



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

October 21, 2013

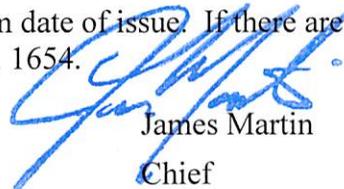
WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-100061, issued to PDC MOUNTAINEER LLC, 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: MCCALL NO. 2 (2-242)
Farm Name: DAVISSON, EDITH ,. ET AL
API Well Number: 47-100061
Permit Type: Plugging
Date Issued: 10/21/2013

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.

1) Date 9/12, 2013
2) Operator's
Well No. #2
3) API Well No. 47-001 - 00061

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 X / Gas / Liquid injection / Waste disposal /
(If "Gas, Production X or Underground storage) Deep / Shallow X

5) Location: Elevation 1290' Watershed
District Union 01 County Barbour 01 Quadrangle Brownton 7.5' 266
Browntown

6) Well Operator PDC Mountaineer LLC 7) Designated Agent Jamie Haga
Address 120 Genesis Blvd Address 120 Genesis Blvd
Bridgeport WV 26330 Bridgeport WV 26330

8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name Bryan Harris Name Hydrocarbon Well Service
Address PO Box 157 Address Drawer 995
Volga WV 26238 Buckhannon WV 26201

10) Work Order: The work order for the manner of plugging this well is as follows:
Release packer and remove 3" tubing. Check TD and fluid level. Load hole with gel.
Set cement plug from 4335' to 4225', sever 5 3/16" casing at free point and pull. Set cement plug from 50' below to 50' above sever on 5 3/16
extending up to at least 3935'. Set cement plug from 2062' to 1780'. Pull 8.25" casing.
Set cement plug from 792' to 685' then from 471' to surface. Install monument

Set plug 1350 - 1250 (ELEVATION)
* MUST BE HIGHER BECAUSE ONLY 3710' OF 5 3/16" WAS RUN.

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WV Dept. 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 Harris Date 10-3-13

BROWNTOWN GUAD

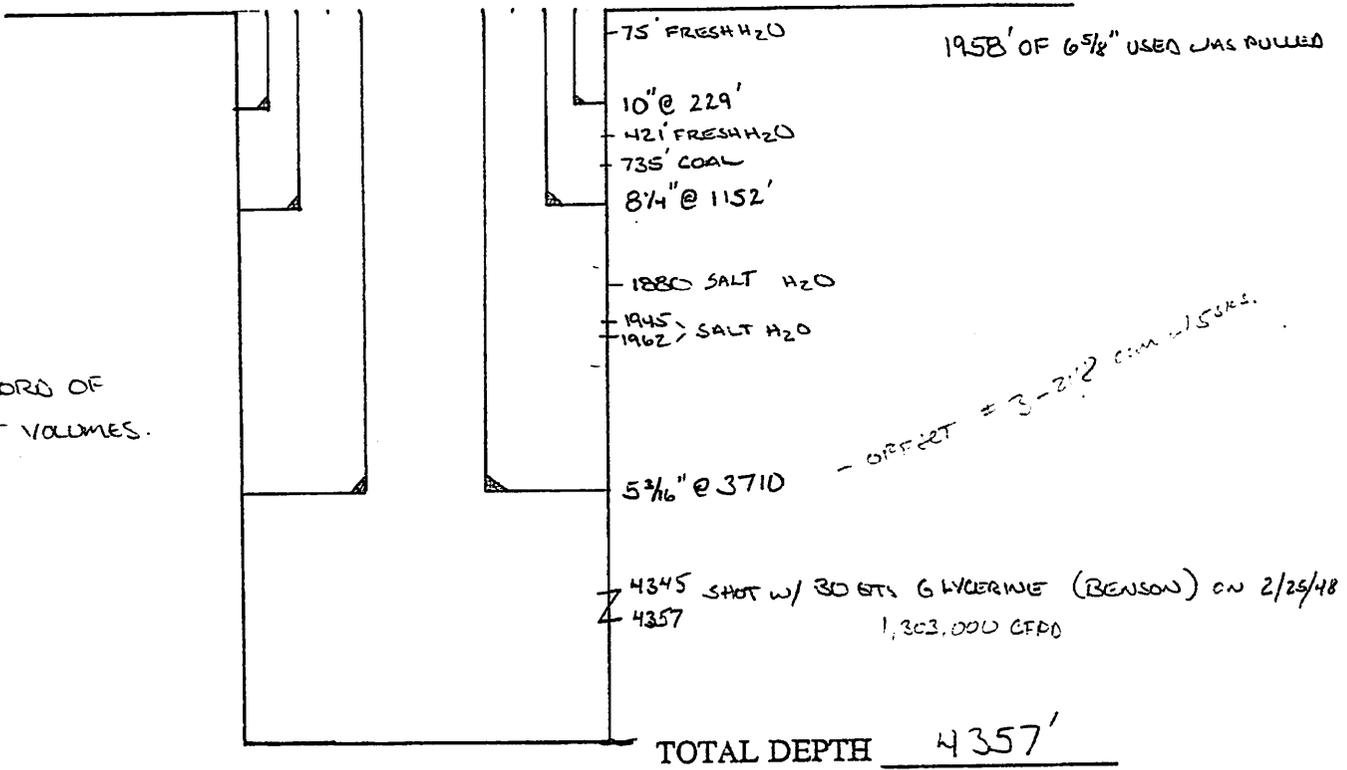
100661A

plug1

BAR-61

WELL NAME PICKENS-DAVISON # 2-242 FARM NAME _____
 TOWNSHIP UNION DIST. COUNTY BARBOUR
 COMPLETED 2-29-48 COAL 735-42'

PRESENT STATUS



NO RECORD OF CEMENT VOLUMES.

- OFFSET = 3-2 1/2" FROM 15525.

CASING RECORD

Pulled

| CONDUCTOR | 10" | 229' | 0' |
|-----------|---------|-------|-------|
| CASING | 8 1/4" | 1152' | 0' |
| | 6 5/8" | 1958' | 1958' |
| TUBING | 5 3/16" | 3710' | 0' |

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WV Dept. of Environmental Protection

RECORDS OF 10 JTS 3" TUBING BEING RUN ON PACKER
BECAUSE DRILLING MUD LEAKED WHEN SHOT IN.
PACKER WAS 7"



Pickens - Davidson

2-242

10006P

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

WELL RECORD

Permit No. BAR-61

Oil or Gas Well Gas
(KIND)

Company McCall Drilling Co.
Address 612 Keystone Bldg, Pgh. Pa.
Farm Pickens heirs Acres 295
Location (waters) _____
Well No. 2-242 Elev. 1290
District Union County Barbour
The surface of tract is owned in fee by Pickens heirs
307 Point Street Address Clarksburg, W. Va.
Mineral rights are owned by same
Address _____
Drilling commenced October 27th, 1947
Drilling completed February 29th, 1948
Date Shot 2/25/48 From 4345 To 4357
With _____
Open Flow /10ths Water in _____ Inch
57/10ths Merc. in 27 Inch
Volume 1,302,000 Cu. Ft.
Rock Pressure turned in lime hrs.
Oil _____ bbls., 1st 24 hrs.
Fresh water 75 feet 421 feet
Salt water 1880 feet 1945 & 1962 feet

| Casing and Tubing | Used in Drilling | Left in Well | Packers |
|-------------------|------------------|--------------|----------------|
| Size | | | Kind of Packer |
| 16 | | | |
| 18 | | | |
| 10 | <u>229</u> | <u>229</u> | Size of |
| 8 3/4 | <u>1152</u> | <u>1152</u> | Depth set |
| 6 3/4 | <u>1958</u> | <u>None</u> | |
| 5 3/16 | <u>3710</u> | <u>3710</u> | |
| 3 | | | Perf. top |
| 2 | | | Perf. bottom |
| Liners Used | | | Perf. top |
| | | | Perf. bottom |

