

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

Wednesday, October 25, 2017 WELL WORK PERMIT Vertical / Fracture

BUCKEYE OIL PRODUCING CO. POST OFFICE BOX 129

WOOSTER, OH 446910129

Re:

Permit approval for 4 47-013-03146-00-00

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: 4 Farm Name: METZ, JAMES

U.S. WELL NUMBER: 47-013-03146-00-00

Vertical / Fracture

Date Issued: 10/25/2017

Promoting a healthy environment.

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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. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code §22-6-20, which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
- Pursuant to 35 CSR 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.
- 3. Pursuant to 35 CSR 4-19.1.c, if the operator is unable to sample and analyze any water well or spring with one thousand (1,000) feet of the permitted well location, the Office of Oil and Gas requires the operator to sample, at a minimum, one water well or spring located between one thousand (1,000) feet and two thousand (2,000) feet of the permitted well location.
- 4. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
- 5. 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.
- 6. During the surface casing and cementing process, in the event cement does not return to the surface, or any other casing string that is permitted to circulate cement to the surface and does not return to the surface, the oil and gas inspector shall be notified within twenty-four (24) hours
- 7. Well work activities shall not constitute a hazard to the safety of persons.
- 8. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced, drilling ceased, completion of any other permitted well work and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

WW - 2B (Rev. 8/10)

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS WELL WORK PERMIT APPLICATION

|) Well Operato | r: Bucke | eye Oil P | roducing Co. | 7275 | Calhoun | Center | Grantsville |
|--|-----------------------|--|---------------------------------------|---------------|------------------|----------------|--|
| | | | | Operator ID | County | District | Quadrangle |
|) Operator's W | /ell Numb | er:_Metz | z #4 | | 3) Elevation: | 862 | _ |
|) Well Type: (a | a) Oil X | or Ga | s X | | | | (m) |
| | | | ction X / Und | deraround Sto | rage | | |
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|) Proposed Ta) Proposed To) Approximate) Approximate | tal Depth fresh wa | nation(s): :_ ²²⁷⁴ ter strata | Berea Feet depths: 90' | | Proposed Tar | | |
|) Approximate | coal sea | m depths | s: N/A | | | | V Department of onmental Protection |
| | | | al, Karst, other): | N/A | | | 101 1 8 201 7 |
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| 3) | | CA | SING AND TU | RING PROGR | ΔМ | | |
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| | Size | <u>Grade</u> | Weight per ft | For Drilling | Left in Well | Fill -up (Cu | u. Ft.) |
| Conductor | | | | | | | |
| Fresh Water | 6-5/8 | | | 1700' | 1700' | on packer exis | ting casing |
| Coal | | | | | | | |
| Intermediate | | | | | | | |
| Production | 4-1/2 | | 10.5# | 2200' | 2200' | 900' fil | ll up |
| Tubing | | | | | | | |
| Liners | | | | | | | |
| Packers: Kind | l: Botto | om Hole | | /// | u | | |
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| Obver | se) | | | | | | | Well No. | James Metz #4 |
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| | Fir | nal ope | n flow, | , <u> </u> | | Mc f/d | Final : | pen flow, | Bbl/d |
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Time of open flow between initial and final tests. ____ hours

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[08-78]

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

"Shot" 70 qts. October 23, 1903

"Shot" 100 qts. March 12, 1904

CHOITA

WELL LOG

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| Berea | Brown . | | | | |
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OKMAR · OIL COMPANY

Well Operator

---- opc. 4.01

ABOLPH BEREN, CO-PARTNER

10/27/2017

NOTE: Regulation 2.02(i) provides as follows:

"The tern 'log' or 'well log' shall mean a systematic, detailed geologial record of all formations, including coal, encountered in the drilling of a well."

