



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 15, 2014

WELL WORK PERMIT

Vertical Well

This permit, API Well Number: 47-8510166, issued to MURVIN & MEIER OIL CO., 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.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days 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.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-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) 926-0499 ext. 1654.



James Martin
Chief

Operator's Well No: M1
Farm Name: HEARTWOOD FORESTLAND FU
API Well Number: 47-8510166
Permit Type: Vertical Well
Date Issued: 10/15/2014

Promoting a healthy environment.

10/17/2014

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.
2. 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 on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

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

1) Well Operator: Murphy and Meier Oil Co Operator ID 307980 County Ritchie District 3 612 Murphy Quadrangle Smithville 7.5'

2) Operator's Well Number: Gregg Hrs M1 3) Elevation: 1178

4) Well Type: (a) Oil or Gas
(b) If Gas: Production / Underground Storage
Deep / Shallow

5) Proposed Target Formation(s): Warren thru Rhinestreet Proposed Target Depth: 6120

6) Proposed Total Depth: 6120 Feet Formation at Proposed Total Depth: Shale

7) Approximate fresh water strata depths: None - Permit 1251 None - Permit 1122

8) Approximate salt water depths: None - Permits 1122, 1251

9) Approximate coal seam depths: None - Permits 1122, 1251

10) Approximate void depths, (coal, Karst, other): None

11) Does land contain coal seams tributary to active mine? No

12) Describe proposed well work and fracturing methods in detail (attach additional sheets if needed)
Drill and Complete New Well

13) CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	
Conductor	16"		32	25	25	
Fresh Water	11 3/4	A-500	300	300	300	CTS
Coal						
Intermediate	8 5/8	J-55	24	2180	2180	CTS
Production	4 1/2	WT-65	10.5	6070	6070	Office 6000
Tubing						
Liners						

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Office of Oil and Gas
SEP 12 2014
WV Department of Environmental Protection

Packers: Kind: _____
Sizes: _____
Depths Set _____

8510166
65208
✓ 38957

WW-2A
(Rev. 6-07)

1). Date: 9-8-2014
2.) Operator's Well Number Gregg Hrs M1
State _____ County _____ Permit _____
3.) API Well No.: 47- 085 - _____

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 be served: 5) (a) Coal Operator
(a) Name Heartwood Forestland Fund IV Name None
Address 3001 Emerson Ave. Address _____
Parkersburg, WV 26104-2415
(b) Name _____ (b) Coal Owner(s) with Declaration
Address W Name _____

Address _____
(c) Name _____ Name _____
Address _____
6) Inspector Mr. David Cowan (c) Coal Lessee with Declaration
Address Route 1 Box 202 Name _____
Harrisville, WV 26362 Address _____
Telephone 304-389-3509

TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:

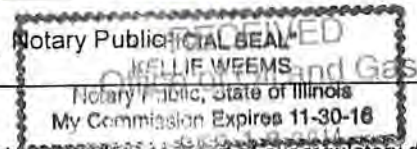
Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas
OR
X Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)
I certify that as required under Chapter 22-6 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through 12 on the above named parties by:
 Personal Service (Affidavit attached)
 X Certified Mail (Postmarked postal receipt attached)
 Publication (Notice of Publication attached)

I have read and understand Chapter 22-6 and 35 CSR 4, and I agree to the terms and conditions of any permit issued under this application.
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, 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 and imprisonment.

Well Operator Musvia and Meier Oil Co
By: Kellie Weems
Its: Exec Vice-Pres.
Address P.O. Box 396
Olney Illinois 62450
Telephone 618-295-4405

Subscribed and sworn before me this 8th day of September, 2014

Kellie Weems
My Commission Expires 11/30/16
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

Environmental Protection

10/17/2014

WW-2A Surface Waiver

SURFACE OWNER WAIVER

County Ritchie

Operator Murvin & Meier Oil Co
Operator well number Gregg Ave 121

INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE 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:

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 FIFTEEN (15) 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 a 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.

List of Water Testing Laboratories. The Office maintains a list of water testing laboratories which you can hire to test your water to establish water quality prior to and after drilling. Contact the Chief to obtain a copy.

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 Well Work Permit on Form WW2-A, and attachments consisting of pages 1 through ___ including a work order on Form WW2-B, a survey plat, and a soil and erosion plan, all for proposed well work on my surface land as described therein.

