



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

Tuesday, December 26, 2017
WELL WORK PERMIT
Vertical / Plugging

EQT PRODUCTION COMPANY
625 LIBERTY AVE., SUITE 1700

PITTSBURGH, PA 15222

Re: Permit approval for 521
47-061-00412-00-00

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: 521
Farm Name: JOHNSON, S. J.
U.S. WELL NUMBER: 47-061-00412-00-00
Vertical / Plugging
Date Issued: 12/26/2017

Promoting a healthy environment.

12/29/2017

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: November 9, 2017
 Operator's Well
 Well No. 651466 (Johnson #521)
 API Well No.: 47 061 - 00412

CHECK # 21606
 11-14-17
 \$1000⁰⁰

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 X Or Underground storage Deep Shallow
- 5) Elevation: 1191 ft Watershed: Jakes Run
 Location: Clay County: Monongalia Quadrangle: Blacksville 7.5'
 District: _____
- 6) Well Operator EQT Production Company 7) Designated Agent: Rex C. Ray
120 Professional Place Address: 120 Professional Place
 Address: Bridgeport, WV 26330 Bridgeport, WV 26330
- 8) Oil & Gas Gayne J. Knitowski 9) Plugging Contractor:
 Name: P. O. Box 108 Name: HydroCarbon Well Service
 Address: Gormanian, WV 26720 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 10 2017
 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 Gayne J Knitowski Date 11/29/2017

PLUGGING PROGNOS

651466

S.J. Johnson # 521

API# 47-061-00412

District, Clay

Monongalia County, WV

BY: R Green

DATE: 01/30/17

CURRENT STATUS:

TD @ 2120'

Elevation @ Well not yet surveyed

10" casing @ 732'

6 5/8" casing @ 1936

5 3/16 casing @ 1951'

Elev. 1191'

Fresh Water @ None reported**Saltwater @ None reported****Oil Show @ None reported****Gas shows @ 2107' (Big Injun)****Coal @ 700' to 707'**

1. Notify inspector Gayne Knitowski, @ 304-546-8171, 24 hrs. prior to commencing operations.
2. Check TD @ or below, 2075', spot 25 bbl. of 6% gelled water, followed by a 300' C1A cement plug, 2075' to 1775', WOC 8 hrs., TAG TOC, add additional C1A cement if necessary.
3. Free point 5 3/16" casing, cut casing @ free point, TOOH casing.
4. Set 100' C1A cement plug 50' in/out of casing cut. Perforate all saltwater, freshwater, coal, oil and gas shows below cut. Do not omit any plugs.
5. Free point 6 5/8" casing, cut casing @ free point, TOOH casing.
6. Set 100' C1A cement plug 50' in/out of casing cut. Perforate all saltwater, freshwater, coal, oil and gas shows below cut. Do not omit any plugs.
7. TOOH to elevation, set 100' C1A cement plug across elevation. * Note, elevation plug to be determined after well is surveyed.
8. TOOH to 900', set 300' C1A cement plug, 900' to 600'. (10" casing seat).
9. Free point 10" casing, cut casing @ free point, TOOH casing.
10. Set 100' C1A cement plug 50' in/out of casing cut. Perforate all saltwater, freshwater, coal, oil and gas shows below cut. Do not omit any plugs.
11. TOOH to 300', set 300' C1A cement plug 300' to surface.
12. *Note, if unable to cut and pull 10" casing, TIH and perforate 10" casing with 3 holes each @ 500', 400', 300', 200', 100', then set a 500', C1A cement plug 500' to surface.
13. Erect monument with API#, date plugged, company name, and company 6-digit ID#.
14. Reclaim location and road to WV-DEP specifications.

6 5/8"

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15. AN ATTEMPT must be made to pull all casing at a min. of 1 1/2 x string weight

*MAY FREEPOINT, CUT & PULL 6 5/8" & 5 3/16 TOGETHER, AS FROM COLLAR DIAMETER ON 5 3/16" IS ≈ 6" AND ID OF 6 5/8" IS ≈ 6".

