



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

January 07, 2013

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-1706158, issued to ANTERO RESOURCES APPALACHIAN CORPORATION, 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 of completion of drilling, 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

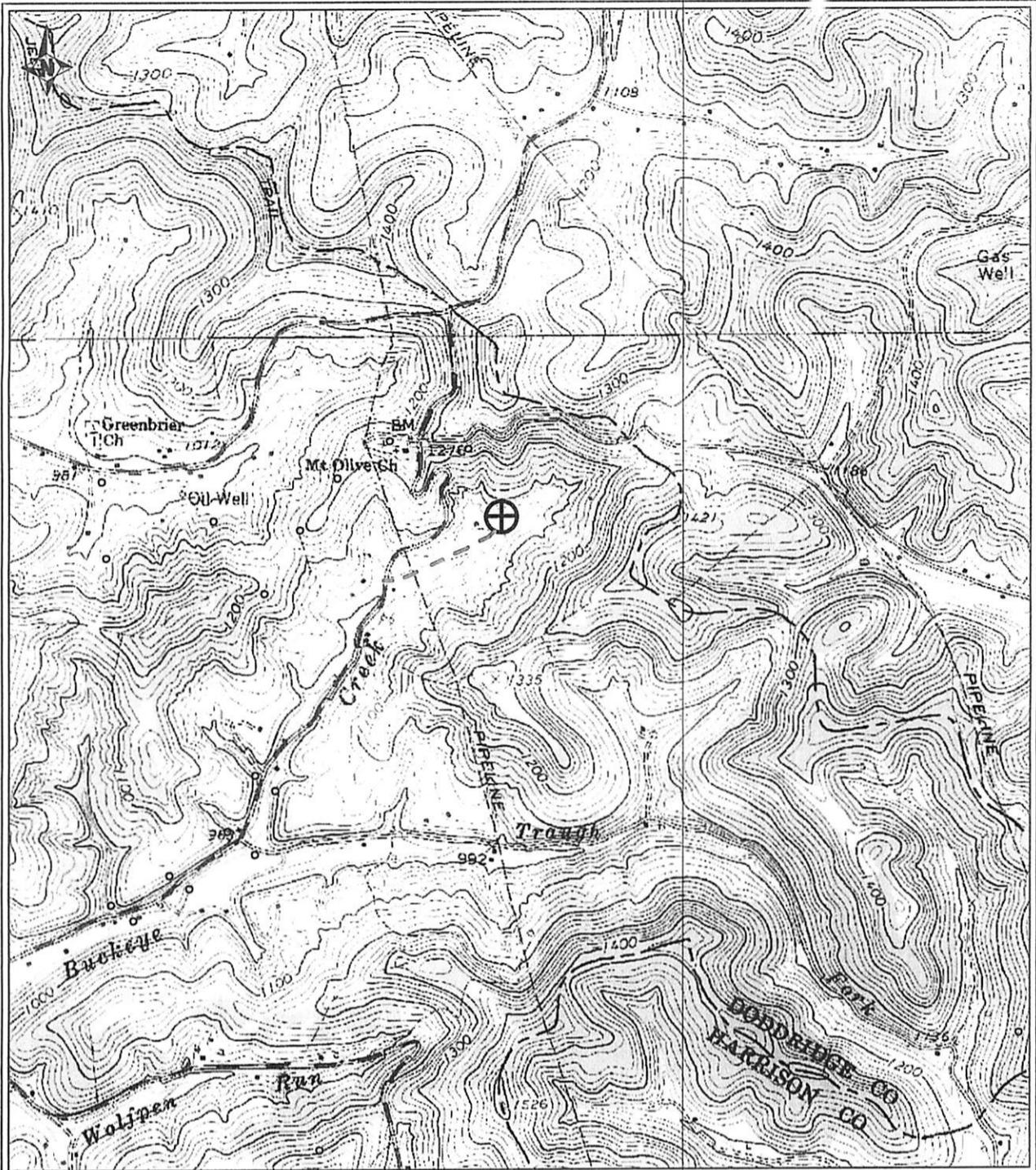
Operator's Well No: WALTER UNIT 1H
Farm Name: MUTSCHELKNAUS, CLARENCE

API Well Number: 47-1706158

Permit Type: Horizontal 6A Well

Date Issued: 01/07/2013

Promoting a healthy environment.



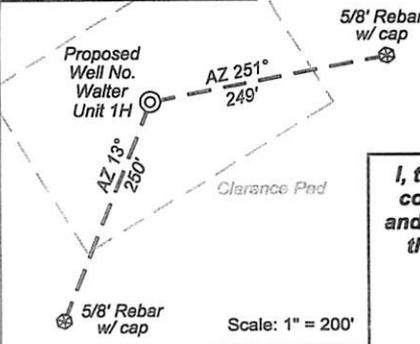
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RECEIVED
 OCT 12 2012
 ENVIRONMENTAL PROTECTION
 DEPARTMENT

Antero Resources Corporation	
APPALACHIAN BASIN	
Walter Unit 1H	
Harrison County	
REMARKS QUADRANGLE: BIG ISAAC WATERSHED: BUCKEYE CREEK DISTRICT: GREENBRIER	
By: ECM	
July 6, 2012	

Antero Resources
Well No. Walter Unit 1H
Antero Resources Appalachian Corporation

Well Location References



(⊕) Denotes location of well on United States topographic maps

Top Hole
 7.5' Spot



Line	Bearing	Distance
L1	N 86°35' E	907.0'
L2	N 83°19' W	1217.1'
L3	S 51°50' W	794.8'
L4	N 62°57' W	1494.3'

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.

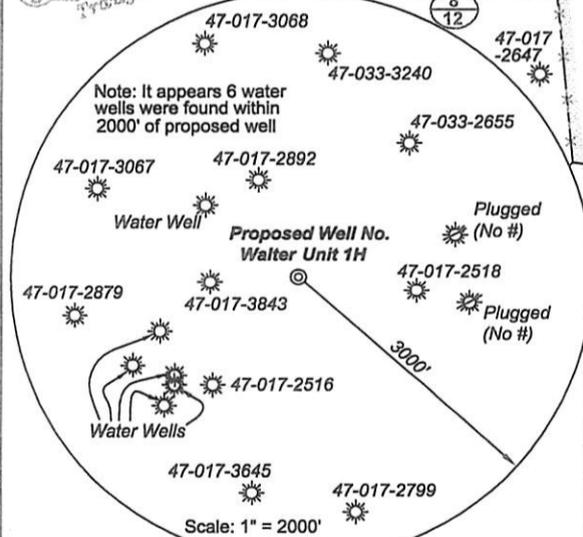
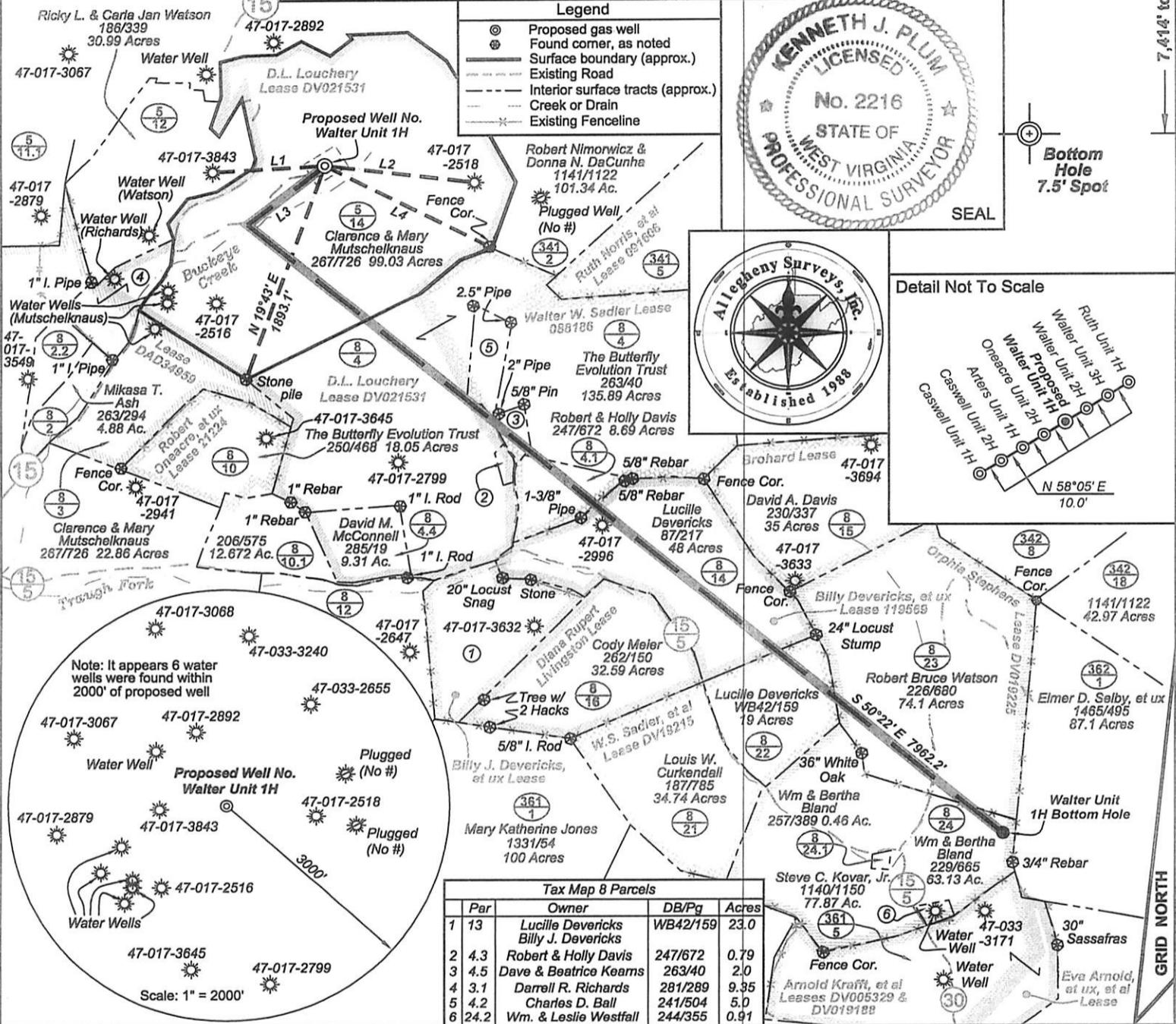
Kenneth J. Plum
Kenneth J. Plum, P.S. 2216

2,033' to Bottom Hole
 LATITUDE 39 - 15 - 00

Notes:

West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
 Well No. Walter Unit 1H Top Hole coordinates are
 N: 273,030.94 Latitude: 39°14'40.89"
 E: 1,697,466.10 Longitude: 80°34'05.56"
 Bottom Hole coordinates are
 N: 267,461.31 Latitude: 39°13'46.49"
 E: 1,702,973.51 Longitude: 80°32'54.74"
UTM Zone 17, NAD 1983
 Top Hole Coordinates: Bottom Hole Coordinates:
 N: 4,344,029.666m N: 4,342,360.859m
 E: 537,275.809m E: 538,981.962m
 Plat orientation and corner and well references are based upon the grid north meridian.
 Well location references are based upon the magnetic meridian.

LONGITUDE 80 - 32 - 30
 1.845' to Top Hole
 7.414' to Bottom Hole



Par	Owner	DB/Pg	Acres
1 13	Lucille Devericks Billy J. Devericks	WB42/159	23.0
2 4.3	Robert & Holly Davis	247/672	0.79
3 4.5	Dave & Beatrice Kearns	263/40	2.0
4 3.1	Darrell R. Richards	281/289	9.35
5 4.2	Charles D. Ball	241/504	5.0
6 24.2	Wm. & Leslie Westfall	244/355	0.91

FILE NO: 131-30-G-12
 DRAWING NO: 131-12 Walter 1H Well
 SCALE: 1" = 1200'
 MINIMUM DEGREE OF ACCURACY:
 Submeter
 PROVEN SOURCE OF ELEVATION:
 WVDOT, Bridgeport, WV

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

DATE: October 5 20 12
 OPERATOR'S WELL NO. Walter Unit 1H
 API WELL NO:
 47 - 017 - 06158
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
 LOCATION: ELEVATION: 1050' WATERSHED: Buckeye Creek QUADRANGLE: Big Isaac
 DISTRICT: Greenbrier COUNTY: Doddridge
 SURFACE OWNER: Clarence & Mary Mutschelknaus ACREAGE: 99.03
 ROYALTY OWNER: D. L. Louchery; Walter W. Sadler; Billy Devericks, et ux LEASE NO: DV021531; 088186; 119569 ACREAGE: 172; 85.25; 48; 54
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) TVD 7,400'
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: MD 15,750'

WELL OPERATOR: Antero Resources Appalachian Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System
 ADDRESS: 1625 17th Street ADDRESS: 5400 D Big Tyler Road
 Denver, CO 80202 Charleston, WV 25313



west virginia department of environmental protection

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Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
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January 07, 2013

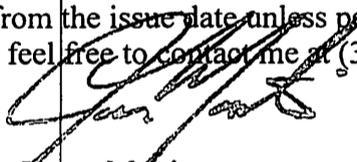
WELL WORK PERMIT
Horizontal 6A Well

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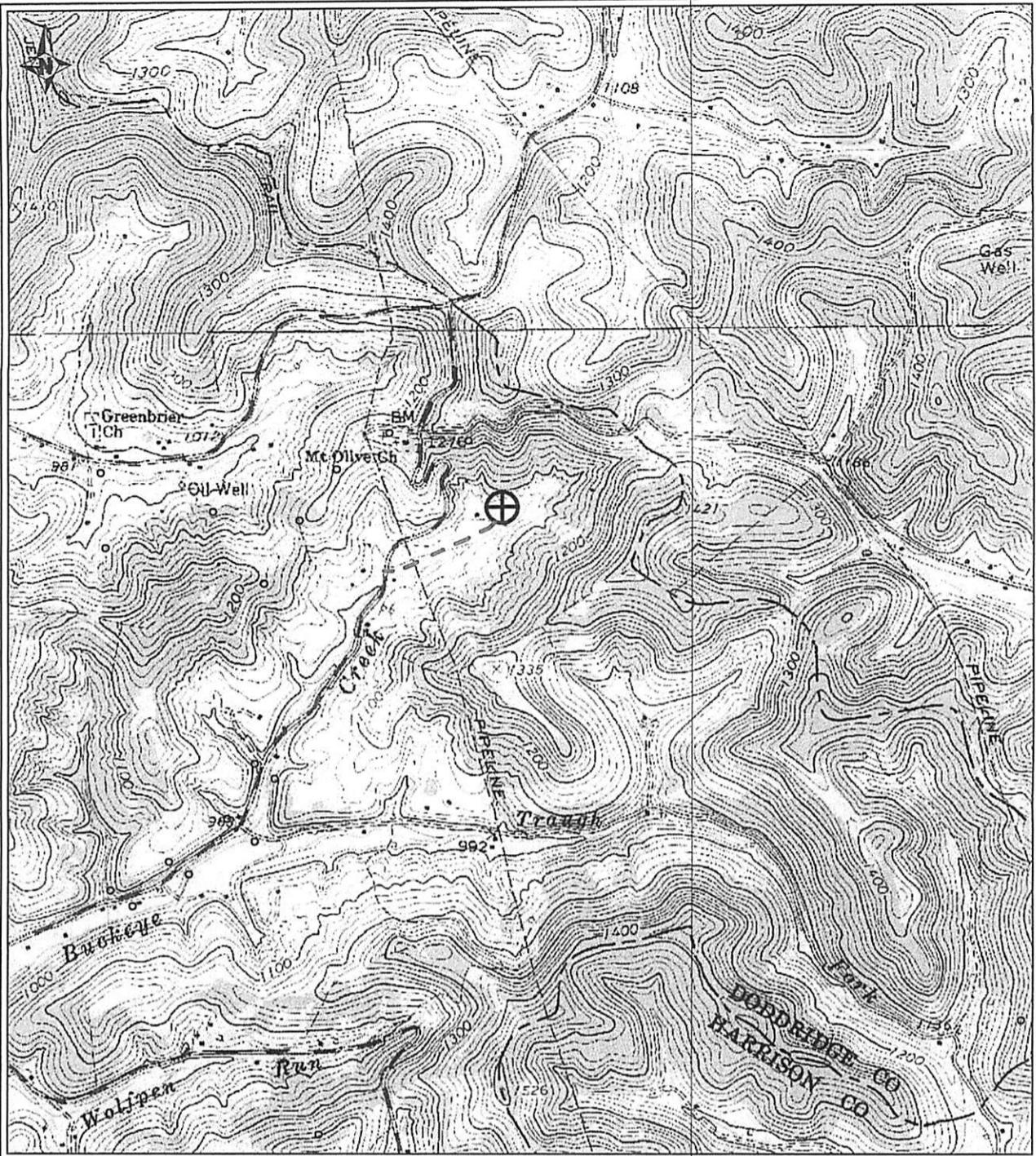
Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.



James Martin
Chief

Operator's Well No: ONEACRE UNIT 2H
Farm Name: MUTSCHELKNAUS, CLARENCE
API Well Number: 47-1706159
Permit Type: Horizontal 6A Well
Date Issued: 01/07/2013

Promoting a healthy environment.



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RECEIVED
Office of Oil and Gas

OCT 12 2012

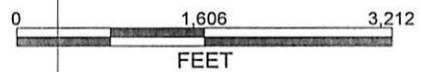
WV Department of
Environmental Protection

Antero Resources Corporation

APPALACHIAN BASIN

Oneacre Unit 2H

Harrison County



REMARKS
QUADRANGLE: BIG ISAAC
WATERSHED: BUCKEYE CREEK
DISTRICT: GREENBRIER

By: ECM

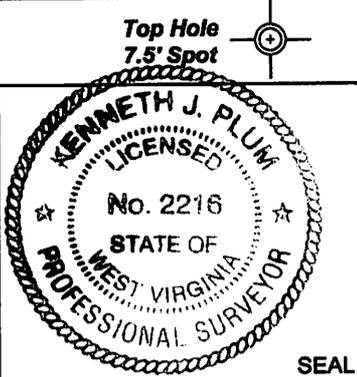
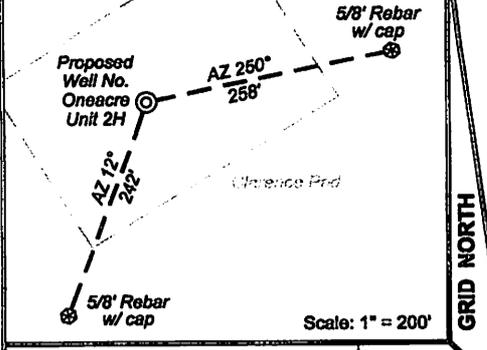
July 6, 2012

Antero Resources
Well No. Oneacre Unit 2H
Antero Resources Appalachian Corporation

(⊕) Denotes location of well on United States topographic maps

1,885' to Bottom Hole
LATITUDE 39 - 15 - 00
LONGITUDE 80 - 32 - 30

Well Location References



Notes:
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
 Well No. Oneacre Unit 2H Top Hole coordinates are
 N: 273,025.65 Latitude: 39°14'40.84"
 E: 1,697,457.61 Longitude: 80°34'05.67"
 Bottom Hole coordinates are
 N: 266,474.47 Latitude: 39°13'36.75"
 E: 1,703,120.70 Longitude: 80°32'52.72"
UTM Zone 17, NAD 1983
 Top Hole Coordinates: Bottom Hole Coordinates:
 N: 4,344,028.012m N: 4,342,060.964m
 E: 537,273.249m E: 539,031.816m
 Plat orientation and corner and well references are based upon the grid north meridian.
 Well location references are based upon the magnetic meridian.