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

FOR EXECUTION BY A CORPORATION, ETC.
Office of Oil and Gas

Signature

Date

Company
Name
By
Its

Date

Print Name

SEP 12 2014
WV Department of
Environmental Protection

HEARTWOOD FORESTLAND FUND IV, L.P.
By: Heartwood Forestland Advisors IV, LLC
Its general partner
By: The Forestland Group, LLC
Its Manager

James G. Wilhelm
James G. Wilhelm
Assistant to Regional Director

9-10-14

10/17/2014

Operator's Well Number Gregg Hrs M1

**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
Zedie D. Gregg et al	Clem S. Morris	1/8	78/204
Clem S. Morris	Beall/Bishop Oil & Gas	Assignment	
Beall/Bishop Oil & Gas	Murvin & Meier Oil Co.	Farmout	248/288

**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 hereby acknowledges 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

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 acquired from the appropriate authority before the affected activity is initiated.

Well Operator: Murvin and Meier Oil Co.
 By: Kate M. Blackford
 Its: Kate M. Blackford, Exec. Vice Pres.

8510166

WW-2B1
(5-12)

Well No. Gregg Heirs M1

West Virginia Department of Environmental Protection
Office of Oil and Gas

NOTICE TO SURFACE OWNERS

The well operator named below is preparing to file for a permit from the state to drill a new well. Before a well work permit can be filed with the Chief of the Office of Oil and Gas, the well operator is required to have given notice of the right to request water well or spring analytical testing. This notice shall be given to the owners or occupants of land which have a water well or spring being utilized for human consumption, domestic animals, or other general use and which is located within 1000 feet of the proposed well site.

With this form, the operator is giving you notice of your right to request analytical testing. The operator is required to sample and analyze the water wells or springs of all owners or occupants who request it. Therefore, if you wish to have your water well or spring tested, contact the operator named below.

All sampling shall be completed prior to drilling. Within thirty (30) days of the receipt of such sample analyses the operator shall submit the results to the Chief of the Office of Oil and Gas and to the owners or occupants who may have requested them.

Be advised, you have the right to sample and analyze any water supply at your own expense.

Listed below is the laboratory chosen by operator to perform analysis, and contactor chosen to collect sample.

Certified Laboratory Name Reliance Labs
Sampling Contractor Smith Land Surveying, Inc. - Environmental Division

Well Operator Murvin & Meier Oil Co.
Address P.O. Box 396
Olney, IL 62450
Telephone 618-395-4405

FOR OPERATOR'S USE ONLY: Below, or on an attached page, list those persons which were given this notice. Place an asterisk beside the one(s) that contacted you and requested sampling and analyses. If there were no requests made, indicate by underling which one you have selected to sample and analyze. If there are no water wells or springs within 1000 feet of the proposed site, the Chief may require the operator to test wells up to 2000 feet from the proposed site.

NOTE: There appears to be 1 +/- potable water sources within 1,500', therefore tests will be offered and samples taken as required.

SEE ATTACHED FOR NAMES
& ADDRESSES OF 5 WATER
WELL SAMPLE OWNERS

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Office of Oil and Gas
SEP 12 2014
WV Department of
Environmental Protection

10/17/2014

WELL INFORMATION AND POTENTIAL WATER WELL SAMPLE DATA SHEET

OPERATOR: Murvin & Meier Oil Company
LEASE NAME AND NUMBER: Greg Heirs M-1

COMMENTS

The initial field and/or mapping review of the area surrounding the proposed well site revealed the below listed surface owner(s) that were potentially utilizing groundwater (potable) for Human Consumption or other purposes within 2000' of the proposed well site. (For location of each site see attached area map.)

INDIVIDUAL CONTACTED OR NOTIFIED

Site: 1 Spacing 2645' Owner/Occupant: Margaret Kirby
 Address: 8945 N Calhoun Hwy Big Springs, WV 26137 Ph: (304)-477-3241
 Field Contact Date: 8/13/14 Sampled: Yes Date Sampled: 8/13/14 Source: Water Well
 If No, declined by who _____ Letter/Notice Date: 1st N/A 2nd N/A Certified (3rd) N/A
 Comments: Northing : 39° 02' 07.5"
Easting : 81° 03' 13.0"
Tax Map 44, Parcels 22 and 23

Site: 2 Spacing 2675' Owner/Occupant: Donnie & Holly Millican
 Address: 3192 Trottel Rd. Norton, OH 44203 Ph: (330)-592-5762
 Field Contact Date: 8/19/14 Sampled: Yes Date Sampled: 8/19/14 Source: Water Well
 If No, declined by who _____ Letter/Notice Date: 1st N/A 2nd N/A Certified (3rd) N/A
 Comments: Northing : 39° 02' 04.38"
Easting : 81° 03' 50.44
Tax Map 44, Parcel 19

