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

May 09, 2016

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-5100573, issued to LEATHERWOOD, INC., 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 penalities 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: 1595
Farm Name: LOUGH, MABEL L.
API Well Number: 47-5100573
Permit Type: Plugging
Date Issued: 05/09/2016

Promoting a healthy environment.

5100573P

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.

5100573P

WW-4B
Rev. 2/01

1) Date _____, 20 16
2) Operator's
Well No. Mabel L Lough 1595
3) API Well No. 47- 051 - 00573

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

4) Well Type: Oil ____/ Gas X / Liquid injection ____/ Waste disposal ____/
(If "Gas, Production X or Underground storage ____) Deep ____/ Shallow X

5) Location: Elevation 1227.02 Watershed Middle Grave Creek-Grave Creek
District Cameron County Marshall Quadrangle Cameron

6) Well Operator Leatherwood, Inc.
Address 1000 Consol Energy Drive
Canonsburg, PA 15317

7) Designated Agent Seth Wilson
Address 7000 Hampton Center, Suite K
Morgantown, WV 26505

8) Oil and Gas Inspector to be notified
Name James Nicholson
Address PO Box 44
Moundsville, WV 26041

9) Plugging Contractor
Name Contractor Services Inc. (CSI)
Address 929 Charleston Rd.
Spencer, WV 25776

10) Work Order: The work order for the manner of plugging this well is as follows:

Please see attached pages.

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

RECEIVED
Office of Oil and Gas

Work order approved by inspector Jim Nicholson Date ~~APR 21 2016~~ 4/13/16

WV Department of
Environmental Protection

5100573P

Mabel L Lough #1595

API 47-051-00573

Cameron District

Marshall County

Location: Cameron

Northing: 491559.43 (Nad83 WVN)

Easting: 1680430.98 (Nad83 WVN)

Elevation: 1227.02'

Proposed Plug & Abandonment Procedure:

The work order for the manner of plugging this well is as follows:

The wellbore will be cleaned out to the total depth. An attempt to remove all casing shall be made by pulling a minimum of 150% of the casing string weight. From the total depth to the surface, casing will be removed so that only fully cemented casing strings will be left in the wellbore. Intact and un-cemented casing as determined by electronic logging shall be perforated, ripped, or milled at no greater than 100 ft. intervals from total depth, to the top of the casing. A borehole survey will be conducted to determine the top and bottom of any mineable coal seam. In addition, starting at a point 5 ft. below through 5 ft. above any mineable coal seam, any casing shall be ripped, cut, or perforated on no greater than 5 ft. intervals. Circulation will have been established using gelled water to the clean out depth. Expanding cement will be placed from the total depth or attainable bottom to 100 ft. above any mineable coal seam. From that point to the surface, Class A cement with no more than 3% $CaCl_2$ and no other additives shall be used to fill the wellbore. A monument with the API number will be set on the wellbore at the surface. All plugging shall comply with WV Code Chapter 22 Article 6. The disturbed areas shall be graded, seeded and mulched as required. Site to be reclaimed as soon as possible.

4/13/16

1220' OF 8" LEFT IN WELL
1865' OF 6 5/8" LEFT IN WELL
4" SET ON 6 5/8" PACKER - IF PACKER WON'T RELEASE, CUT & PULL 4".

gwm

RECEIVED
Office of Oil and Gas

APR 21 2016

WV Department of
Environmental Protection

5100573D

The M. L. & H. Company Company

Division

Record of Well No. 1595 on T. B. Lough Farm Acres

Field Cameron District Township Cameron County Marshall State

Rig Commenced April 4, 1913 19 , Completed April 29, 1913 19

Drilling Commenced May 1, 1913 19 ; Completed June 12, 1913 19

Cost per Foot $1.15 Contractor F. T. Burns Address

Drillers' Names S. T. Best and William Richards

BOILER			ENGINE			RIG			
H. P.	No.	Name of Maker	H. P.	No.	Name of Maker	New	Old	Height	Name of Builder