12/29/2017

1) Date: November 9, 2017
2) Operator's Well Number
651466 (Johnson #521)
3) API Well No.: 47 061 - 00412
State County Permit

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Office of Oil and Gas

STATE OF WEST VIRGINIA - BUREAU OF ENVIRONMENT
DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL & GAS
NOTICE AND APPLICATION TO PLUG AND ABANDON WELL

NOV 22 2017

WV Department of
Environmental Protection

4) Surface Owner(s) to be served:
(a) Name Phyllis J. Johnson
Address 922 Jakes Run Road
Fairview, WV 26570
(b) Name Ralph Varner
Address P. O. Box 148
Blacksville, WV 26521
(c) Name Ethel Varner
Address 68 Logue Tennett Road
Fairview, WV 26570
6) Inspector Gayne J. Knitowski
Address P. O. Box 108
Gormanian, WV 26720
Telephone (304) 546-8171

5) (a) Coal Operator:
Name None
Address _____
(b) Coal Owner(s) with Declaration
Name Consol Energy, Inc.
Address 1000 Consol Energy Drive
Cannonsburg, PA 15317
Name Murray Energy Road
Address 46226 National Road
St. Clairsville, OH 43950
(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: Regional Land Supervisor
Address: PO Box 280
Bridgeport, WV 26330
Telephone: (304) 848-0076

Subscribed and sworn before me this 14th day of November, 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 privacyofficer@wv.gov.



12/29/2017

1) Date: November 9, 2017
2) Operation Well Number: 641568 (former 4531)
3) API Well No: 47 00413 - 00413

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Division of Oil and Gas

STATE OF WEST VIRGINIA - BUREAU OF ENVIRONMENT
DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL & GAS
NOTICE AND APPLICATION TO PLUG AND ABANDON WELL

Department of Environmental Protection

4) Surface Owners (to be served)	
(a) Name	Address
Phillips J. Johnson	202 Lakes Run Road Fairview, WV 26032
(b) Name	Address
Edwin Vander	P.O. Box 144 Steinville, WV 26252
(c) Name	Address
Libal Varner	85 Long Tunnel Road Fairview, WV 26032
(d) Inspector	Address
Wayne J. Kircovski	P.O. Box 100 Glenwood, WV 26030
(e) Co-1. Inspector with Declaration	Name
	Address
	Address
(f) Co-2. Inspector with Declaration	Name
	Address
	Address
(g) Coal Operator with Declaration	Name
	Address
	Address
(h) Coal Operator	Name
	Address
	Address
Telephone	(304) 348-3171

TO THIS PERSONS LISTED ABOVE

You should have received this notice and the following documents:

(1) The application to Plug and Abandon a Well on Form WW-48, which sets out the parties involved in the work and identifies the well to be plugged and abandoned.

(2) The plug (cave) - a map showing the well location on Form WW-8.

If the reason you received these documents is that you have rights regarding the application which are enumerated in the instructions on the reverse side. However, you are not required to take any action in this regard.

Take notice that the Office of Oil and Gas of the West Virginia Department of Environmental Protection, proposed to file on this filed this notice and application and on compliance documents for a permit to plug and abandon a well with 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 permit to plug and abandon Form WW-48. Copies of this notice, the application and the plug have been mailed by registered or certified mail or delivered in hand to a person(s) named above (or application for certain mineral interests on or before the day of mailing or delivery to the Office of Oil and Gas).

Address: 200 West 28th Street, Charleston, WV 25301
 Phone: (304) 348-3171
 Fax: (304) 348-3171
 Website: www.dep.wv.gov

Notary Public

Subscribed and sworn before me this _____ day of _____, 2017.

My Commission Expires _____

The Office of Oil and Gas processes your personal information such as name, address and phone number as part of our regulatory functions. We may use this information to contact you regarding your application or to provide you with information regarding our operations. If you have any questions about our use of your personal information, please contact the Office of Oil and Gas at 304-348-3171.

12/29/2017

WW-9
Revised 5/16

Page _____ of _____
2) Operator's Well Number
651466 (Johnson #521)
3) API Well No.: 47 061 - 00412

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): Jakes Run Quadrangle: Blacksville 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: _____

Formation Fluids

Will a synthetic liner be used in the pit? Yes X No ___ Is so, what ml.? 10 ml gpm

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. _____

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Additives to be used in drilling medium? _____

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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) _____

WV Department of
Environmental Protection

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.