CASING CEMENTED 5-2/80E No. Ft. 50 Date _____
COAL WAS ENCOUNTERED AT 735 FEET _____ INCHES
_____ FEET _____ INCHES FEET _____ INCHES
_____ FEET _____ INCHES FEET _____ INCHES

| Formation | Color | Hard or Soft | Top | Bottom | Oil, Gas or Water | Depth Found | Remarks |
|-----------|-------|--------------|------|--------|-------------------|-------------|---------|
| Conductor | | | | 16 | | | |
| Slate | | | 16 | 25 | | | |
| Red Rock | | | 25 | 60 | | | |
| Sand | | | 60 | 75 | | | |
| Slate | | | 75 | 125 | | | |
| Red Rock | | | 125 | 160 | | | |
| Slate | | | 160 | 210 | | | |
| Red Rock | | | 210 | 220 | | | |
| Slate | | | 220 | 290 | | | |
| Red Rock | | | 290 | 305 | | | |
| Lime | | | 305 | 325 | | | |
| Slate | | | 325 | 335 | | | |
| Red Rock | | | 335 | 340 | | | |
| Sand | | | 340 | 460 | | | |
| Slate | | | 460 | 500 | | | |
| Sand | | | 500 | 620 | | | |
| Slate | | | 620 | 735 | | | |
| Coal | | | 735 | 742 | | | |
| Slate | | | 742 | 831 | | | |
| Sand | | | 831 | 865 | | | |
| Slate | | | 865 | 885 | | | |
| Sand | | | 885 | 1020 | | | |
| Slate | | | 1020 | 1115 | | | |
| Sand | | | 1115 | 1175 | | | |
| Slate | | | 1175 | 1185 | | | |
| Sand | | | 1185 | 1215 | | | |
| Red Rock | | | 1215 | 1390 | | | |
| Sand | | | 1390 | 1470 | | | |
| Slate | | | 1470 | 1496 | | | |
| Lime | | | 1496 | 1508 | | | |
| Slate | | | 1508 | 1545 | | | |
| Big Lime | | | 1545 | 1625 | | | |
| Big Injun | | | 1625 | 1647 | | | |
| Red Rock | | | 1647 | 1650 | | | |
| Sand | | | 1650 | 1665 | | | |
| Red Rock | | | 1665 | 1670 | | | |
| Sand | | | 1670 | 1725 | | | |
| Slate | | | 1725 | 1760 | | | |

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WV Dept. of Environmental Protection

| Formation | Color | Hard or Soft | Top | Bottom | Oil, Gas or Water | Depth Found | Remarks |
|----------------|-------|--------------|------|--------|-------------------|-------------|---------|
| Lime | | | 1780 | 1860 | | | |
| Sand | | | 1860 | 1980 | | | |
| Slate | | | 1980 | 1985 | | | |
| Lime | | | 1985 | 2345 | | | |
| Sand | | | 2345 | 2360 | | | |
| Red Rock | | | 2360 | 2370 | | | |
| Lime | | | 2370 | 2900 | | | |
| Slate | | | 2900 | 3450 | | | |
| Lime | | | 3450 | 3680 | | | |
| Slate | | | 3680 | 3675 | | | |
| Lime | | | 3675 | 3720 | | | |
| Slate | | | 3720 | 4033 | | | |
| Sand | | | 4033 | 4050 | | | |
| Slate & Shells | | | 4050 | 4245 | | | |
| Benson Sand | | | 4245 | 4357 | | | |
| Lime | | | 4357 | | | | |

1 - 8" Bailor Water at 1880'
 Hole full water 1945'
 2 - 8" Bailors at 1982'
 Gas 8/10 W in 1" 4034'
 Gas 2/10 W 1" 4345
 " 10/10 W 2" - 4249
 " 40/10 W 2" - 4243-57
 Shot with 30 Qts Glycerine
 4245 to 4357, 3 drums water on
 top shot, exploded with bomb.

4345
 -1290

 3055 Benson

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OCT 10 2013

Office of Oil and Gas
 WV Dept. of Environmental Protection

Date 5-21-48, 19__
 APPROVED McCall Drilling Co, Owner
 By Geo. C. Shaffer, Sec.
 (X196)

100061P

WW-4A
Revised 6-07

1) Date: 9/12/2013
2) Operator's Well Number
#2
3) API Well No.: 47 - 001 - 00061

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

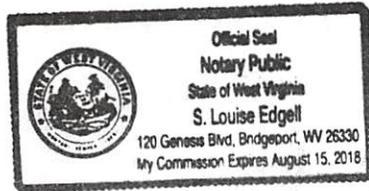
| | |
|--|---|
| 4) Surface Owner(s) to be served: | 5) (a) Coal Operator |
| (a) Name <u>Corbin Davisson et al</u> <i>W</i> ✓ | Name _____ |
| Address <u>164 HARRISON ST</u> | Address _____ |
| <u>CLARKSBURG WV 26301</u> | |
| (b) Name _____ | (b) Coal Owner(s) with Declaration |
| Address _____ | Name <u>North Central Resources LLC</u> ✓ |
| | Address <u>200 Chapel Brook Drive</u> |
| | <u>Bridgeport WV 26330</u> |
| (c) Name _____ | Name _____ |
| Address _____ | Address _____ |
| 6) Inspector <u>Bryan Harris</u> | (c) Coal Lessee with Declaration |
| Address <u>PO Box 157</u> | Name _____ |
| <u>Volga WV 26238</u> | Address _____ |
| Telephone <u>304-553-6087</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 PDC Mountaineer LLC
 By: Jamie Haga *[Signature]*
 Its: Agent
 Address 120 Genesis Blvd
Bridgeport WV 26330
 Telephone 304-842-3597

Subscribed and sworn before me this 1st day of October, 2013
[Signature] Notary Public
 My Commission Expires August 15, 2018

Received
 OCT 10 2013
 Office of Oil and Gas
 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 depprivacyoffier@wv.gov.

SURFACE OWNER WAIVER

Operator's Well
Number

#2 McCall Pickens/Davisson

INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW4-A

The well operator named on page WW-4A is applying for a permit from the State to plug and abandon a well. (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:**

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

Time Limits and methods for filing comments. The law requires these materials to be served on or before the date the operator files his Application. You have **FIVE (5) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Comments must be in writing. Your comments must include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons.
- 2) The soil erosion and sediment control plan is not adequate or effective;
- 3) Damage would occur to publicly owned lands or resources;
- 4) The proposed well work fails to protect fresh water sources or supplies;
- 5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation..."

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

VOLUNTARY STATEMENT OF NO OBJECTION

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application For A Permit To Plug And Abandon on Forms WW-4A and WW-4B, and a survey plat.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURAL PERSON
ETC.

FOR EXECUTION BY A CORPORATION,

Edith A. Davisson Date Oct 7 2015
Signature By

Its Date

Signature

Date

RECEIVED
Office of Oil and Gas
OCT 16 2015
WV Department of
Environmental Protection

SURFACE OWNER WAIVER

Operator's Well
Number

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Department of Environmental Protection
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FOR EXECUTION BY A NATURAL PERSON
ETC.

FOR EXECUTION BY A CORPORATION,

| | | |
|-------------------------|------------------------|-----------------|
| <u>Edith A. Navison</u> | Date <u>Oct 7 2013</u> | Name _____ |
| Signature | | By _____ |
| | | Its _____ |
| | | Date _____ |
| | | Signature _____ |
| | | Date _____ |

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OCT 10 2013
Office of Oil and Gas
WV Dept. of Environmental Protection

100061 P

WW-9
Rev. 5/08

Page _____ of _____
API Number 47 - 001 - 00061
Operator's Well No. #2

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

CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM
GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator Name PDC Mountaineer LLC OP Code 494494839

Watershed _____ Quadrangle Brownnton 7.5'

Elevation 1290' County Barbour District Union

Description of anticipated Pit Waste: No Pit Will Use Tanks (Gel & Cement)

Will a synthetic liner be used in the pit? N/A

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number See Attached)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

Proposed Work For Which Pit Will Be Used:

- Drilling
- Workover
- Other (Explain _____)
- Swabbing
- Plugging

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 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 _____