Site: 3 Spacing 2760' Owner/Occupant: Donnie & Holly Millican
 Address: 3192 Trottel Rd. Norton, OH 44203 Ph: (330)-592-5762
 Field Contact Date: 8/13/14 Sampled: Yes Date Sampled: 8/13/14 Source: Spring
 If No, declined by who _____ Letter/Notice Date: 1st N/A 2nd N/A Certified (3rd) N/A
 Comments: Northing : 39° 02' 02.0"
Easting : 81° 03' 46.2
Tax Map 44, Parcel 19

Site: 4 Spacing 2560' Owner/Occupant: Tony Butts
 Address: 307 Wishbone Cir. Hedgesville, WV 25427 Ph: (304)-754-7039
 Field Contact Date: 9/3/14 Sampled: Yes Date Sampled: 9/3/14 Source: Creek
 If No, declined by who _____ Letter/Notice Date: 1st N/A 2nd N/A Certified (3rd) 7/21/14
 Comments: Northing : 39° 02' 12.4"
Easting : 81° 04' 00.3"
Tax Map 44, Parcel 2

Site: 5 Spacing 2750' Owner/Occupant: Tony Butts
 Address: 307 Wishbone Cir. Hedgesville, WV 25427 Ph: (304)-754-7039
 Field Contact Date: 9/3/14 Sampled: Yes Date Sampled: 9/3/14 Source: Creek
 If No, declined by who _____ Letter/Notice Date: 1st N/A 2nd N/A Certified (3rd) 7/21/14
 Comments: Northing : 39° 02' 13.9"
Easting : 81° 04' 04.5"
Tax Map 44, Parcel 2

Site: 6 Spacing _____ Owner/Occupant: Sandra K Lenhart
 Address: P.O. Box 169 U-2 Rd. Arthurdale, WV 26520 Ph: _____
 Field Contact Date: N/A Sampled: No Date Sampled: N/A Source: Unknown
 If No, declined by who _____ Letter/Notice Date: 1st N/A 2nd N/A Certified (3rd) 7/21/14
 Comments: Tax Map 44, Parcel 21.1
No response to certified letter as of 09/02/2014

Site: 7 Spacing _____ Owner/Occupant: Michael Buehner & Robert Huff
 Address: 16160 Boston Rd. Strongsville, OH 44136 Ph: _____
 Field Contact Date: N/A Sampled: No Date Sampled: N/A Source: Unknown
 If No, declined by who _____ Letter/Notice Date: 1st N/A 2nd N/A Certified (3rd) 7/21/14
 Comments: Tax Map 44, Parcel 4
No response to certified letter as of 09/02/2014

Site: 8 Spacing _____ Owner/Occupant: Chad Thomas & Randy Whittington
 Address: 114 walter lane King, NC 27021 Ph: _____
 Field Contact Date: N/A Sampled: No Date Sampled: N/A Source: Unknown
 If No, declined by who _____ Letter/Notice Date: 1st N/A 2nd N/A Certified (3rd) 7/21/14
 Comments: Tax Map 44, Parcel 7
No response to certified letter as of 09/02/2014

Site: 9 Spacing _____ Owner/Occupant: John Holstine
 Address: HC 75 Box 24 Smithville, WV 26178 Ph: _____
 Field Contact Date: N/A Sampled: No Date Sampled: N/A Source: Unknown
 If No, declined by who _____ Letter/Notice Date: 1st N/A 2nd N/A Certified (3rd) 7/21/14
 Comments: Tax Map 35, Parcel 43
No response to certified letter as of 09/02/2014

