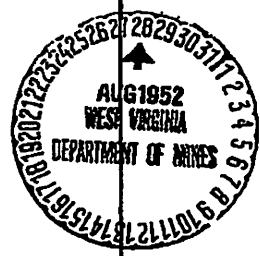
Company Hope Natural Gas Company  
Address 445 West Main St., Clarcksburg, W. Va.  
Farm J.D. Smith Acres 475.75  
Location (waters) \_\_\_\_\_  
Well No. 6119 Elev. 1032  
District DeKalb County Gilmer  
The surface of tract is owned in fee by \_\_\_\_\_  
Address \_\_\_\_\_  
Mineral rights are owned by \_\_\_\_\_  
Address \_\_\_\_\_  
Drilling commenced deeper July 1, 1952  
Drilling completed July 19, 1952  
Date Shot 7 24 '52 From 1913 To 1951  
With 1200ts  
Open Flow /10ths Water in \_\_\_\_\_ Inch  
/10ths Merc. in \_\_\_\_\_ Inch  
Volume 130,000 Cu. Ft.  
Rock Pressure 80% lbs. \_\_\_\_\_ hrs.  
Oil \_\_\_\_\_ bbls., 1st 24 hrs.  
Fresh water none recorded feet \_\_\_\_\_ feet  
Salt water none recorded feet \_\_\_\_\_ feet

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16			Kind of Packer
18			
10			Size of
8 3/4	178	178	
8 3/8	1025	1025	Depth set
5 3/16			
8	1991	1991	Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED NOT SIZE \_\_\_\_\_ No. Ft. \_\_\_\_\_ Date \_\_\_\_\_

COAL WAS ENCOUNTERED AT none FEET \_\_\_\_\_ INCHES \_\_\_\_\_  
FEET \_\_\_\_\_ INCHES \_\_\_\_\_ FEET \_\_\_\_\_ INCHES \_\_\_\_\_  
FEET \_\_\_\_\_ INCHES \_\_\_\_\_ FEET \_\_\_\_\_ INCHES \_\_\_\_\_

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
RECORD OF DEEPER DRILLING.							
Commenced				1815			
Big Line				1900	gas	1813	
Big Injun			1900	1953	gas	1914, 1940	
Total depth				2006			



*[Handwritten signature]*

(Over)

508



2100925P

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

WELL RECORD

Permit No. 91L-925

Oil and Gas Well (MINO)

Company Hope Natural Gas Co.  
 Address 445 W. Main Street, Clarksburg, W. Va.  
 Farm J. D. Smith Acres 475.75  
 Location (waters) \_\_\_\_\_  
 Well No. 6119 Elev. 1032  
 District DeKalb County Gilmer  
 The surface of tract is owned in fee by \_\_\_\_\_  
 Address \_\_\_\_\_  
 Mineral rights are owned by \_\_\_\_\_  
 Address \_\_\_\_\_  
 Drilling commenced 2-20-22  
 Drilling completed 3-15-22  
 Date Shot \_\_\_\_\_ From \_\_\_\_\_ To \_\_\_\_\_  
 With \_\_\_\_\_  
 Open Flow /10ths Water in \_\_\_\_\_ Inch  
/10ths Merc. in \_\_\_\_\_ Inch  
 Volume \_\_\_\_\_ Cu. Ft.  
 Rock Pressure \_\_\_\_\_ lbs. \_\_\_\_\_ hrs.  
 Oil \_\_\_\_\_ bbls. 1st 24 hrs.  
 Fresh water 70 feet \_\_\_\_\_ feet  
 Salt water None Recorded feet \_\_\_\_\_ feet