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DEC 10 2017

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.

WV Department of
Environmental Protection

Company Official Signature _____

Company Official (Typed Name) Victoria J. Roark

Company Official Title Regional Land Supervisor

Subscribed and sworn before me this 14th day of November, 2017

My Commission Expires 2/20/18

Misty S. Coates

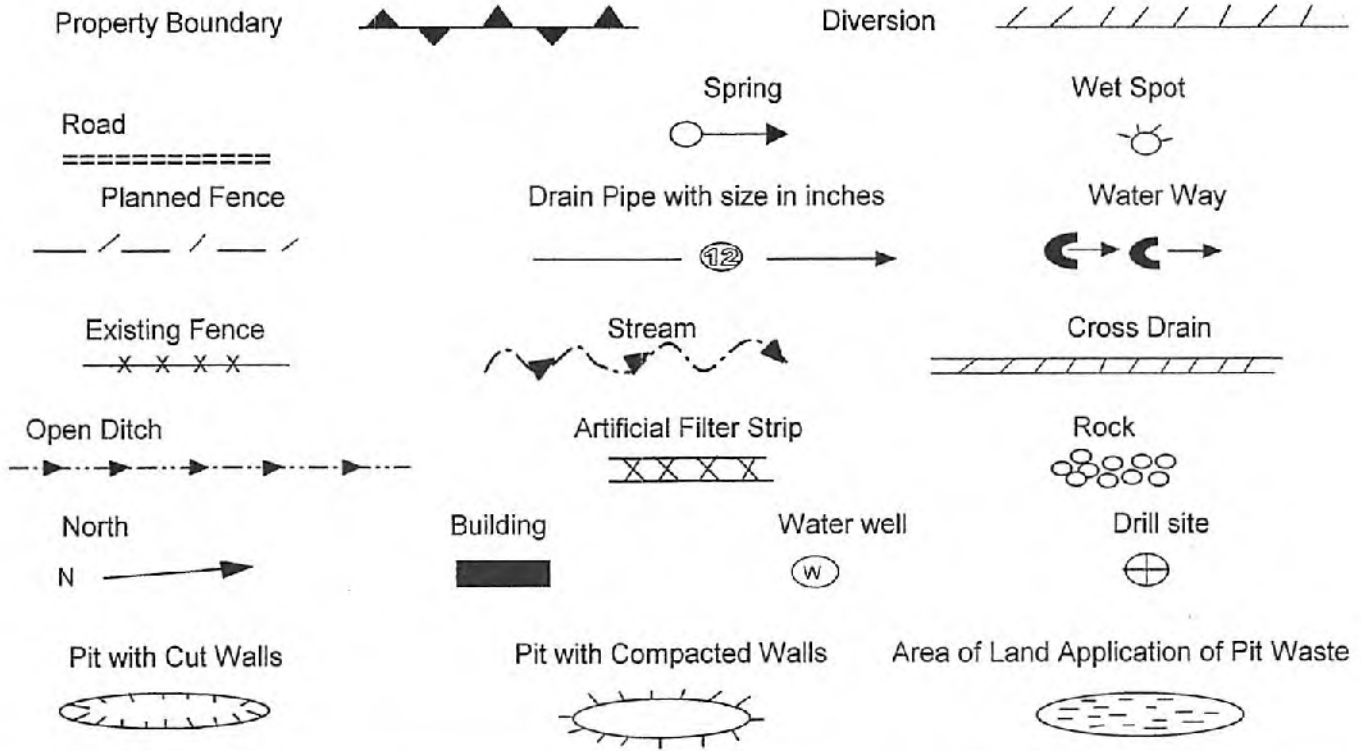


OFFICIAL SEAL
NOTARY PUBLIC
Misty S. Coates
1207 Brierhill Rd
Bridgeport, Wv 26330
My Commission Expires February 20, 2018

12/29/2017

OPERATOR'S WELL NO.:
651466 (Johnson #521)

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		

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Environmental Protection

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: Retain SITE ASAP

Title: Inspector

Date: 11/29/2017

Field Reviewed? X Yes No

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

12/29/2017

Topo Quad: Blacksville 7.5'

