



---

west virginia department of environmental protection

---

Office of Oil and Gas  
601 57<sup>th</sup> Street, S.E.  
Charleston, WV 25304  
(304) 926-0450  
fax: (304) 926-0452

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Wednesday, September 11, 2019  
WELL WORK PLUGGING PERMIT  
Vertical Plugging

EQT PRODUCTION COMPANY  
625 LIBERTY AVE., SUITE 1700

PITTSBURGH, PA 15222

Re: Permit approval for J.L. ERWIN 6  
47-049-00514-00-00

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.

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. Please be advised that form WR-38, Affidavit of Plugging and Filling Well, 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: J.L. ERWIN 6  
Farm Name: ERWIN, J. L.  
U.S. WELL NUMBER: 47-049-00514-00-00  
Vertical Plugging  
Date Issued: 9/11/2019

I

## 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.

1) Date June 7, 2019  
2) Operator's  
Well No. 518584 JL Erwin #6  
3) API Well No. 47-049 - 00514

STATE OF WEST VIRGINIA  
DEPARTMENT 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 \_\_\_ or Underground storage \_\_\_) Deep \_\_\_ / Shallow X

5) Location: Elevation 1382 Watershed Whetstone Run  
District Mannington County Marion Quadrangle Glover Gap 7.5'

6) Well Operator EQT Production Company 7) Designated Agent Jason Ranson  
Address 2400 Ansys Drive- Suite 200 Address 120 Professional Place  
Canonsburg PA 15317 Bridgeport WV 26330

8) Oil and Gas Inspector to be notified 9) Plugging Contractor  
Name Sam Ward Name HydroCarbon Well Service  
Address PO Box 2327 Address PO Box 995  
Buckhannon, WV 26201 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

JUN 14 2019

WV Department of  
Environmental Protection

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

Work order approved by inspector Bryan O'Han Date 6-13-19

## PLUGGING PROGNOSIS

518584  
 Erwin #6  
 API# 47-049-00514  
 District, Mannington  
 Marion County, WV

BY: R Green  
 DATE: 01/18/18

**CURRENT STATUS:**

**TD @ 3116'**  
**Elevation @ 1389'**

10" casing @ 406'  
 8 1/4" casing @ 1407'  
 6 5/8" casing @ 2212'  
 5 3/16" casing @ 2521'  
 237' of 4" liner on bottom  
 Top of liner @ 2879'

**Fresh Water @** none Reported  
**Saltwater @** None Reported  
**Oil Show @** 3101'  
**Gas shows @** None Reported  
**Coal @** None Reported

**\*3. SPOT ENOUGH GEL TO FILL SHOT HOLE  
 WELL SHOT @ GORDON 3095'**

1. Notify inspector Sam Ward @ 304-389-7583, 24 hrs. prior to commencing operations.
2. TIH, check TD @ or below 2880'.
- A** 3. TIH to 2880', spot 35 bbl. of 6% gelled water followed by a 425' C1A cement plug, 2880' to 2455' (Oil show & 5 3/16" casing seat). WOC 8 hrs. Tag TOC, add additional C1A cement if necessary.
4. Free point 5 3/16" casing, cut casing @ free point. TOOH 5 3/16" casing.
5. Set a 100' C1A cement plug 50' in/out of casing cut. Perforate all freshwater, saltwater, coal, oil and gas shows below cut. Do not omit any plugs.
6. TOOH to 2260' set a 100' C1A cement plug. 2260' to 2160'. (6 5/8" casing seat).
7. Free point 6 5/8" casing, cut casing @ free point. TOOH 6 5/8" casing.
8. Set a 100' C1A cement plug 50' in/out of casing cut. Perforate all freshwater, saltwater, coal, oil and gas shows below cut. Do not omit any plugs.
9. TOOH to 1450', set a 200' C1A cement plug 1450' to 1250' (8 1/4" casing seat & elevation).
10. Free point 8 1/4" casing, cut casing @ free point. TOOH 8 1/4" casing.
11. Set a 100' C1A cement plug 50' in/out of casing cut. Perforate all freshwater, saltwater, coal, oil and gas shows below cut. Do not omit any plugs.
12. TOOH to 450' set a 100' C1A cement plug 450' to 350' (10" casing seat).
13. Free point 10" casing, cut casing @ free point. TOOH 10" casing.
14. Set a 100' C1A cement plug 50' in casing cut to surface. Perforate all freshwater, saltwater, coal, oil and gas shows below cut. Do not omit any plugs.