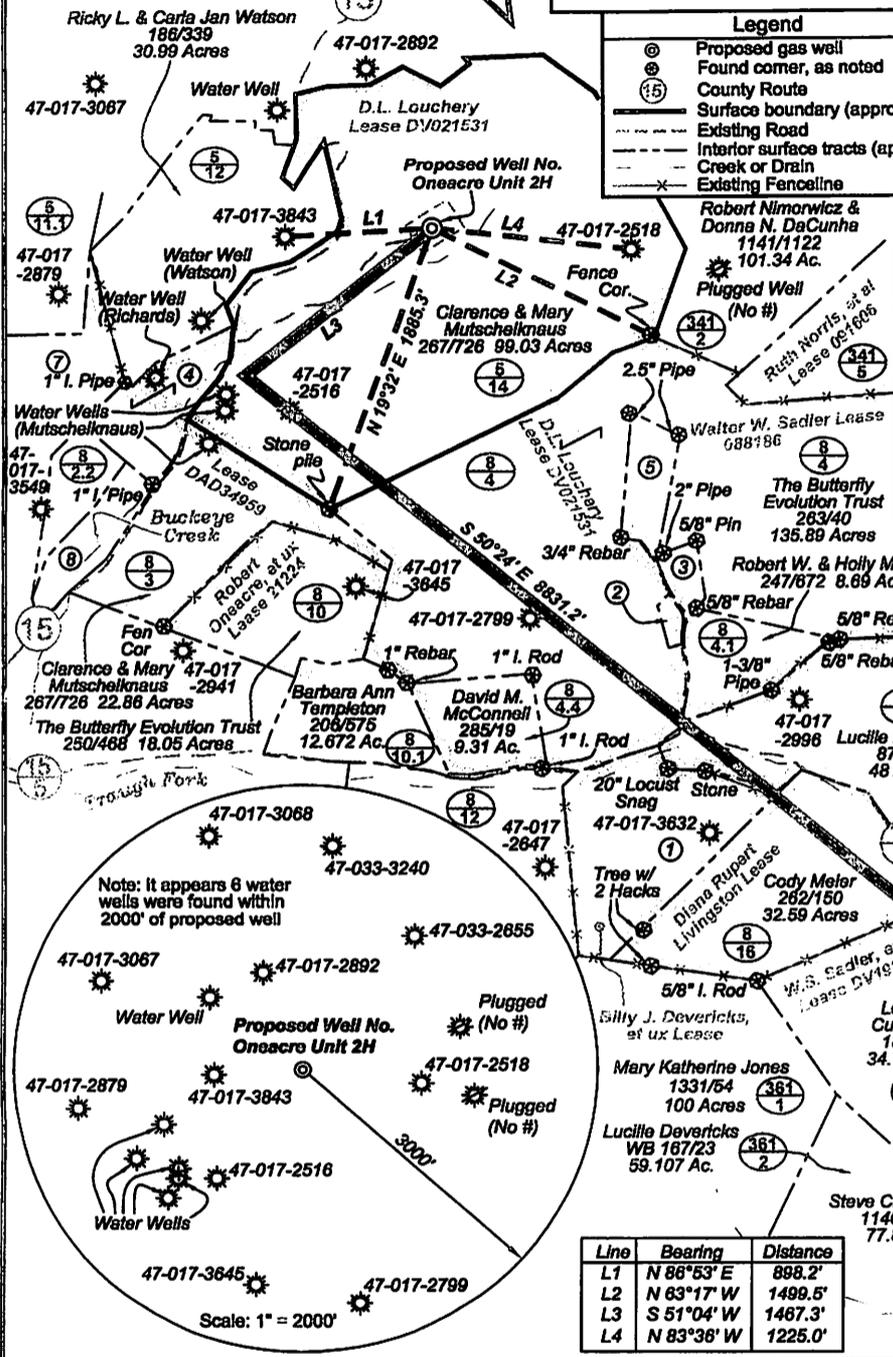
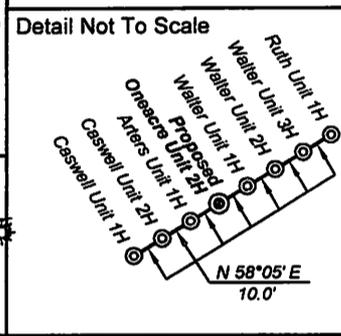
I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Department of Environmental Protection.

Kenneth J. Plum, P.S. 2216

Legend
 ⊕ Proposed gas well
 ⊕ Found corner, as noted
 ⊕ County Route
 ⊕ Surface boundary (approx.)
 --- Existing Road
 --- Interior surface tracts (approx.)
 --- Creek or Drain
 --- Existing Fenceline



Bottom Hole 7.5' Spot



Tax Map 8 Parcels

Par	Owner	DB/Pg	Acres
1 13	Lucille Devericks Billy J. Devericks	WB42/159	23.0
2 4.3	Robert & Holly Davis	247/672	0.79
3 4.5	Dave & Beatrice Kearns	263/40	2.0
4 3.1	Darrell R. Richards	281/289	9.35
5 4.2	Charles D. Ball	241/504	5.0
6 24.2	Wm. & Leslie Westfall	244/355	0.91
7 2.1	Don & Charlotte Henrey	294/81	69.57
8 2	Mikase T. Ash	263/294	4.88

Line	Bearing	Distance
L1	N 86°53' E	898.2'
L2	N 63°17' W	1499.5'
L3	S 51°04' W	1467.3'
L4	N 83°36' W	1225.0'

FILE NO: 132-30-G-12
 DRAWING NO: 132-12 Oneacre 2H Well
 SCALE: 1" = 1200'
 MINIMUM DEGREE OF ACCURACY:
 Submeter
 PROVEN SOURCE OF ELEVATION:
 WVDOT, Bridgeport, WV

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

DATE: October 5 20 12
 OPERATOR'S WELL NO. Oneacre Unit 2H
 API WELL NO:
 47 - 017 - 6159
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
 LOCATION: ELEVATION: 1050' WATERSHED: Buckeye Creek QUADRANGLE: Big Isaac
 DISTRICT: Greenbrier COUNTY: Doddridge
 SURFACE OWNER: Clarence & Mary Mutschelknaus W. S. Sadler, et al; Orphia Stephens; Arnold Krafft, et al
 ROYALTY OWNER: D. L. Louchery; Walter W. Sadler; Billy Devericks, et ux LEASE NO: DV019225; DV019215 ACREAGE: 99.03 79; 130
 DV005328 & DV019188 35.5; 54
 DV021531; 088188; 119569 ACREAGE: 172; 85.25; 48; 23
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) TVD 7,400'
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: MD 17,000'
 WELL OPERATOR: Antero Resources Appalachian Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System
 ADDRESS: 1625 17th Street ADDRESS: 5400 D Big Tyler Road
 Denver, CO 80202 Charleston, WV 25313



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Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

January 07, 2013

WELL WORK PERMIT
Horizontal 6A Well

This permit, API Well Number: 47-1706162, issued to ANTERO RESOURCES APPALACHIAN CORPORATION, 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.

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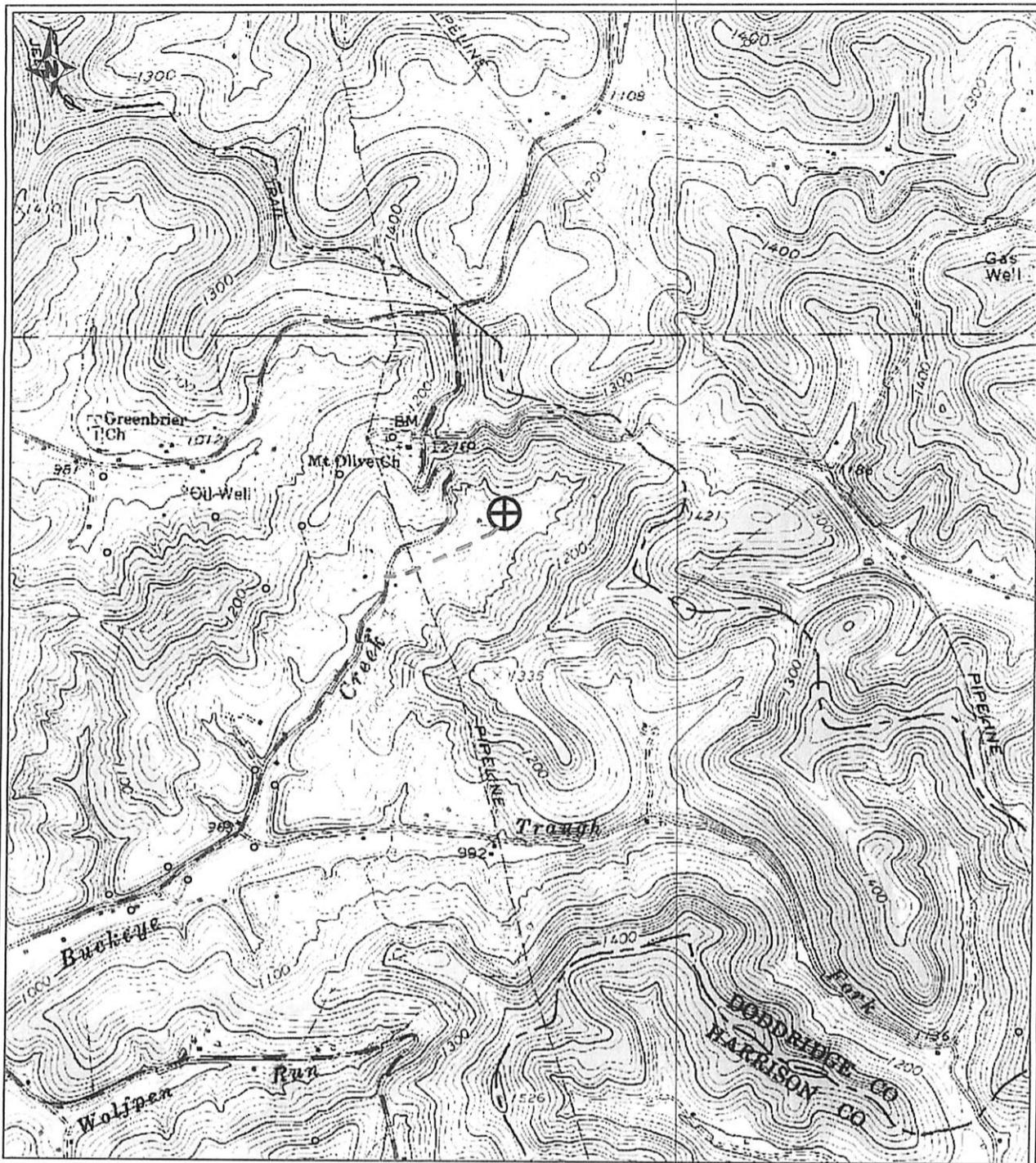
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James Martin
Chief

Operator's Well No: WALTER UNIT 2H
Farm Name: MUTSCHELKNAUS, CLARENCE
API Well Number: 47-1706162
Permit Type: Horizontal 6A Well
Date Issued: 01/07/2013

Promoting a healthy environment.



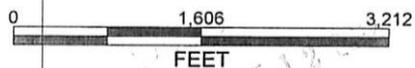
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Antero Resources Corporation

APPALACHIAN BASIN

Walter Unit 2H

Harrison County



REMARKS
QUADRANGLE: BIG ISAAC
WATERSHED: BUCKEYE CREEK
DISTRICT: GREENBRIER

By: ECM

July 6, 2012

Antero Resources
Well No. Walter Unit 2H
Antero Resources Appalachian Corporation

(⊕) Denotes location of well on United States topographic maps

1,959' to Bottom Hole
LATITUDE 39 - 15 - 00

Well Location References



Line	Bearing	Distance
L1	N 86°17' E	915.8'
L2	N 83°01' W	1209.3'
L3	S 61°53' W	97.7'
L4	N 62°37' W	1489.1'



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.

Kenneth J. Plum
Kenneth J. Plum, P.S. 2216

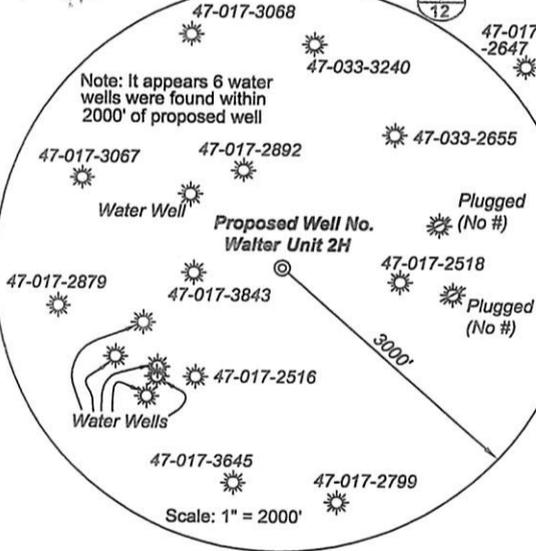
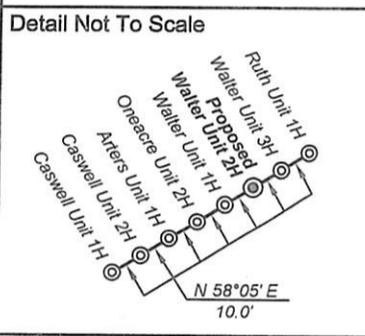
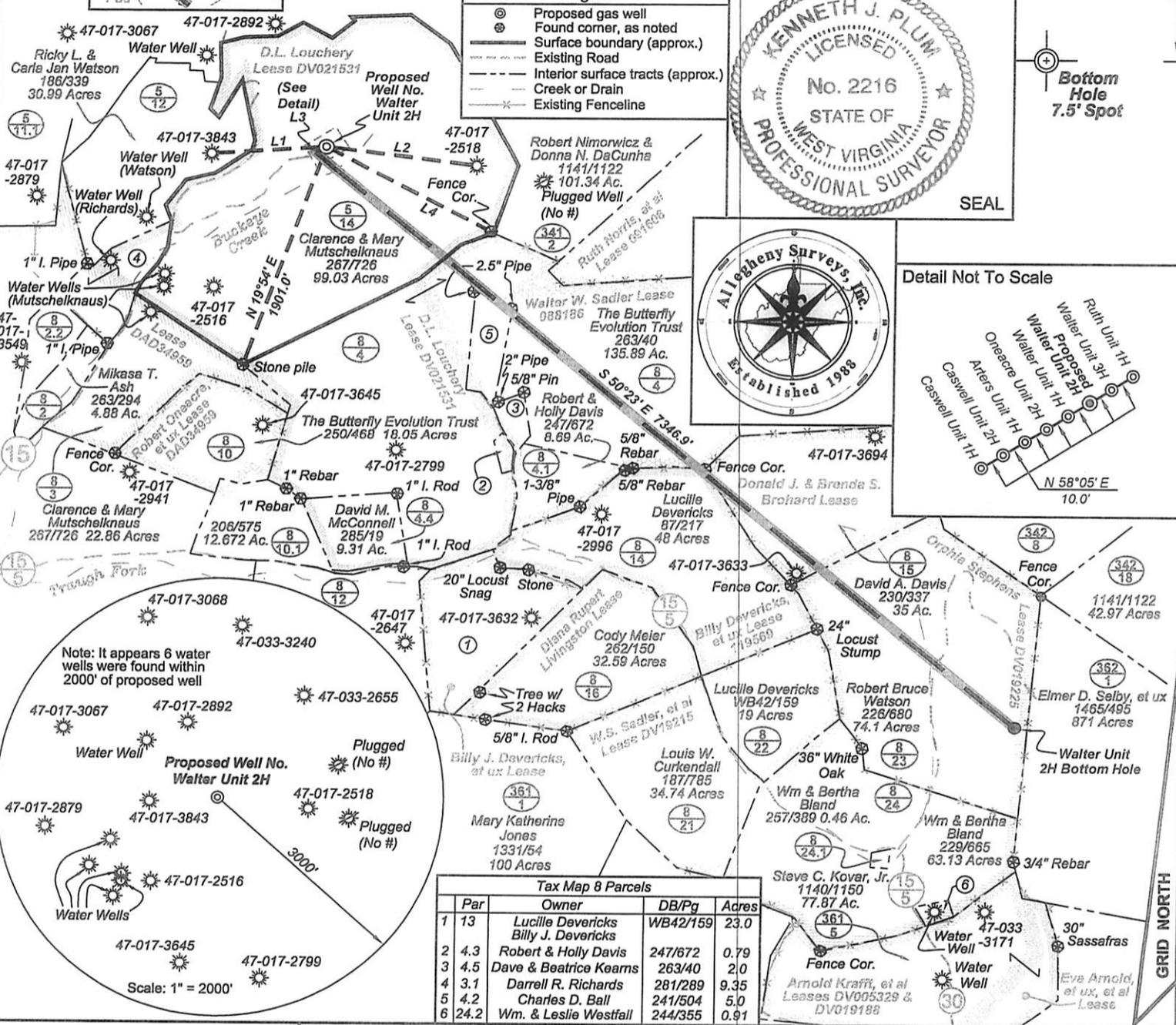
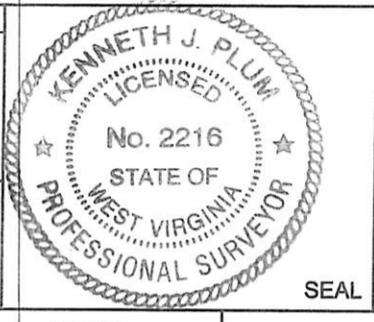
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LONGITUDE 80 - 32 - 30
6,571' to Bottom Hole



Legend

- ⊕ Proposed gas well
- ⊙ Found corner, as noted
- Surface boundary (approx.)
- Existing Road
- - - Interior surface tracts (approx.)
- Creek or Drain
- Existing Fenceline



Tax Map 8 Parcels

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FILE NO: 131-30-G-12
 DRAWING NO: 131-12 Walter 2H Well
 SCALE: 1" = 1200'
 MINIMUM DEGREE OF ACCURACY:
 Submeter
 PROVEN SOURCE OF ELEVATION:
 WVDOT, Bridgeport, WV

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

DATE: October 5 20 12
 OPERATOR'S WELL NO. Walter Unit 2H
 API WELL NO:
 47 - 017 - 6162-6
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
 LOCATION: ELEVATION: 1050' WATERSHED: Buckeye Creek QUADRANGLE: Big Isaac
 DISTRICT: Greenbrier COUNTY: Doddridge
 SURFACE OWNER: Clarence & Mary Mutschelknaus ACREAGE: 99.03
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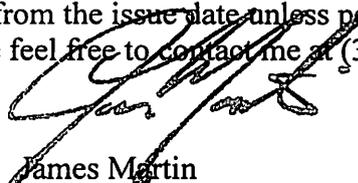
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Horizontal 6A Well**

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James Martin
Chief

Operator's Well No: ONEACRE UNIT 2H
Farm Name: MUTSCHELKNAUS, CLARENCE
API Well Number: 47-1706159
Permit Type: Horizontal 6A Well
Date Issued: 01/07/2013

Promoting a healthy environment.



west virginia department of environmental protection

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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.