Scale: 1" = 200'

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County: Monongalia

Date: October 03, 2017

NOV 22 2017

District: Clay

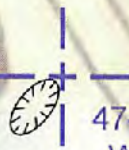
Project No: 72-20-00-08

WV Department of
Environmental Protection

47-061-00412 WV 651466 (Johnson #521)

Topo

Pit Location Topo



47-061-00412
WV 651466


Existing Well
Access Road

WANT RD

NAD 27, North Zone
N: 432,305.23
E: 1,813,843.74

WGS 84
LAT: 39.685124
LONG: -80.161249
ELEV: 1191.36

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
P.O. Box 280
Bridgeport, WV 26330

Topo Quad: Blacks ville 7.5'

Scale: 1" = 500'

RECEIVED
Office of Oil and Gas

County: Monongalia

Date: October 03, 2017

NOV 22 2017

District: Clay

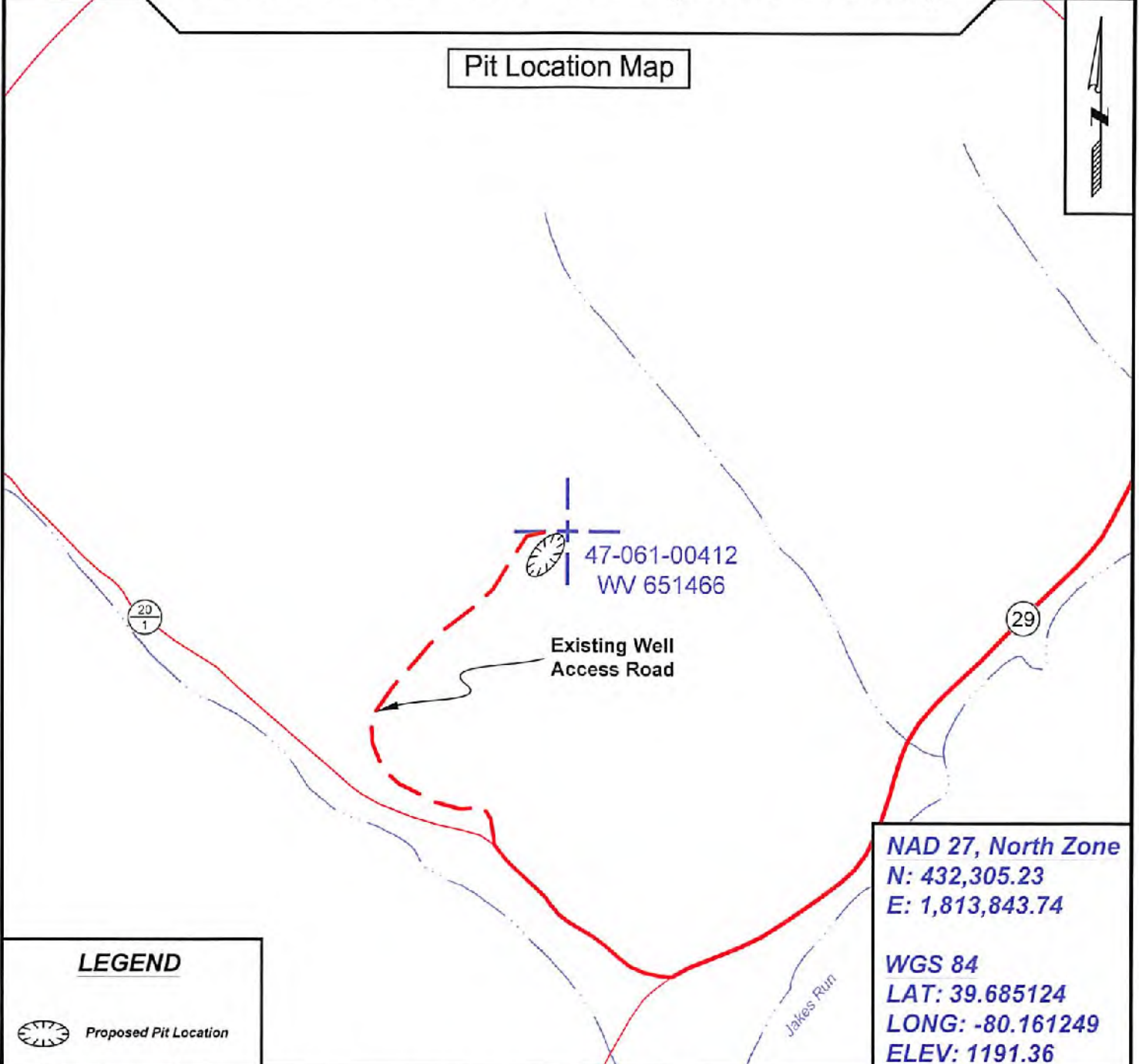
Project No: 72-20-00-08

WV Department of
Environmental Protection

Highway

47-061-00412 WV 651466 (Johnson #521)


Pit Location Map



NAD 27, North Zone
N: 432,305.23
E: 1,813,843.74

WGS 84
LAT: 39.685124
LONG: -80.161249
ELEV: 1191.36

LEGEND

 Proposed Pit Location



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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

Topo Quad: Blacksville 7.5'

Scale: 1" = 2000'