WW-2A (Rev. 6-14)

Date: September 13, 2017
 Operator's Well Number Metz #4

State County

013

Permit

3.) API Well No.:

47-

03146

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE AND APPLICATION FOR A WELL WORK PERMIT

| 4) Surface Owner(s) to b | e served: | 5) (a) Coal Op | erator | |
|--|-------------------------------|---------------------------|----------------------------------|--|
| | E. & Sheila J. Sims | Name | N/A | |
| Address | | Address | | |
| | | | | |
| (b) Name | | (b) Coal C | wner(s) with Declaration | |
| Address | | Name | N/A | |
| | | Address | | |
| | | | | - FOUNTED |
| (c) Name | | _ Name | | RECEIVED Office of Oil and Gas |
| Address | | Address | | |
| | | - | | OCT 18 2017 |
| 6) Inspector Joe Tay | | | essee with Declaration | ant of |
| Address 1478 CI | aylick Rd. | Name | N/A | WV Department of Environmental Protection |
| Ripley, \ | WV 25271 | Address | | Elivironin |
| Telephone | | | | |
| | TO THE PERSONS NAM | MED ABOVE T | AKE NOTICE THAT: | |
| Included is the lease or | leases or other continuing | contract or contr | acts by which I hold the right t | o extract oil and gas |
| OR | | | | |
| | | | n 8(d) of the Code of West Vii | |
| | | | inia Code I have served copi | |
| application, a location plat, a | and accompanying docume | nts pages 1 thro | ugh on the above named | parties by: |
| | onal Service (Affidavit attac | | | |
| | fied Mail (Postmarked posta | | ed) | |
| | cation (Notice of Publication | | I agree to the terms and con | nditions of any permit |
| issued under this application | | 35 CSK 4, and | agree to the terms and con | nutions of any permit |
| I certify under nena | ilty of law that I have perso | onally examined | and am familiar with the info | rmation submitted on |
| this application form and al | I attachments, and that bar | sed on my inqui | ry of those individuals immed | lately responsible for |
| obtaining the information, I to | pelieve that the information | is true, accurate | and complete. | |
| I am aware that the | re are significant penalties | for submitting fa | lse information, including the | possibility of fine and |
| imprisonment. | | | | |
| 44.430/6004.44 | Well Operator | SACE | do | / Cialan |
| Land of Land | | | Producina Co., Steven W | . Sigler |
| and a state of the | | President 120 | | |
| STATE OF THE PARTY | Address: | PO Box 129 Wooster, OH | 44601 | |
| | Talanhana | 330-264-884 | | |
| | | | ckeyeoilinc.com | |
| Subscribed and sworn before | re me this 13th day of | September | er , 03146 | |
| AA AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA | Total day of | CODICITIO | 1 00110 | |
| Church S. T. | Sicken | | Notary Public | |
| My Commission Expires | November 4, 2017 | 7 | | |
| 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 depprivacyofficer@wv.gov

4701303146W CK# 114429

comt \$ 650.00

Octo 9/13/17

WW-2A Surface Waiver

| | (4/16) | | | | | | |
|----|--|---|--|--|---|--|--|
| | (4/10) | S | SURFACE OWNER WA | VER | | | |
| | County | 013 | Operator Operator wel | l number | Buckeye Oil Producing Co. Metz #4 | | |
| | | INSTRUCTIONS TO | SURFACE OWNERS N | AMED ON PAG | SE WW2-A | | |
| | The well operator named on page WW2A is applying for a permit from the State to do oil or gas well work. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas. NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT. WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION: Jo quantification of the surface tract is do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas. NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT. WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION is placed to the true owner immediately if you will be a provided to the true owner immediately if you will be a provided to the true owner immediately if you will be a provided to the true owner immediately if you will be a provided to the true owner immediately if you will be a provided to the true owner immediately if you will be a provided to the true owner immediately if you will be a provided to the true owner immediately if you will be a provided to the true owner immediately if you will be a provided to the true owner immediately if you will be a provided to the true owner immediately if you will be a provided to the true owner immediately if you will be a provided to the true owner immediately if you will be a provided to the true owner immediately if you will be a provided to the true owner immediately if you will be a provided to the true owner immediately if yo | | | | | | |
| | Chief, Office of Department of I | | | | 0CL 18 ZO1/ | | |
| | 601 57th St. SE Charleston, WV | | | | RECEIVED Office of Oil and Gas | | |
| | operator files his be filed in person be sure of the diff you have been work described Common operator's name the application. The Character of the diff you was a copy from the List of to test your wat the person of the copy from the List of the copy from the Character of the copy from the copy | is Application. You have FIFTE on or received in the mail by the ate. Check with your postmaste on contacted by the well operator in these materials, then the perients must be in writing. Your of e and well number and the approver you may add other documents after has the power to deny or core proposed well work will constitute soil erosion and sediment containing would occur to publicly ow a proposed well work fails to prove applicant has committed a substitute the chief. Water Testing Laboratories. The containing was a copy of the permit as it are to establish water quality prious that I have read the institute Well Work Permit on Form What was a well work Permit on Form What was the Well Work Permit on Form What was the work Permit on Form What | EN (15) DAYS after the Chief's office by the ting to ensure adequate de and you have signed a mit may be issued at an ecomments must include coximate location of the particular and to the safe and to the safe and to the safe are location of a present and to the safe are location of a present and to the safe are location of a present and to the safe are location of a present and to the safe are location of a present and the location of a present and the location of a present and the location of a present and after drilling. CRY STATEMENT OF Not a control of the location of the locatio | filing date to filme stated above livery time or to "voluntary state by time. I wour name, add proposed well so or photograp it based on contry of persons, or effective; if or supplies; vious permit or to abate or see the order denyibles of water testing of page 1 has and that I has consisting of page 1 has a state of page 2 has | be served on or before the date the le your comments. Comments must e. You may call the Chief's office to arrange special expedited handling. Ement of no objection" to the planned dress and telephone number, the well ite including district and county from this to support your comments. In ments on the following grounds: a substantial violation of one or more k review of the violation". ing the permit, you should request sting laboratories which you can hire f to obtain a copy. | | |
| | described there I furthe | in. | | | materials, and I have no objection to | | |
| X | FOR EXECUTION James | ON BY A NATURAL PERSON | ate 10-16-17 Name | oany | ION BY A CORPORATION, ETC. | | |
| ** | JAMES S | signature Esims heila J. S. ms | By Its | | Date | | |
| | P | rint Name | | | | | |

