



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

December 06, 2013

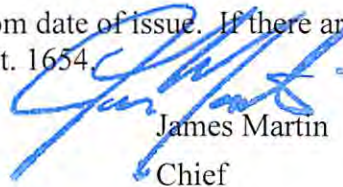
WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-2101559, 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: 154941 (C. JACKSON #1)
Farm Name: LOWTHER, AVIN B. & MARY E.
API Well Number: 47-2101559
Permit Type: Plugging
Date Issued: 12/06/2013

Promoting a healthy environment.

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.

Date: ^{CK 16904} November 22, 2013
Operator's Well
Well No. 154941 (C. Jackson #1)
API Well No.: 47 021 - 01559

2101559P

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 Liquid Injection Waste Disposal:
If Gas, Production Or Underground storage Deep Shallow

5) Elevation: 1158' Watershed: Jakes Run
Location: Glennville 03 County: Gilmer 21 Quadrangle: Gilmer 7.5' 365
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
Office of Oil and Gas

DEC 05 2013

WV Department of
Environmental Protection

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 Bryana Harris Date 12-4-13

PLUGGING PROGNOSIS -Weston

Jackson C. #1 (154941)

GILMER, COUNTY, WEST VIRGINIA

API # 47-021-01559

Burnsville Quad

BY: Craig Duckworth

ELEV' 1130'

DATE: 9/12/13

CURRENT STATUS:

10" csg @ 404'
 8 1/4" csg @ 934'
 4 1/2" csg @ 2225' (100 sks cement)

TD @ 2858'**Fresh Water** @ None Reported**Salt Water** @ None reported**1st Salt Sand** @ Estimated @ 1351'**Coal** @ 376' - 379'**Gas shows** @ Sand 1838' & Sand 2140'**Oil Shows** @ Sand 2140'**Stimulation:** Fractured 12/11/63

1. Notify State Inspector. **Bryan Harris 304-553-6087**, 24 hrs. Prior to commencing operations.
2. TIH w/ tbg @ 2225'; Set 440' C1A Cement Plug @ 2225' to 1785' (gas show@ 1838' & water @ 1870')
3. TOOH w/ tbg, Free Point 4 1/2", cut 4 1/2" @ free point, TOOH w/ 4 1/2" csg
4. Set a 100' C1A 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
5. TIH w/ tbg @ 1351'; Set 100' C1A Cement Plug @ 1351' to 1251' (Salt Sand @ 1351')
6. TOOH w/ tbg @ gel hole @ 1251' to 984'.
7. Set a 100' C1A Cement Plug 50' In/Out of cut. Perf all FW, Coal, Oil and Gas shows below 8 1/4" cut. Do not omit any plugs.
8. TOOH w/ tbg @ 984'; Set 100' C1A Cement Plug @ 984' to 884' (8 1/4" @ 934')
9. TOOH w/ tbg @ 884'; gel hole @ 884' to 454'.
6. TOOH w/ tbg @ 454'; Set 100' C1A Cement Plug @ 454' to 354' (10" csg st. @ 404')
7. Set a 100' C1A Cement Plug 50' In/Out of cut. Perf all FW, Coal, Oil and Gas shows below 10" Do not omit any plugs
8. TOOH w/ tbg @ 354'; gel hole @ 354' to 200'.
9. TIH w/ tbg @ 200'; Set 200' C1A Cement Plug @ 200' to Surface
10. Top off as needed
11. Set Monument to WV-DEP Specifications
12. Reclaim Location & Road to WV-DEP Specifications



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

2101559P

Quadrangle Burns

WELL RECORD 6

Oil or Gas Well Gas
(RIND)

Permit No. 613-1559

Company M. J. Moran
Address Box 368, Weston, W. Va.
Farm Charles Jackson Acres 30 1/2
Location (waters) Ellis Creek
Well No. 1 Elev. 1130
District Glenville County Gilmer
The surface of tract is owned in fee by Alva P. Luther
Address Linton, W. Va.
Mineral rights are owned by Roscoe Jackson, et al.
Address Valley Chapel, W. Va.
Drilling commenced 10-18-63
Drilling completed 12-1-63
Date Shot From To
With

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16			
13			
10	10 1/2	10 1/2	Size of
8 1/2	9 3/4		
6 3/4			Depth set
4 1/2	2225	2225	
3			Perf. top
2			Perf. bottom
Liners Used			Perf. top
			Perf. bottom

Open Flow /10ths Water In _____ Inch
/10ths Merc. in _____ Inch

Volume _____ Cu. Ft.