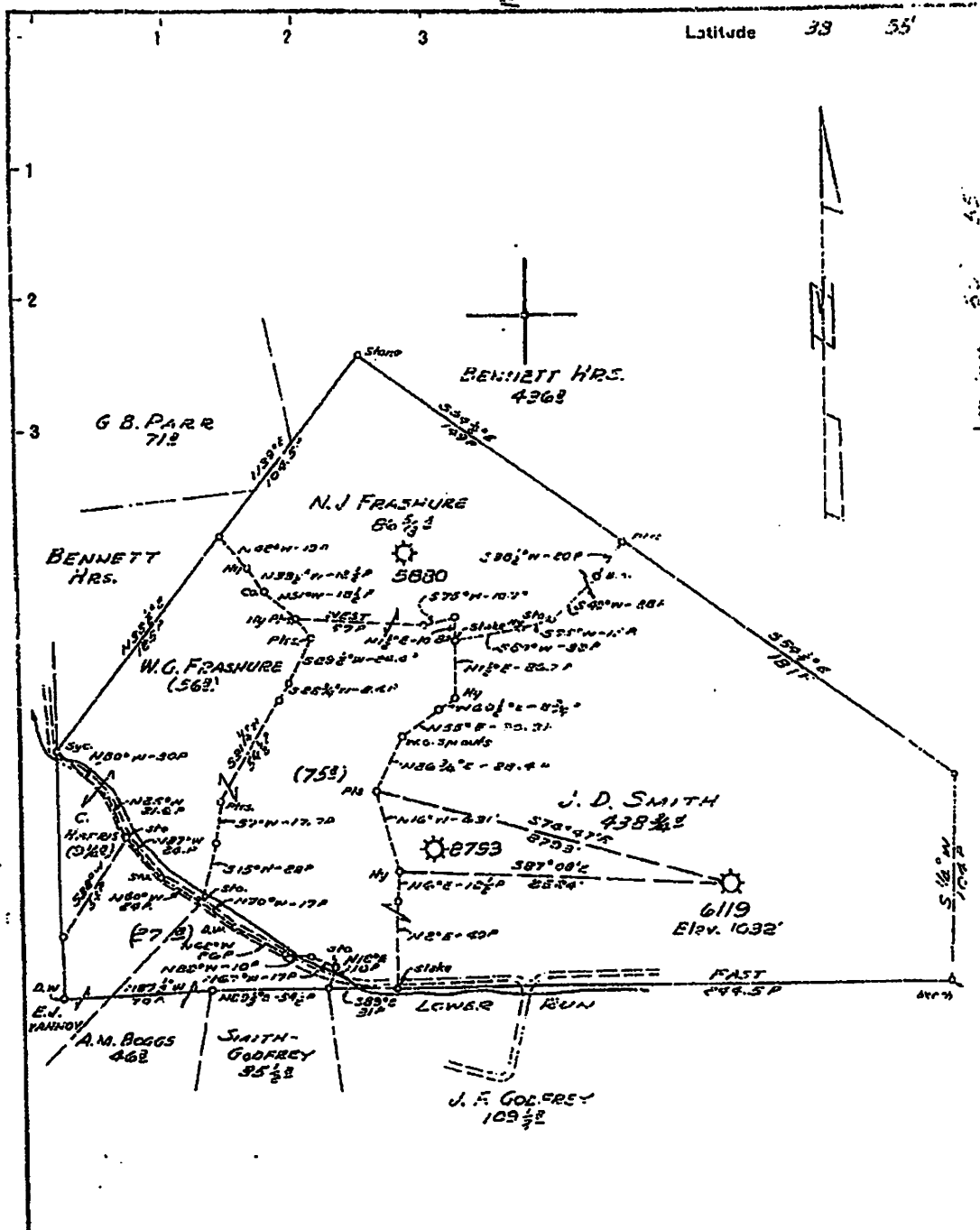
Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16			Kind of Packer
18			
10			Size of
8 1/2	<u>178</u>	<u>178</u>	
6 3/4	<u>1025</u>	<u>1025</u>	Depth set
6 3/16			
8	<u>1815</u>	<u>1815</u>	Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

CASING CEMENTED NOT SIZE \_\_\_\_\_ No. Ft. \_\_\_\_\_ Date \_\_\_\_\_  
 COAL WAS ENCOUNTERED AT 84 FEET 24 INCHES  
 FEET INCHES FEET INCHES  
 FEET INCHES FEET INCHES

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Coal			<u>84</u>	<u>86</u>	<u>Water 70'</u>		
Little Dunkard			<u>845</u>	<u>?</u>			
Big Dunkard			<u>?</u>	<u>945</u>			
Gas Sand			<u>1017</u>	<u>1130</u>			
First Salt			<u>1145</u>	<u>1285</u>			
Second Salt			<u>1555</u>	<u>1595</u>	<u>Gas 1 1/2'</u>	<u>1561</u>	
Macon			<u>1625</u>	<u>1652</u>			
Little Lime			<u>1755</u>	<u>1780</u>			
Pencil Cave			<u>1780</u>	<u>1810</u>			
Big Lime			<u>1810</u>		<u>Gas</u>	<u>1812</u>	
Total Depth				<u>1815</u>			
<u>TO BE DRILLED DEEPER</u>							



(Over)



New Location...   
 Drill Deeper...  6119  
 Abandonment...