Company Official (Typed Name) Jamie Haga

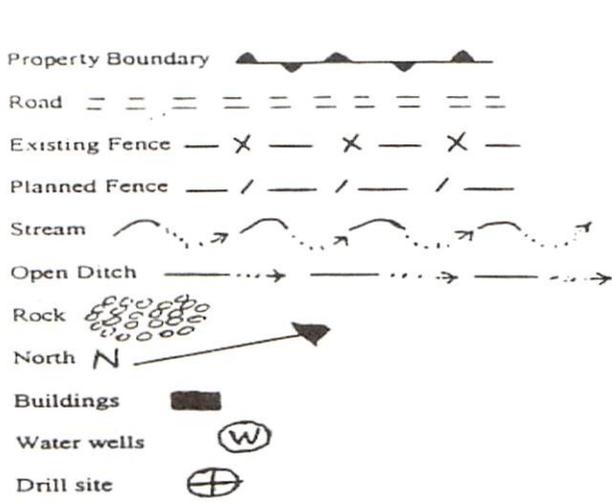
Company Official Title Agent

Subscribed and sworn before me this 1st day of October, 20 13

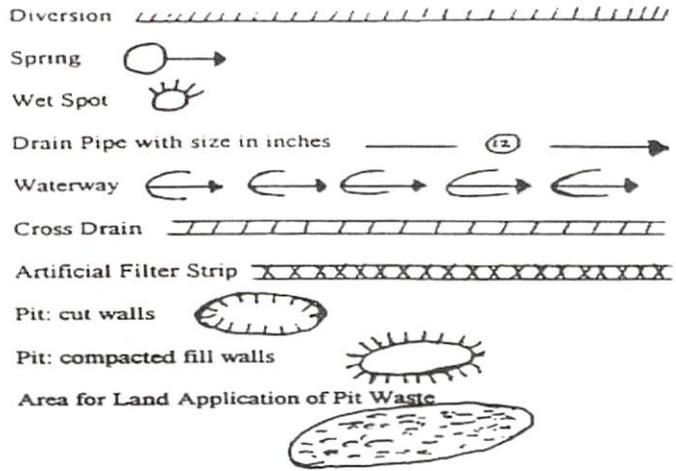
S. Louise Edgell Notary Public

My commission expires August 15, 2018

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Office of Oil and Gas
WV Dept. of Environmental Protection



LEGEND



Proposed Revegetation Treatment: Acres Disturbed 1.5 Prevegetation pH _____

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20 or equivalent) 500 lbs/acre (500 lbs minimum)

Mulch 2 Tons/acre

Seed Mixtures

| Seed Type | Area I | | Seed Type | Area II | |
|----------------|--------|----------|-----------|---------|----------|
| | | lbs/acre | | | lbs/acre |
| Timothy | | 40 | | | |
| Orchard Grass | | 15 | | | |
| Red Top Clover | | 5 | | | |

Attach:
Drawing(s) of road, location, pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Bryan Harris

Comments: _____

Title: Oil & Gas Inspector

Date: 10-3-13

Field Reviewed? () Yes (X) No

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 Office of Oil and Gas
 WV Dept. of Environmental Protection

Disposal Well Information Sheet

(Including Lat./Long. , Operator, and API #)

| DISPOSAL WELL NAME | API WELL # | STATE | COUNTY | TWP |
|--------------------------------------|---------------|-------|------------|---------|
| Ohio Oil Gathering Corp. - Bells Run | 34-167-2-9395 | Ohio | Washington | Newport |
| Long Run Disposal Well | 34-167-2-9658 | Ohio | Washington | Newport |
| Newell Run Disposal Well | 34-167-2-9685 | Ohio | Washington | Newport |

Operator: Ohio Oil Gathering Corp.

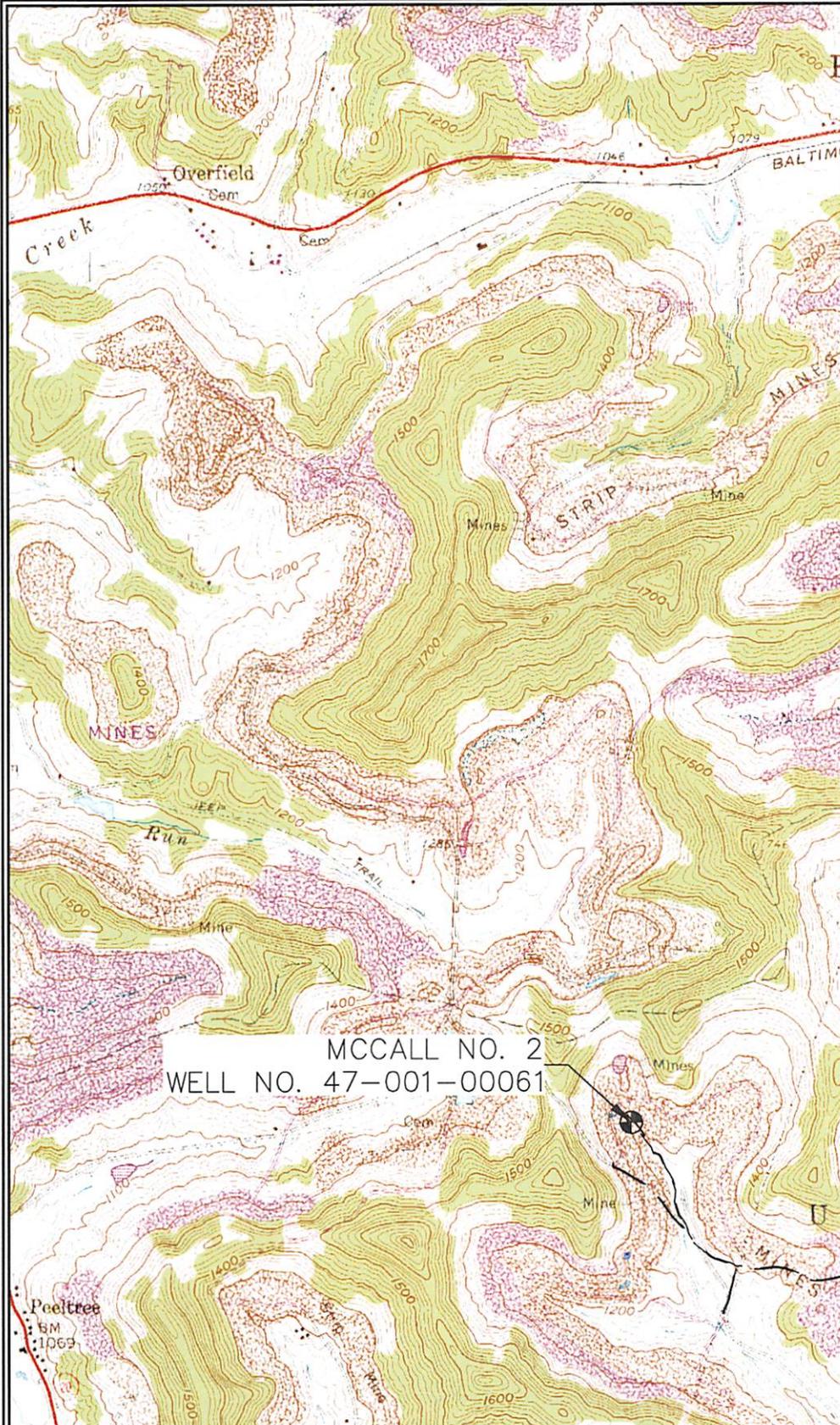
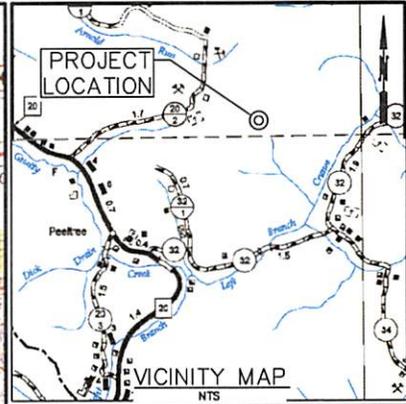
| DISPOSAL WELL NAME | API WELL # | STATE | COUNTY | TWP |
|--------------------|--------------|-------|-----------|-----|
| BW # 4 | 47-073-02523 | WV | Pleasants | |
| Greens Run | 47-073-02540 | WV | Pleasants | |

Operator: Appalachian Oil Purchasers

| Coordinates | Lat /Long |
|-------------------------------------|------------------------------|
| Ohio Oil Gathering Corp. -Bells Run | 39.387 N, -81.289 W |
| Long Run Disposal Well | 39.391 N, -81.317 W |
| Newell Run Disposal Well | 39.399 N, -81.273 W |
| BW# 4 | 39 22'20.55 N, -81 14'47.70" |
| Greens Run | |