Date

Signature

WW-2A1 (Rev. 1/11)

| 0 | pera | tor's | Well | Number | Metz # |
|---|------|-------|------|--------|--------|
| | | | | | |

INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE Chapter 22, Article 6, Section 8(d) IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

| Grantor, Lessor, etc. | Grantee, Lessee, etc. | Royalty | Book/Page |
|-----------------------|---------------------------|---------|-----------|
| Okmar Oil Co. | Buckeye Oil Producing Co. | 1/8 | 229/543 |

Acknowledgement of Possible Permitting/Approval In Addition to the Office of Oil and Gas

The permit applicant for the proposed well work addressed in this application he reby a cknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources
- WV Division of Highways
- · U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

Office of Oil and Gas

OCT 18 2017

WV Department of Environmental Protection

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be ac quired from the appr opriate aut hority before the affected activity is initiated.

| Show E | |
|-----------------------------|---------------------------|
| Buckeye Oil Producing Co. | |
| Steven W. Sigler, President | |
| | Buckeye Oil Producing Co. |

WW-9 (5/16)

| API Number | 47 - 0 | 13 - | 03146 |
|--------------|---------|---------|-------|
| Operator's W | ell No. | Metz #4 | |

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

| FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN |
|--|
| Operator Name Buckeye Oil Producing Co. OP Code 7275 |
| Watershed (HUC 10) Yellow Creek Quadrangle Grantsville |
| 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 V No No |
| If so, please describe anticipated pit waste: Flowback water & pit water |
| Will a synthetic liner be used in the pit? Yes No If so, what 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 systembe used? If so, describe: No |
| Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. fresh water |
| -If oil based, what type? Synthetic, petroleum, etc |
| Additives to be used in drilling medium? N/A |
| Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. leave in pit |
| -If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) cement |
| -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 Secret S |
| Company Official (Typed Name) Steven W. Sigler Company Official Title President Office of Oil add Gas |
| Company Official Title President |
| (OCT -18822017 |
| Subscribed and sworn before me this 13th day of September , 2017 :: WY Department of Environmental Protection |
| My commission expires Nov. 4, 2011 |

| - | No. Metz #4 |
|--|--|
| +/- 2 acres Prevegetation pH | 5.5 |
| rect to pH 6.5 | |
| | |
| lbs/acre | |
| Чън жасте | |
| Seed Mixtures | |
| Permane | nt |
| Seed Type | lbs/acre |
| Kentucky Fescue | 20 |
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| Date: 9-70-17 | RECEIVE Office of Oil at OCT 18 WV Depart Environments |
| a Fi. | lbs/acre |