CONDUCTOR AND CASING USED IN DRILLING

Conductor	13 inch	10 inch	8¼ inch	6⅝ inch	6¼ inch	5⅝ inch	5⅛ inch	5 inch	4 inch		
		205'	1220'	1865'							

CONDUCTOR AND CASING LEFT IN WELL

Conductor	13 inch	10 inch	8¼ inch	6⅝ inch	6¼ inch	5⅝ inch	5⅛ inch	5 inch	4 inch	3 inch	
			1220'	1865'							

OIL WELL						GAS WELL				
When Shot	Size of Torpedo	1st Day's Production	Tubing	Rods	Tanks	Size of Packer	Depth Set	Packed with	1st Minute Pressure	Rock Press

Initial Open Flow Production Cubic Feet Per 24 Hours | Shut In Pressure Cubic Feet Per 24 Hours

FORMATION	Top	Bottom	Thickness
Waynesburg Coal	487	492	
Mapletown Coal	680	685	
Pittsburgh Coal	773	778	
Murphy Sand	843	883	
Little Dunkard	1144	1159	
Sand	1172	1230	
Big Dunkard	1265	1310	
Sand	1390	1450	
Gas Sand	1530	1570	
Salt Sand	1695	1828	
Little Lime	1845	1855	
Pencil Cave	1855	1860	
Big Lime	1860	1932	
Big Injun	1932	2178	
Thirty Foot	2516	2569	
Gordon Stray	2777	2812	
Slate & Shells	2812	2912	
~~Fifty Foot~~ Gordon	2714	2750	
Total Depth		2915	

Well shot June 14, 1913 with 60 quarts in the Gordon Stray. Increased from 4/10" water in 6 5/8" to 10/10" water in 6 5/8".

Well tubed June 17, 1913 with 4" tubing and packed with one 6 5/8" x 4" Anchor Packer set in the 30 foot sand.

Above packer	2541' 07"	----123	joints
Anchor	386' 07"	----19	"
Total	2928' 02"	----142	"

Feb. 1937, W.O.C 9128 Well Pulled and cleaned out by Harry Jones & R.W. Yoho

REMARKS

1- day dig out to repair 6⅝ casing
5 " Rig and tare up
1 - " Moving Tools.
Test after clean out 22/10 water in 1½
Line 10-13-16-18-20-22 Rock 78.
Packed in 50ft sand with 1-6⅝ x 4"
anchor Packer set at 2546'
Anchor 369'08- 18. joints
Above 2562'05 125= "
2932'11" 143
All- 10thd Tubing
cage on first and 7th Joint
Packer on 18th Joint
Packer has 1- Truck load of red mud.
Had very Hard time cleaning out we.
Tons of sand run in hole

RECEIVED
Office of Oil and Gas
APR 21 2016
WV Department of
Protection

5100573P

WW-4A
Revised 6-07

1) Date:
2) Operator's Well Number
Mabel L Lough 1595

3) API Well No.: 47 - 051 - 00573

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE 0F APPLICATION TO PLUG AND ABANDON A WELL

4) Surface Owner(s) to be served:
(a) Name: Arden B Wood Et Ux
Address: 4589 Clouston Rd
Cameron, WV 26033

(b) Name
Address

(c) Name
Address

6) Inspector: James Nicholson
Address: PO Box 44
Maundsville, WV 26041
Telephone: 304-552-3874

5) (a) Coal Operator
Name
Address

(b) Coal Owner(s) with Declaration
Name: Consolidation Coal Company
Address: 1000 Consol Energy Drive
Canonsburg, PA 15317