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 WV Dept of Environmental Protection

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MCCALL NO. 2
WELL NO. 47-001-00061

Received
OCT 10 2013

Office of Oil and Gas
Department of Environmental Protection



CAD FILE: R:\030-2384-PDC-6 Plots For Plugging\Drawing\McCall #2\McCall2-Cover.dwg
PLOT DATE/TIME: 9/24/2013 4:16 PM



PDC MOUNTAINEER

THRASHER

THE THRASHER GROUP, INC.
600 WHITE OAKS BOULEVARD - BRIDGEPORT, WV 26330
PHONE: 304-824-4108
FAX: 304-824-7831

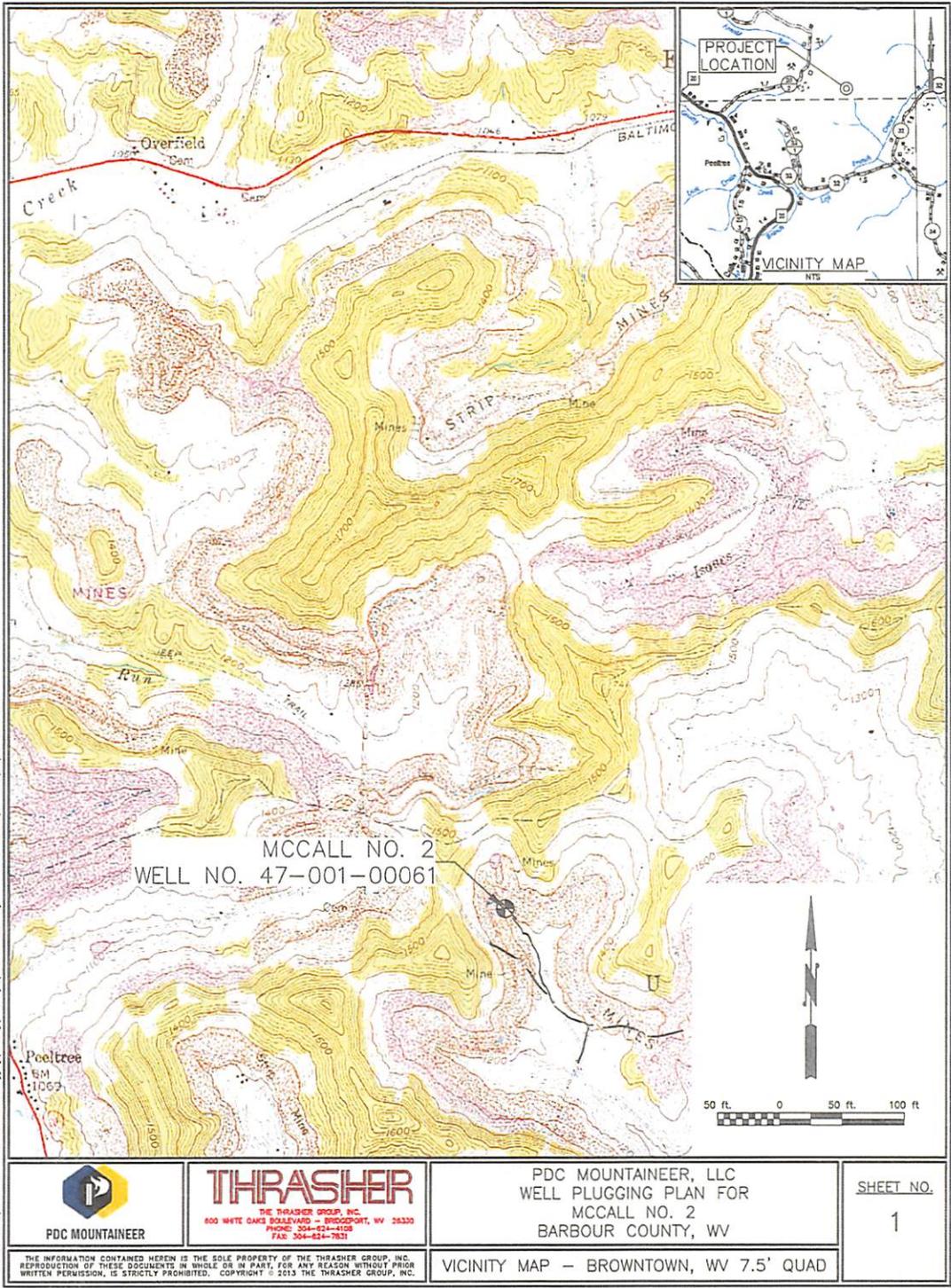
PDC MOUNTAINEER, LLC
WELL PLUGGING PLAN FOR
MCCALL NO. 2
BARBOUR COUNTY, WV

SHEET NO.

1

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VICINITY MAP - BROWNTOWN, WV 7.5' QUAD



CAD FILE: R:\000-208-PDC-6 Plans For Plugging\Drawing\Mccall 47\MC002-Cover.dwg
 PLOT DATE/TIME: 9/24/2013 4:18 PM

MCCALL NO. 2
WELL NO. 47-001-00061



THRASHER
 THE THRASHER GROUP, INC.
 800 WHITE OAKS BOULEVARD - BRIDGEPORT, WV 26330
 PHONE: 304-824-4100
 FAX: 304-824-7831

PDC MOUNTAINEER, LLC
 WELL PLUGGING PLAN FOR
 MCCALL NO. 2
 BARBOUR COUNTY, WV

SHEET NO.
1

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VICINITY MAP - BROWNTOWN, WV 7.5' QUAD

RECEIVED
 Office of Oil and Gas
 OCT 18 2013
 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: 47-001-00061 WELL NO.: McCall/ Pickens Davisson 2

FARM NAME: Davisson

RESPONSIBLE PARTY NAME: Jamie Haga

COUNTY: Barbour DISTRICT: Union

QUADRANGLE: Brownton 7.5'

SURFACE OWNER: Corbin Davisson et al

ROYALTY OWNER: Davisson Pickens Heirs

UTM GPS NORTHING: 4332298.527

UTM GPS EASTING: 570575.376 GPS ELEVATION: 1290

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 0.02M
Real-Time Differential 0.02M
Mapping Grade GPS : Post Processed Differential _____
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.

Jamie Haga
Signature

Agent
Title

10/17/13
Date

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Office of Oil and Gas
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3. Data Collection Method: Survey grade GPS x: Post Processed Differential 0.02M

Real-Time Differential 0.02M

Mapping Grade GPS : Post Processed Differential

Real-Time Differential

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Jamie Haga
Signature

Agent
Title

10/17/13
Date

PDC MOUNTAINEER, LLC.
WELL NO. McCall No. 2

NOTES:
-PLAT ORIENTATION, CORNERS, AND WELL REFERENCES ARE BASED UPON THE GRID NORTH MERIDIAN FOR THE WV STATE PLANE COORDINATE SYSTEM, NORTH ZONE NAD 83. WELL LOCATION REFERENCE TIES ARE BASED UPON THE MAGNETIC MERIDIAN.

-THERE ARE NO WATER WELLS LOCATED WITHIN 250' OF WELL 2.