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WW-9- GPP Rev. 5/16

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|---------------------|---------|-------|
| API Number 47 - 01 | 3 _ | 03146 |
| Operator's Well No. | Metz #4 | |

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS GROUNDWATER PROTECTION PLAN

| perator Name: Buckeye Oil Producing Co. | |
|--|---|
| /atershed (HUC 10): Yellow Creek | Quad: Grantsville |
| arm Name: Metz #4 | |
| List the procedures used for the treatment and discharge groundwater. | e of fluids. Include a list of all operations that could contaminate the |
| Excess workover fluids to be directed to lined dependent upon volumes, fluids will be treate to an approved offside disposal facility. | d earthen pit. Upon completion of workover, ed, aeriated, and land applied or transported |
| inadequate pit construction; no liner; excessi | ive water volume |
| Describe procedures and equipment used to protect ground | indwater quality from the list of potential contaminant sources above. |
| pit liner berms directing discharge from pit flowback to tanks after frac | |
| . List the closest water body, distance to closest water be discharge area. | body, and distance from closest Well Head Protection Area to the |
| Yellow Creek at approx. 800' 475' from sediment barrier | |
| | |
| Summarize all activities at your facility that are already | regulated for groundwater protection. |
| tank dikage | RECEIVED Office of Oil and |
| | nct 18 2011 |
| | W Department Environmental Prot |
| | |

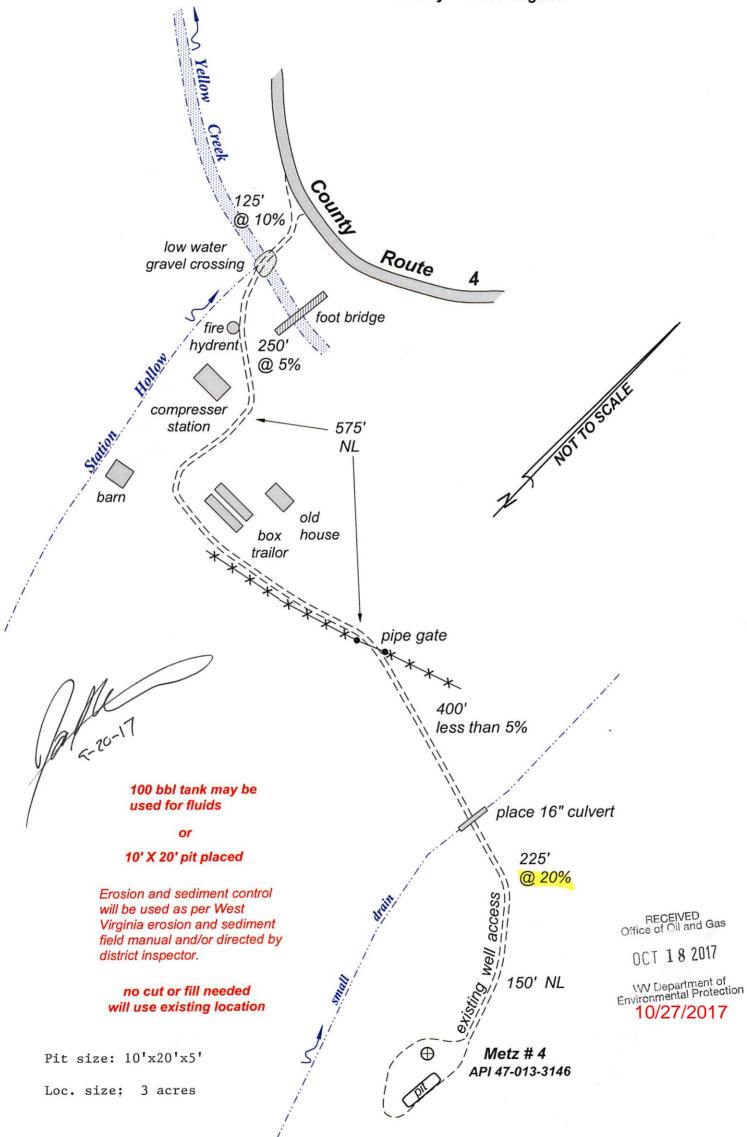
5. Discuss any existing groundwater quality data for your facility or an adjacent property.