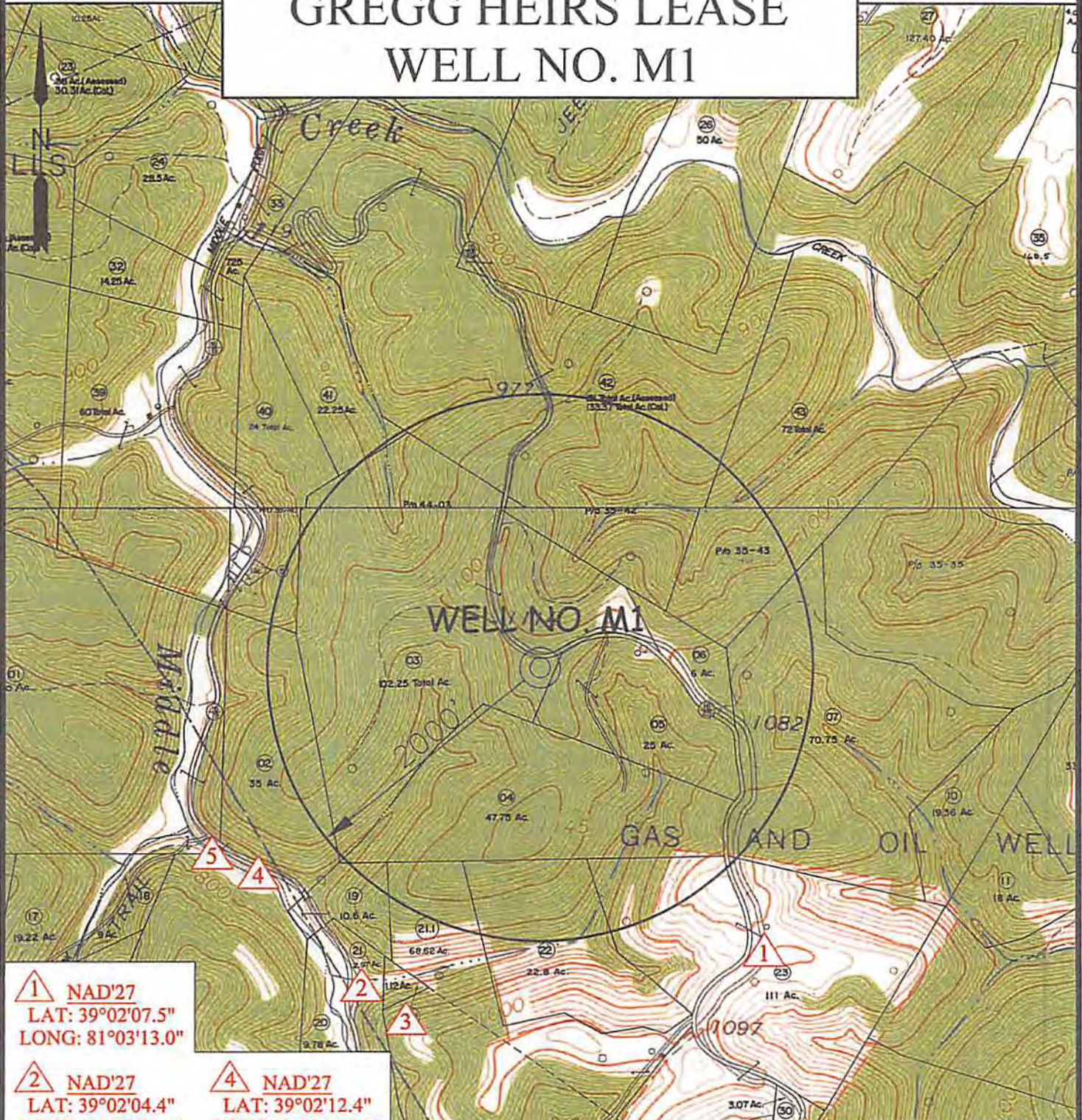
Site: 10 Spacing _____ Owner/Occupant: Heartwood Forestland Fund IV Limited Partnership
 Address: 3001 Emerson Ave. Parkersburg, WV 26104 Ph: _____
 Field Contact Date: N/A Sampled: No Date Sampled: N/A Source: Unknown
 If No, declined by who _____ Letter/Notice Date: 1st N/A 2nd N/A Certified (3rd) 7/21/14
 Comments: Tax Map 35, Parcel 40, 41 & 42 Also Tax Map 44, Parcel 3
No response to certified letter as of 09/02/2014

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 WV Department of
 Environmental Protection
 10/17/2014

WATER SAMPLES

GREGG HEIRS LEASE WELL NO. M1

page of



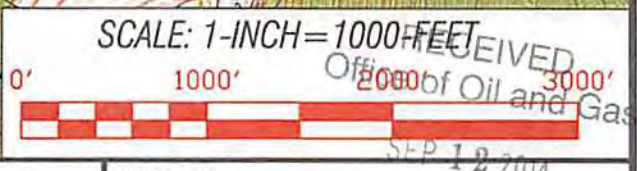
1 NAD'27
 LAT: 39°02'07.5"
 LONG: 81°03'13.0"

2 NAD'27
 LAT: 39°02'04.4"
 LONG: 81°03'50.4"

3 NAD'27
 LAT: 39°02'02.0"
 LONG: 81°03'46.2"

4 NAD'27
 LAT: 39°02'12.4"
 LONG: 81°04'00.3"

5 NAD'27
 LAT: 39°02'13.9"
 LONG: 81°04'04.5"



Professional Energy Consultants
 A DIVISION OF SMITH LAND SURVEYING, INC.

SURVEYORS
 ENGINEERS
 ENVIRONMENTAL
 PROJECT MGMT.