Rock Pressure _____ lbs.

Oil _____ bbls., 1st 24 hrs.

WELL ACIDIZED _____

WELL FRACTURED 12-11-63

CASING CEMENTED 1 1/2 SIZE 2225 No. Ft. 12-563 Date
100 sacks cement

COAL WAS ENCOUNTERED AT 376 FEET _____ INCHES

379 FEET _____ INCHES FEET _____ INCHES

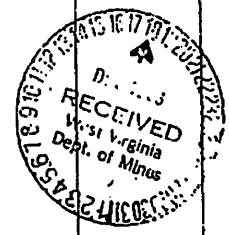
FEET _____ INCHES FEET _____ INCHES

RESULT AFTER TREATMENT more than one million

ROCK PRESSURE AFTER TREATMENT 750# - 24 lbs.

Fresh Water _____ Feet Salt Water _____ Feet

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Dirt			0	13			
Sand			13	55			
Red Rock			55	130			
Slate			130	155			
Red Rock			155	215			
Slate			215	275			
Lime			275	359			
Slate			359	376			
Coal			376	379			
Slate			379	422			
Sand			422	495			
Red Rock			495	520			
Slate & shells			520	562			
Lime			562	600			
Slate & shells			600	677			
Red Rock			677	687			
Slate & shells			687	756			
Red Rock			756	762			
Slate & shells			762	895			
Sand			895	956			
Broken Lime			956	1075			
Sand			1075	1085			
Slate & shells			1085	1310			
Sand			1310	1387			
Slate and shells			1387	1525			
Sand			1525	1675			
Slate and shells			1675	1693			
Sand			1693	1728			
Slate and shells			1728	1800			
Lime			1800	1835			
Sand			1835	1865	gas	1838	Burns 6' in 2"
Lime			1865	1902			
Slate			1902	1928			
Lime			1928	1956	water	1870	1 bbl. per hr.
Slate			1956	1972			
Big Lime			1972	2050			
Sand			2050	2155	gas (bubbles) & show of oil.		2 1/2
Slate & shells			2155				
Total Depth			2858				