A handwritten signature in black ink, appearing to read 'James Martin', is written over the typed name.

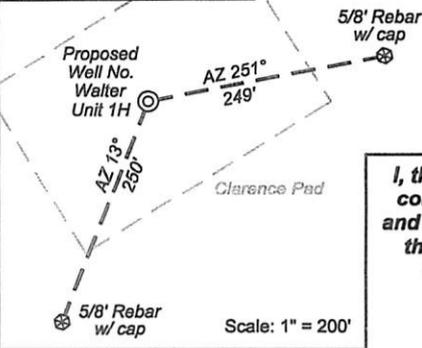
James Martin
Chief

Operator's Well No: WALTER UNIT 1H
Farm Name: MUTSCHELKNAUS, CLARENCE
API Well Number: 47-1706158
Permit Type: Horizontal 6A Well
Date Issued: 01/07/2013

Promoting a healthy environment.

Antero Resources
Well No. Walter Unit 1H
Antero Resources Appalachian Corporation

Well Location References



(-⊕-) Denotes location of well on United States topographic maps

Top Hole 7.5' Spot



Line	Bearing	Distance
L1	N 86°35' E	907.0'
L2	N 83°19' W	1217.1'
L3	S 51°50' W	794.8'
L4	N 62°57' W	1494.3'

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.

Kenneth J. Plum
Kenneth J. Plum, P.S. 2216

2,033' to Bottom Hole
LATITUDE 39 - 15 - 00
LONGITUDE 80 - 32 - 30

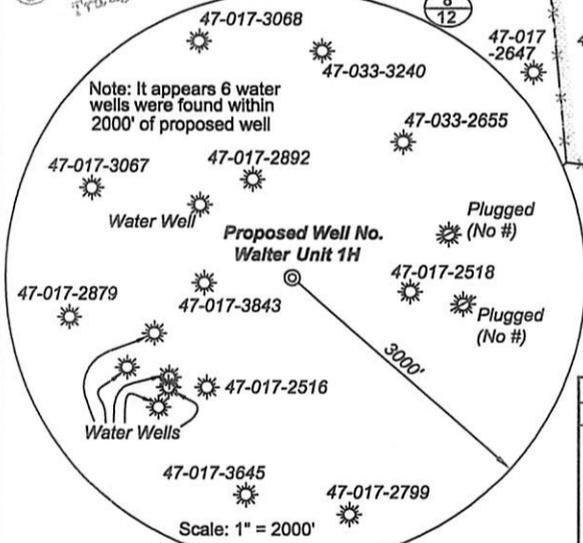
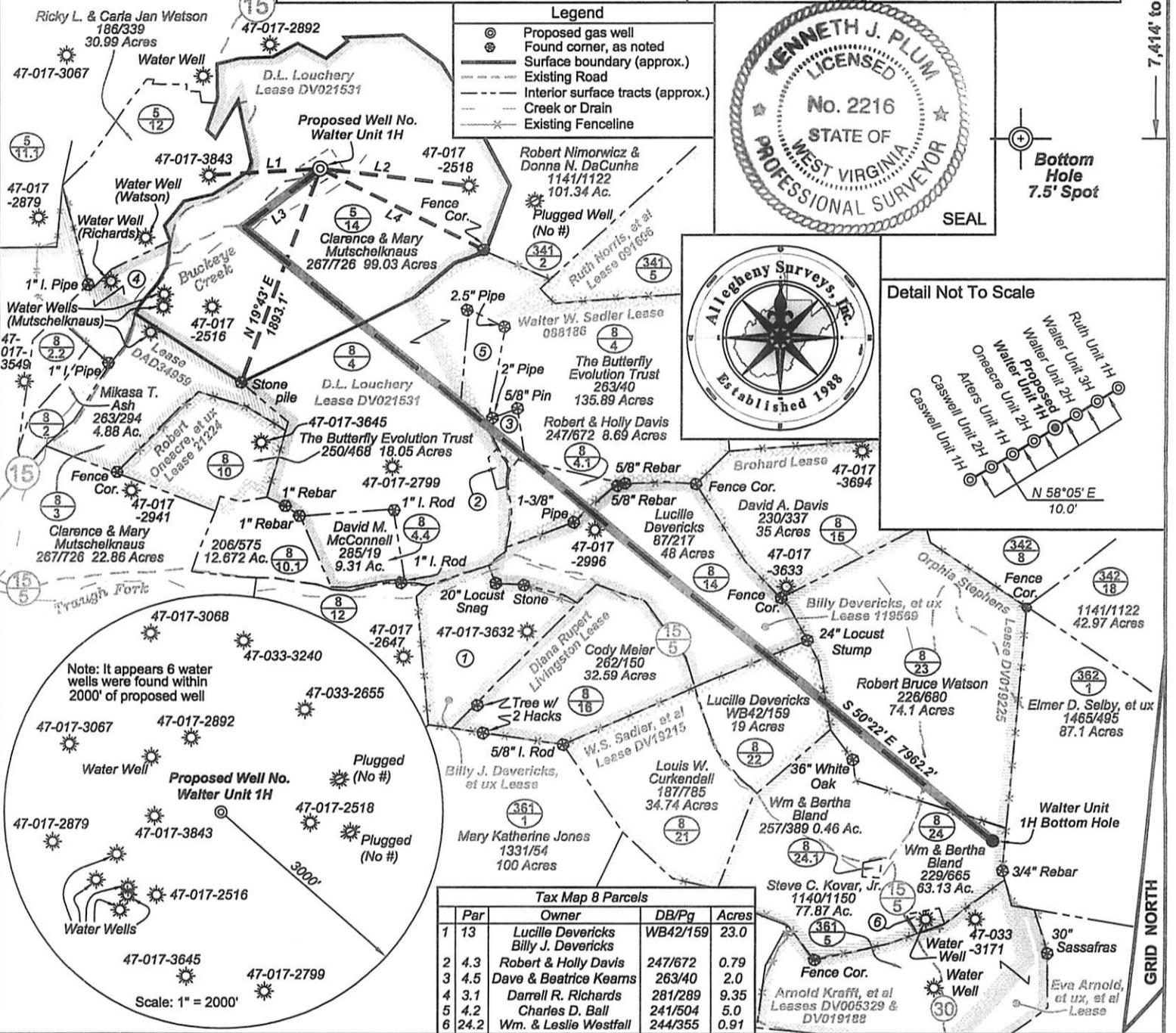
Notes:
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.

Well No. Walter Unit 1H Top Hole coordinates are
 N: 273,030.94 Latitude: 39°14'40.89"
 E: 1,697,466.10 Longitude: 80°34'05.56"

Bottom Hole coordinates are
 N: 267,461.31 Latitude: 39°13'46.49"
 E: 1,702,973.51 Longitude: 80°32'54.74"
UTM Zone 17, NAD 1983

Top Hole Coordinates: N: 4,344,029.666m E: 537,275.809m
 Bottom Hole Coordinates: N: 4,342,360.859m E: 538,981.962m

Plat orientation and corner and well references are based upon the grid north meridian.
 Well location references are based upon the magnetic meridian.



Par	Owner	DB/Pg	Acres
1 13	Lucille Devericks	WB42/159	23.0
2 4.3	Billy J. Devericks		
3 4.5	Robert & Holly Davis	247/672	0.79
4 3.1	Dave & Beatrice Keams	263/40	2.0
5 4.2	Darrell R. Richards	281/289	9.35
6 24.2	Charles D. Ball	241/504	5.0
	Wm. & Leslie Westfall	244/355	0.91

FILE NO: 131-30-G-12
 DRAWING NO: 131-12 Walter 1H Well
 SCALE: 1" = 1200'
 MINIMUM DEGREE OF ACCURACY: Submeter
 PROVEN SOURCE OF ELEVATION: WVDOT, Bridgeport, WV

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

DATE: October 5 20 12
 OPERATOR'S WELL NO. Walter Unit 1H
 API WELL NO:
47 - 017 - 00153 #
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1050' WATERSHED: Buckeye Creek QUADRANGLE: Big Isaac
 DISTRICT: Greenbrier COUNTY: Doddridge

SURFACE OWNER: Clarence & Mary Mutschelknaus ACREAGE: 99.03
 ROYALTY OWNER: D. L. Louchery; Walter W. Sadler; Billy Devericks, et ux LEASE NO: DV021531; 088186; 119569 ACREAGE: 172; 85.25; 48; 54

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____ TVD 7,400'
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: MD 15,750'

WELL OPERATOR: Antero Resources Appalachian Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System
 ADDRESS: 1625 17th Street ADDRESS: 5400 D Big Tyler Road
Denver, CO 80202 Charleston, WV 25313

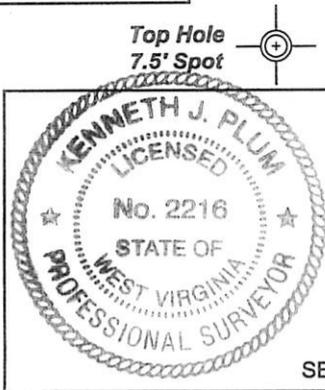
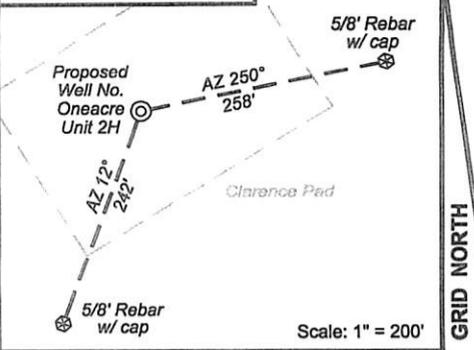
Antero Resources
Well No. Oneacre Unit 2H
Antero Resources Appalachian Corporation

(⊕) Denotes location of well on United States topographic maps

1,885' to Bottom Hole
LATITUDE 39 - 15 - 00

LONGITUDE 80 - 32 - 30

Well Location References



Notes:
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
 Well No. Oneacre Unit 2H Top Hole coordinates are
 N: 273,025.65 Latitude: 39°14'40.84"
 E: 1,697,457.61 Longitude: 80°34'05.67"
 Bottom Hole coordinates are
 N: 266,474.47 Latitude: 39°13'36.75"
 E: 1,703,120.70 Longitude: 80°32'52.72"
UTM Zone 17, NAD 1983
 Top Hole Coordinates: Bottom Hole Coordinates:
 N: 4,344,028.012m N: 4,342,060.964m
 E: 537,273.249m E: 539,031.816m
 Plat orientation and corner and well references are based upon the grid north meridian.
 Well location references are based upon the magnetic meridian.



Legend
 ⊕ Proposed gas well
 ⊕ Found corner, as noted
 ⊕ County Route
 --- Surface boundary (approx.)
 --- Existing Road
 --- Interior surface tracts (approx.)
 --- Creek or Drain
 --- Existing Fenceline

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.
Kenneth J. Plum, P.S. 2216



Line	Bearing	Distance
L1	N 86°53' E	898.2'
L2	N 63°17' W	1499.5'
L3	S 51°04' W	1467.3'
L4	N 83°36' W	1225.0'

Tax Map 8 Parcels

Par	Owner	DB/Pg	Acres
1 13	Lucille Devericks Billy J. Devericks	WB42/159	23.0
2 4.3	Robert & Holly Davis	247/672	0.79
3 4.5	Dave & Beatrice Keams	263/40	2.0
4 3.1	Darrell R. Richards	281/289	9.35
5 4.2	Charles D. Ball	241/504	5.0
6 24.2	Wm. & Leslie Westfall	244/355	0.91
7 2.1	Don & Charlotte Henrey	294/81	69.57
8 2	Mikasa T. Ash	263/294	4.88

FILE NO: 132-30-G-12
 DRAWING NO: 132-12 Oneacre 2H Well
 SCALE: 1" = 1200'
 MINIMUM DEGREE OF ACCURACY:
 Submeter
 PROVEN SOURCE OF ELEVATION:
 WVDOT, Bridgeport, WV

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

DATE: October 5 2012
 OPERATOR'S WELL NO. Oneacre Unit 2H
 API WELL NO:
47 - 017 - 0189 HG
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
 LOCATION: ELEVATION: 1050' WATERSHED: Buckeye Creek QUADRANGLE: Big Isaac
 DISTRICT: Greenbrier COUNTY: Doddridge
 SURFACE OWNER: Clarence & Mary Mutschelknaus W. S. Sadler, et al; Orphia Stephens; Arnold Krafft, et al DV019225; DV019215
 BILLY J. DEVERICKS, et ux; DIANA RUPERT LIVINGSTON DV005329 & DV019188 ACREAGE: 99.03 79; 130
 ROYALTY OWNER: D. L. Louchery; Walter W. Sadler; Billy Devericks, et ux LEASE NO: DV021531; 088186; 119569 ACREAGE: 172; 85.25; 48; 23 35.5; 54
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____ TVD 7,400'
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: MD 17,000'
 WELL OPERATOR: Antero Resources Appalachian Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System
 ADDRESS: 1625 17th Street ADDRESS: 5400 D Big Tyler Road
Denver, CO 80202 Charleston, WV 25313



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

January 07, 2013

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-1706162, issued to ANTERO RESOURCES APPALACHIAN CORPORATION, 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 of completion of drilling, 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.

A handwritten signature in black ink, appearing to read 'James Martin', is written over the typed name.

James Martin
Chief

Operator's Well No: WALTER UNIT 2H
Farm Name: MUTSCHELKNAUS, CLARENCE
API Well Number: 47-1706162
Permit Type: Horizontal 6A Well
Date Issued: 01/07/2013

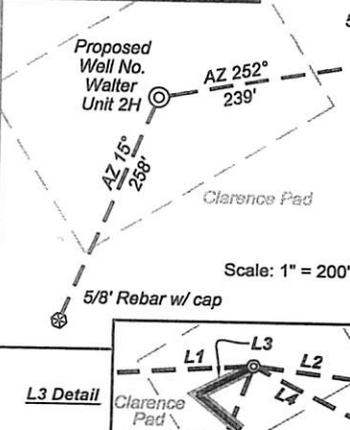
Promoting a healthy environment.

Antero Resources
Well No. Walter Unit 2H
Antero Resources Appalachian Corporation

(-φ-) Denotes location of well on United States topographic maps

1,959' to Top Hole
 LATITUDE 39 - 15 - 00
 6,571' to Bottom Hole
 LONGITUDE 80 - 32 - 30

Well Location References



Line	Bearing	Distance
L1	N 86°17' E	915.8'
L2	N 83°01' W	1209.3'
L3	S 61°53' W	97.7'
L4	N 62°37' W	1489.1'

Top Hole
 7.5' Spot



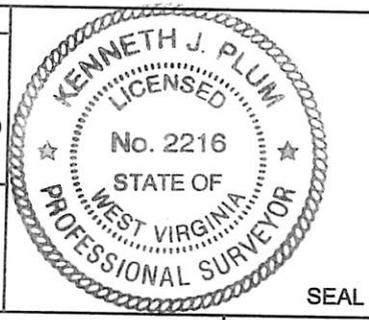
I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Department of Environmental Protection.

Kenneth J. Plum
Kenneth J. Plum, P.S. 2216

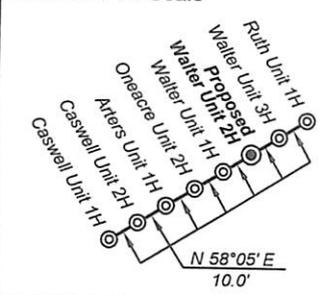
Notes:
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
 Well No. Walter Unit 2H Top Hole coordinates are
 N: 273,036.23 Latitude: 39°14'40.95"
 E: 1,697,474.59 Longitude: 80°34'05.45"
 Bottom Hole coordinates are
 N: 268,304.80 Latitude: 39°13'54.83"
 E: 1,703,047.43 Longitude: 80°32'53.92"
UTM Zone 17, NAD 1983
 Top Hole Coordinates: Bottom Hole Coordinates:
 N: 4,344,031.321m N: 4,342,618.206m
 E: 537,278.368m E: 539,000.199m
 Plat orientation and corner and well references are based upon the grid north meridian.
 Well location references are based upon the magnetic meridian.