DRAWN BY: K.D.W. FILE NO: 7427 DATE: 09/03/14 CADD FILE: 7427WSM1R2.dwg

TOPO SECTION OF:
 SMITHVILLE, WV 7.5' QUAD

DISTRICT	COUNTY	TAX MAP-PARCEL NO.
MURPHY	RITCHIE	44-03

OPERATOR:
MURVIN & MEIER OIL CO.
 P.O. BOX 396
 OLNEY, IL 62450

WV Department of Environmental Protection
 10/17/2014

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Murvin and Meier Oil Co. OP Code 307980

Watershed (HUC 10) Leather bark Creek Quadrangle Smithville 7.5'

Elevation 1178' County Ritchie District Murphy

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 for drill cuttings? Yes X No _____

If so, please describe anticipated pit waste: Drill Water, Frac Blow Back, Various Formation Cuttings

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

Proposed Disposal Method For Treated Pit Wastes:

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

Will closed loop system be used? No

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. Air

-If oil based, what type? Synthetic, petroleum, etc. _____

Additives to be used in drilling medium? Soap

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) _____

-Landfill or offsite name/permit number? _____

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia 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) Kate M. Blackford

Company Official Title Exec. Vice - Pres.

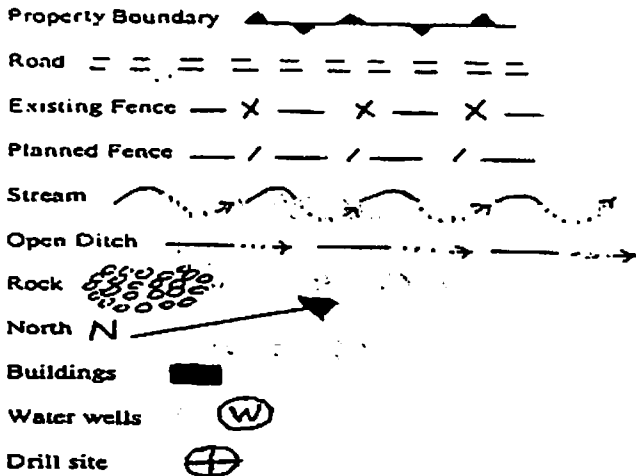
Subscribed and sworn before me this 8th day of September, 20 14

Kellie Weems Notary Public

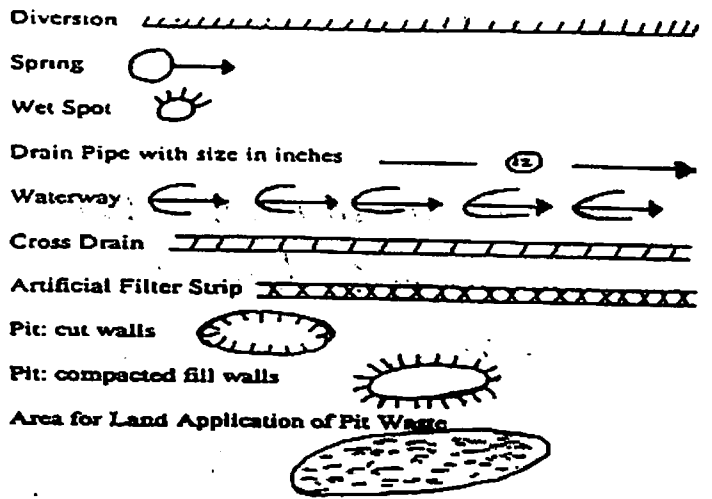
My commission expires 11/30/16



10/13/2014



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 lb/acre (500 lbs minimum)

Mulch Hay 2 Tons/acre

Seed Mixtures

Seed Type	Area I	lbs/acre	Seed Type	Area II	lbs/acre
<u>KY-31</u>		<u>40</u>	<u>Orchard Grass</u>		<u>15</u>
<u>Alsike Clover</u>		<u>5</u>	<u>Alsike Clover</u>		<u>5</u>
<u>Annual Rye</u>		<u>15</u>			

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

Photocopied section of involved 7.5' topographic sheet.