NORTH

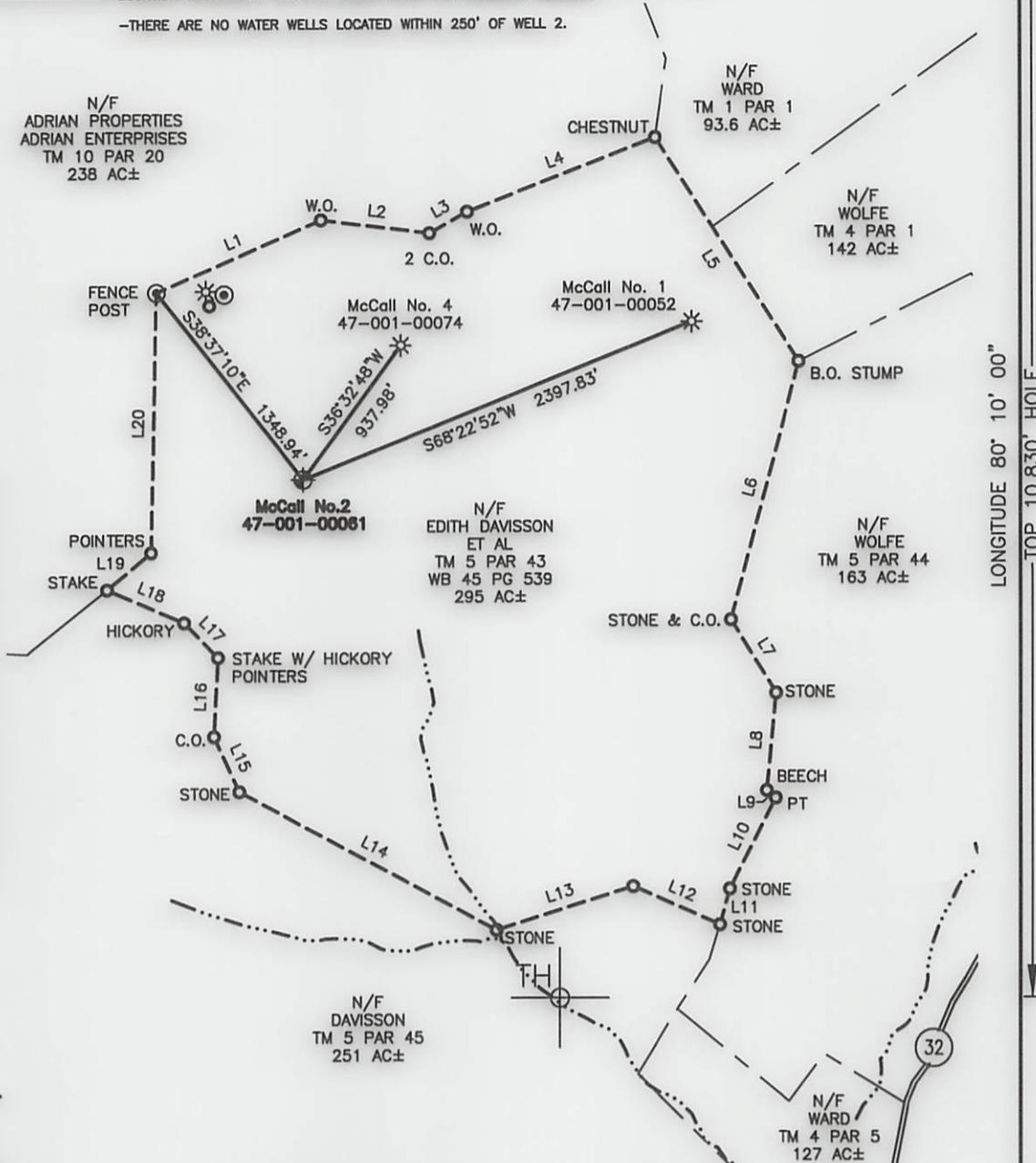
USER: kpoth

LAYOUT: PICKENS

PLOT DATE/TIME: 8/28/2013 - 3:09pm

CAD FILE: R:\030-2384-PDC-6 Plats for Plugging\Survey\WV-N PLUGGING PLATS.dwg

| LINE | BEARING | DISTANCE |
|------|-------------|----------|
| L1 | N66°30'00"E | 1031.25' |
| L2 | S83°00'00"E | 627.00' |
| L3 | N60°30'00"E | 247.50' |
| L4 | N69°00'00"E | 1155.00' |
| L5 | S33°00'00"E | 1509.75' |
| L6 | S15°00'00"W | 1509.75' |
| L7 | S32°00'00"E | 486.75' |
| L8 | S05°30'00"W | 551.10' |
| L9 | S50°00'00"E | 66.00' |
| L10 | S27°00'00"W | 577.50' |
| L11 | S15°30'00"W | 210.37' |
| L12 | N66°30'00"W | 544.50' |
| L13 | S72°30'00"W | 820.88' |
| L14 | N62°00'00"W | 1670.62' |
| L15 | N25°00'00"W | 342.38' |
| L16 | N03°00'00"E | 445.50' |
| L17 | N44°30'00"W | 276.37' |
| L18 | N63°30'00"W | 382.80' |
| L19 | N50°00'00"E | 330.00' |
| L20 | N01°15'00"E | 1468.50' |



LONGITUDE 80° 10' 00"

TH
DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAP
● = MONUMENT FOUND IRON REBAR UNLESS NOTED OTHERWISE.

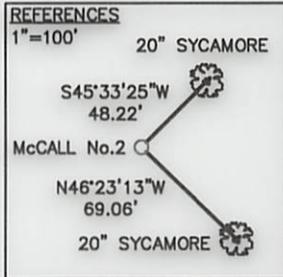
----- LEASE BOUNDARY -----



Michael R. Hyman, P.S. 983

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

WELL NO. 2
TOP HOLE
STATE PLANE COORDINATES
(NAD 83 NORTH ZONE)
N:232754.7620
E:1774656.6420
LAT: 39°08'13.2413"
LON: 80°11'00.2136"
UTM COORDINATES
(NAD 83-METER)
N:4332298.527
E:570575.376



FILE NO. xxxxx
SCALE: 1"=1000'
MINIMUM DEGREE OF ACCURACY: 1 in 2500
PROVEN SOURCE OF ELEVATION: OPUS SURVEY GRADE GPS



DATE AUGUST 28, 2013
OPERATOR'S WELL NO. McCALL No. 2
API WELL NO. 47 - 001 - 00061 P
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1290 WATER SHED: _____
DISTRICT: _____ UNION _____ COUNTY: _____ BARBOUR _____
QUADRANGLE: BROWNTON 7.5' ACREAGE: 295 AC±
SURFACE OWNER: EDITH DAVISSON ET AL LEASE ACREAGE: 295 AC±
OIL & GAS ROYALTY OWNER: PICKENS HEIRS LEASE NO. _____



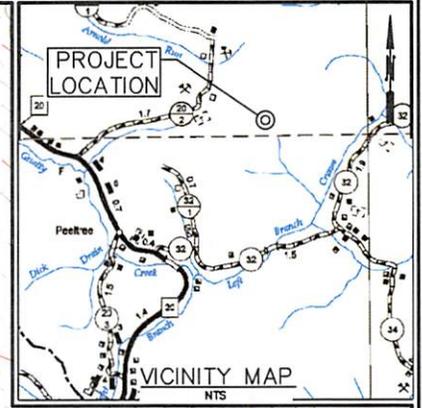
PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
PERFORATE NEW FORMATION PLUG OFF OLD FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON X CLEAN OUT AND REPLUG _____
TARGET FORMATION: BENSON ESTIMATED DEPTH: 4,345 TO 4,357

WELL OPERATOR: PDC MOUNTAINEER, LLC. DESIGNATED AGENT: JAMIE HAGA
ADDRESS: 120 GENESIS BOULEVARD ADDRESS: 120 GENESIS BOULEVARD
BRIDGEPORT, WV 26330 BRIDGEPORT, WV 26330

100061A

N/F
EDITH DAVISSON
ET AL
TM 5 PAR 43



EXISTING
TREELINE (TYP.)

EXISTING MCCALL NO. 2
WELL NO. 47-001-00061
WV83-NF N: 232754.762
WV83-NF E: 1774656.642
LAT: N 39° 08' 13.2413"
LONG: W 80° 11' 00.2136"

EXISTING TANK
WITH CONTAINMENT

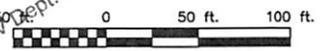
EXISTING
WELL PAD

EXISTING
ACCESS ROAD

1.1-MI TO
BARBOUR COUNTY
ROUTE 32
(SEE SHEET 2a)

Received

OCT 10 2012
Office of Oil and Gas
Dept. of Environmental Protection



CAD FILE: R:\030-2384_PDC-- 6 Plats For Plugging\Drawing\McCall #2\McCall2-Plug-Plan.dwg PLOT DATE/TIME: 10/4/2013 8:34 AM



PDC MOUNTAINEER

THRASHER

THE THRASHER GROUP, INC.
600 WHITE OAKS BOULEVARD - BRIDGEPORT, WV 26330
PHONE: 304-624-4108
FAX: 304-624-7831

PDC MOUNTAINEER, LLC
WELL PLUGGING PLAN FOR
MCCALL NO. 2
BARBOUR COUNTY, WV

SHEET NO.