Legend

- ⊙ Proposed gas well
- ⊙ Found corner, as noted
- Surface boundary (approx.)
- - - Existing Road
- - - Interior surface tracts (approx.)
- - - Creek or Drain
- * - Existing Fenceline

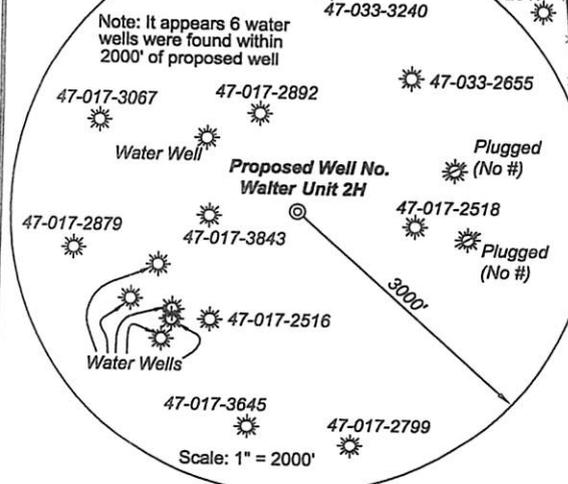


Detail Not To Scale



Tax Map 8 Parcels

Par	Owner	DB/Pq	Acres
1	13 Lucille Devericks Billy J. Devericks	WB42/159	23.0
2	4.3 Robert & Holly Davis	247/672	0.79
3	4.5 Dave & Beatrice Kearns	263/40	2.0
4	3.1 Darrell R. Richards	281/289	9.35
5	4.2 Charles D. Ball	241/504	5.0
6	24.2 Wm. & Leslie Westfall	244/355	0.91



FILE NO: 131-30-G-12
 DRAWING NO: 131-12 Walter 2H Well
 SCALE: 1" = 1200'
 MINIMUM DEGREE OF ACCURACY: Submeter
 PROVEN SOURCE OF ELEVATION: WVDOT, Bridgeport, WV

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

DATE: October 5 20 12
 OPERATOR'S WELL NO. Walter Unit 2H
 API WELL NO: 47 - 017 - 616246
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
 LOCATION: ELEVATION: 1050' WATERSHED: Buckeye Creek QUADRANGLE: Big Isaac
 DISTRICT: Greenbrier COUNTY: Doddridge
 SURFACE OWNER: Clarence & Mary Mutschelknaus ACREAGE: 99.03
 ROYALTY OWNER: D. L. Louchery; Walter W. Sadler; Billy Devericks, et ux LEASE NO: DV021531; 088186; 119569 ACREAGE: 172; 85.25; 48; 130
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____ TVD 7,400'
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: MD 15,300'
 WELL OPERATOR: Antero Resources Appalachian Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System
 ADDRESS: 1625 17th Street ADDRESS: 5400 D Big Tyler Road
 Denver, CO 80202 Charleston, WV 25313



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

January 07, 2013

WELL WORK PERMIT

Vertical Well

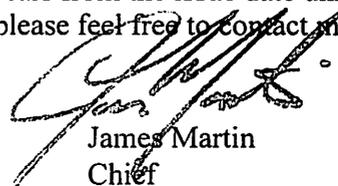
This permit, API Well Number: 47-5902240, issued to TUG FORK DEVELOPMENT, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as 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 of completion of drilling, 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: BNR 11
Farm Name: BURNING CREEK MARROWBON
API Well Number: 47-5902240
Permit Type: Vertical Well
Date Issued: 01/07/2013

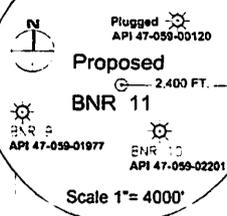
Promoting a healthy environment.

LATITUDE 37° 52' 30"

API 47-059-00120
Approx.
Plugged

LONGITUDE 82° 20' 00"

Wells Within 2,400'



Coal Lessee: CONSOL Of Kentucky Inc.
Lauren Land Company
Oil & Gas Lessee: Judith Casalino
Tug Fork Development

Wh. Oak
Chest. Stump

Fee
Burning Creek Marrowbone Land Co.
144 Acre
Deed Book 24 Page 396
"McCarthy Tract"

BURNING CREEK MARROWBONE
LAND COMPANY

BURNING CREEK MARROWBONE LAND COMPANY
TAX MAP 241 PARCEL 7

Burning
Creek

BNR 9
API 47-059-01977

24" R. Oak
West Side
Knob

Proposed Location

Tug Fork Development
Operator No. "BNR 11"
N.G.V.D. 29 Elev. 1217'
WV. State Plane Coordinates
(SOUTH) NAD 27
GRID N: 306,828.84
GRID E: 1,614,077.20
LATITUDE: 37°50'06.02"
LONGITUDE: 82°20'10.85"

UTM 17
NAD 83

32" BEECH
(Found)

N 418 8360.723
E 382419.132

Mine Control Monumentation
Wv. SP NAD 27

Upper

BNR 8
API 47-059-01976
14" BEECH

Surveyed 1979
12" Hornbeam
5" Beech

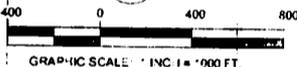
Burning Creek Marrowbone Land Co.
144 Acre
"McCarthy Tract"

Chestnut Oak
(Found)

NEIBERT LAND COMPANY
TAX MAP 261 PARCEL 51

NEIBERT LAND COMPANY
TAX MAP 262 PARCEL 7

Buck Baldwin Knob
SOURWOOD

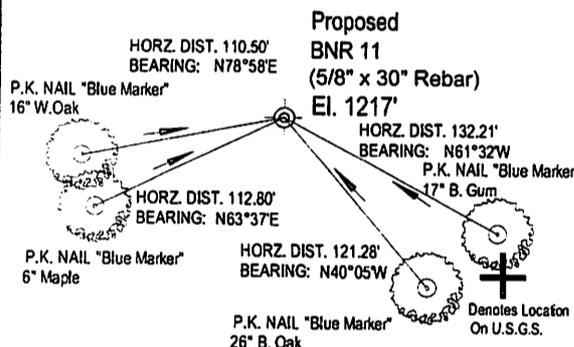


LEGEND

- Proposed Well
- Existing Well
- Plugged Well
- Solid Lines Surveyed
- Broken Lines Deed Calls

References

Scale 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.

[Signature]

(+) DENOTES LOCATION OF WELL ON U.S.G.S. TOPOGRAPHIC MAP

DATE 14 November 20 12

OPERATORS WELL NO. BNR 11

API WELL NO. 47 - 059 - 02240
STATE COUNTY PERMIT

Alan J. Coffey, PLS No. 869su

MINIMUM DEGREE OF ACCURACY 1: 5,000
PROVEN SOURCE OF ELEVATION: U.S.G.S. (N.G.V.D. 29) Benchmark "Q - 144" El. 650.75'

FILE NO. SCALE 1" = 800 FEET

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



WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___ If "Gas" Production X Storage ___ Deep ___ Shallow X

LOCATION: Elevation 1217' Watershed Bent Branch Of Marrowbone Creek Of Tug Fork Big Sandy River
District KERMIT County MINGO Quadrangle Naugatuck 7.5 Min.

SURFACE OWNER Burning Creek Marrowbone Land Company ACREAGE ±144

ROYALTY OWNER Burning Creek Marrowbone Land Company LEASE ACREAGE ±144

PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ LEASE NO. ___

PLUG OFF OLD FORMATION ___ PERFORATE NEW ___ PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___

OTHER PHYSICAL CHANGE IN WELL (SPECIFY) TARGET FORMATION LOWER HURON

ESTIMATED DEPTH ±4,200'

WELL OPERATOR Tug Fork Development DESIGNATED AGENT DAVE BARTMAN

ADDRESS: 1930 BRANDWINE DRIVE, CATLETTSBURG, KENTUCKY 40302 ADDRESS P.O. BOX 306 MILTON, WV 25547

COUNTY PERMIT



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

January 04, 2013

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-4302083, issued to CHESAPEAKE APPALACHIA, L.L.C., 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.

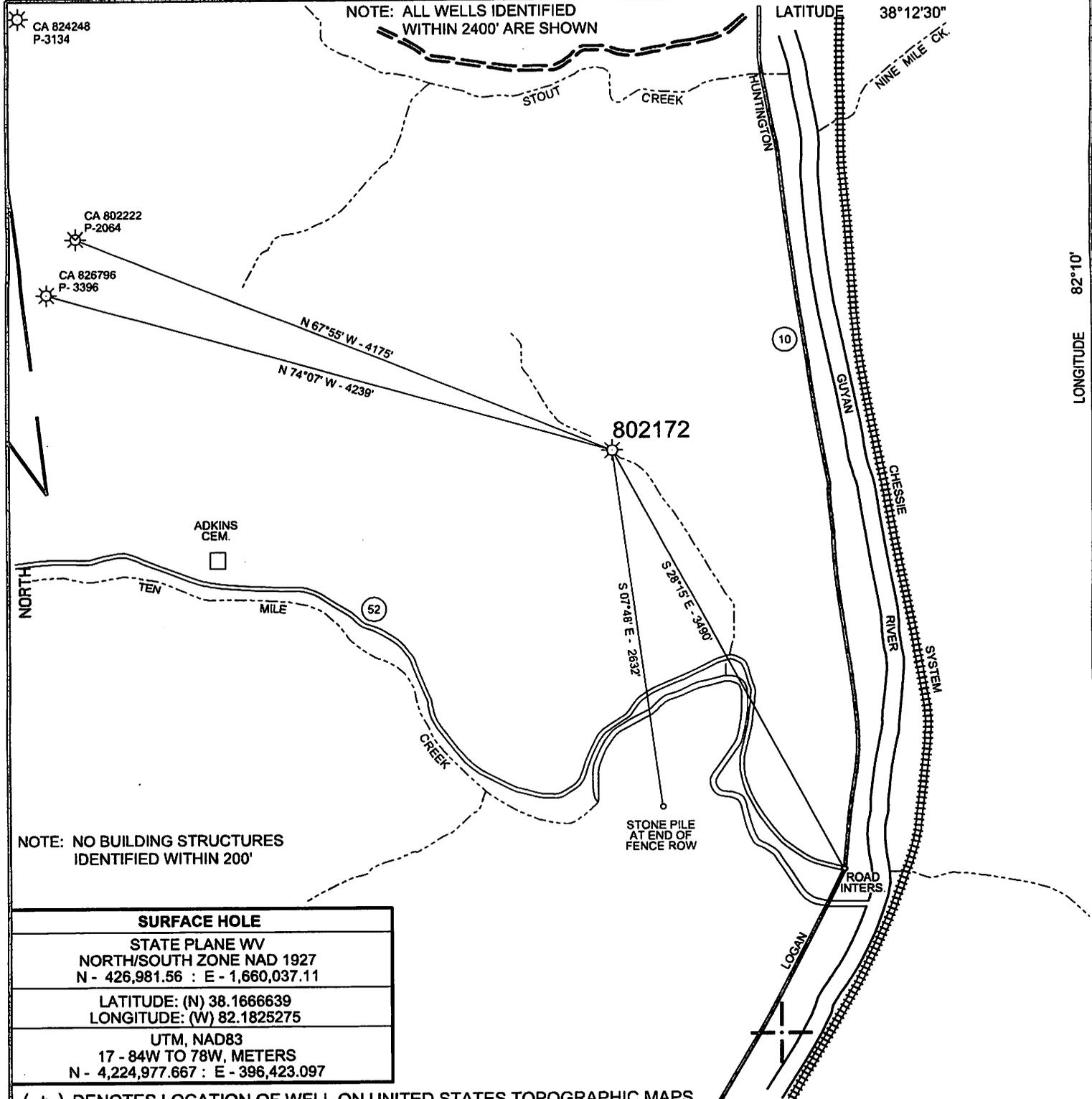
Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the 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: 2172
Farm Name: OK CORRAL MORTGAGE, INC.
API Well Number: 47-4302083
Permit Type: Plugging
Date Issued: 01/04/2013

Promoting a healthy environment.



SURFACE HOLE	
STATE PLANE WV NORTH/SOUTH ZONE NAD 1927 N - 426,981.56 : E - 1,660,037.11	
LATITUDE: (N) 38.1666639 LONGITUDE: (W) 82.1825275	
UTM, NAD83 17 - 84W TO 78W, METERS N - 4,224,977.667 : E - 396,423.097	

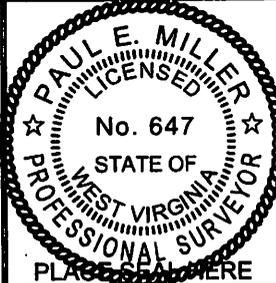
(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO.	802172P&A.DGN
DRAWING NO.	2172 P&A
SCALE	1" = 1000'
MINIMUM DEGREE OF ACCURACY	1:200
PROVEN SOURCE OF ELEVATION	MAPPING GRADE GPS

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) *Paul E. Miller*

R.P.E. _____ L.L.S. 647



STATE OF WEST VIRGINIA DIVISION OF ENVIRONMENTAL PROTECTION OIL AND GAS DIVISION		DATE	NOVEMBER 21	20	12
		OPERATOR'S WELL NO.	802172	API WELL NO.	
WELL TYPE: OIL ___ GAS ___ LIQUID INJECTION ___ WASTE DISPOSAL ___ (IF "GAS,") PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW ___		STATE	47	COUNTY	043
LOCATION: ELEVATION 748' WATER SHED TEN MILE CREEK DISTRICT LAUREL HILL COUNTY LINCOLN QUADRANGLE BRANCLAND, WV 7.5'		PERMIT 02083 P			
SURFACE OWNER OK CORRAL MORTGAGE, INC. ACREAGE 42.5 OIL & GAS ROYALTY OWNER CHESAPEAKE APPALACHIA LLC LEASE ACREAGE 74.735.91 LEASE NO. _____ FEE LANDS _____		COUNTY NAME			
PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____		PERMIT			
PLUG AND ABANDON ___ X ___ CLEAN OUT AND REPLUG ___ TARGET FORMATION _____ ESTIMATED DEPTH _____ WELL OPERATOR CHESAPEAKE APPALACHIA L.L.C. DESIGNATED AGENT ERIC GILLISPIE ADDRESS PO BOX 18496 OKLAHOMA CITY, OK 73154-0496 ADDRESS PO BOX 6070 CHARLESTON, WV 25362					

FORM WW-6



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

January 04, 2013

WELL WORK PERMIT
Vertical Well

This permit, API Well Number: 47-4105670, issued to ROSS, MIKE 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.

Please be advised that form WR-35, well operators report of well work, is to be submitted to this office within 90 days of completion of drilling, 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

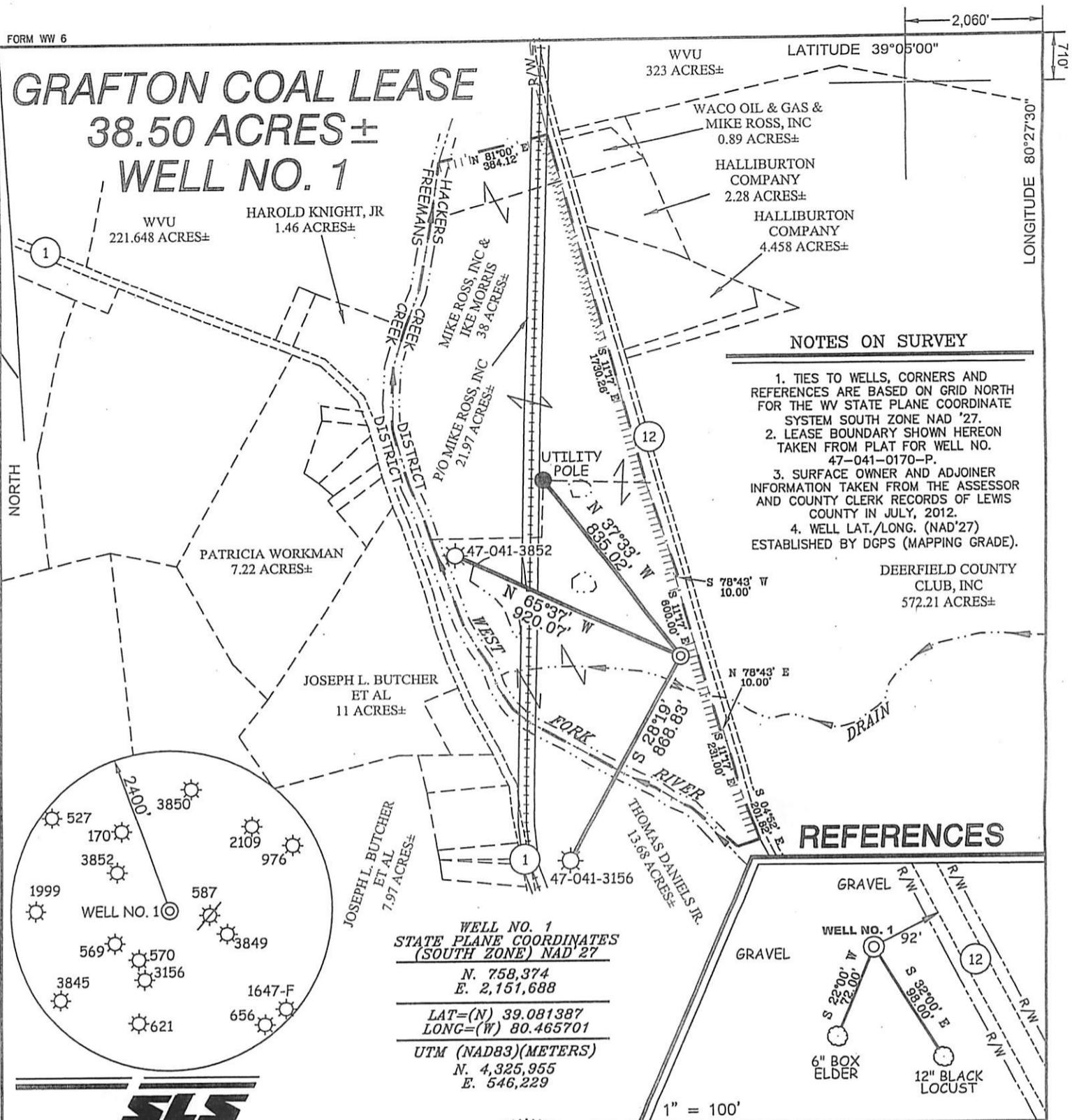
Operator's Well No: 1
Farm Name: MIKE ROSS & IKE MORRIS
API Well Number: 47-4105670
Permit Type: Vertical Well
Date Issued: 01/04/2013

Promoting a healthy environment.