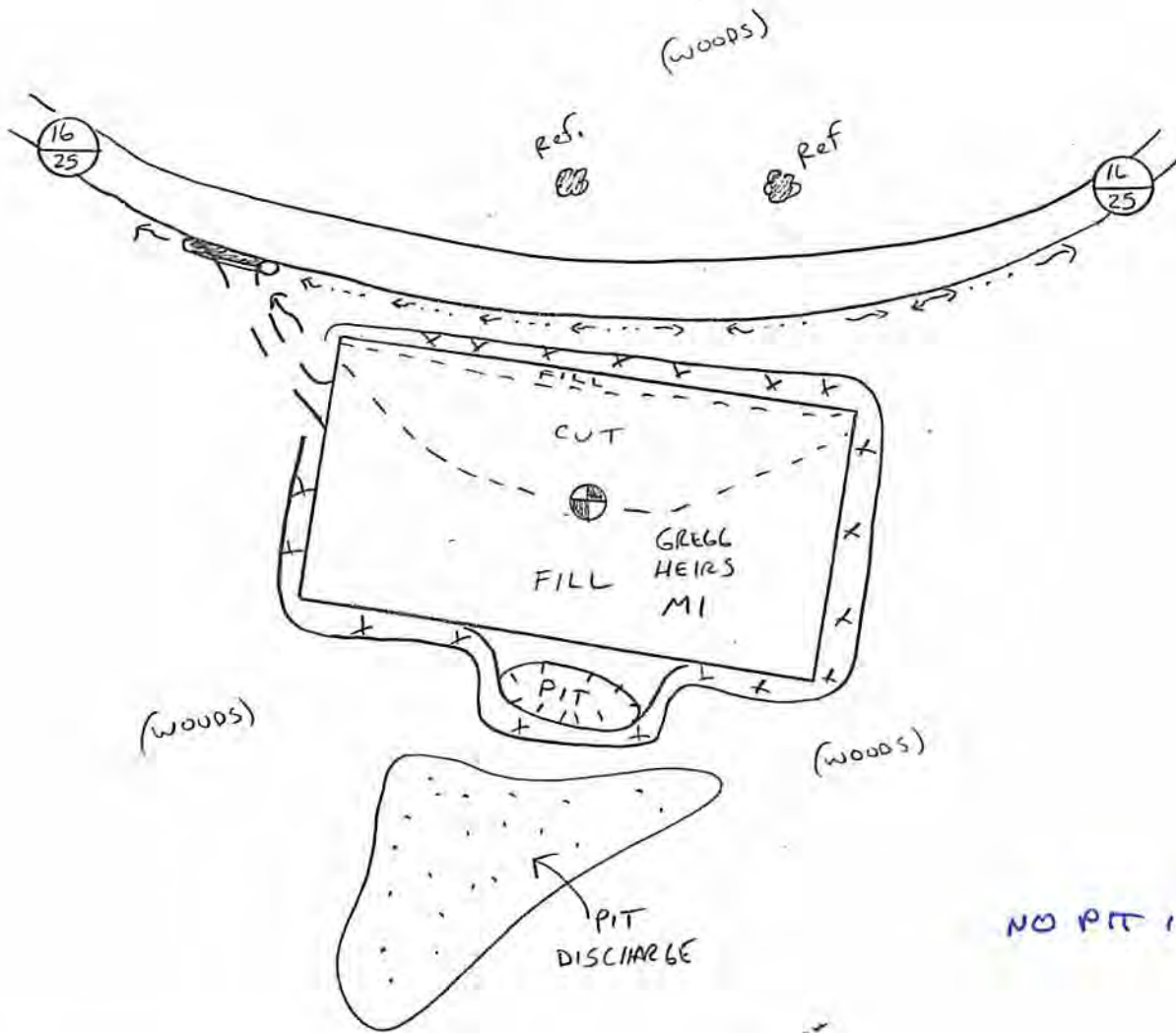
Plan Approved by: [Signature]

Comments: proceed with well out area maintain all C45 during operations

Title: oil/gas inspector Date: 7-22-14

Field Reviewed? Yes No

Gregg Heirs Lease Well No. M1



Duck

NO PIT IN FILL.

NORTH
DRAWING NOT TO SCALE

ALL ROADS SHOWN HEREON ARE EXISTING UNLESS OTHERWISE NOTED AND SHALL BE MAINTAINED IN ACCORDANCE WITH WV D.E.P. OIL AND GAS BMP MANUAL ENTRANCES, AT COUNTY/STATE ROADS SHALL BE MAINTAINED IN ACCORDANCE WITH WV D.O.T. REGULATIONS. SEPARATE PERMITS MAY BE REQUIRED BY THE D.O.T.

SEDIMENT BASINS (TRAPS) AND APPROPRIATE EROSION CONTROL BARRIERS ARE TO BE CONSTRUCTED AT ALL CULVERT AND CROSS DRAIN INLETS AND OUTLETS AS REQUIRED IN THE WV D.E.P. OIL AND GAS BMP MANUAL. FIELD CONDITIONS (ROCK OUTCROPS AND BEDROCK) MAY PROHIBIT INLET TRAPS BEING INSTALLED. WHEN THESE CONDITIONS EXIST ADDITIONAL EROSION CONTROL MEASURES SHALL BE EVALUATED AND UTILIZED AS NEEDED.

EARTHWORK CONTRACTORS ARE RESPONSIBLE FOR NOTIFICATION TO THE OPERATOR AND INSPECTOR PRIOR TO ANY DEVIATION FROM THIS PLAN.

TEMPORARY SEED & MULCH ALL SLOPES AFTER CONSTRUCTION OF LOCATION.