15. \* Note if unable to cut and pull 10" casing. TIH and perforate 10" casing with 4 holes each @ 300' 250' 200' 150' & 100'. TIH to 350', and set a 350' C1A cement plug, 350' to surface.
16. Erect monument with API#, date plugged, & company name.
17. Reclaim location and road to WV-DEP specifications.

RECEIVED  
Office of Oil and Gas

JUN 14 '2019

WV Department of  
Environmental Protection

NO. 1 **SOUTH PENN OIL COMPANY—COMPLETION**

SERIAL NO. \_\_\_\_\_ FARM J. L. Erwin WELL NO. 6

ELEVATION 1389.25 N. 3-4 S. \_\_\_\_\_ E. 13 W. \_\_\_\_\_

LEASE NO. 11770 & 11771 ACRES \_\_\_\_\_

WATERS OF Whetstone

DISTRICT Mannington COUNTY Marion STATE W. Va.

DRILLING COMMENCED 9/27/1917 COMPLETED 12/6/1917 DEPTH 3116

SANDS	TOP	BOTTOM	ELEV. TOP	CASING
PSM. COAL <del>11770</del>	887	893		10" 400'-3"
Gordon	3085		5 5/8	8 1/2" 1407'-2"
Oil	3095	3101	5 3/16	2212'-7"
			4 1/2 x 4	237'
				PACKERS AND DEPTH SET