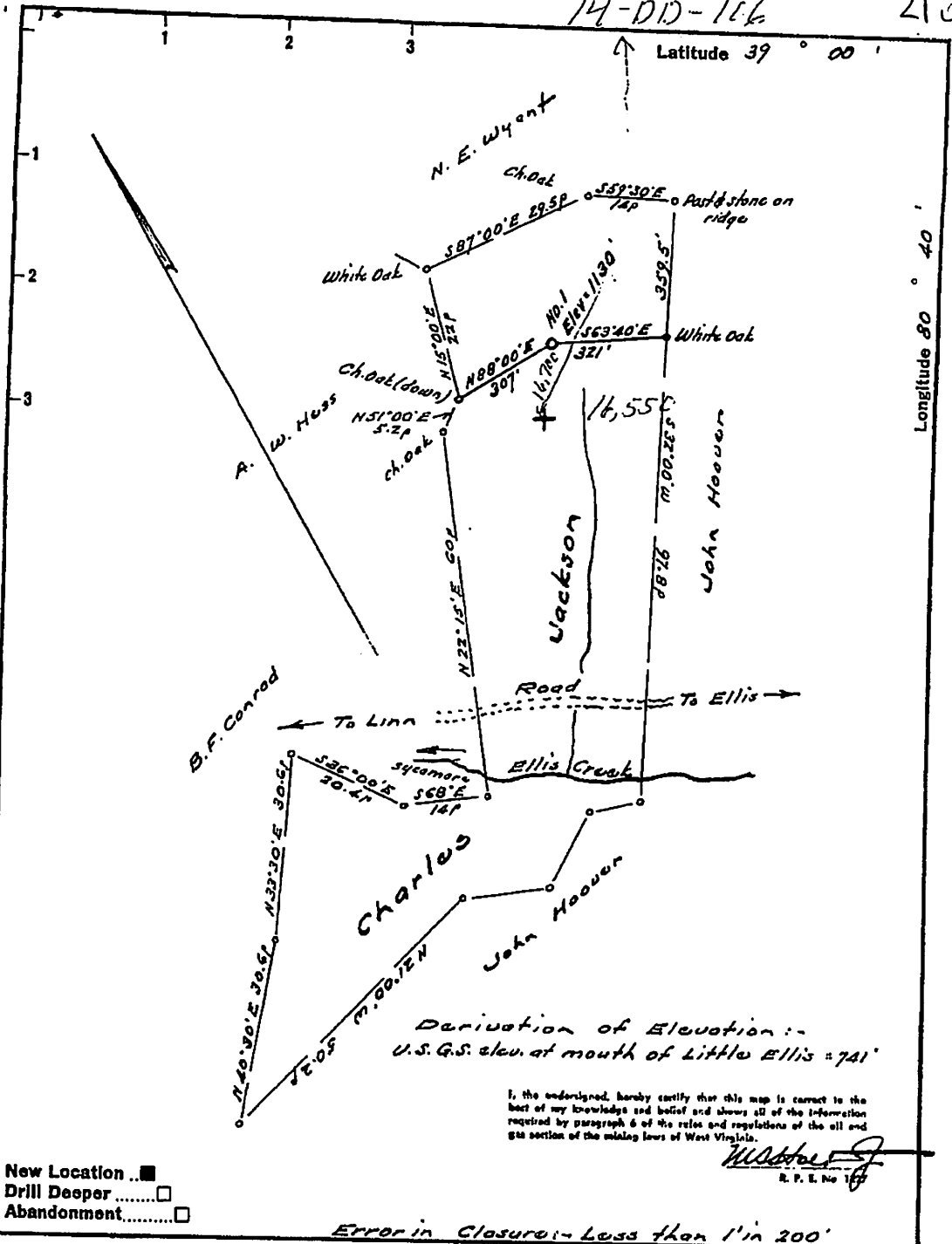


GIL-1559

Date December 16, 1963

APPROVED M. J. MORAN Owner

By M. J. Moran



New Location ..
 Drill Deeper
 Abandonment

Error in Closure: - Less than 1' in 200'

Company M. J. MORAN
 Address Weston, West Va.
 Farm Charles Jackson
 Tract _____ Acres 30.25 Lease No. _____
 Well (Farm) No. One Serial No. _____
 Elevation (Spirit Level) 1130
 Quadrangle Burnsville
 County Gilmer District Glenville
 Engineer M. J. Moran
 Engineer's Registration No. 1227
 File No. _____ Drawing No. _____
 Date Aug. 20, 1963 Scale 1" = 200'

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

WELL LOCATION MAP
 FILE NO. Gil-1559

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,800, latitude and longitude lines being represented by border lines as shown.
 - Denotes one inch spaces on border line of original tracing.

2101559P

WW-4-A
Revised 6/07

1) Date: November 22, 2013
2) Operator's Well Number
154941 (C. Jackson #1)
3) API Well No.: 47 021 - 01559
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 Avin B. & Mary E. Lowther ✓
Address 3484 Ellis Road
Linn WV 26384
(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 Avin B. & Mary E. Lowther ✓
3484 Ellis Road
Address Linn WV 26384
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. Kugel 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 protect your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at dep.wv@dep.wv.gov



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Roark
80
t, WV 26330

ncopost
11/22/2013
US POSTAGE \$05.05
EPCIPET * MAIL
CenPostOffice
ZIP 26330
041L10220002

Bryan Harris
P.O. Box 157
Volga, WV 26238

RECEIVED
Office of Civil and
WV State
Environmental Protection

2101554P

2) Operator's Well Number

154941 (C. Jackson #1)