W.V. DEPT. OF MINES - F.B. 1000 - 4371-70

Company HOPE NATURAL GAS CO.  
 Address CLARKSBURG, W. VA.  
 Firm J. D. SMITH  
 Tract Acres 47 3/4 Lease No. 29587  
 Well (Farm) No. \_\_\_\_\_ Serial No. 6119  
 Elevation (Spirit Level) 1032'  
 Quad. angle GLENVILLE  
 County GILMER District DEKALB  
 Engineer D.W. Bowers  
 Engineer's Registration No. 900  
 File No. \_\_\_\_\_ Drawing No. \_\_\_\_\_  
 Date JULY 9, 1952 Scale 1" = 60 P. 165

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

WELL LOCATION MAP  
 FILE NO. GIL-925-D ✓

☛ 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.

25117

3502

WW-4-A  
Revised 6/07

1) Date: November 22, 2013  
2) Operator's Well Number  
159791 (J.D. Smith #6119)  
3) API Well No.: 47 021 - 00925  
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 West Virginia Public Land Corp. ✓  
Address Real Estate Div/Chuck Lawrence Dir.  
900 Pennsylvania Ave.  
Charleston WV 25302  
(b) Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_  
6) Inspector Bryan Harris ✓  
Address P.O. Box 157  
Volga, WV 26238  
Telephone 304-553-6087

5) (a) Coal Operator:  
Name None  
Address \_\_\_\_\_  
(b) Coal Owner(s) with Declaration ✓  
Name see attached sheet  
Address \_\_\_\_\_  
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:

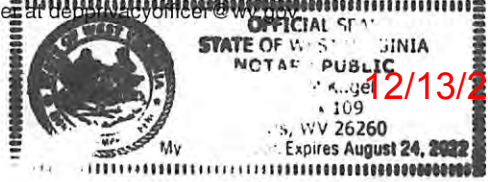
- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
  - (2) The plat (surveyor's map) showing the well location on Form WW-6.
- The reason you received these documents is that you have 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 22 day of November, 2013  
Kathy M. Hugel Notary Public  
My Commission Expires: 8-24-2022

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 202-261-6100.