Name: Ronald W. Kasserman
Address: 369 Pembroke Dr
Triadelphia, WV 26059

(c) Coal Lessee with Declaration
Name
Address

TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

(1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
(2) The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia 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: Leatherwood, Inc.
By: Gerald Ramsburg
Its: General Manager
Address: 1000 Consol Energy Drive
Canonsburg, PA 15317
Telephone: 1-724-485-4081

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Christopher A. Rabbitt, Notary Public
Cecil Twp., Washington County
My Commission Expires Jan. 18, 2020
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

RECEIVED
Office of Oil and Gas
APR 21 2016
WV Department of
Environmental Protection

Subscribed and sworn before me this 10 day of February 2016
Christopher A. Rabbitt Notary Public
My Commission Expires 1/18/2020

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.

5100573P

WW-9
(2/15)

API Number 47 - 051 - 00573
Operator's Well No. Mabel L Lough 1595

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Leatherwood, Inc. OP Code 494476721

Watershed (HUC 10) Middle Grave Creek - Grave Creek Quadrangle Cameron

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

Will a pit be used? Yes ☐ No ☑

If so, please describe anticipated pit waste: N/A

Will a synthetic liner be used in the pit? Yes ☐ No ☐ If so, what ml.? N/A

Proposed Disposal Method For Treated Pit Wastes:

_____ 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? If so, describe: Closed tanks will be used to capture any well effluent, and these fluids will be disposed of properly.

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. N/A

-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. N/A

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

-Landfill or offsite name/permit number? _____

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on 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) Gerald Ramsburg

Company Official Title General Manager - Leatherwood, Inc.

Subscribed and sworn before me this 10 day of February, 2016

Christopher A. Rabbitt Notary Public

My commission expires 1/18/2020

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Christopher A. Rabbitt, Notary Public
Cecil Twp., Washington County
My Commission Expires Jan. 18, 2020
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

5100573P

Form WW-9

Operator's Well No. Mabel L Lough 1595

Leatherwood, Inc.

Proposed Revegetation Treatment: Acres Disturbed less than 1 acre Prevegetation pH _____

Lime 2-3 Tons/acre or to correct to pH _____

Fertilizer type 10-20-20 or equivalent

Fertilizer amount 500 lbs/acre

Mulch hay or straw 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Tall Fescue	40	Tall Fescue	40
Landino Clover	5	Landino Clover	5

Attach:
Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [signature]

Comments:

Title: Oil & Gas Inspector Date: 4/13/16

Field Reviewed? (✓) Yes ( ) No

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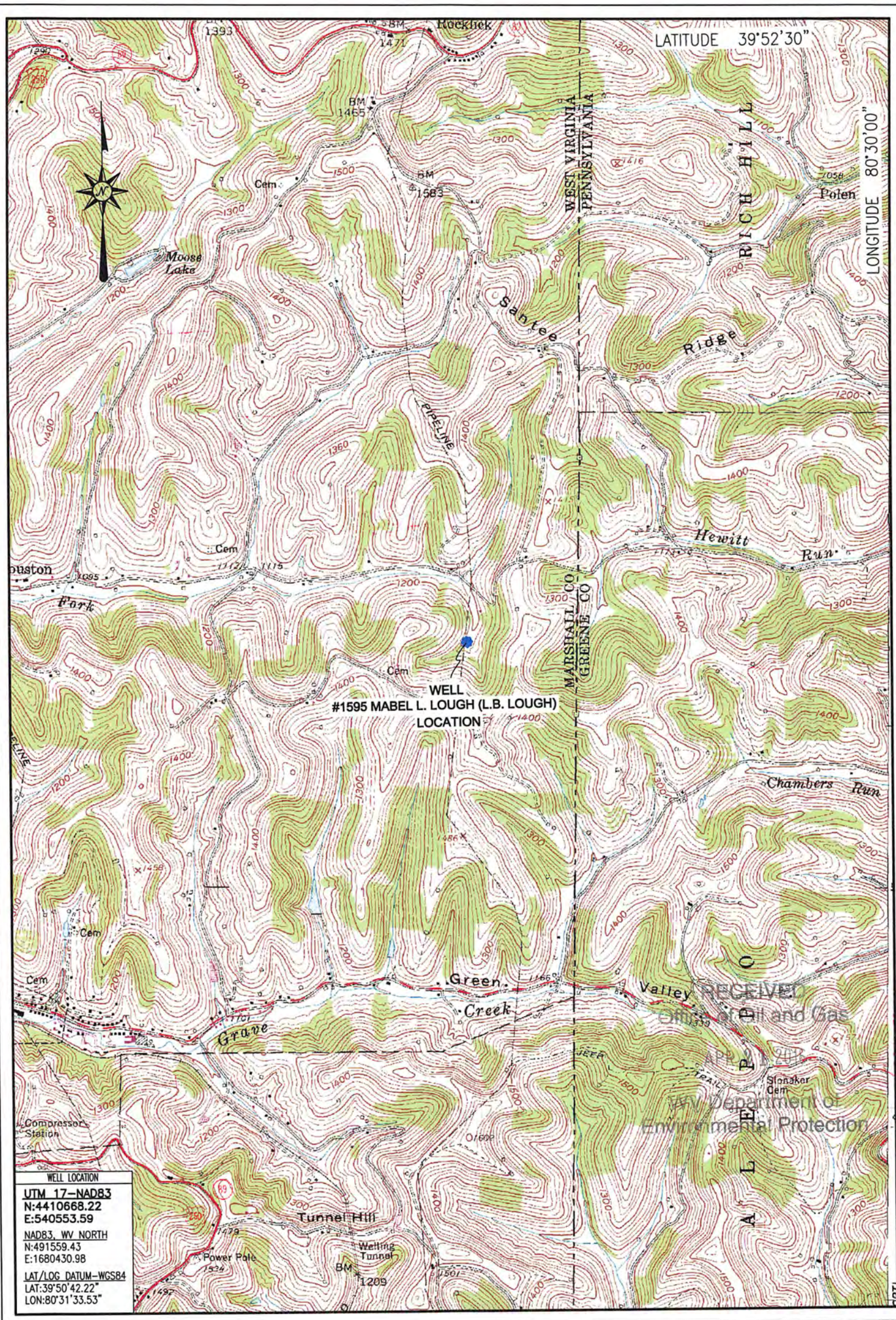
Office of Oil and Gas
APR 21 2016
WV Department of
Environmental Protection

5100573P



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Office of Oil and Gas
APR 2 2016
WV Department of
Environmental Protection

LOCATION MAP
FEBRUARY 5, 2016

Blue Mountain Inc.
10125 MASON DIXON HIGHWAY
BURTON, WV 26562
PHONE: (304) 662-6486