GRAFTON COAL LEASE

38.50 ACRES±

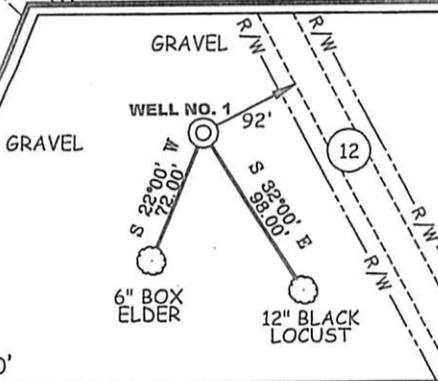
WELL NO. 1



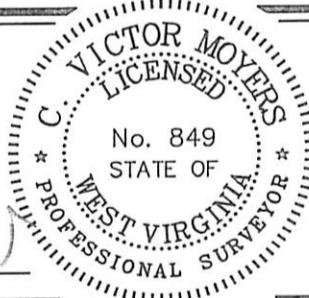
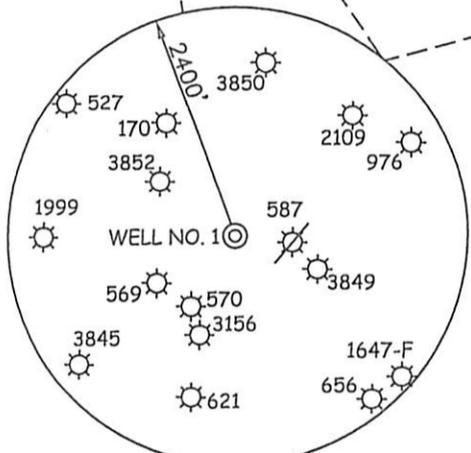
NOTES ON SURVEY

1. TIES TO WELLS, CORNERS AND REFERENCES ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM SOUTH ZONE NAD '27.
2. LEASE BOUNDARY SHOWN HEREON TAKEN FROM PLAT FOR WELL NO. 47-041-0170-P.
3. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF LEWIS COUNTY IN JULY, 2012.
4. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS (MAPPING GRADE).

REFERENCES



WELL NO. 1
STATE PLANE COORDINATES
(SOUTH ZONE) NAD '27
 N. 758,374
 E. 2,151,688
LAT=(N) 39.081387
LONG=(W) 80.465701
UTM (NAD83)(METERS)
 N. 4,325,955
 E. 546,229



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. C. Victor Moyers
 849

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
 DATE OCTOBER 08, 20 12
 OPERATORS WELL NO. 1
 API WELL NO. 47-041-05670
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. 7920P1(433-13)
 PROVEN SOURCE OF ELEVATION DGPS (MAPPING GRADE) SCALE 1" = 500'

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



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

LOCATION: ELEVATION 1004' WATERSHED WEST FORK RIVER
 DISTRICT HACKERS CREEK COUNTY LEWIS QUADRANGLE BOSTON

SURFACE OWNER MIKE ROSS & IKE MORRIS ACREAGE 38.50±
 ROYALTY OWNER PATRICIA HALL LEASE NO. 2-000

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER

PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION ALEXANDER
 ESTIMATED DEPTH 5990'

WELL OPERATOR MIKE ROSS INC. dba ROSS AND WHARTON GAS CO. DESIGNATED AGENT MIKE ROSS
 ADDRESS P.O. BOX 219 ADDRESS P.O. BOX 219
COALTON, WV 26257 COALTON, WV 26257

RECEIVED
 OFFICE OF OIL & GAS
 NOV 28 2012

COUNTY NAME
 PERMIT



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

January 04, 2013

WELL WORK PERMIT

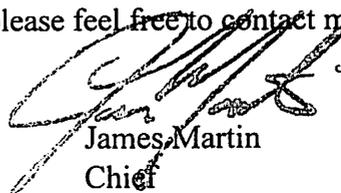
Horizontal 6A Well

This permit, API Well Number: 47-5101611, issued to CHESAPEAKE APPALACHIA, L.L.C., 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 of completion of drilling, 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: FORK RIDGE MSH 1H
Farm Name: CONSOLIDATION COAL COMPA
API Well Number: 47-5101611
Permit Type: Horizontal 6A Well
Date Issued: 01/04/2013

Promoting a healthy environment.

Top Hole 3,832'

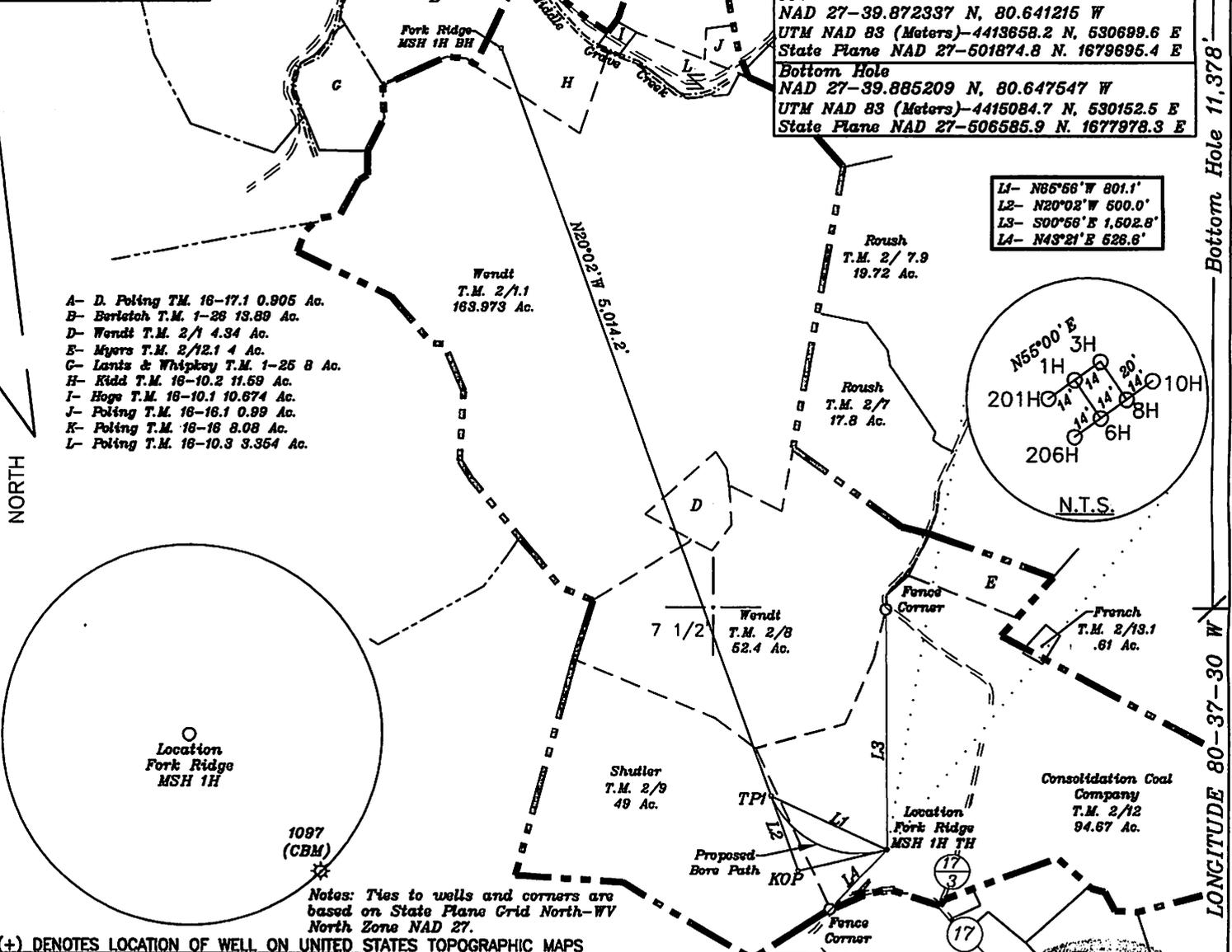
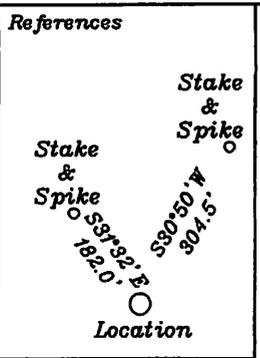
Bottom Hole 6,470'
 LATITUDE 39-52-30 N (TH)
 LATITUDE 39-55-00 N (BH)

7 1/2'

Top Hole 1,239'

Bottom Hole 11,378'

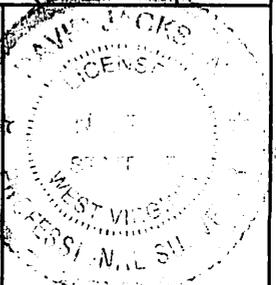
LONGITUDE 80-37-30 W



FILE NO. _____
 DRAWING NO. 1
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1 in 2500
 PROVEN SOURCE OF ELEVATION GPS
submeter unit

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.

(SIGNED) David Jackson
 R.P.E. _____ L.L.S. 708



STATE OF WEST VIRGINIA
 Division of Environmental Protection
 OFFICE OF OIL AND GAS

DATE November 27, 2012
 OPERATOR'S WELL NO. Fork Ridge MSH 1H
 API WELL NO. _____

WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL STATE 47 COUNTY 51 PERMIT 01611 H64
 (IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X

LOCATION: ELEVATION 1391' WATER SHED Middle Grave Creek
 DISTRICT Cameron COUNTY Marshall
 QUADRANGLE Glen Easton 7 1/2' (TH) Moundsville 7 1/2' (BH)

SURFACE OWNER Consolidation Coal Company ACREAGE 94.67
 OIL & GAS ROYALTY OWNER Consolidation Coal Company LEASE ACREAGE 470.343 ac.
 LEASE NO. 1-284746-001 to 003(TM2/12), 1-284746-001 to 004(TM2/9&8), 1-286490-000(TM2/1), 1-286494-000
 LEASE NO. (TM2/1.1), Bk. 699/179(TM16/10.2)

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

PLUG AND ABANDON CLEAN OUT AND REPLUG

TARGET FORMATION Marcellus ESTIMATED DEPTH TVD 6,813'+ Horizontal Leg, TMD 12,147'
 WELL OPERATOR Chesapeake Appalachia, L.L.C. DESIGNATED AGENT Eric B. Gillespie
 ADDRESS P.O. Box 18496 Oklahoma City, OK 73154-0496 ADDRESS P.O. Box 6070 Charleston, WV 25362



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

January 04, 2013

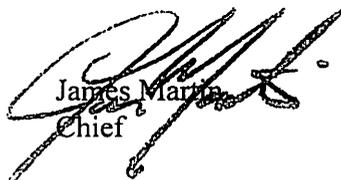
WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-4105671, issued to DOMINION TRANSMISSION 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 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: DAWSON WELL
Farm Name: WILLIAM DAWSON MEANS, ET.
API Well Number: 47-4105671
Permit Type: Plugging
Date Issued: 01/04/2013

Promoting a healthy environment.

(+) DENOTES LOCATION OF WELL ON U.S.G.S. TOPOGRAPHIC MAP

LATITUDE 39°05'30"

Joseph W. & Elizabeth A. Crofford
Tax Map 2D Parcel 9 16.05 Ac.

Francis L., Jr. & Sharon Hartlaub
Tax Map 2D Parcel 13
104.34 Ac.



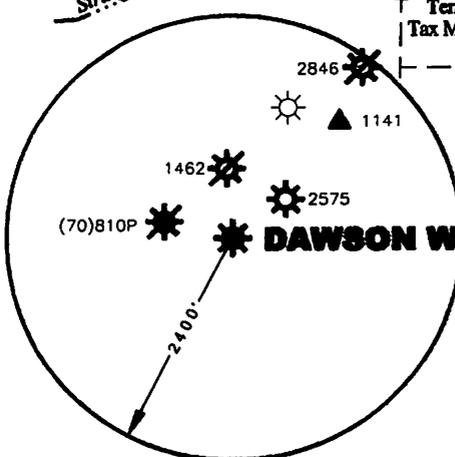
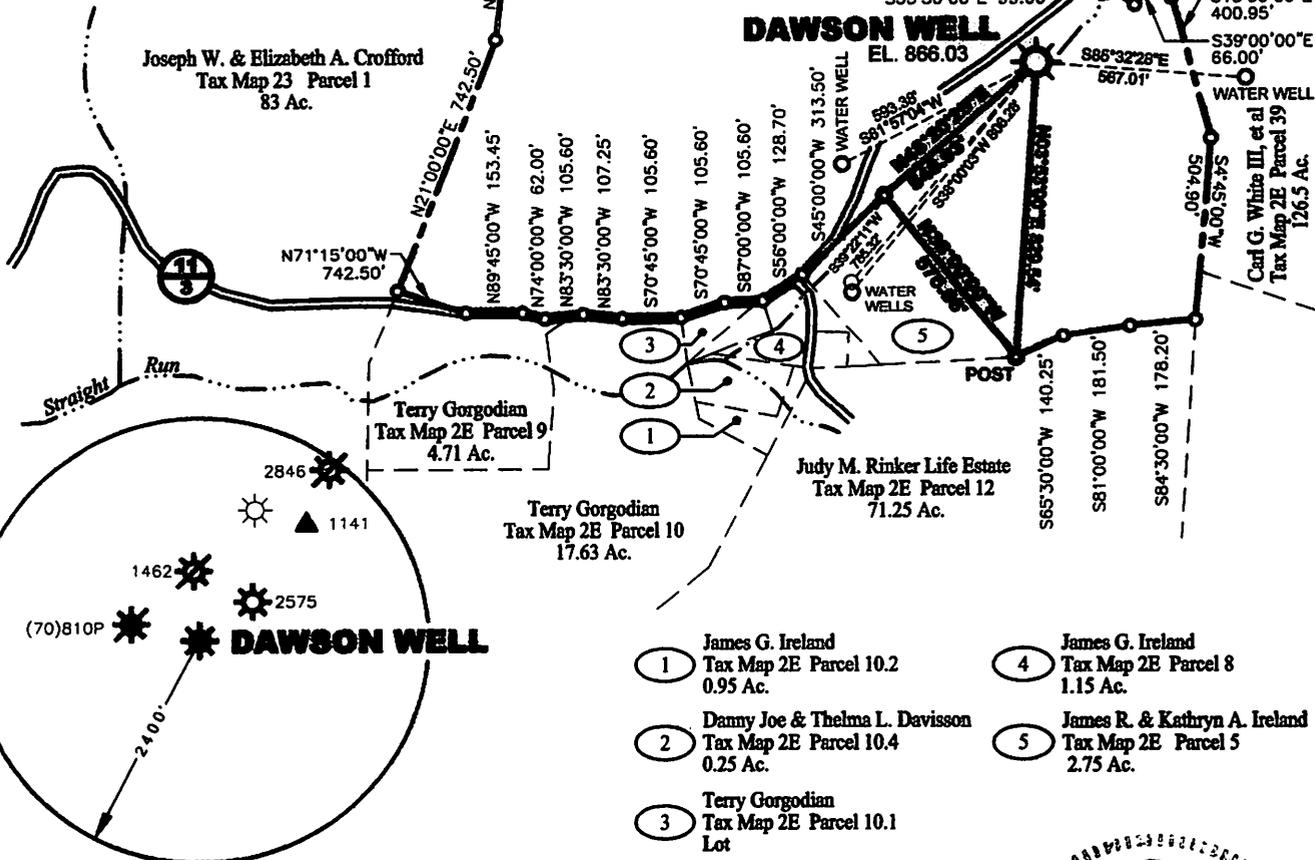
DAWSON WELL
NAD 83 LAT. 39°04'48.3084"
LONG. 80°40'47.9214"
UTM NAD 83 N4321897.8686
(METERS) E551507.8910

WILLIAM DAWSON MEANS, ET AL
66.31 ACRES

DAWSON WELL
EL. 866.03

Joseph W. & Elizabeth A. Crofford
Tax Map 23 Parcel 1
83 Ac.

CNG Producing Co.
Tax Map 2D Parcel 10
4.49 Ac.
Straight Run Methodist Church
Tax Map 2E Parcel 3
0.5 Ac.



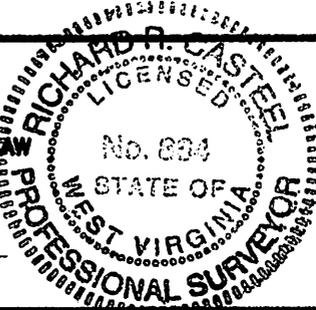
- 1 James G. Ireland
Tax Map 2E Parcel 10.2
0.95 Ac.
- 2 Danny Joe & Thelma L. Davisson
Tax Map 2E Parcel 10.4
0.25 Ac.
- 3 Terry Gorgodian
Tax Map 2E Parcel 10.1
Lot
- 4 James G. Ireland
Tax Map 2E Parcel 8
1.15 Ac.
- 5 James R. & Kathryn A. Ireland
Tax Map 2E Parcel 5
2.75 Ac.

MSES consultants, inc.

FILE NO. 15-502-Dawson
DRAWN BY HDW/RRC/MVS
SCALE 1" = 500'
MIN. DEGREE OF ACCURACY 1 IN 2500
PROVEN SOURCE OF ELEVATION
ROAD INTERSECTION 2600'
NORTHEAST OF LOCATION EL. 845'

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

(SIGNED) *Richard R. Castiel*
R.P.E. _____ L.L.S. 864



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION



DATE JANUARY 3, 20 12
OPERATOR'S WELL NO. DAWSON WELL
API WELL NO.
47 041 5671P
STATE COUNTY PERMIT NO.

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

LOCATION: ELEVATION 866.03' WATERSHED STRAIGHT RUN
DISTRICT FREEMANS CREEK COUNTY LEWIS
QUADRANGLE VADIS. WV 7.5' NEAREST TOWN HURST

SURFACE OWNER WILLIAM DAWSON MEANS, ET AL ACREAGE 67.25
OIL & GAS ROYALTY OWNER WILLIAM DAWSON MEANS, ET AL LEASE ACREAGE 67.25
LEASE NO. FK-051065

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

TARGET FORMATION GANTZ ESTIMATED DEPTH 2,900'
WELL OPERATOR DOMINION TRANSMISSION, INC. DESIGNATED AGENT JAMES D. BLASINGAME
ADDRESS 445 WEST MAIN STREET ADDRESS 445 WEST MAIN STREET
CLARKSBURG, WV 26301 CLARKSBURG, WV 26301

FORM IV-6

COUNTY 041 PERMIT NO.



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

January 09, 2013

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-3305705, issued to ANTERO RESOURCES APPALACHIAN CORPORATION, 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 of completion of drilling, 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.