INITIAL PROD. \_\_\_\_\_ SAND Gordon DEPTH 3095

GAS TEST \_\_\_\_\_ QUARTS 20

SHOT 12/18/1917 QUARTS \_\_\_\_\_ DEPTH 3095

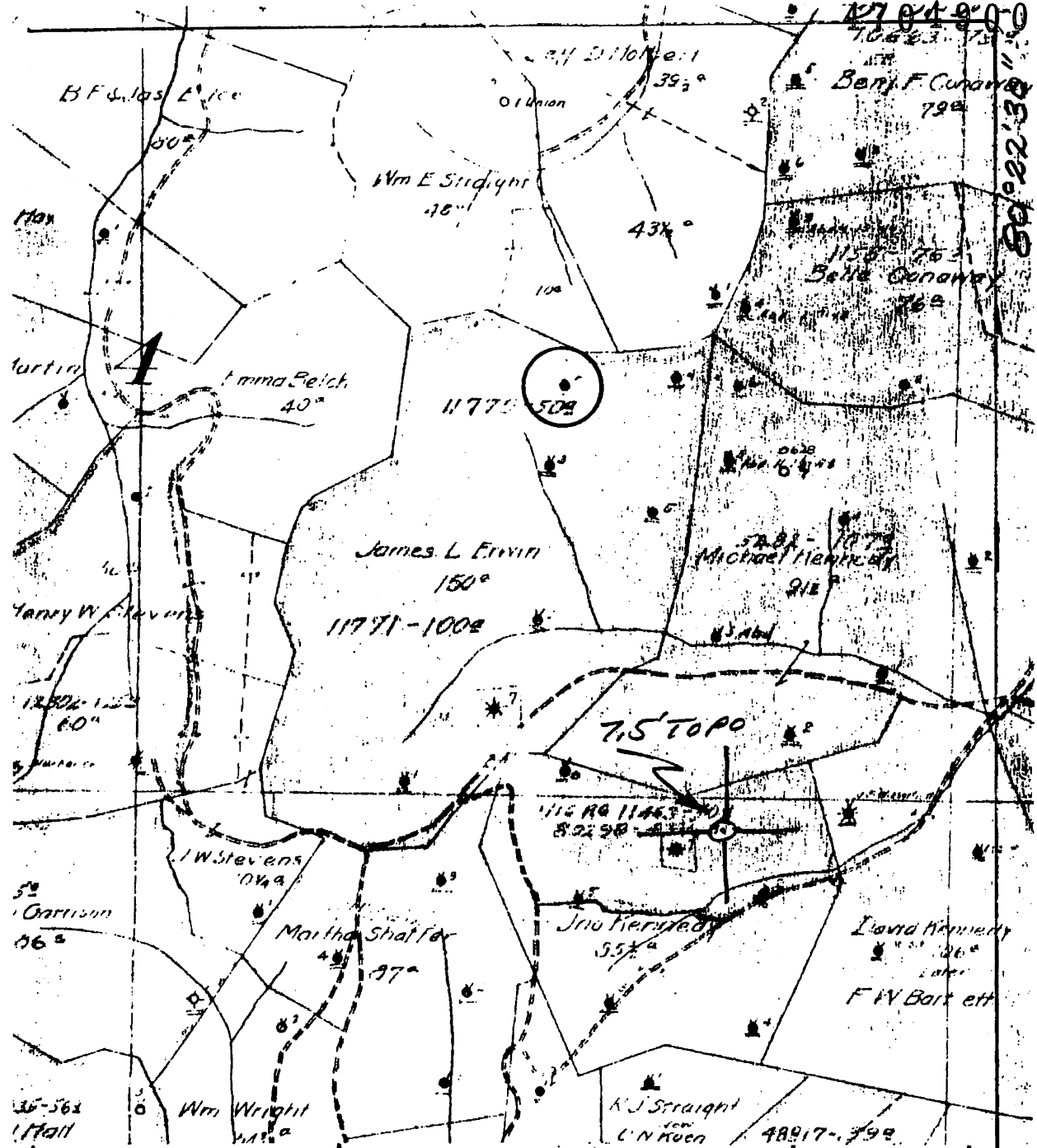
REMARKS \_\_\_\_\_

REPORTED BY MANNINGTON DIST. \_\_\_\_\_ ABANDONED \_\_\_\_\_


*(over)*

RECEIVED  
Office of Oil and Gas  
JUN 14 2019  
WV Department of  
Environmental Protection

47-049-0514



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 FORM IV-6 (8-78)  
**N50E N4E13**

  
 STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

DATE 1-25-1979  
 OPERATOR'S WELL NO. 6  
 API WELL NO. 47-049-0514  
 STATE COUNTY PERMIT

WELL TYPE: OIL  GAS \_\_\_\_\_ LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 (IF GAS, PRODUCTION \_\_\_\_\_ STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW \_\_\_\_\_)

LOCATION: ELEVATION 1386 WATER SHED LITTLE WHEATSTONE  
 DISTRICT MANNINGTON COUNTY MARRION  
 QUADRANGLE GLOVER GAP 7.5

SURFACE OWNER \_\_\_\_\_ ACRES \_\_\_\_\_  
 OIL & GAS ROYALTY OWNER \_\_\_\_\_ LEASE ACRES \_\_\_\_\_  
 LEASE NO. \_\_\_\_\_

PROPOSED WORK: DRILL \_\_\_\_\_ CONVERT \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_ FRACTURE OR STIMULATE \_\_\_\_\_ PLUS OFF OLD FORMATION \_\_\_\_\_ PERFORATE NEW FORMATION \_\_\_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

PLUG AND ABANDON \_\_\_\_\_ CLEAN OUT AND REPLUG \_\_\_\_\_  
 TARGET FORMATION \_\_\_\_\_ ESTIMATED DEPTH \_\_\_\_\_

WELL OPERATOR Pennzoil Company DESIGNATED AGENT James A. Crews  
 ADDRESS P. O. Box 1588 ADDRESS P. O. Box 1588  
Parkersburg, WV 26101 Parkersburg, WV 26101

RECEIVED  
 Office of Oil and Gas  
 JUN 14 2019  
 WV Department of Environmental Protection

L.L. ERVIN - 6

WW-4A  
Revised 6-07

1) Date: 6/7/2019  
2) Operator's Well Number  
518584 JL Erwin #6  
3) API Well No.: 47 - 049 - 00514

**STATE OF WEST VIRGINIA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS**  
**NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL**


4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>See Attached</u>	Name _____
Address _____	Address _____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>See Attached</u>
(c) Name _____	Address _____
Address _____	Name _____
6) Inspector <u>Sam Ward</u>	(c) Coal Lessee with Declaration
Address <u>PO Box 2327</u>	Name _____
<u>Buckhannon, WV 26201</u>	Address _____
Telephone <u>304-389-7583</u>	_____

**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 Department 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	<u>EQT Production Company</u>
	By:	<u>Todd Klener</u>
	Its:	<u>Regional Land Manager</u>
	Address	<u>2400 Ansys Drive, Suite 200</u> <u>Canonsburg PA 15317</u>
	Telephone	<u>(724) 271-7314</u>

RECEIVED  
Office of Oil and Gas

Subscribed and sworn before me this 10th day of June, 2019  
Donna K. Larry Notary Public  
My Commission Expires 18-23-2023

JUN 14 2019

WV Department of  
Environmental Protection

**Oil and Gas Privacy Notice**

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a 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 [deprivacyoffier@wv.gov](mailto:deprivacyoffier@wv.gov).