#1595 MABEL L. LOUGH (L.B. LOUGH)
CAMERON QUADRANGLE
WEST VIRGINIA

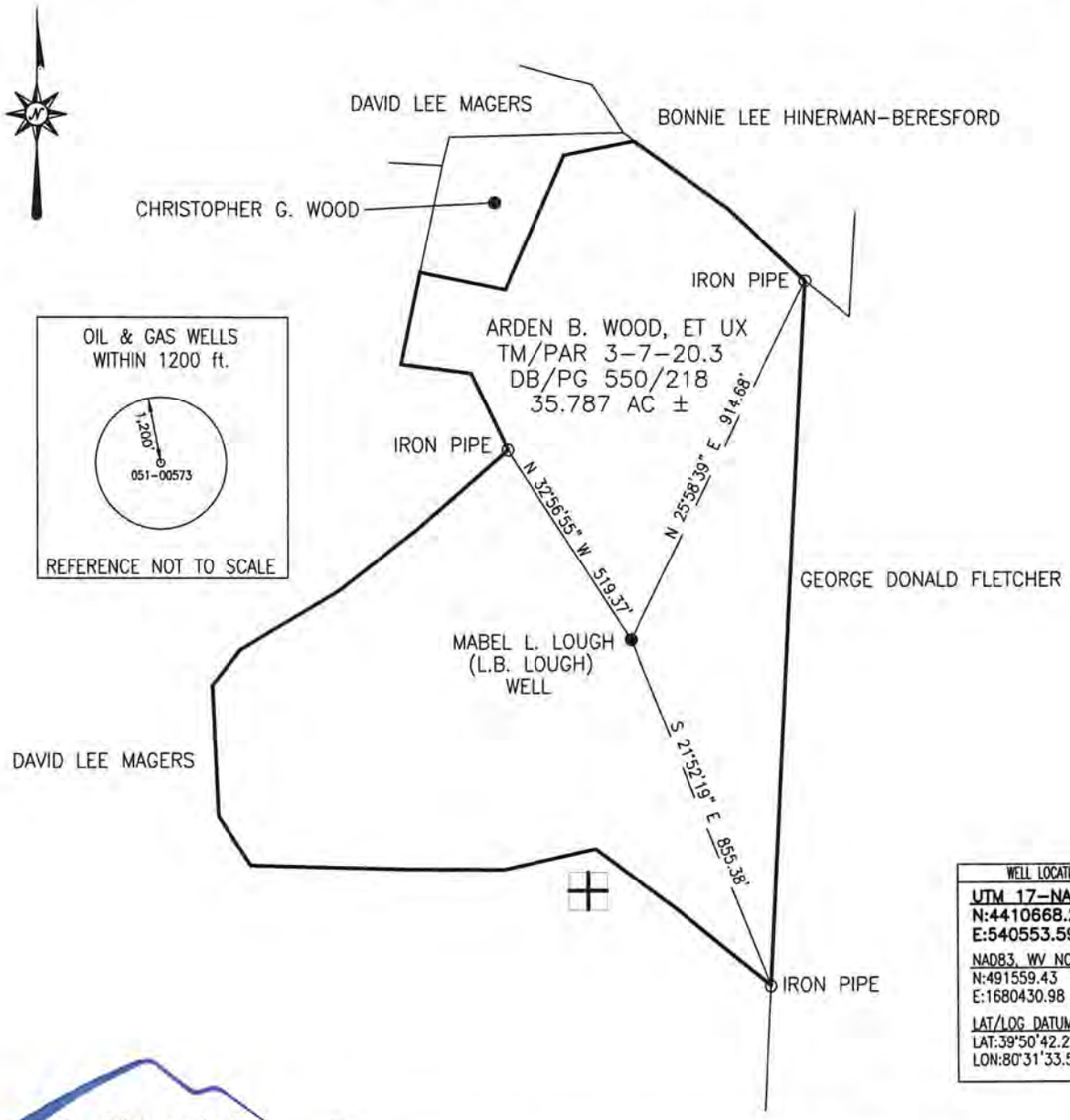
SCALE 1" = 2000'
0' 2000' 4000' 6000'

BLUE MOUNTAIN ENGINEERING

5100573P

Well is located on topo map 10,906 feet south of Latitude: 39° 52' 30"

Well is located on topo map 7,294 feet west of Longitude: 80° 30' 00"



WELL LOCATION
UTM 17-NAD83
N:4410668.22
E:540553.59
NAD83, WV NORTH
N:491559.43
E:1680430.98
LAT/LOG DATUM-WGS84
LAT:39°50'42.22"
LON:80°31'33.53"

Blue Mountain Inc.
10125 MASON DIXON HIGHWAY
BURTON, WV 26562
PHONE: (304) 662-6486

NOTE:
It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, are based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.