CUT & STACK ALL MARKETABLE TIMBER.

STACK BRUSH BELOW LOCATION FOR SEDIMENT CONTROL.

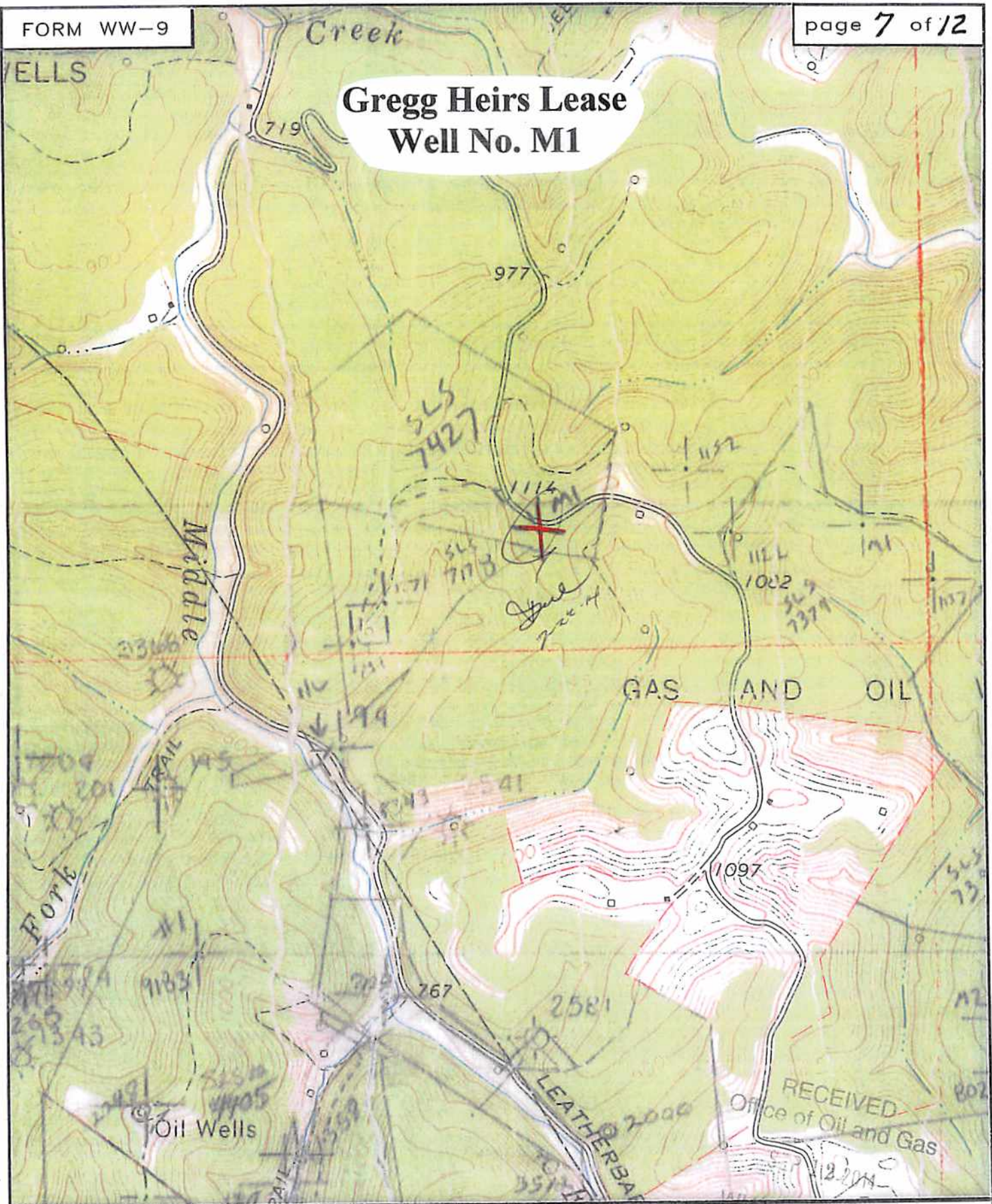
RECEIVED
Office of Oil and Gas

SEP 18 2014

	Phone (304) 462-5634 Fax 462-5656 email: sls@rtol.net
P.O. BOX 150, GLENVILLE, WV 26351	Environmental Protection Department DRAWN BY C.P.M. DATE 4/28/10 FILE 10/17/2014

7/11/14

Gregg Heirs Lease Well No. M1



SLS
 SMITH LAND SURVEYING
 P.O. BOX 150 GLENVILLE, WV. 26351

TOPO SECTION OF SMITHVILLE 7.5
 FILE NO. 7427 DATE 4/28/10 SCALE 10" = 1 MI
 RECEIVED Office of Oil and Gas
 Environmental Protection Department of
 7/11/14