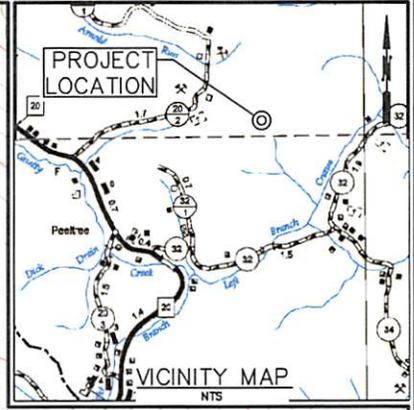
2

EXISTING CONDITIONS

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100061P

N/F
EDITH DAVISSON
ET AL
TM 5 PAR 43



EXISTING
TREELINE (TYP.)

EXISTING MCCALL NO. 2
WELL NO. 47-001-00061
WV83-NF N: 232754.762
WV83-NF E: 1774656.642
LAT: N 39° 08' 13.2413"
LONG: W 80° 11' 00.2136"

EXISTING TANK
WITH CONTAINMENT

EXISTING
WELL PAD

PROPOSED TEMPORARY
FLOWBACK TANK WITH
SECONDARY CONTAINMENT

PROPOSED SUPER
SILT FENCE (TYP.)

EXISTING
ACCESS ROAD

1.1-MI TO
BARBOUR COUNTY
ROUTE 32
(SEE SHEET 2a)

Received
OCT 10 2013

Office of Oil and Gas
West Virginia Department of Environmental Protection



CAD FILE: R:\030-2384-PDC-6-Platts For Plugging\Drawing\McCall #2\McCall2-Plug-Plan.dwg PLOT DATE/TIME: 10/4/2013 8:34 AM



THRASHER
 THE THRASHER GROUP, INC.
 800 WHITE OAKS BOULEVARD - BRIDGEPORT, WV 26330
 PHONE: 304-624-4108
 FAX: 304-624-7831

PDC MOUNTAINEER, LLC
 WELL PLUGGING PLAN FOR
 MCCALL NO. 2
 BARBOUR COUNTY, WV

SHEET NO.
 3

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PROPOSED PLUGGING SITE PLAN

100061A

EROSION AND SEDIMENT CONTROL NOTES

SEEDING AND MULCHING

1. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS PERMANENTLY CEASED.
2. WHERE THE INITIATION OF STABILIZATION MEASURES WITHIN 7 DAYS AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASES IS PRECLUDED BY SNOW COVER, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS CONDITIONS ALLOW.
3. WHERE CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN 14 DAYS FROM WHEN ACTIVITIES CEASED, (E.G., THE TOTAL TIME PERIOD THAT CONSTRUCTION ACTIVITY IS TEMPORARILY HALTED IS LESS THAN 14 DAYS) THEN STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE BY THE SEVENTH DAY AFTER CONSTRUCTION ACTIVITIES HAVE TEMPORARILY CEASED. SEEDBED PREPARATION: AREAS TO BE SEEDED SHALL BE FREE OF ROCKS AND STONES, DISKED TO A DEPTH OF 4-IN TO 6-IN, AND SMOOTHLY GRADED.
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5. SEEDING METHOD: SEED MAY BE BROADCAST BY HYDROSEEDER OR MANUALLY AS FOLLOWS: BY HAND WITH A CYCLONE SEEDER, OR FERTILIZER SPREADER. IF A MANUAL METHOD IS USED, DIVIDE THE SEED INTO TWO LOTS AND BROADCAST THE SECOND PERPENDICULAR TO THE FIRST.
6. AREAS WHERE THE SEED HAS FAILED TO GERMINATE ADEQUATELY (UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70%) WITHIN 30 DAYS AFTER SEEDING AND MULCHING MUST BE RE-SEEDED IMMEDIATELY, OR AS SOON AS WEATHER CONDITIONS ALLOW.
7. TEMPORARY AND PERMANENT SEED MIXTURES SHALL BE FOSTER SUPPLY PREMIUM MEADOW MIX (OR APPROVED EQUAL).
8. SEED APPLICATION SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS.
9. MULCH SHALL BE APPLIED AT A RATE OF 3-4 TONS PER ACRE.
10. LIME APPLICATION RATES
 - 10.1. WHEN A SOIL TEST REQUIRES LIME APPLICATION OF MORE THAN 4 TONS PER ACRE, THE LIME MUST BE MIXED INTO THE TOP SIX (6) INCHES OF SOIL.
 - 10.2. MINIMUM 6 TONS PER ACRE AT 100% EFFECTIVE NEUTRALIZING VALUE (% ENV), UNLESS THE SOIL TEST DETERMINES A LESSER AMOUNT IS NEEDED. TO DETERMINE THE ACTUAL AMOUNT OF REGULAR LIME TO APPLY, DIVIDE THE AMOUNT CALLED FOR BY THE SOIL TEST BY THE % ENV FOR THE PRODUCT USED. FOR EXAMPLE, IF 6 TONS PER ACRE IS NEEDED AND THE % ENV FOR THE LIME USED IS 88%, DIVIDE 6 BY 0.88 RESULTING IN 6.8 TONS NEEDING TO BE APPLIED.
 - 10.3. FOR DOLOMITIC LIME, WHICH HAS A SIGNIFICANT AMOUNT OF MAGNESIUM IN IT, DIVIDE THE AMOUNT CALLED FOR BY THE SOIL TEST BY THE % CALCIUM CARBONATE EQUIVALENT (% CCE) LISTED FOR THE PRODUCT INSTEAD OF THE % ENV. THE % CCE MAY BE ABOVE 100% WHICH ACCOUNTS FOR THE FACT THAT MAGNESIUM HAS A GREATER EFFECT PER POUND THAN THE CALCIUM IN REGULAR LIME.
11. FERTILIZATION RATES
 - 11.1. IF TOP DRESSED APPLY 10-20-20 AT 600 POUNDS/ACRE
 - 11.2. IF INCORPORATED APPLY 10-20-20 AT 1,000 POUNDS/ACRE
 - 11.3. UNLESS THE SOIL TEST DETERMINES THAT THE RATE CAN BE LESS THAN THESE MINIMUMS.

CONSTRUCTION NOTES

1. CONTRACTOR SHALL INSTALL ALL REQUIRED SUPER SILT FENCE, SILT FENCE, AND/OR COMPOST FILTER SOCK BARRIERS AS SHOWN ON THE PLANS AND AS DIRECTED. ALL SUPER SILT FENCE, SILT FENCE, AND COMPOST FILTER SOCKS ARE TO BE INSTALLED PARALLEL TO THE EXISTING CONTOURS.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE WVDEP OFFICE OF OIL AND GAS "WV E&S CONTROL FIELD MANUAL".

MAINTENANCE AND INSPECTION NOTES

1. CONTRACTOR SHALL CLEAN OUT SEDIMENT BEHIND THE SUPER SILT FENCE, SILT FENCE, AND/OR COMPOST FILTER SOCKS ONCE IT IS ONE THIRD OF THE HEIGHT OF THE FENCE AND/OR SOCK. THE SEDIMENT SHALL BE INCORPORATED INTO THE FILL WITHIN THE DISTURBED AREA.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED, AT MINIMUM, ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24-HOURS AFTER ANY STORM EVENT GREATER THAN 0.5-INCHES PER 24-HOUR PERIOD. ANY REQUIRED REPAIRS OR MAINTENANCE SHALL BE MADE IMMEDIATELY.

GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL PLAN AND ELEVATION DIMENSIONS OF THE VARIOUS WORK ITEMS ON THIS PROJECT.
2. THE BASE MAPPING FOR THIS PROJECT IS BASED ON DIGITAL USGS QUAD MAP CONTOURS. THE DATUM IS NAD83 WEST VIRGINIA STATE PLANES, NORTH ZONE, US FOOT.
3. THE CONTRACTOR SHALL LOCATE AND PROTECT EXISTING UTILITIES AND FACILITIES FROM DAMAGE BY EQUIPMENT OR PERSONNEL. THE CONTRACTOR SHALL CONTACT ALL UTILITY AND FACILITY AGENCIES FOR FIELD MARKING PRIOR TO BEGINNING CONSTRUCTION. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE EXISTING UTILITY INFORMATION IS THE BEST AVAILABLE AND MAY NOT BE COMPLETELY ACCURATE OR REPRESENTATIVE OF ACTUAL CONDITIONS. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND/OR OWNER IN WRITING, OF ANY EXISTING DAMAGED UTILITIES PRIOR TO BEGINNING CONSTRUCTION. ANY UTILITIES OR FACILITIES DAMAGED DURING THE PROJECT BY THE CONTRACTOR OR EQUIPMENT SHALL BE PROMPTLY REPAIRED AT THE CONTRACTOR'S EXPENSE. HAND DIGGING TO PROTECT UTILITIES FROM DAMAGE SHOULD BE ANTICIPATED.
4. ALL DISTURBED AREAS SHALL BE RESTORED TO A SMOOTH LINE AND GRADE WITH POSITIVE DRAINAGE. THE CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED AREAS.
5. THE CONTRACTOR SHALL PROVIDE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AND OTHER ACTIONS AS REQUIRED BY LOCAL AND STATE REGULATIONS OR REQUESTED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING OR MODIFYING EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION IN ORDER TO PREVENT EROSION. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH "WEST VIRGINIA EROSION AND SEDIMENT CONTROL FIELD MANUAL", AVAILABLE AT: <http://www.dep.wv.gov/oil-and-gas/Documents/Erosion%20Manual%2004.pdf>
6. EVERY LOCATION WHERE SUPER SILT FENCE IS PROPOSED TO BE INSTALLED, THE CONTRACTOR MAY INSTALL COMPOST FILTER SOCK AS AN APPROVED EQUAL. THE COMPARABLE COMPOST FILTER SOCK SIZE SHALL BE DETERMINED IN THE FIELD (BASED UPON THE CHART PROVIDED IN DETAILS) AND SHALL BE BASED ON THE MAXIMUM SLOPE LENGTH ABOVE THE COMPOST FILTER SOCK. ADDITIONAL ROWS OF COMPOST FILTER SOCK MAY BE NECESSARY COMPARED TO THE SUPER SILT FENCE.

SEQUENCE OF WORK

1. INSTALL ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES AND MAINTAIN FOR THE LIFE OF THE PROJECT OR UNTIL THERE IS 70% GROWTH ESTABLISHED OVER THE ENTIRE PROJECT AREA.
2. INSTALL PROPOSED TEMPORARY FLOWBACK TANK WITH SECONDARY CONTAINMENT.
3. BEGIN WELL PLUGGING OPERATIONS.
4. REMOVE UNNECESSARY EQUIPMENT.
5. COMPLETE WELL PLUGGING.
6. REMOVE TEMPORARY FLOWBACK TANK.
7. RESTORE SITE TO EXISTING CONDITIONS.
8. SEED AND MULCH ALL DISTURBED AREAS.
9. REMOVE TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES AFTER 80% GROWTH HAS BEEN ESTABLISHED OVER THE ENTIRE PROJECT AREA.
10. COMPLETE FINAL PROJECT CLEAN UP.

CONTACTS

| | |
|--|--|
| MISS UTILITY 1-800-245-4848 http://www.wv811.com | NATIONAL RESPONSE CENTER FOR REPORTING CHEMICAL OR OIL SPILLS 1-800-424-8802 |
| AMBULANCE, FIRE, LAW ENFORCEMENT 911 | STATE EMERGENCY SPILL NOTIFICATION 1-800-642-3074 |
| PDC MOUNTAINEER, LLC. JAMIE HAGA OFFICE: 304-842-3597 Jamie.Haga@pdcee.com | THE THRASHER GROUP, INC. ROBERT R. MILNE, P.E. OFFICE: 304-624-4108 rmilne@thrashereng.com |

Received
OCT 10 2013
Office of Oil and Gas
West Virginia Dept. of Environmental Protection



PDC MOUNTAINEER



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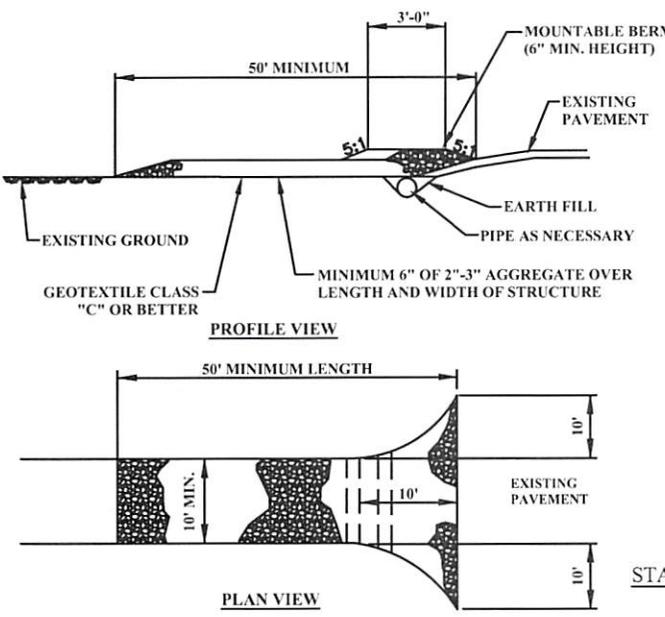
PDC MOUNTAINEER, LLC
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MCCALL NO. 2
BARBOUR COUNTY, WV

SHEET NO.

4

GENERAL NOTES

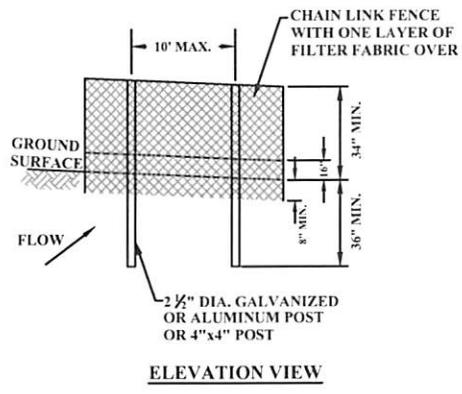
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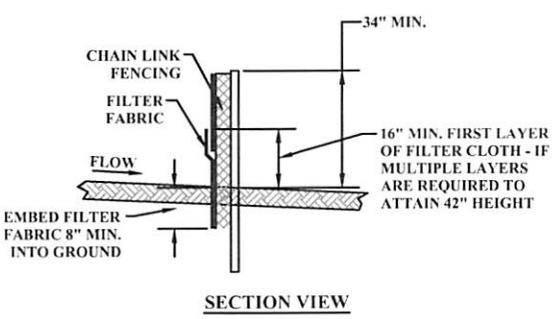
STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE

NOTES:

1. LENGTH - 50' MINIMUM (30' MINIMUM FOR SINGLE RESIDENCE LOT).
2. WIDTH - 10' MINIMUM, SHOULD BE FLARED AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
3. GEOTEXTILE FABRIC (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE. THE PLAN APPROVAL AUTHORITY MAY NOT REQUIRE SINGLE FAMILY RESIDENCES TO USE GEOTEXTILE.
4. STONE - CRUSHER AGGREGATE (2" - 3") OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT SHALL BE PLACED AT LEAST 6" DEEP OVER THE LENGTH AND WIDTH OF THE ENTRANCE.
5. SURFACE WATER - ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED THROUGH THE ENTRANCE MAINTAINING POSITIVE DRAINAGE. PIPE INSTALLED THROUGH THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROTECTED WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 6" OF STONE OVER THE PIPE. PIPE MUST BE SIZED ACCORDING TO THE DRAINAGE AND THE AMOUNT OF RUN OFF TO BE CONVEYED. A 6" DIAMETER MINIMUM WILL BE REQUIRED. WHEN THE STABILIZED CONSTRUCTION ENTRANCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY A PIPE WILL NOT BE NECESSARY.
6. LOCATION - A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE. VEHICLES LEAVING THE SITE MUST TRAVEL THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCTION ENTRANCE.