3) API Well No.: 47 021 - 01559

**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: Jakes Run Quadrangle: Gilmer 7.5'

Elevation: 1158' County: Gilmer District: Glenville

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

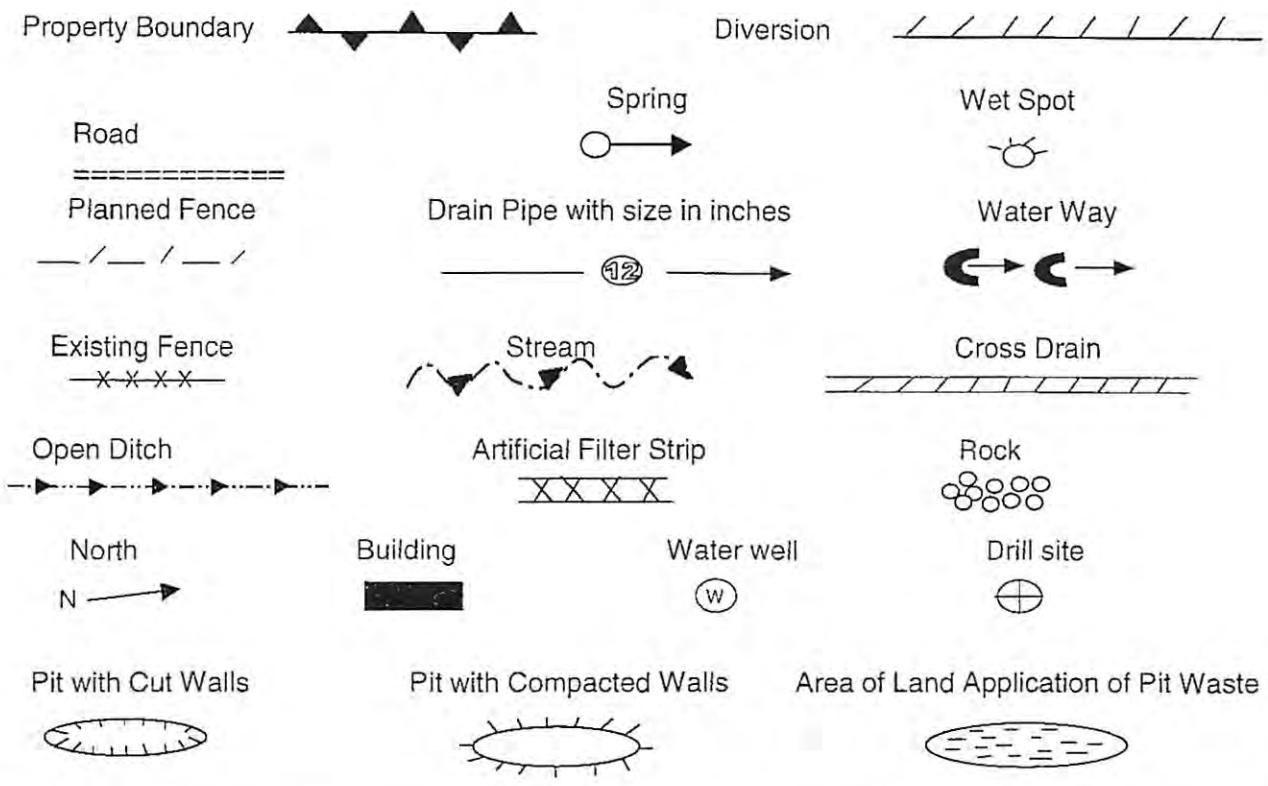
Kathy M. Ruggel
My Commission Expires 8-24-2022



2101559P

OPERATOR'S WELL NO.:
154941 (C. Jackson #1)

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		

RECEIVED
Office of Oil and Gas

ATTACH:
 Drawing(s) of road, location, pit and proposed area for land application.
 Photocopies section of involved 7.5' topographic sheet.

DEC 05 2013

WV Department of
Environmental Protection

Plan approved by: *Suzanne Harris*

Comments: _____

Title: Oil & Gas Inspector Date: 12-4-13
 Field Reviewed? X Yes No

Topo Quad: Gilmer 7.5'

Scale: 1" = 2000'