FILE #: WELL #1595 MABEL L. LOUGH (L.B. LOUGH)

DRAWING #: WELL #1595 MABEL L. LOUGH (L.B. LOUGH)

SCALE: 1" = 400'

MINIMUM DEGREE OF ACCURACY: 1/2500

PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

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 DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Signed: _____

R.P.E.: _____ L.L.S.: P.S. No. 2000

GEORGE D. SIX LICENSED No. 2000 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304

DATE: FEBRUARY 8, 2016

OPERATOR'S WELL #: WELL #1595 MABEL L. LOUGH (L.B. LOUGH)

API WELL #: 47 051 00573 P
STATE COUNTY PERMIT

RECEIVED
Office of Oil and Gas
APR 21 2016
WV Department of Environmental Protection

Well Type: ☐ Oil ☐ Waste Disposal ☒ Production ☐ Deep
☒ Gas ☐ Liquid Injection ☐ Storage ☒ Shallow

WATERSHED: MIDDLE GRAVE CREEK-GRAVE CREEK ELEVATION: 1227.02'

COUNTY/DISTRICT: MARSHALL/CAMERON QUADRANGLE: CAMERON, WV 7.5'

SURFACE OWNER: ARDEN B. WOOD, ET UX ACREAGE: 35.787±

OIL & GAS ROYALTY OWNER: _____ ACREAGE: _____

DRILL ☐ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☐ FRACTURE OR STIMULATE ☐

PLUG OFF OLD FORMATION ☐ PERFORATE NEW FORMATION ☐ PLUG & ABANDON ☒

CLEAN OUT & REPLUG ☐ OTHER CHANGE ☐ (SPECIFY): _____

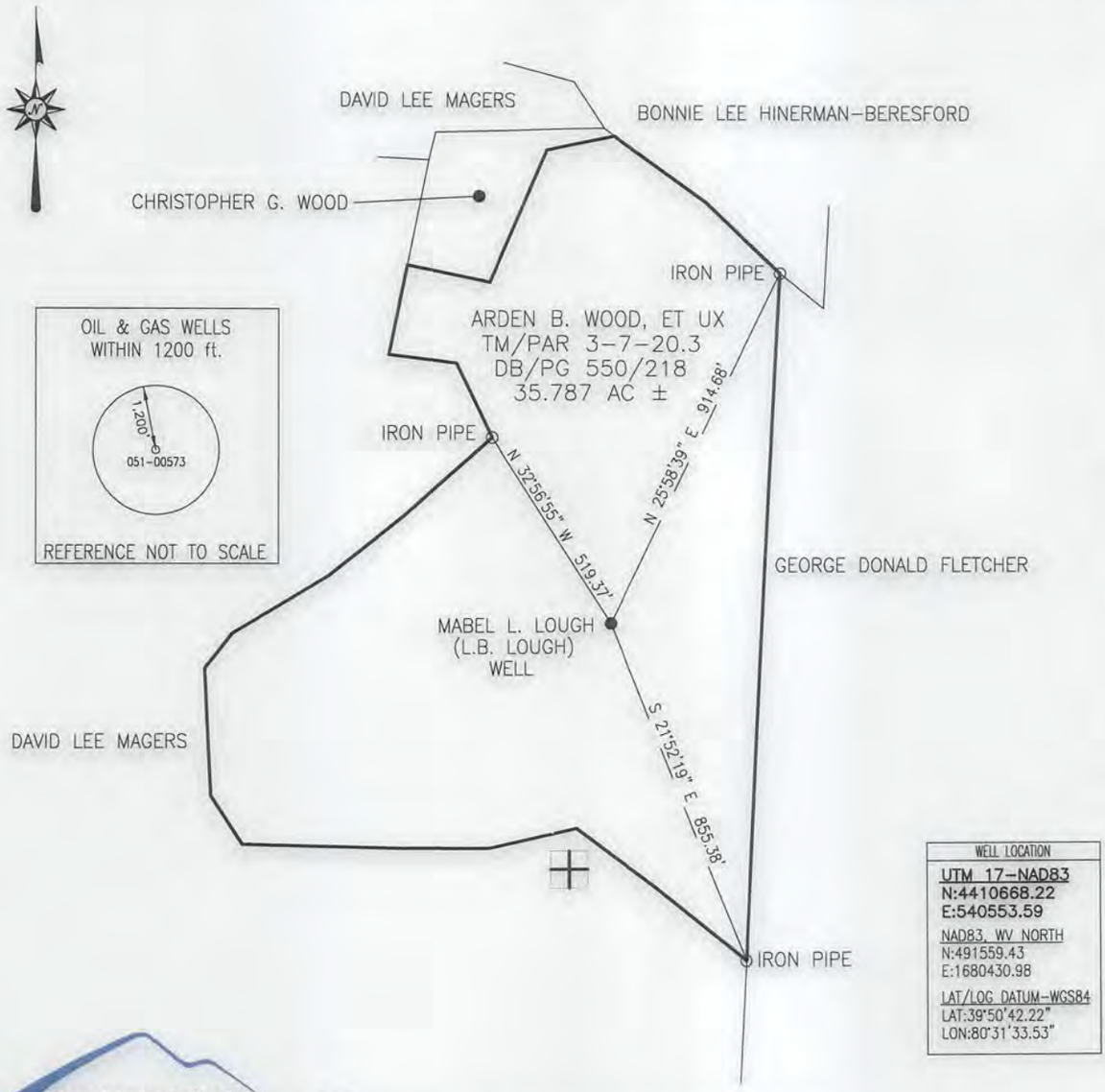
TARGET FORMATION: GORDON & FIFTY-FOOT ESTIMATED DEPTH: 2,912'±