ELEVATION VIEW

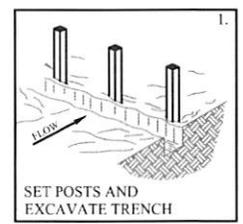


SECTION VIEW

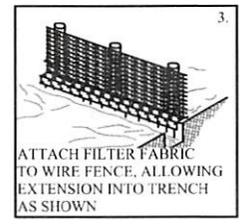
SUPER (REINFORCED) SILT FENCE DETAIL
NOT TO SCALE

NOTES:

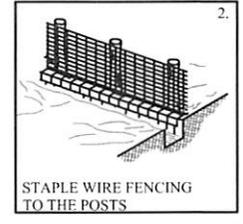
1. MAXIMUM 10' CENTER-TO-CENTER SPACING FOR POSTS.
2. FENCING SHALL BE 42" IN HEIGHT.
3. CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES. THE LOWER TENSION WIRE, BRACE AND TRUSS RODS, DRIVE ANCHORS AND POST CAPS ARE NOT REQUIRED EXCEPT ON THE ENDS OF THE FENCE.
4. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24" AT THE TOP AND MID-SECTION.
5. FILTER CLOTH AND CHAIN LINK FENCE SHALL BE EMBEDDED 8" MINIMUM INTO THE GROUND.
6. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6" MINIMUM AND FOLDED.
7. BOTH ENDS OF THE BARRIER MUST BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT.
8. SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE ABOVE GROUND HEIGHT OF THE FENCE.
9. ANY SECTION OF FILTER FABRIC FENCE WHICH HAVE BEEN UNDERMINED OR TOPPED MUST BE IMMEDIATELY REPLACED.



1. SET POSTS AND EXCAVATE TRENCH



3. ATTACH FILTER FABRIC TO WIRE FENCE, ALLOWING EXTENSION INTO TRENCH AS SHOWN



2. STAPLE WIRE FENCING TO THE POSTS



4. BACKFILL AND COMPACT EXCAVATED SOIL

BUILDING SUPER (REINFORCED) SILT FENCE DETAIL
NOT TO SCALE

CAD FILE: R:\030\2304 PDC-6 Plans For Plugging\Drawing\McCall #2\McCall-Detail.dwg PLOT DATE/TIME: 9/26/2013 7:26 AM



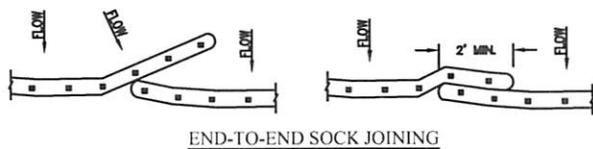
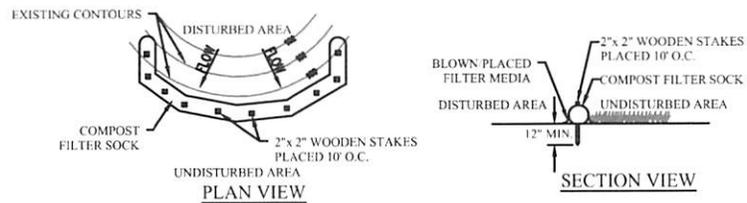
PDC MOUNTAINEER, LLC
WELL PLUGGING PLAN FOR
MCCALL NO. 2
BARBOUR COUNTY, WV

SHEET NO.
5

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DETAILS

Received
OCT 10 2013
Office of Oil and Gas
WV Dept. of Environmental Protection



COMPOST SHALL MEET THE FOLLOWING STANDARDS

| | |
|----------------------------|-------------------------------|
| ORGANIC MATTER CONTENT | 80% - 100% (DRY WEIGHT BASIS) |
| ORGANIC PORTION | FIBROUS AND ELONGATED |
| pH | 5.5 - 8.0 |
| MOISTURE CONTENT | 35% - 55% |
| PARTICLE SIZE | 98% PASS THROUGH 1" SCREEN |
| SOLUBLE SALT CONCENTRATION | 5.0 dS MAXIMUM |

COMPOST FILTER SOCK TO BE INSTALLED IN ACCORDANCE WITH FILTREXX MANUFACTURER SPECIFICATIONS, OR AN APPROVED EQUAL.

COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8' UP SLOPE AT 45° TO THE MAIN SOCK ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY DIAMETER SOCK SHALL NOT EXCEED THAT SHOWN ON BELOW TABLE.

TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

SOCKS SHALL BE INSPECTED AS DESCRIBED IN THE MAINTENANCE AND INSPECTION NOTES IN THE EROSION AND SEDIMENT CONTROL NOTES OF THESE PLANS. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

BIODEGRADABLE FILTER SOCK SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1YR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, ALL STAKES SHALL BE REMOVED. DEGRADABLE FILTER SOCK MAY BE LEFT IN PLACE AND VEGETATED - THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT PRIOR TO SEEDING. THE MESH FROM ALL POLYPROPYLENE FILTER SOCKS SHALL BE REMOVED - THE MULCH SHALL BE SPREAD AS A SOIL SUPPLEMENT PRIOR TO SEEDING.

REPRODUCED FROM *FILTREXX LOW IMPACT DESIGN MANUAL PAGE 324.*

| Slope Percent | Maximum Slope Length Above Sediment Control in Feet (Meters) * | | | | |
|---------------|--|--|---|---------------------------------------|---------------------------------------|
| | 8-IN (200-mm) | 12-IN (300-mm) | 18-IN (450-mm) | 24-IN (600-mm) | 32-IN (800-mm) |
| | Sediment Control 6.5-IN (160-mm) ** | Sediment Control 9.5-IN (240-mm) ** | Sediment Control 14.5-IN (360-mm) ** | Sediment Control 19-IN (480-mm) ** | Sediment Control 26-IN (650-mm) ** |
| 2 (or less) | 600 (180) | 750 (225) | 1000 (300) | 1300 (400) | 1650 (500) |
| 5 | 400 (120) | 500 (150) | 550 (165) | 650 (200) | 750 (225) |
| 10 | 200 (60) | 250 (75) | 300 (90) | 400 (120) | 500 (150) |
| 15 | 140 (40) | 170 (50) | 200 (60) | 325 (100) | 450 (140) |
| 20 | 100 (30) | 125 (38) | 140 (42) | 260 (80) | 400 (120) |
| 25 | 80 (24) | 100 (30) | 110 (33) | 200 (60) | 275 (85) |
| 30 | 60 (18) | 75 (23) | 90 (27) | 130 (40) | 200 (60) |
| 35 | 60 (18) | 75 (23) | 80 (24) | 115 (35) | 150 (45) |
| 40 | 60 (18) | 75 (23) | 80 (24) | 100 (30) | 125 (38) |
| 45 | 40 (12) | 50 (15) | 60 (18) | 80 (24) | 100 (30) |
| 50 | 40 (12) | 50 (15) | 55 (17) | 65 (20) | 75 (23) |

* Based on a failure point of 36-IN (0.9-m) super silt fence (wire reinforced) at 1000-FT (303-m) of slope, watershed width equivalent to receiving length of sediment control device, 1-IN/24-HR (25-mm/24-HR) rain event.

** Effective height of Sediment Control after installation and with constant head from runoff as determined by Ohio State University.

RESTRICTIONS

- (1) COMPOST FILTER SOCK WILL NOT BE PLACED IN ANY AREA OF CONCENTRATED FLOWS SUCH AS SWALES, DITCHES, CHANNELS, ETC.
- (2) COMPOST FILTER SOCK WILL NOT BE USED IN AREA WHERE ROCK OR ROCKY SOILS PREVENT THE FULL AND UNIFORM ANCHORING OF THE COMPOST FILTER SOCK.
- (3) COMPOST FILTER SOCK WILL NOT BE PLACED ACROSS THE ENTRANCES TO PIPES OR CULVERTS AND WILL NOT BE WRAPPED AROUND THE PRINCIPAL SPILLWAY STRUCTURES OF SEDIMENT TRAPS OR BASINS.

INSTALLATION

- (1) COMPOST FILTER SOCK WILL BE INSTALLED WITH LITTLE, IF ANY DISTURBANCE TO THE DOWNSLOPE SIDE OF THE COMPOST FILTER SOCK.

COMPOST FILTER SOCK
NOT TO SCALE

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Environmental Protection

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WELL PLUGGING PLAN FOR
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