**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: Lower Run of Little Kanawha River Quadrangle: Tanner 7.5'

Elevation: 1027' County: Gilmer District: Dekalb

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

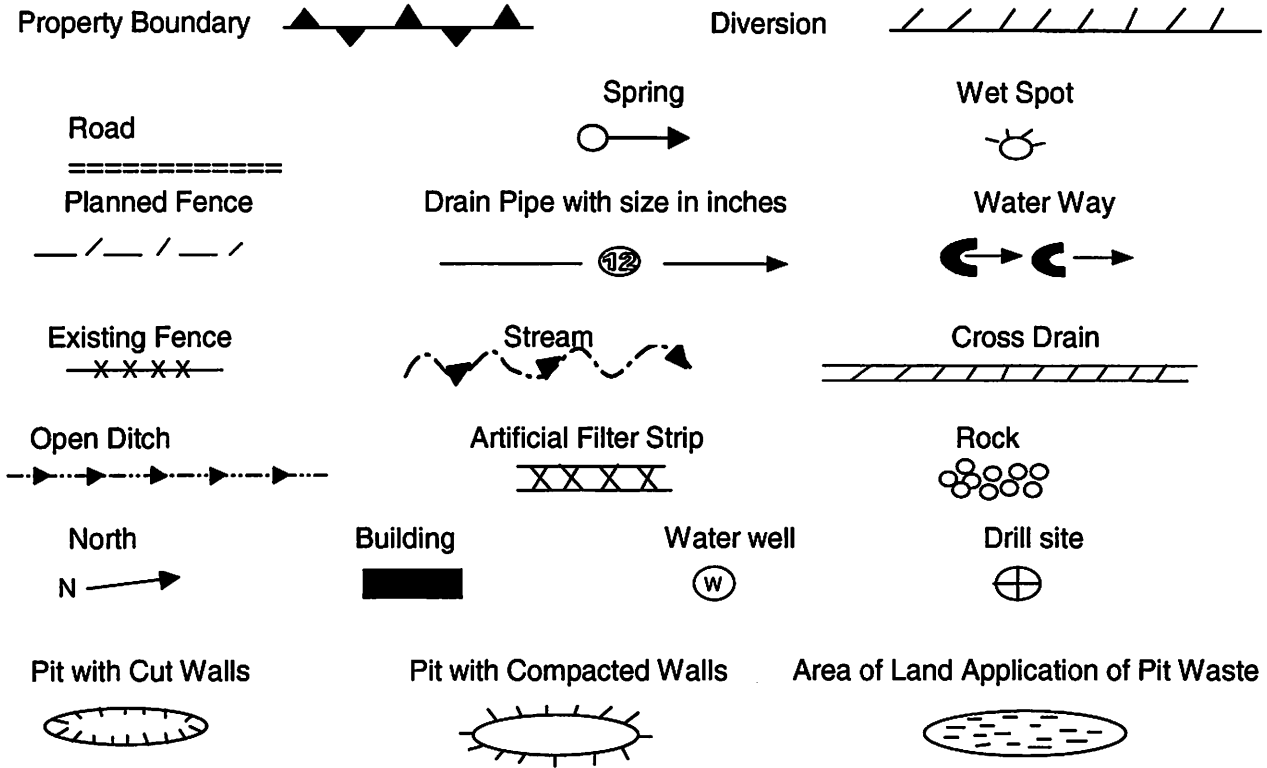
Subscribed and sworn before me this 22 day of November, 2013

*Kathy M. Kugel* Notary Public  
My Commission Expires 8-24-2022



**OPERATOR'S WELL NO.:**  
**159791 (J.D. Smith #6119)**

**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		

**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

12/13/2013



Topo Quad: Tanner 7.5'

Scale: 1" = 2000'