RECEIVED
Office of Oil and Gas

County: Monongalia

Date: October 03, 2017

NOV 22 2017

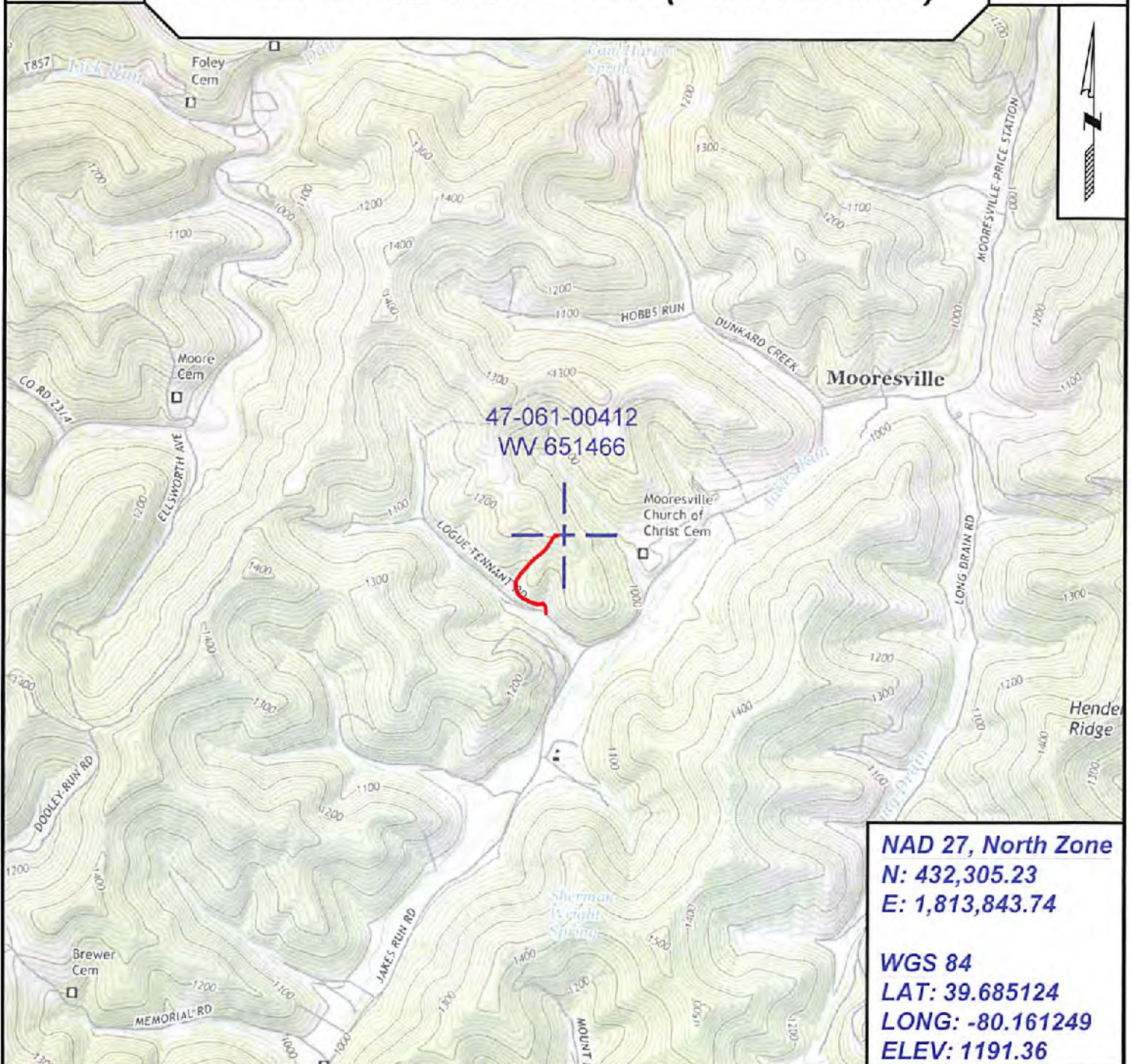
District: Clay

Project No: 72-20-00-08

WV Department of
Environmental Protection

47-061-00412 WV 651466 (Johnson #521)

Topo



47-061-00412
WV 651466

NAD 27, North Zone
N: 432,305.23
E: 1,813,843.74

WGS 84
LAT: 39.685124
LONG: -80.161249
ELEV: 1191.36



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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



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WV Department of
Environmental Protection

POTENTIAL WATER SAMPLE DATA SHEET

CLIENT: EQT PRODUCTION COMPANY
LEASE NAME AND WELL No. Johnson #521 WV 651466 47-061-00412

POTENTIAL SAMPLE LOCATIONS

Site: 1 Spacing: 981 +/- Owner: Ralph T. Varner
Address: P.O. Box 148, Blacksville, WV 26521 Phone No. 304-879-5522
Comments: _____

Site: 2 Spacing: 763 +/- Owner: Ralph T. Varner
Address: P.O. Box 148, Blacksville, WV 26521 Phone No. 304-879-5522
Comments: _____

Site: 3 Spacing: 775 +/- Owner: Ralph T. Varner
Address: P.O. Box 148, Blacksville, WV 26521 Phone No. 304-879-5522
Comments: _____

Site: 4 Spacing: 975 +/- Owner: James W. & Wanda E. Haught
Address: 1032 Jakes Run Rd., Fairview, WV 26570 Phone No. 304-879-5259
Comments: Pond

Site: 5 Spacing: 830 +/- Owner: Jack J. & Phyllis Gean Johnson
Address: 922 Jakes Run Rd., Fairview, WV 26570 Phone No. _____
Comments: _____

Site: 6 Spacing: 974 +/- Owner: Gary & Faye Thomas
Address: 978 Jakes Run Rd., Fairview, WV 26570 Phone No. 304-879-5246
Comments: Pond

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 Childress Rd
Alum Creek, WV 25003
phone: 304-756-2949
fax: 304-756-2948

MARTINSBURG OFFICE
25 Lights Addition Drive
Martinsburg, WV 25404
phone: 304-901-2162
fax: 304-901-2182

Topo Quad: Blacksville 7.5'

Scale: 1" = 2000'