47-049-00514

518584 JL Erwin #6

**Owner(s) (Surface and Access)**

Stephen M & Freda L Moore  
1008 Whetstone Ln  
Mannington, WV 26582

**Coal Owner(s)**

Murray Energy Corporation  
Attn: Mason Smith  
46226 National Road  
Saint Clairsville, OH 43950

**Potential Water Owner(s)**

N/A

RECEIVED  
Office of Oil and Gas

JUN 14 2019

WV Department of  
Environmental Protection

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS  
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name EQT Production Company OP Code 306686

Watershed (HUC 10) Whetstone Run Quadrangle Glover Gap 7.5'

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes  No

Will a pit be used? Yes  No

If so, please describe anticipated pit waste: Formation Fluids

Will a synthetic liner be used in the pit? Yes  No  If so, what ml? 20 ml

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- Underground Injection ( UIC Permit Number \_\_\_\_\_ )
- Reuse (at API Number \_\_\_\_\_ )
- Off Site Disposal (Supply form WW-9 for disposal location)
- 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, removed offsite, etc. \_\_\_\_\_

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) \_\_\_\_\_

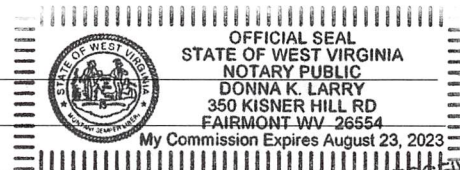
-Landfill or offsite name/permit number? \_\_\_\_\_

Permittee shall provide written notice to the Office of 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 Department 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 submitting false information, including the possibility of fine or imprisonment.

Company Official Signature [Signature]  
Company Official (Typed Name) Todd Klaner  
Company Official Title Regional Land Manager



RECEIVED  
Office of Oil and Gas  
JUN 14 2019  
WV Department of Environmental Protection

Subscribed and sworn before me this 10th day of June, 2019  
Donna K. Larry Donna K. Larry Notary Public  
My commission expires 8-23-2023

<b>EQT Production Water plan</b> <b>Offsite disposals</b>
--

**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

RECEIVED  
Office of Oil and Gas  
JUN 14 2019  
WV Department of  
Environmental Protection

Proposed Revegetation Treatment: Acres Disturbed 1± Prevegetation pH \_\_\_\_\_

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type (10-20-20) or equivalent

Fertilizer amount 1/3 ton lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Red Fescue	40	Red Fescue	15
Aslike Clover	5	Aslike Clover	5
Annual Rye	15		

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Bryan O'Hara

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Title: Inspector

Date: 6-13-19

Field Reviewed?  Yes  No

RECEIVED  
Office of Oil and Gas  
JUN 14 2019  
WV Department of  
Environmental Protection

47-049-00514P

Topo Quad: Glover Gap 7.5'

Scale: 1" = 500'