County: Gilmer

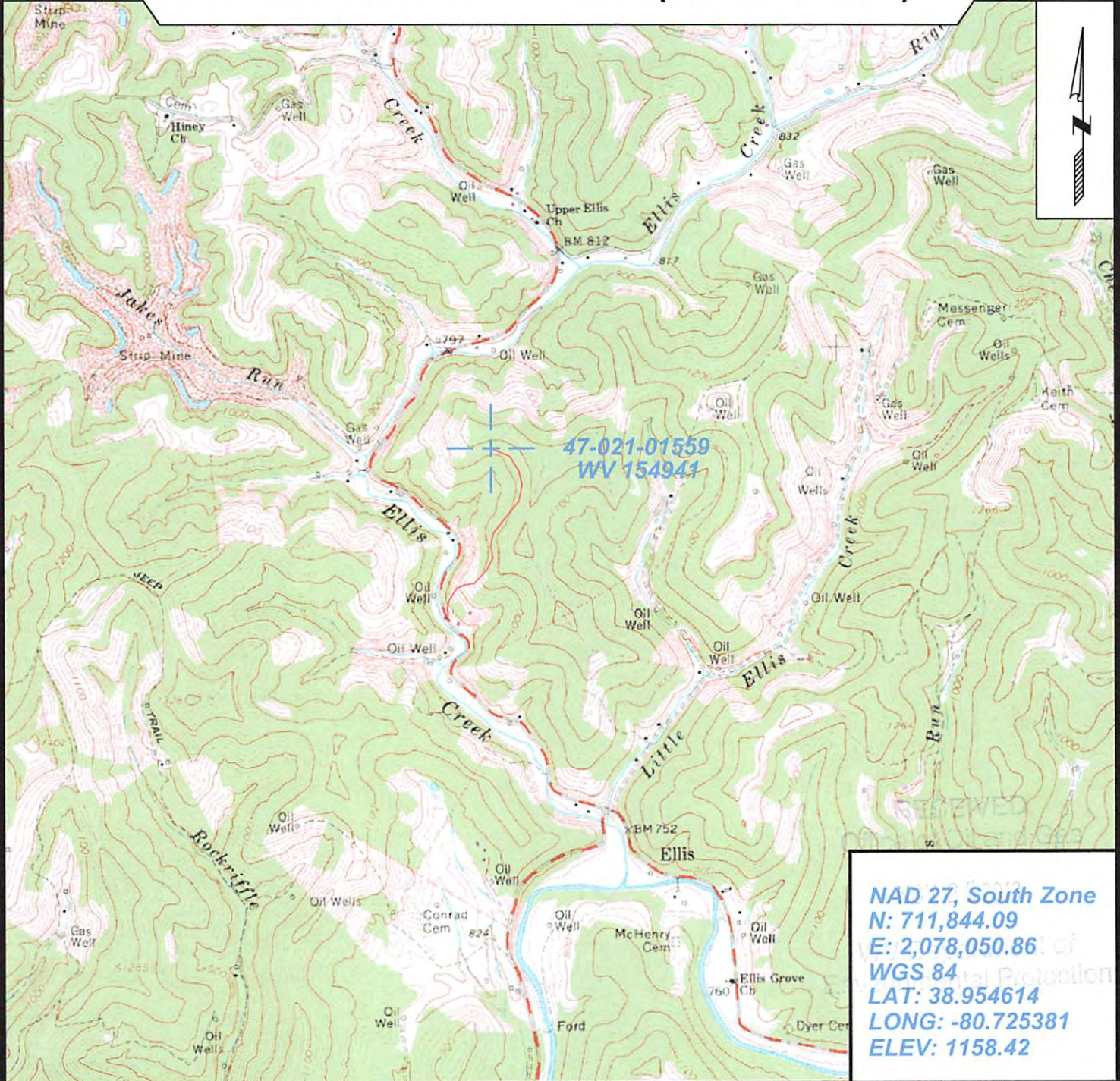
Date: October 16, 2013

District: Glenville

Project No: 25-19-00-07

47-021-01559 WV 154941 (C. Jackson #1)

Topo



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



POTENTIAL WATER SAMPLE DATA SHEET

CLIENT: EQT PRODUCTION COMPANY

LEASE NAME AND WELL No. C. Jackson #1 WV 154941 (47-021-01559)

POTENTIAL SAMPLE LOCATIONS

There appears to be no known water samples within the required 1000' of the existing well WV 154941.