County: Gilmer

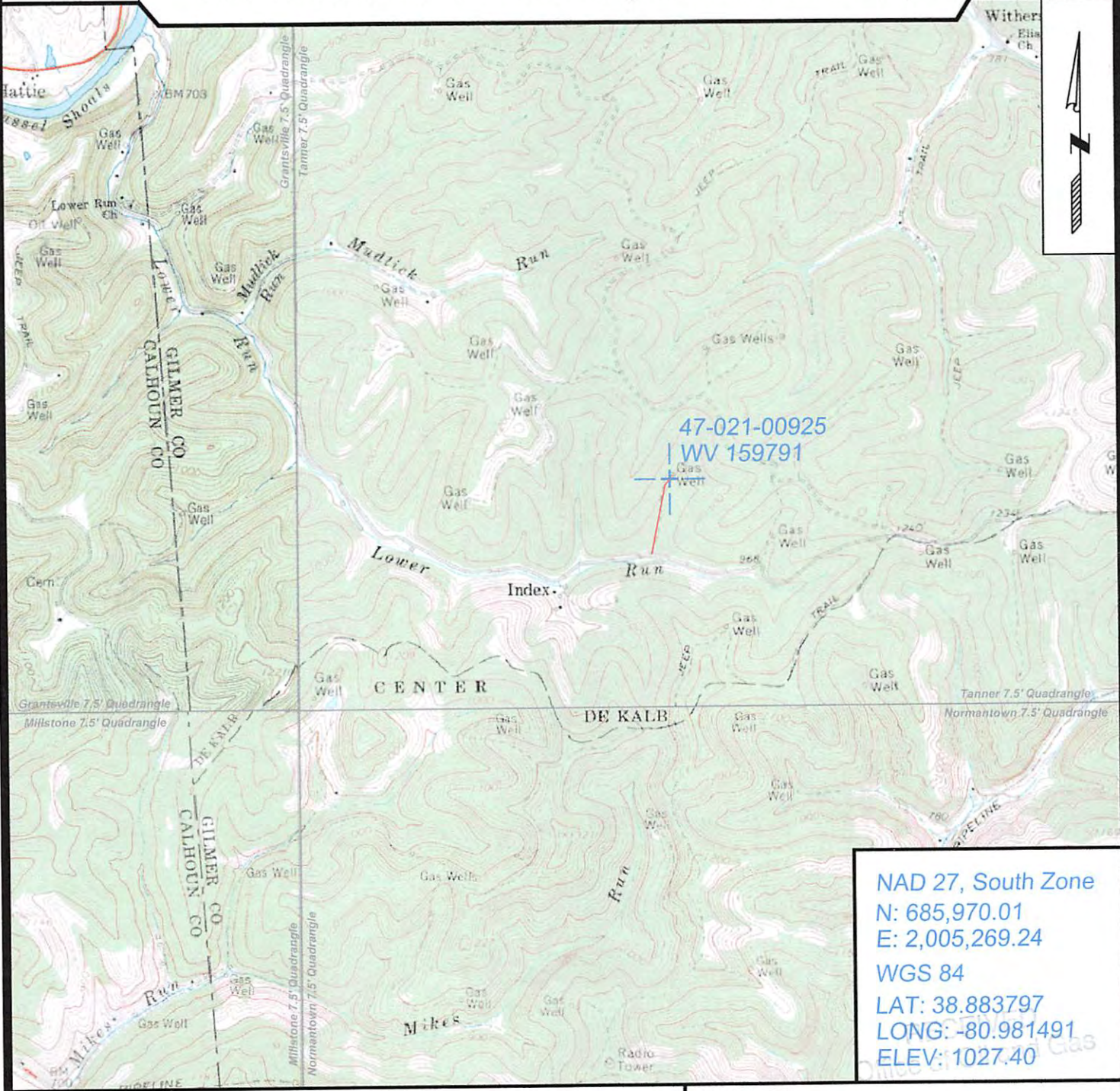
Date: October 29, 2013

District: Dekalb

Project No: 25-19-00-07

# WV 159791 47-021-00925 (J.D. Smith #6119)

Topo



NAD 27, South Zone  
 N: 685,970.01  
 E: 2,005,269.24  
 WGS 84  
 LAT: 38.883797  
 LONG: -80.981491  
 ELEV: 1027.40



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



WW-7  
8-30-06



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

API: 47-021-00925 WELL NO.: WV 159791 (J. D. Smith #6119)

FARM NAME: J. D. Smith

RESPONSIBLE PARTY NAME: EQT Production Company

COUNTY: Gilmer DISTRICT: Dekalb

QUADRANGLE: Tanner 7.5'

SURFACE OWNER: State of West Virginia (Division of Natural Resources)

ROYALTY OWNER: J. D. Smith, et al.

UTM GPS NORTHING: 4303892

UTM GPS EASTING: 501620 GPS ELEVATION: 313 m ( 1027 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.

  
Signature  
11/7/13  
Date

PS# 2180  
Title

RECEIVED  
Office of Oil and Gas  
JAN 15 2013





## POTENTIAL WATER SAMPLE DATA SHEET

CLIENT: EQT PRODUCTION COMPANY  
 LEASE NAME AND WELL No. J. D. Smith #6119 WV 159791 (47-021-00925)

### POTENTIAL SAMPLE LOCATIONS

There appears to be no known water samples within the required 1000' of the existing well WV 159821.