County: Marion

Date: December 11, 2018

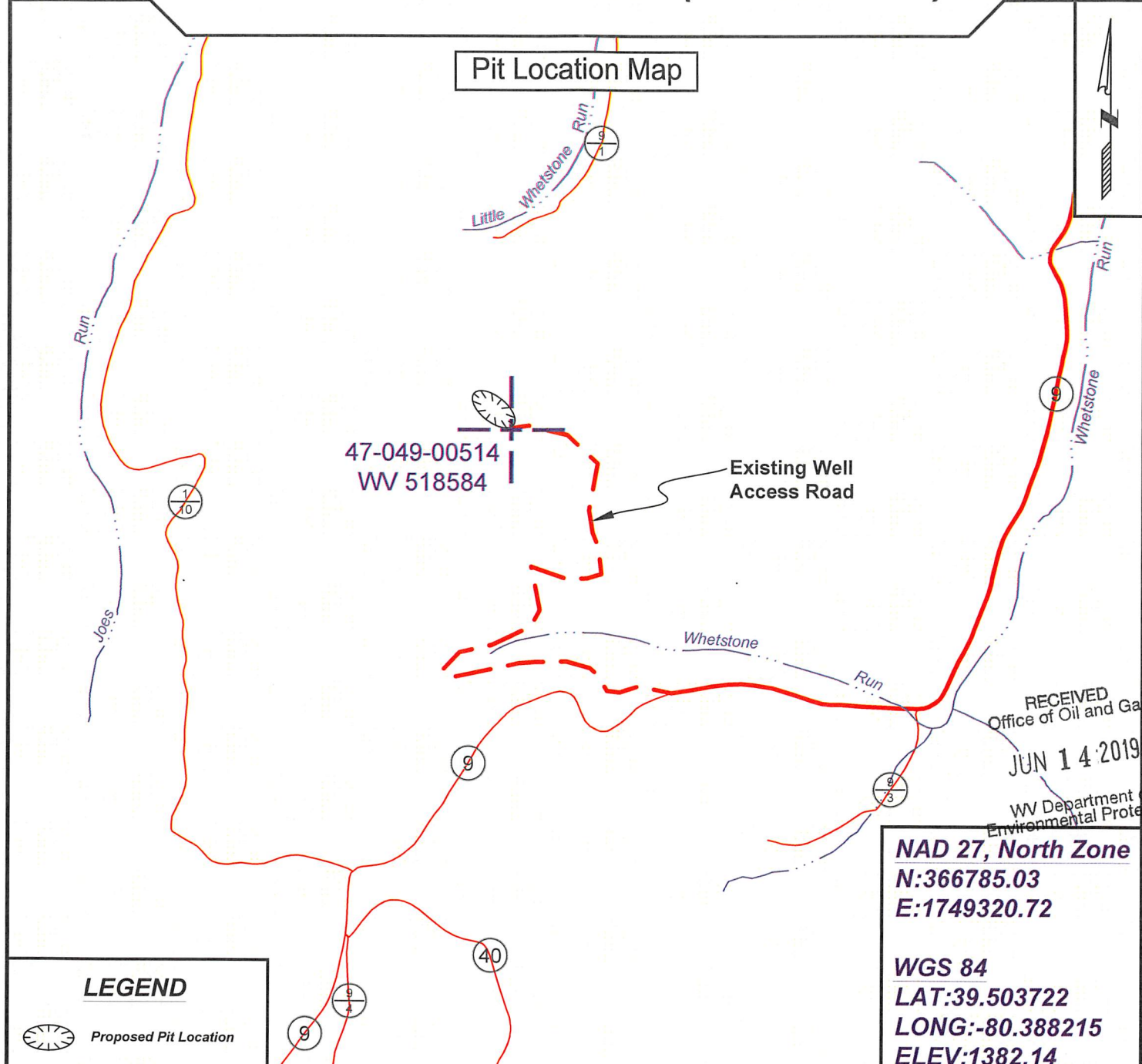
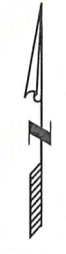
District: Mannington

Project No: 74-18-00-08

Highway

# 47-049-00514 WV 518584 (J. L. Erwin #6)

Pit Location Map



47-049-00514  
WV 518584

Existing Well  
Access Road

RECEIVED  
Office of Oil and Gas  
JUN 14 2019  
WV Department of  
Environmental Protection

**NAD 27, North Zone**  
N:366785.03  
E:1749320.72

**WGS 84**  
LAT:39.503722  
LONG:-80.388215  
ELEV:1382.14

### LEGEND

 Proposed Pit Location



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

2400 Ansys Drive, Suite 200  
Canonsburg, PA 15317

47-049-00514P

Topo Quad: Glover Gap 7.5'

Scale: 1" = 400'