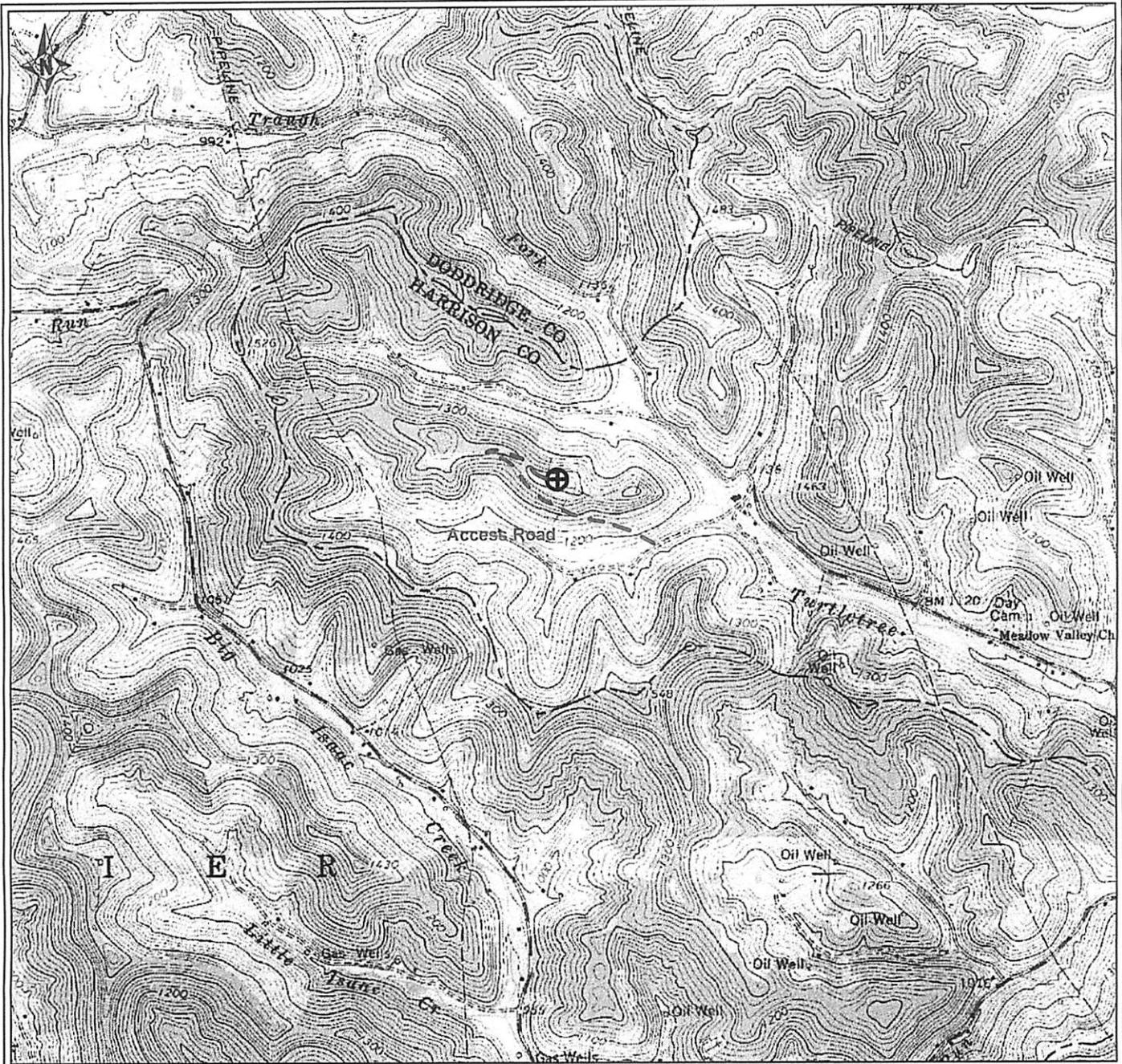
In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

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: MAUDE UNIT 1H
Farm Name: CORDER, GERALD AND LOUELI
API Well Number: 47-3305705
Permit Type: Horizontal 6A Well
Date Issued: 01/09/2013

Promoting a healthy environment.



PETRA 6/6/2012 11:56:26 AM

Antero Resources Corporation

Appalachian Basin

Maude Unit 1H

Harrison County



REMARKS
 QUADRANGLE: BIG ISSAC
 WATERSHED: TURTLE TREE FORK OF
 TENMILE CREEK
 DISTRICT: UNION

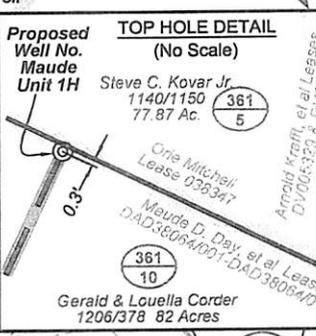
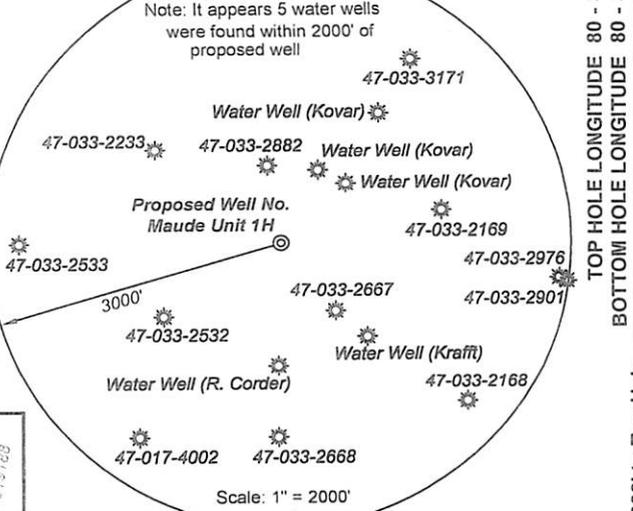
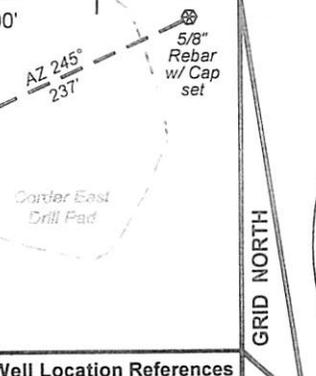
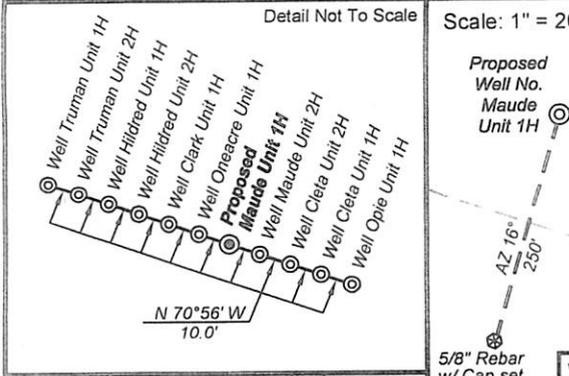
June 6, 2012

**Antero Resources
Well No. Maude Unit 1H
Antero Resources
Appalachian Corporation**

Bottom Hole
7.5' Spot

(⊕) Denotes location
of well on
United States
topographic maps

3,508' to Top Hole
TOP HOLE LATITUDE 39 - 15 - 00
BOTTOM HOLE LATITUDE 39 - 12 - 30
TOP HOLE LONGITUDE 80 - 32 - 30
BOTTOM HOLE LONGITUDE 80 - 30 - 00

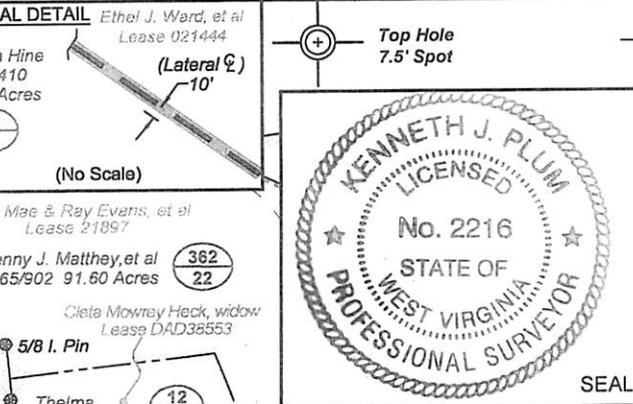


I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Department of Environmental Protection.

Kenneth J. Plum
Kenneth J. Plum, P.S. 2216



Line	Bearing	Distance
L1	S 09°41' E	839.1'
L2	N 84°53' W	979.5'
L3	N 49°45' W	1391.4'
L4	N 37°26' W	909.2'



Notes:
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
Well No. Maude Unit 1H Top Hole coordinates are
N: 264,842.78 Latitude: 39°13'20.44"
E: 1,701,497.76 Longitude: 80°33'13.10"
Bottom Hole coordinates are
N: 258,576.61 Latitude: 39°12'19.20"
E: 1,707,547.77 Longitude: 80°31'55.31"
UTM Zone 17, NAD 1983
Top Hole Coordinates: Bottom Hole Coordinates:
N: 4,341,555.619m N: 4,339,677.362m
E: 538,545.664m E: 540,420.652m
Plat orientation and corner and well references are based upon the grid north meridian.
Well location references are based upon the magnetic meridian.



Par	Owner	DB/Pg	Acres
1	4 Lucille Devericks	WB167/23	9.84
2	3 Lucille Devericks	WB167/23	9.70
3	11.1 Lorena Krafft, et al	FOB100/347	1.25

FILE NO: 71-36-U-12
DRAWING NO: 71-12 Maude 1H Well Plat
SCALE: 1" = 1200'
MINIMUM DEGREE OF ACCURACY:
Submeter
PROVEN SOURCE OF ELEVATION:
WVDOT, Bridgeport, WV

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

DATE: September 28 20 12
OPERATOR'S WELL NO. Maude Unit 1H
API WELL NO: 47 - 033 - 5705 H6A
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION: ELEVATION: 1405' WATERSHED: Turtletree Fork of Tenmile Creek QUADRANGLE: Big Isaac
DISTRICT: Union Oral Eugene Davis & Kay Seckman DAD38553 COUNTY: Harrison
SURFACE OWNER: Gerald & Louella Corder DAD38064/010 ACREAGE: 82
DAD38064/001 62; 105; 1.0
ROYALTY OWNER: Maude D. Day, et al; Dortha Bland, et al; James Corder, et ux LEASE NO: DV017732; 021444 ACREAGE: 147; 105; 6.5; 75
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) TVD 7,700'
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: MD 18,600'

WELL OPERATOR: Antero Resources Appalachian Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System
ADDRESS: 1625 17th Street ADDRESS: 5400 D Big Tyler Road
Denver, CO 80202 Charleston, WV 25313



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

January 09, 2013

WELL WORK PERMIT

Brine Disposal

This permit, API Well Number: 47-9502095, issued to SIMPSON, STEVE DISPOSAL WELL, LTD, 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 of completion of drilling, 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.

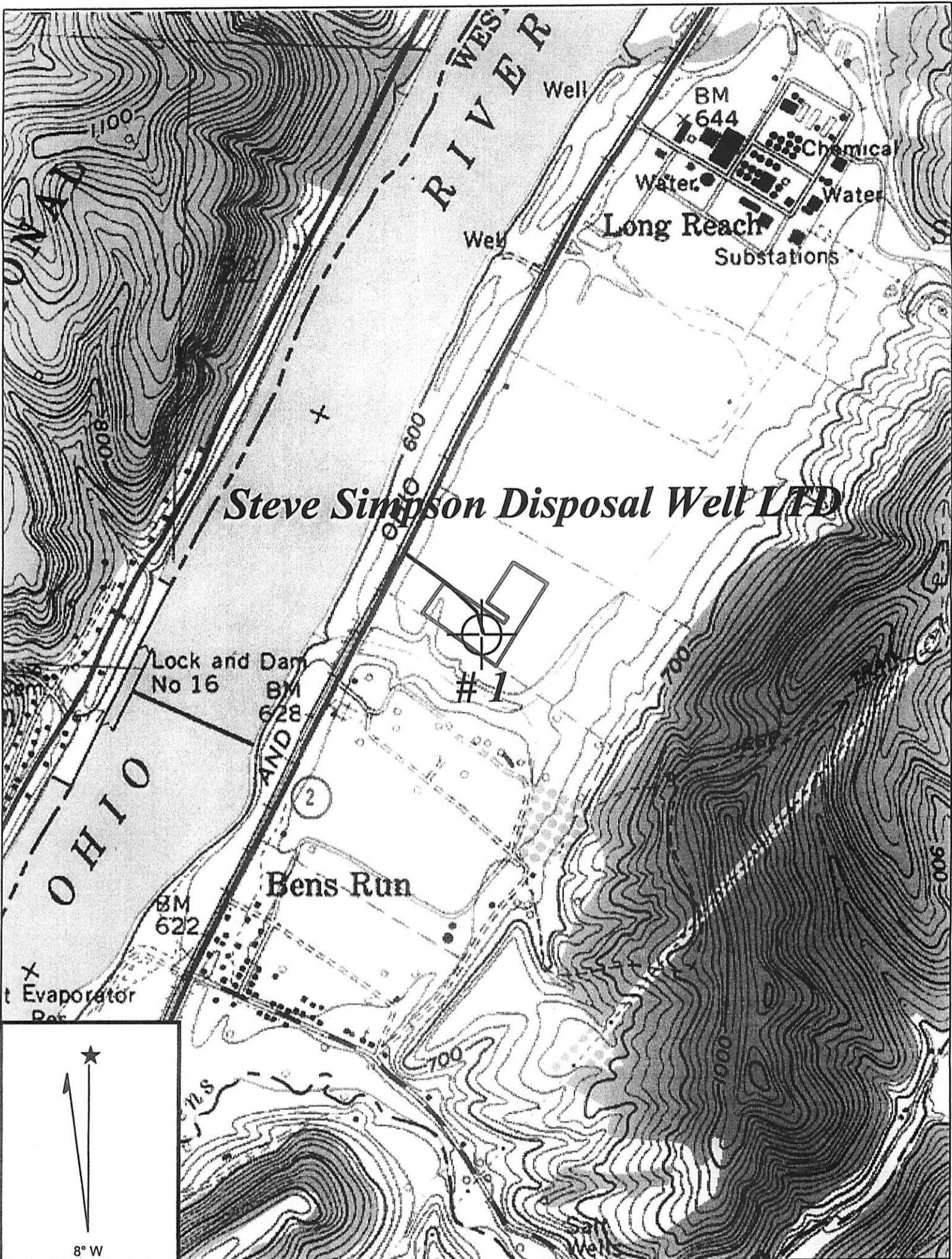
In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

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: 1
Farm Name: STEVE SIMPSON & ASSOCIATES
API Well Number: 47-9502095
Permit Type: Brine Disposal
Date Issued: 01/09/2013

Promoting a healthy environment.



Copyright (C) 1997, Maptech, Inc.

BENS RUN QUADRANGLE

SCALE 1" = 1000'

STEVE SIMPSON DISPOSAL WELL LTD

WELL: #1 (9.857 ACRE LEASE)
 BENS RUN LAND COMPANY (JERRY JACOBS) +/- 1200 ACRE

UNION DISTRICT TYLER COUNTY WEST VIRGINIA



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

January 11, 2013

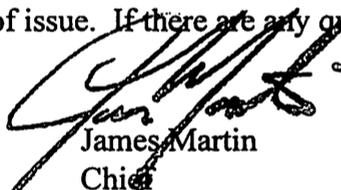
WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-4105672, issued to DOMINION TRANSMISSION 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 penalties being imposed upon the operator.

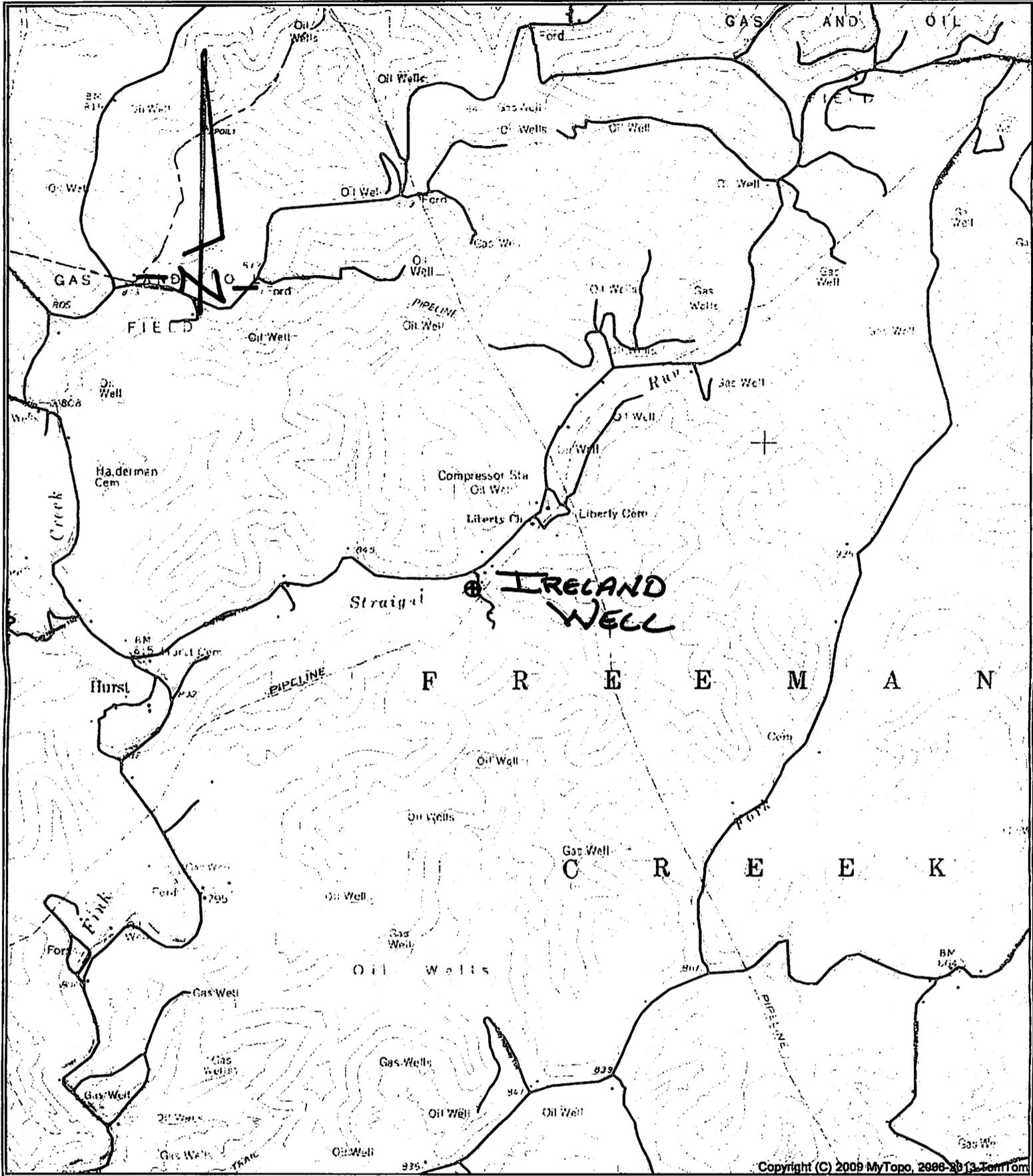
This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.