**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

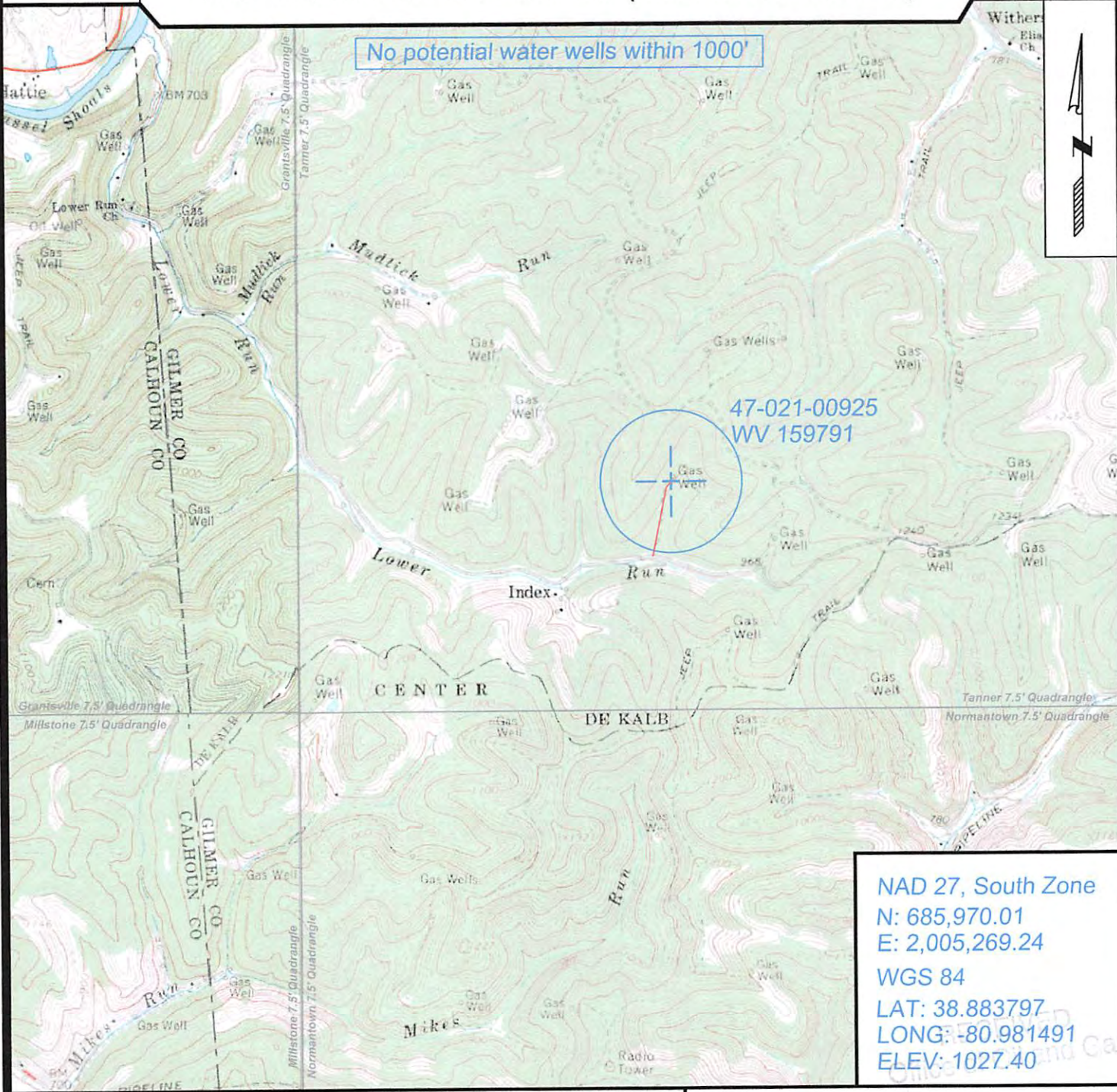
**ALUM CREEK OFFICE**  
 P.O. Box 108 • 1413 Childress Road  
 Alum Creek, WV 25003  
*phone:* 304-756-2949  
*fax:* 304-756-2948



Topo Quad: Tanner 7.5' Scale: 1" = 2000'  
 County: Gilmer Date: October 29, 2013  
 District: Dekalb Project No: 25-19-00-07

Water

# WV 159791 47-021-00925 (J.D. Smith #6119)



NAD 27, South Zone  
 N: 685,970.01  
 E: 2,005,269.24  
 WGS 84  
 LAT: 38.883797  
 LONG: -80.981491  
 ELEV: 1027.40



SURVEYING AND MAPPING SERVICES PERFORMED BY:  
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PREPARED FOR:  
**EQT Production Company**  
 P.O. Box 280  
 Bridgeport, WV 26330