GREGG HEIRS LEASE

77.25± ACRES±

WELL NO. M1

WELL NO. M1
STATE PLANE COORDINATES
NORTH ZONE (NAD '27)
 N. 200,895
 E. 1,557,034

LAT./LONG. (NAD '27)
 LAT=(N) 39°02'27.7"
 LONG=(W) 81°03'34.4"

UTM (NAD '83)
 N. 4,321,338
 E. 494,861

HEARTWOOD FORESTLAND FUND IV
 77.25 OF 102.25 ACRES±

1" REBAR, FOUND

N 81°07' W
 1784.20'

WELL NO. M1

N 02°34' E
 613.96'

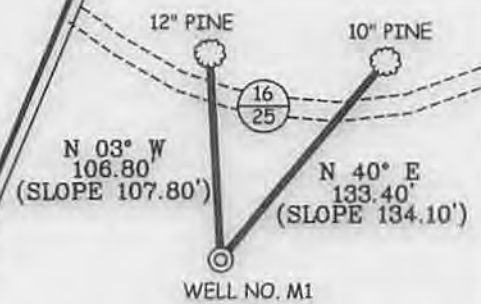
MICHAEL BUEHNER ET AL
 25 ACRES±

MICHAEL BUEHNER ET AL
 47.75 ACRES±

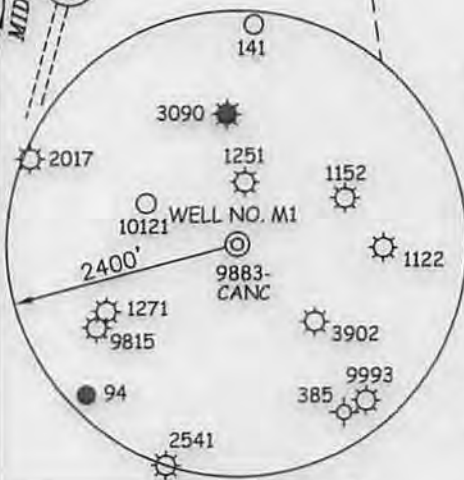
NOTES ON SURVEY

1. TIES TO WELLS AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM NORTH ZONE NAD '27.
2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 04/21/10.
3. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 283 PAGE 649.
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF RITCHIE COUNTY IN JULY, 2014.
5. WELL COORDINATES ESTABLISHED BY DGPS (SUBMETER MAPPING GRADE).
6. WELL PLAT UPDATED TO SHOW CURRENT SURFACE OWNERS & WELL SPOT CIRCLE INFORMATION.

REFERENCES



1" = 100'



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 REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

P.S. 677
Gregory A. Smith



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE	APRIL 28	20	10
UPDATED	JULY 11	20	14
OPERATORS WELL NO.	M1		
API			
WELL NO.	47	85	10166
	STATE	COUNTY	PERMIT

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. 7427P1R (300-49)
 PROVEN SOURCE OF ELEVATION DGPS (SUBMETER MAPPING GRADE) SCALE 1" = 500'

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

WELL TYPE:	OIL	GAS <input checked="" type="checkbox"/>	LIQUID INJECTION	WASTE DISPOSAL	IF "GAS" PRODUCTION <input checked="" type="checkbox"/>	STORAGE	DEEP	SHALLOW <input checked="" type="checkbox"/>
LOCATION:	ELEVATION	1,178'	WATERSHED	LEATHERBARK CREEK	DISTRICT	MURPHY	COUNTY	RITCHIE
	QUADRANGLE	SMITHVILLE 7.5'	SURFACE OWNER	HEARTWOOD FORESTLAND FUND IV	ACREAGE	102.25±	ROYALTY OWNER	ZEDIE GREGG, ET AL
	LEASED ACREAGE	77.25±	PROPOSED WORK:	DRILL <input checked="" type="checkbox"/>	CONVERT	DRILL DEEPER	REDRILL	FRACTURE OR STIMULATE <input checked="" type="checkbox"/>
	PLUG OFF OLD FORMATION	PERFORATE NEW FORMATION	PLUG AND ABANDON	CLEAN OUT AND REPLUG	OTHER	PHYSICAL CHANGE IN WELL (SPECIFY)	TARGET FORMATION	RHINESTREET
	ESTIMATED DEPTH	6,000'	WELL OPERATOR	MURVIN & MEIER OIL CO.	DESIGNATED AGENT	P. NATHAN BOWLES, JR.	ADDRESS	P.O. BOX 396
				OLNEY, IL 62450	ADDRESS	P.O. BOX 1237		CHARLESTON, WV 25325

10/17/2014

COUNTY NAME PERMIT