WELL OPERATOR LEATHERWOOD, INC.
Address 1000 CONSOL ENERGY DRIVE
City CANONSBURG State PA Zip Code 15317

DESIGNATED AGENT SETH WILSON
Address 7000 HAMPTON CENTER, SUITE K
City MORGANTOWN State WV Zip Code 26505

Well is located on topo map 10,906 feet south of Latitude: 39° 52' 30"

Well is located on topo map 7,294 feet west of Longitude: 80° 30' 00"



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NAD83, WV NORTH
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Signed: [signature]

R.P.E.: _____ L.L.S.: P.S. No. 2000

GEORGE D. SIX LICENSED No. 2000 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304

DATE: FEBRUARY 8, 2016

OPERATOR'S WELL #: WELL #1595 MABEL L. LOUGH (L.B. LOUGH)

API WELL #: 47 (STATE) 051 (COUNTY) 00573 P (PERMIT)

Well Type: ☐ Oil ☐ Waste Disposal ☒ Production ☐ Deep
☒ Gas ☐ Liquid Injection ☐ Storage ☒ Shallow

WATERSHED: MIDDLE GRAVE CREEK-GRAVE CREEK ELEVATION: 1227.02'

COUNTY/DISTRICT: MARSHALL/CAMERON QUADRANGLE: CAMERON, WV 7.5'

SURFACE OWNER: ARDEN B. WOOD, ET UX ACREAGE: 35.787±

OIL & GAS ROYALTY OWNER: _____ ACREAGE: _____

DRILL ☐ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☐ FRACTURE OR STIMULATE ☐

PLUG OFF OLD FORMATION ☐ PERFORATE NEW FORMATION ☐ PLUG & ABANDON ☒

CLEAN OUT & REPLUG ☐ OTHER CHANGE ☐ (SPECIFY): _____

TARGET FORMATION: GORDON & FIFTY-FOOT ESTIMATED DEPTH: 2,912'±

WELL OPERATOR LEATHERWOOD, INC.
Address 1000 CONSOL ENERGY DRIVE
City CANONSBURG State PA Zip Code 15317

DESIGNATED AGENT SETH WILSON
Address 7000 HAMPTON CENTER, SUITE K
City MORGANTOWN State WV Zip Code 26505