RECEIVED
Office of Oil and Gas
NOV 26 2013
Department 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

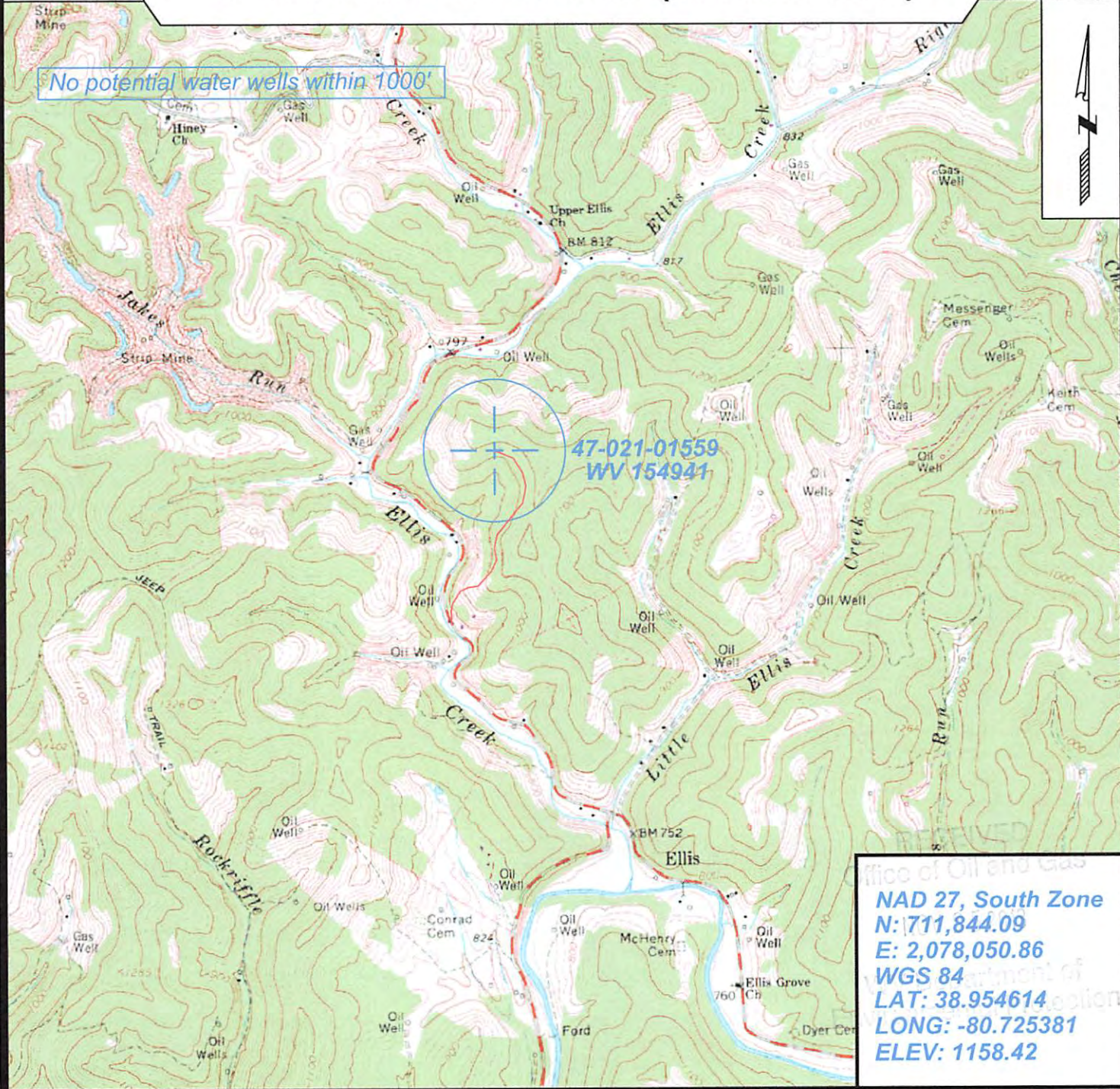
ALUM CREEK OFFICE
P.O. Box 108 • 1413 Childress Road
Alum Creek, WV 25003
phone: 304-756-2949
fax: 304-756-2948

Topo Quad: Gilmer 7.5' Scale: 1" = 2000'
 County: Gilmer Date: October 16, 2013
 District: Glenville Project No: 25-19-00-07

Water

47-021-01559 WV 154941 (C. Jackson #1)

No potential water wells within 1000'



Office of Oil and Gas
NAD 27, South Zone
N: 711,844.09
E: 2,078,050.86
WGS 84
LAT: 38.954614
LONG: -80.725381
ELEV: 1158.42



SURVEYING AND MAPPING SERVICES PERFORMED BY:
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