James Martin
Chief

Operator's Well No: IRELAND
Farm Name: IRELAND, JAMES G.
API Well Number: 47-4105672
Permit Type: Plugging
Date Issued: 01/11/2013

Promoting a healthy environment.



(+) DENOTES LOCATION OF WELL ON U.S.G.S. TOPOGRAPHIC MAP



IRELAND WELL	
NAD 83	LAT. 39°04'38.7514" LONG. 80°40'55.7044"
UTM NAD 83 (METERS)	N4321813.6857 E851441.0884

William Dawson Means & Fred O. Means
Tax Map 2E Parcel 2
67.50 Ac.

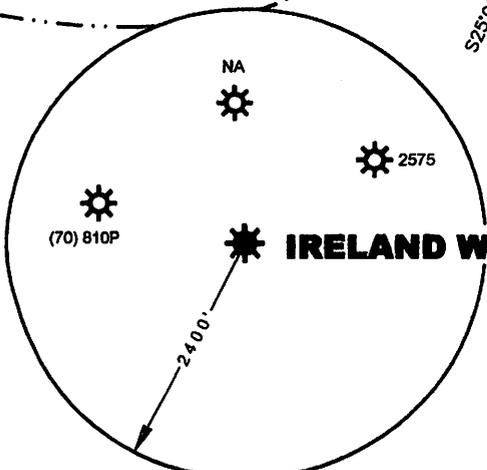
Terry Gorgodian
Tax Map 2E Parcel 10.1
0.21 Ac.

James R. & Kathryn Ireland
Tax Map 2E Parcel 5
2.75 Ac.

James G. Ireland
Tax Map 2E Parcel 11
1.00 Ac.

Danny Joe & Thelma L. Davidson
Tax Map 2E Parcel 10.3
Lot

James G. Ireland
Tax Map 2E Parcel 10.2
0.95 Ac.



MSES consultants, inc.
 FILE NO. 12-502-Ireland Well Plat
 DRAWN BY HDW / RRC / MVS
 SCALE 1" = 100'
 MIN. DEGREE OF ACCURACY 1 IN 2500
 PROVEN SOURCE OF ELEVATION
DGPS (SUBMETER
MAPPING GRADE)

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT IT SHOWS ALL INFORMATION REQUIRED BY LAW AND REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF MINES

(SIGNED) Hershel D. Ward
 R.P.E. _____ L.L.S. 995

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION



DATE JANUARY 7, 20 12
 OPERATOR'S WELL NO. IRELAND WELL
 API WELL NO.
47 041
 STATE COUNTY PERMIT NO.

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 IF "GAS", PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 856.83' WATERSHED STRAIGHT RUN
 DISTRICT FREEMANS CREEK COUNTY LEWIS
 QUADRANGLE VADIS, WV 7.5' NEAREST TOWN HURST
 SURFACE OWNER JAMES G. IRELAND ACREAGE 1.15
 OIL & GAS ROYALTY OWNER OLETA YEAGER ET AL LEASE ACREAGE 20.5
 LEASE NO. FX 066187

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

TARGET FORMATION GANTZ ESTIMATED DEPTH 2250'
 WELL OPERATOR DOMINION TRANSMISSION, INC. DESIGNATED AGENT JAMES D. BLASINGAME
 ADDRESS 445 WEST MAIN STREET ADDRESS 445 WEST MAIN STREET
CLARKSBURG, WV 26301 CLARKSBURG, WV 26301

FORM IV-6

COUNTY **041**
 PERMIT NO.



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

January 04, 2013

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-4105671, issued to DOMINION TRANSMISSION 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 penalties being imposed upon the operator.

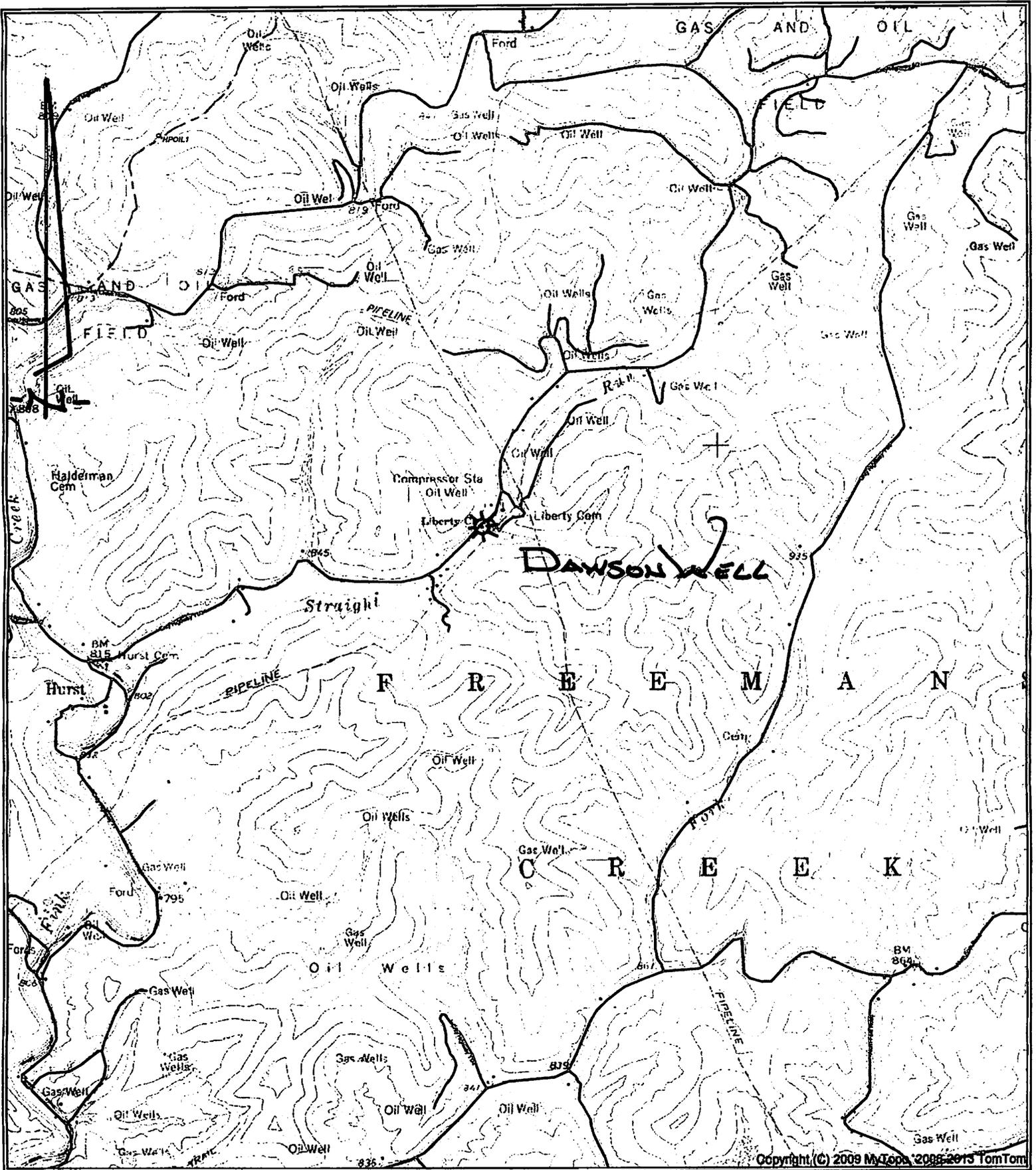
This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.


James Martin
Chief

Operator's Well No: DAWSON WELL
Farm Name: WILLIAM DAWSON MEANS, ET .
API Well Number: 47-4105671
Permit Type: Plugging
Date Issued: 01/04/2013

Promoting a healthy environment.

Map Name: VADIS
Print Date: 01/02/13
Scale: 1 inch = 2,000 ft.
Horizontal Datum: WGS84



(+) DENOTES LOCATION OF WELL ON U.S.G.S. TOPOGRAPHIC MAP

LATITUDE 39°05'30"

LONGITUDE 80°40'00"

NORTH

DAWSON WELL
 NAD 83 LAT. 39°04'46.3084"
 LONG. 80°40'47.9214"
 UTM NAD 83 N4321897.8686
 (METERS) E551507.8910

Francis L., Jr. & Sharon Harlaub
 Tax Map 2D Parcel 13
 104.34 Ac.

Joseph W. & Elizabeth A. Crofford
 Tax Map 2D Parcel 9 16.05 Ac.

WILLIAM DAWSON MEANS, ET AL
66.31 ACRES

DAWSON WELL
 EL. 866.03

Joseph W. & Elizabeth A. Crofford
 Tax Map 23 Parcel 1
 83 Ac.

Terry Gorgodian
 Tax Map 2E Parcel 9
 4.71 Ac.

Terry Gorgodian
 Tax Map 2E Parcel 10
 17.63 Ac.

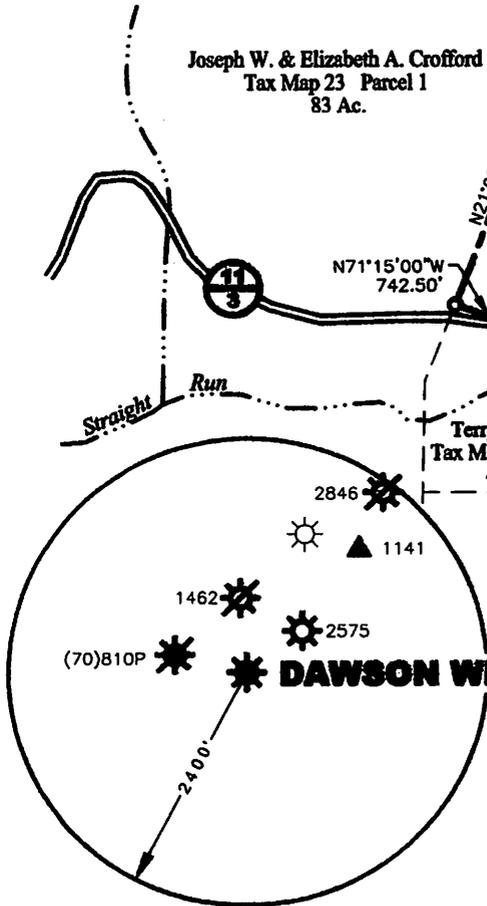
Judy M. Rinker Life Estate
 Tax Map 2E Parcel 12
 71.25 Ac.

CNG Producing Co.
 Tax Map 2D Parcel 10
 4.49 Ac.

Straight Run Methodist Church
 Tax Map 2E Parcel 3
 0.5 Ac.

WATER WELL
 S15°00'00"E 400.95'
 S39°00'00"E 66.00'

WATER WELL
 Carl G. White III, et al
 Tax Map 2E Parcel 39
 126.5 Ac.



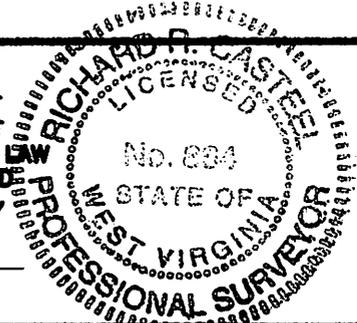
- 1 James G. Ireland
Tax Map 2E Parcel 10.2
0.95 Ac.
- 2 Danny Joe & Thelma L. Davison
Tax Map 2E Parcel 10.4
0.25 Ac.
- 3 Terry Gorgodian
Tax Map 2E Parcel 10.1
Lot
- 4 James G. Ireland
Tax Map 2E Parcel 8
1.15 Ac.
- 5 James R. & Kathryn A. Ireland
Tax Map 2E Parcel 5
2.75 Ac.

MSES consultants, inc.

FILE NO. 15-502-Dawson
 DRAWN BY HDW/RRC/MVS
 SCALE 1" = 500'
 MIN. DEGREE OF ACCURACY 1 IN 2500
 PROVEN SOURCE OF ELEVATION
 ROAD INTERSECTION 2600'
 NORTHEAST OF LOCATION EL. 845'

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

(SIGNED) Richard P. Carter
 R.P.E. _____ L.L.S. 864



STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
OIL AND GAS DIVISION



DATE JANUARY 3, 20 12
 OPERATOR'S WELL NO. DAWSON WELL
 API WELL NO.
47 041 5671P
 STATE COUNTY PERMIT NO.

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

LOCATION: ELEVATION 866.03' WATERSHED STRAIGHT RUN
 DISTRICT FREEMANS CREEK COUNTY LEWIS
 QUADRANGLE VADIS. WV 7.5' NEAREST TOWN HURST

SURFACE OWNER WILLIAM DAWSON MEANS, ET AL ACREAGE 67.25
 OIL & GAS ROYALTY OWNER WILLIAM DAWSON MEANS, ET AL LEASE ACREAGE 67.25
 LEASE NO. FK-051085

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

TARGET FORMATION GANTZ ESTIMATED DEPTH 2,900'
 WELL OPERATOR DOMINION TRANSMISSION, INC. DESIGNATED AGENT JAMES D. BLASINGAME
 ADDRESS 445 WEST MAIN STREET ADDRESS 445 WEST MAIN STREET
CLARKSBURG, WV 26301 CLARKSBURG, WV 26301

FORM IV-6

COUNTY

041

PERMIT NO.



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

January 11, 2013

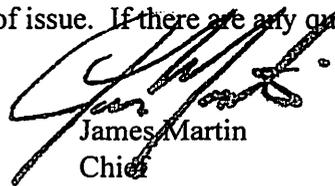
WELL WORK PLUGGING PERMIT

Plugging

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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

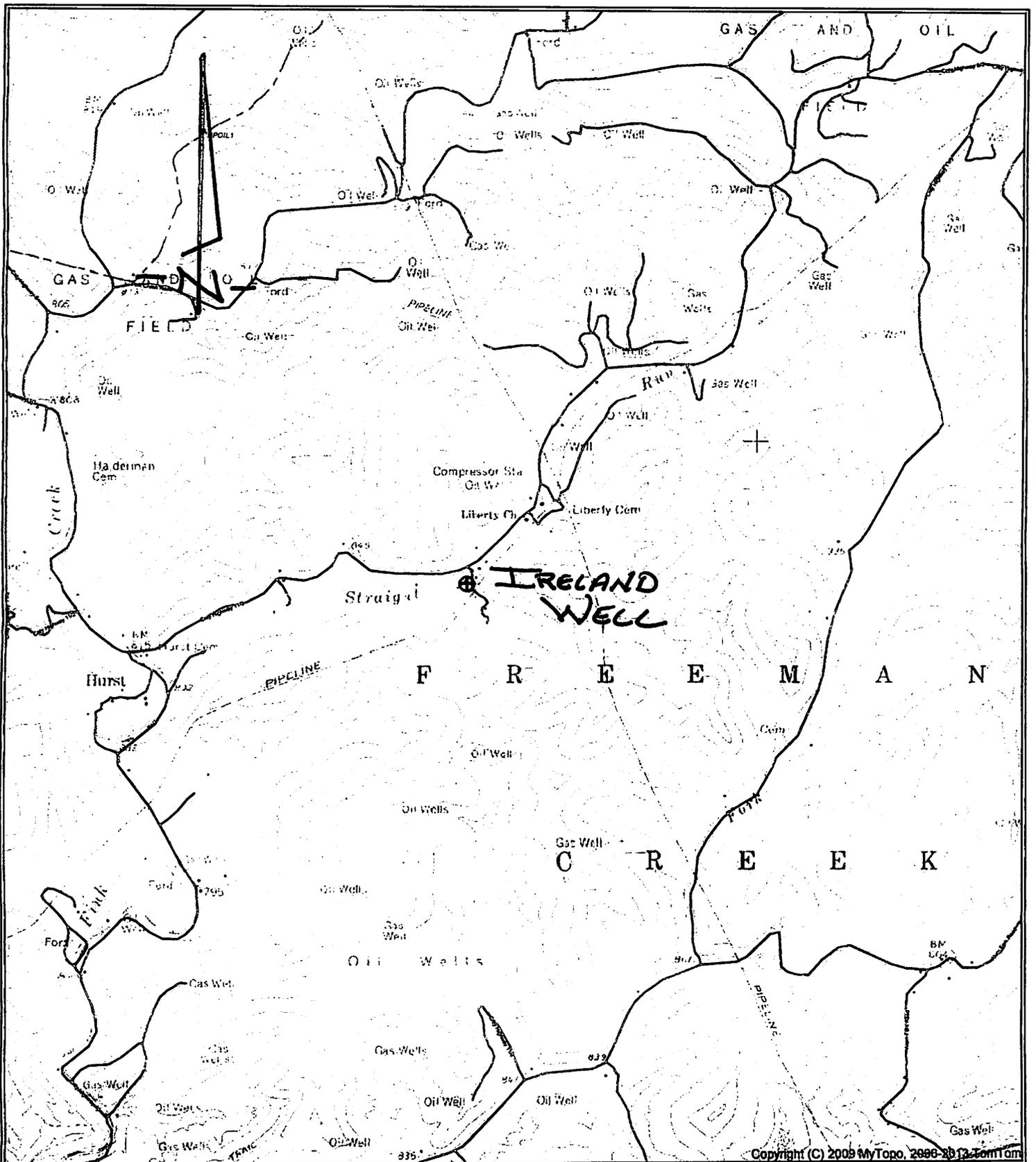
Operator's Well No: IRELAND
Farm Name: IRELAND, JAMES G.
API Well Number: 47-4105672
Permit Type: Plugging
Date Issued: 01/11/2013

Promoting a healthy environment.

Map Name: VADIS
Print Date: 01/08/13

Scale: 1 inch = 2,000 ft.
Map Center: 039° 04' 37.71" N 080° 40' .