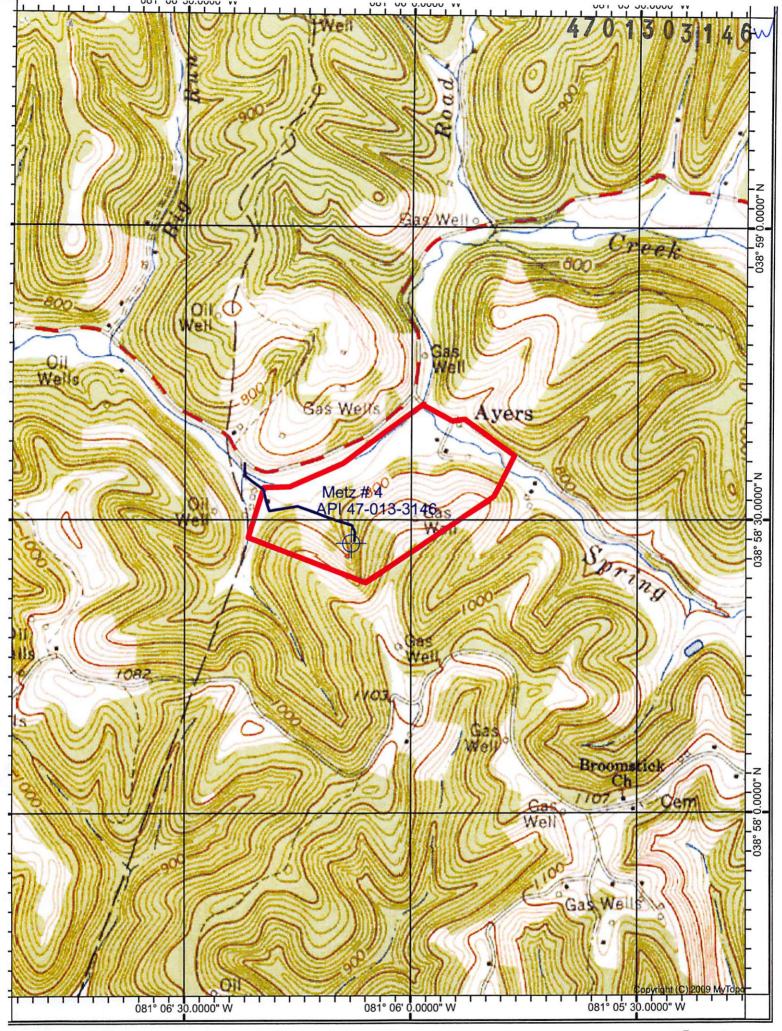
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|-------------------|------------|---|-------|--|
| API Number 47 - | 013 | - | 03146 | |
| Operator's Well N | o. Metz #4 | _ | | |

| | Operator's Well No. Metz #4 | |
|----|---|----------|
| | No issues that we are aware of. | |
| | Closest water well is approx. 2000' | |
| | | |
| 6. | Provide a statement that no waste material will be used for deicing or fill material on the property. | |
| | No waste materials will be used on this or any additional well site for fill or deicing. | |
| | | |
| 7. | . Describe the groundwater protection instruction and training to be provided to the employees. Job procedures shall provide direction on how to prevent groundwater contamination. | |
| | Rig operator is directed to only use the earthen pit as needed. | |
| | Our initial plan is to circulate cleanout materials to a half tank, settle and dispose of liquids at an approved disposal facility. | |
| | Solids will then be left to dry and buried on site. | |
| | | |
| | | |
| | | |
| | | |
| 8. | 3. Provide provisions and frequency for inspections of all GPP elements and equipment. | |
| | Inspections will be daily during workover and ongoing through production period by well tender | |
| | RECEIVED Office of Oil and G | as 7 |
| [| 007 1 8 201 | (|
| | WV Depart Pro | otection |
| | Date: 9 3 7 | |
| | 10/27/201 | 7 |

Buckeye Oil Prod. Co.
Well: Metz # 4 API 47-013-3146
250 Acre Lease
Center District Calhoun County West Virginia





GRANTSVILLE QUADRANGLE

SCALE 1' = 1000'

BUCKEYE OIL CORP..

WELL: METZ #4 API 47-013-03146 METZ HEIRS +/- 94.5 ACRE LEASE

CENTER DISTRICT CALHOUN COUNTY WEST VIRGINIA

RECEIVED Gas

OCT 18 2017

WV Department of Environmental Protection

10/27/2017