County: Marion

Date: December 11, 2018

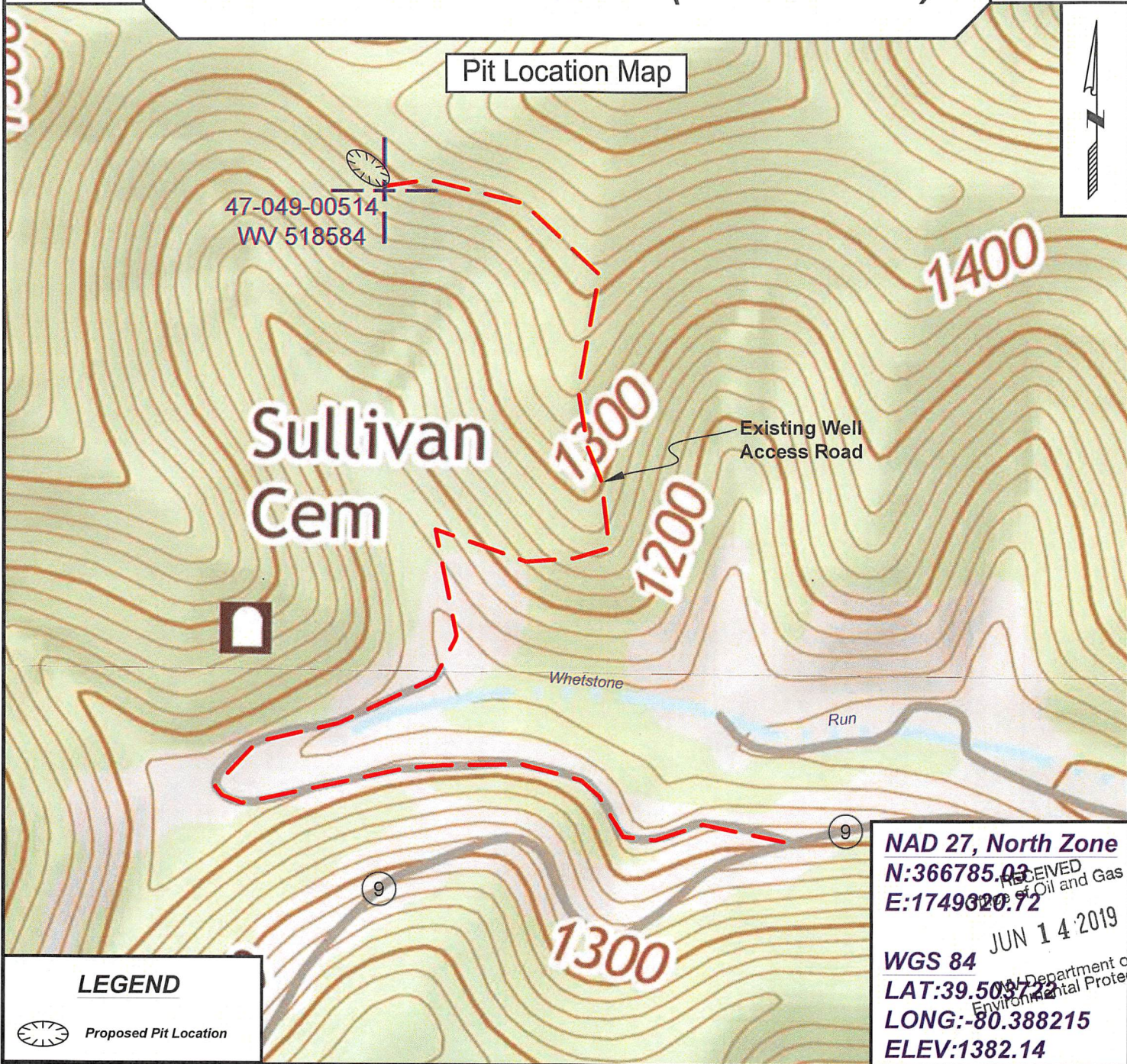
District: Mannington

Project No: 74-18-00-08

# 47-049-00514 WV 518584 (J. L. Erwin #6)

Topo

## Pit Location Map



47-049-00514  
WV 518584

# Sullivan Cem

Existing Well  
Access Road

Whetstone

Run

**NAD 27, North Zone**  
**N:366785.03**  
**E:1749020.72**

**WGS 84**  
**LAT:39.509722**  
**LONG:-80.388215**  
**ELEV:1382.14**

JUN 14 2019

Department of  
Environmental Protection

### LEGEND

 Proposed Pit Location



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

2400 Ansys Drive, Suite 200  
Canonsburg, PA 15317

47-049-00514P

Topo Quad: Glover Gap 7.5'

Scale: 1" = 2000'