RECEIVED
Office of Oil and Gas

County: Monongalia

Date: October 03, 2017

NOV 22 2017

District: Clay

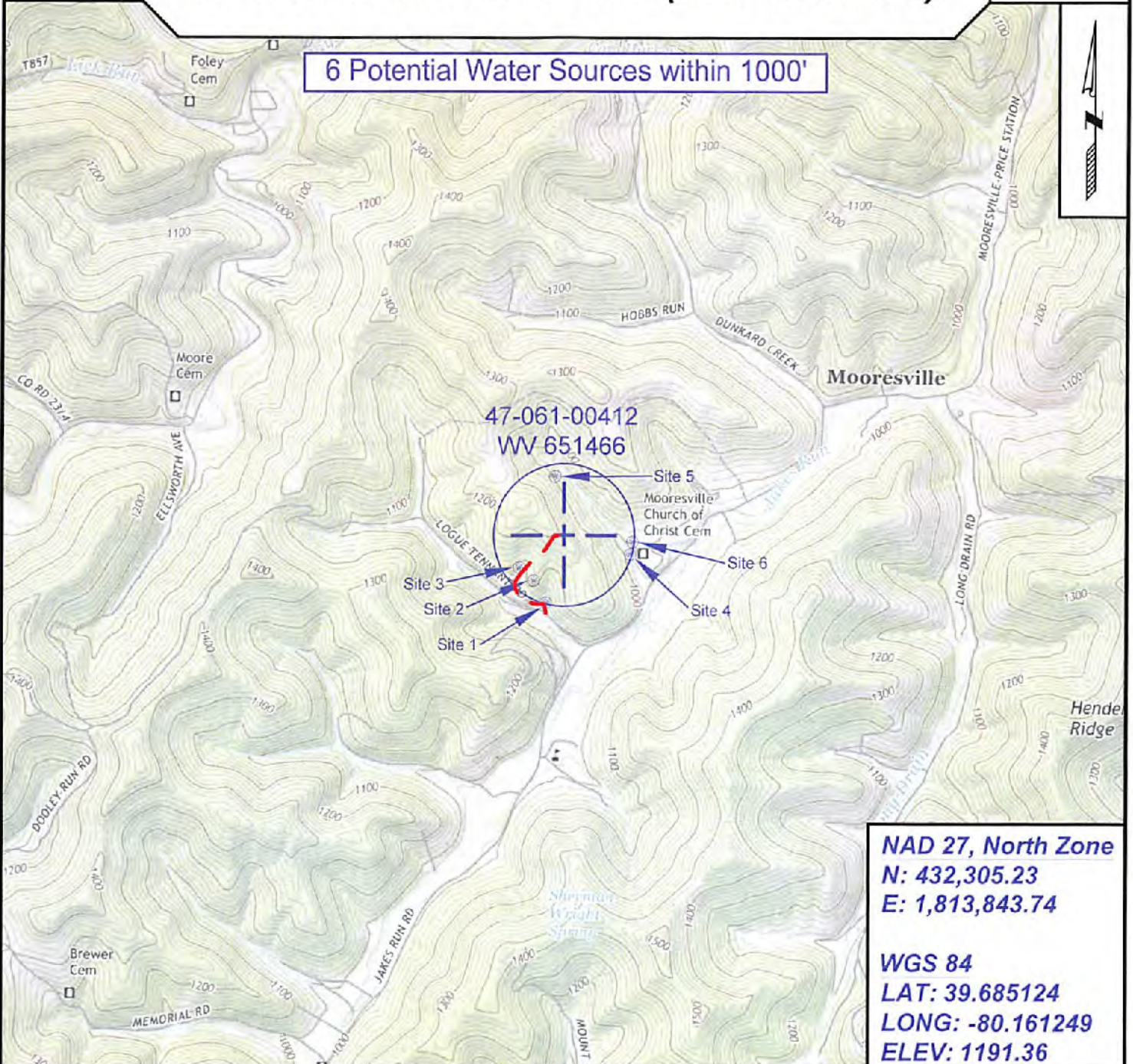
Project No: 72-20-00-08

WV Department of
Environmental Protection

Water

47-061-00412 WV 651466 (Johnson #521)

6 Potential Water Sources within 1000'



NAD 27, North Zone
N: 432,305.23
E: 1,813,843.74

WGS 84
LAT: 39.685124
LONG: -80.161249
ELEV: 1191.36



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

NOV 22 2017

WV Department of
Environmental Protection

WW-7
8-30-06



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

API: 47-061-00412 WELL NO.: WV 651466 (Johnson #521)

FARM NAME: S. J. Johnson

RESPONSIBLE PARTY NAME: EQT Production Company

COUNTY: Monongalia DISTRICT: Clay

QUADRANGLE: Blacksville 7.5'

SURFACE OWNER: Phyllis Johnson

ROYALTY OWNER: ET Bluegrass Apollo Division, et al.

UTM GPS NORTHING: 4393146

UTM GPS EASTING: 571924 GPS ELEVATION: 363 m (1191 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.

Stacy Obama
Signature

PS #2180
Title

10/26/17
Date