County: Marion

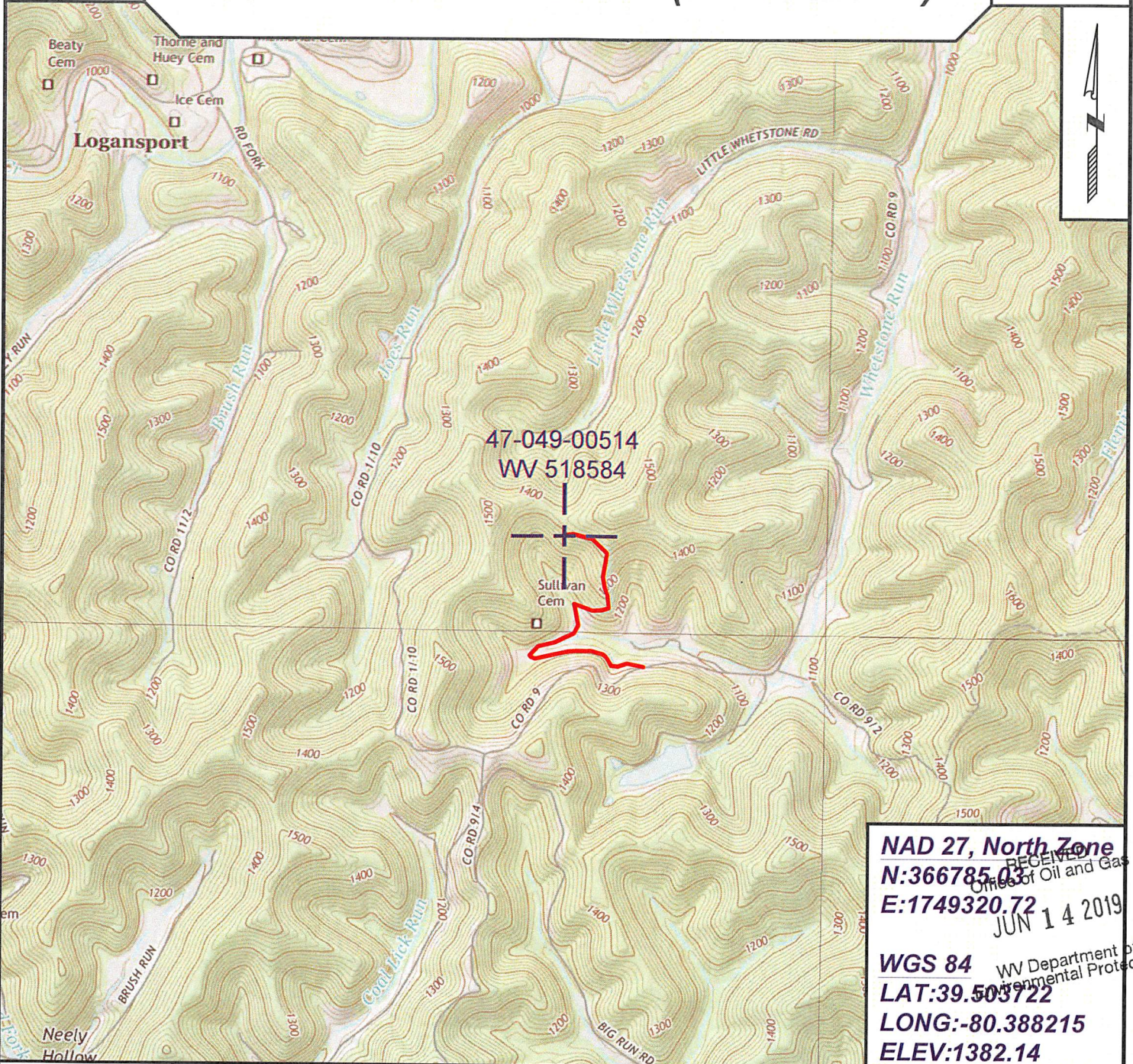
Date: December 11, 2018

District: Mannington

Project No: 74-18-00-08

# 47-049-00514 WV 518584 (J. L. Erwin #6)

Topo



**NAD 27, North Zone**  
**N:366785.03**  
**E:1749320.72**

RECEIVED  
 Office of Oil and Gas  
 JUN 14 2019

**WGS 84**  
**LAT:39.503722**  
**LONG:-80.388215**  
**ELEV:1382.14**

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**  
 2400 Ansys Drive, Suite 200  
 Canonsburg, PA 15317



**Well Pad Site Pictures**  
**J. L. Erwin #6**  
**WV 518584 47-049-00514**



WV 518584 Well ID Sign



WV 518584 Well Pad Site

RECEIVED  
Office of Oil and Gas  
JUN 14 2019

**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

**CHARLESTON WV Department of Environmental Protection**  
301 RHL Boulevard, Suite 5  
Charleston, WV 25309  
phone: 304-756-2949 fax: 304-756-2948