Horizontal Datum: WGS84



6,178'

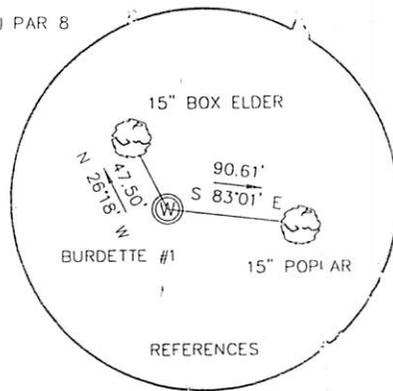
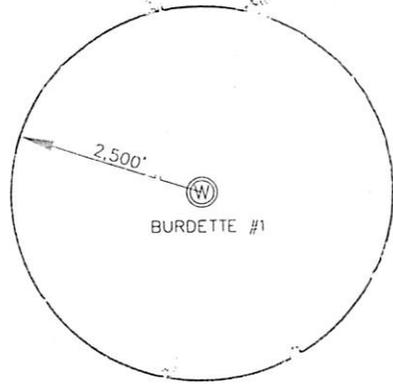
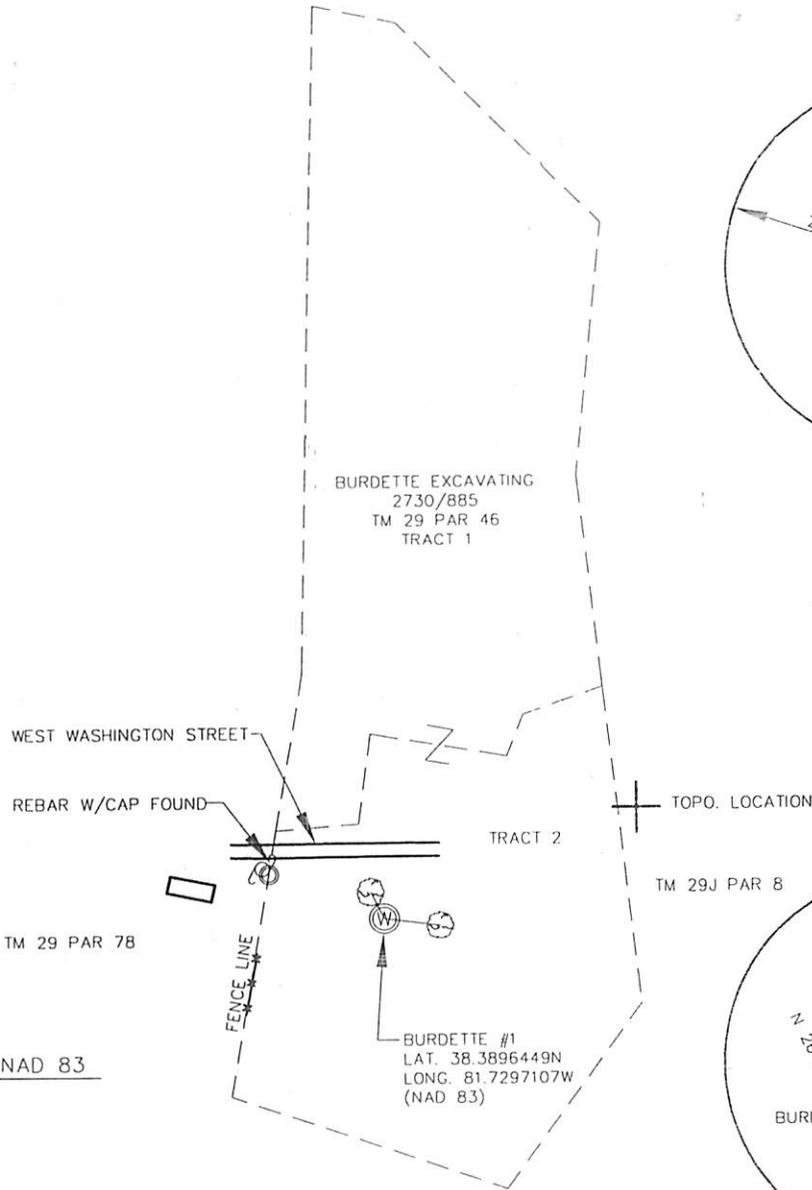
LATITUDE 38°25'00"

LONGITUDE 81°42'30"

9,882'



NORTH REF. TO STATE PLANE COORDINATES
NAD 83



STATE PLANE NAD 83

506844.5 N
1759357.7 E

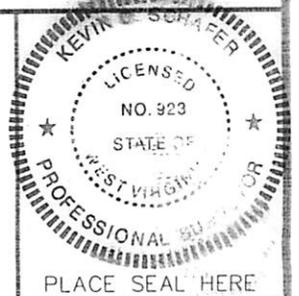
UTM NAD 83 (ZONE 17)

436273 E
4249300 N

FILE NO. _____
 DRAWING NO. 11P-114
 SCALE 1" = 300 FT
 MINIMUM DEGREE OF ACCURACY 1 IN 200
 PROVEN SOURCE OF ELEVATION GPS NAD 88

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 MINES.

(SIGNED) Kevin D. Schaefer
 R.P.E. _____ L.L.S. 923



PLACE SEAL HERE

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



Division of Environmental Protection
 Office of Oil & Gas

DATE OCT. 10, 20 11
 OPERATIONS WELL NO. BURDETTE #1
 API WELL NO. 47 - 039 - 06322
 STATE COUNTY PERMIT

WELL TYPE: OIL _____ GAS X LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS", PRODUCTION X STORAGE _____ DEEP _____ SHALLOW X)
 LOCATION: ELEVATION 760 WATER SHED LANDERS CREEK OF TYLER CREEK
 DISTRICT UNION COUNTY KANAWHA
 QUADRANGLE POCATALICO

SURFACE OWNER BURDETTE EXCAVATING LLC ACREAGE 20.1
 OIL & GAS ROYALTY OWNER BURDETTE EXCAVATING LLC LEASE ACREAGE 20.1

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

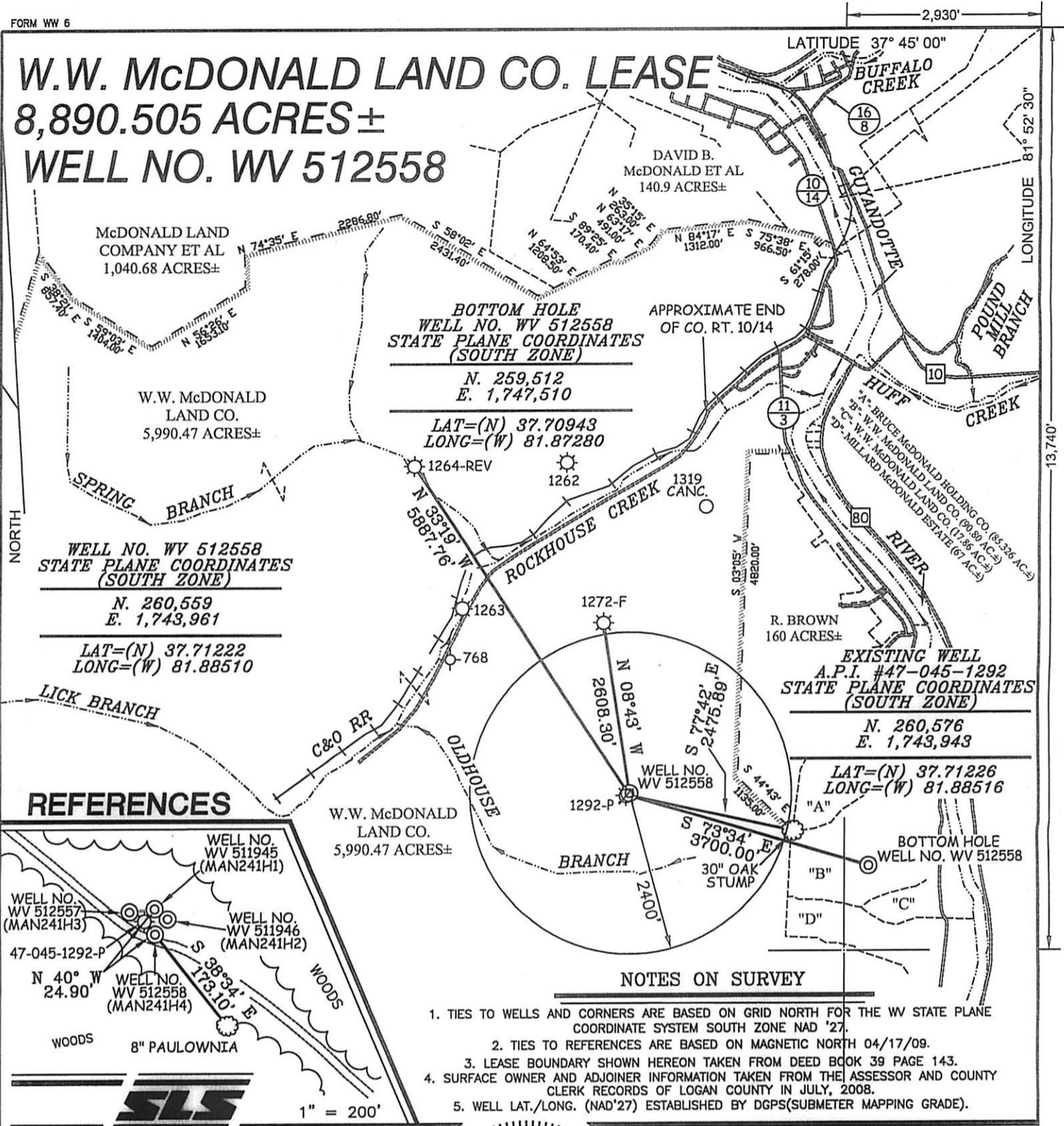
PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____
 TARGET FORMATION BASE OF LOWER HURON/RHINESTREET ESTIMATED DEPTH 5500
 WELL OPERATOR RESERVE OIL & GAS INC. DESIGNATED AGENT J. SCOTT FRESHWATER
 ADDRESS 929 CHARLESTON ROAD ADDRESS 929 CHARLESTON ROAD
 SPENCER, WV 25276 SPENCER, WV 25276

CANCELLED

W.W. McDONALD LAND CO. LEASE

8,890.505 ACRES±

WELL NO. WV 512558



BOTTOM HOLE
WELL NO. WV 512558
STATE PLANE COORDINATES
(SOUTH ZONE)

N. 259,512
 E. 1,747,510

LAT=(N) 37.70943
 LONG=(W) 81.87280

WELL NO. WV 512558
STATE PLANE COORDINATES
(SOUTH ZONE)

N. 260,559
 E. 1,743,961

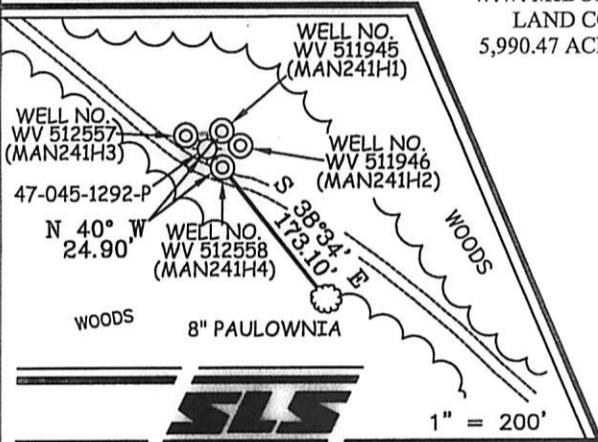
LAT=(N) 37.71222
 LONG=(W) 81.88510

EXISTING WELL
A.P.I. #47-045-1292
STATE PLANE COORDINATES
(SOUTH ZONE)

N. 260,576
 E. 1,743,943

LAT=(N) 37.71226
 LONG=(W) 81.88516

REFERENCES



NOTES ON SURVEY

1. TIES TO WELLS AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM SOUTH ZONE NAD '27.
2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 04/17/09.
3. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 39 PAGE 143.
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF LOGAN COUNTY IN JULY, 2008.
5. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).

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 MAY 27, 20 09

OPERATORS WELL NO. WV 512558

API WELL NO. 47-045-02282H
 STATE WV COUNTY LOGAN PERMIT CANCELLED

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 3850P512558 (276-40)

PROVEN SOURCE OF ELEVATION DGPS (SUBMETER MAPPING GRADE) SCALE 1" = 2000'

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



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

LOCATION: ELEVATION 1,700' WATERSHED OLDHOUSE BRANCH OF ROCKHOUSE CREEK

DISTRICT TRIADELPHIA COUNTY LOGAN QUADRANGLE MAN 7.5'

SURFACE OWNER W.W. McDONALD LAND COMPANY ACREAGE 5,990.47±

ROYALTY OWNER W.W. McDONALD LAND COMPANY LEASE ACREAGE 8,890.505±

PROPOSED WORK: LEASE NO. 080608

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER

PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION LOWER HURON/SILTSTONE
 ESTIMATED DEPTH 5,040' (TOTAL VERTICAL DEPTH)

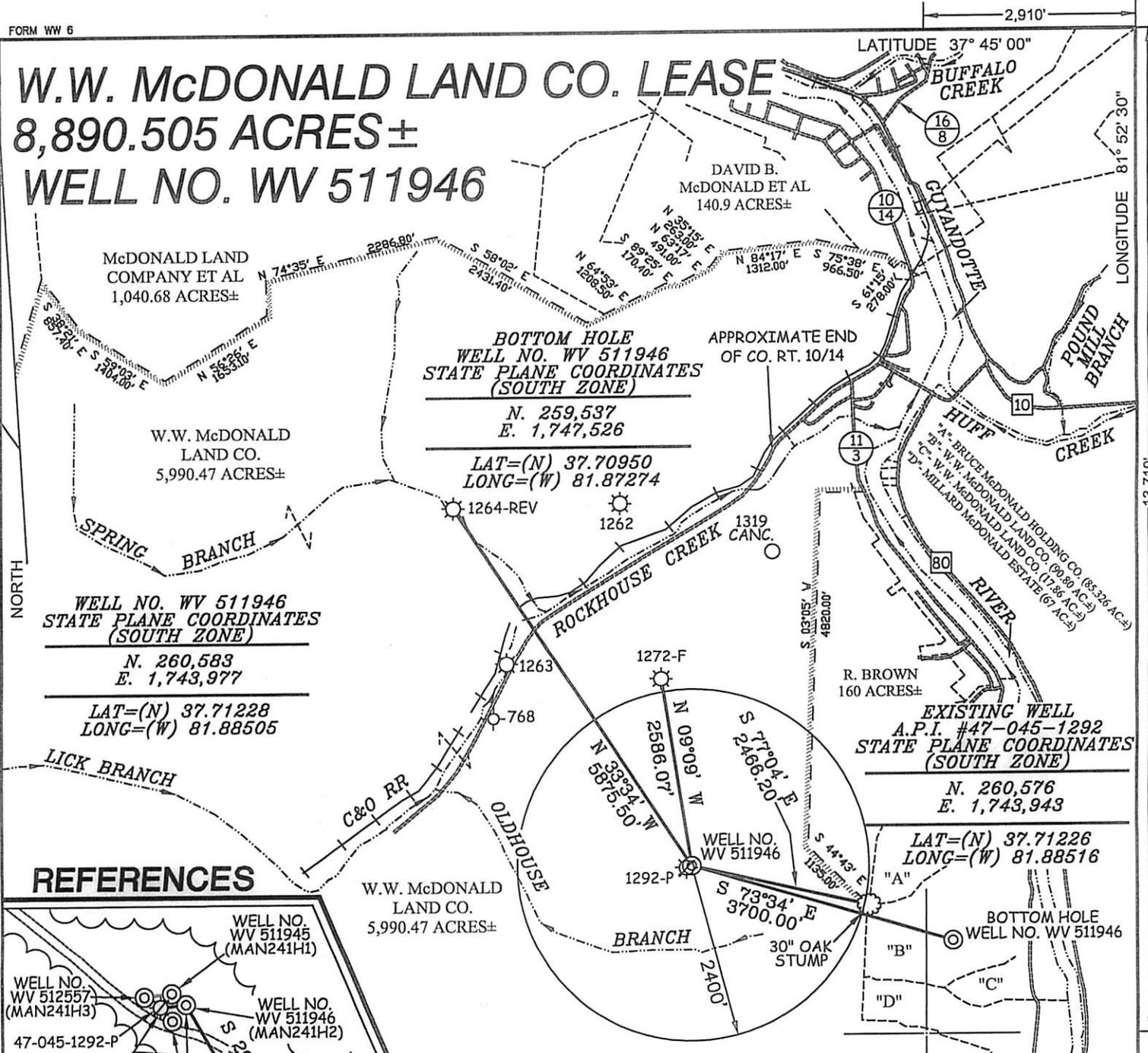
WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT REX C. RAY
 ADDRESS 1710 PENNSYLVANIA AVENUE ADDRESS 1710 PENNSYLVANIA AVENUE
CHARLESTON, WV 25302 CHARLESTON, WV 25302

COUNTY NAME
 PERMIT

W.W. McDONALD LAND CO. LEASE

8,890.505 ACRES±

WELL NO. WV 511946



BOTTOM HOLE
WELL NO. WV 511946
STATE PLANE COORDINATES
(SOUTH ZONE)

N. 259,537
 E. 1,747,526

LAT=(N) 37.70950
 LONG=(W) 81.87274

WELL NO. WV 511946
STATE PLANE COORDINATES
(SOUTH ZONE)

N. 260,583
 E. 1,743,977

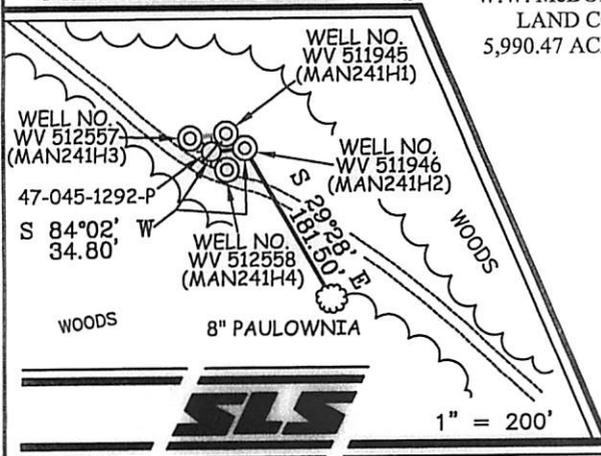
LAT=(N) 37.71228
 LONG=(W) 81.88505

EXISTING WELL
A.P.I. #47-045-1292
STATE PLANE COORDINATES
(SOUTH ZONE)

N. 260,576
 E. 1,743,943

LAT=(N) 37.71226
 LONG=(W) 81.88516

REFERENCES

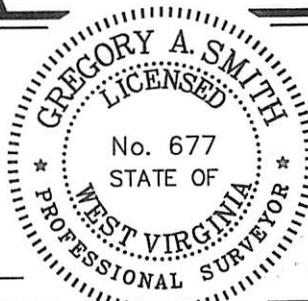


NOTES ON SURVEY

1. TIES TO WELLS AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM SOUTH ZONE NAD '27.
2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 04/17/09.
3. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 39 PAGE 143.
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF LOGAN COUNTY IN JULY, 2008.
5. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).

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 MAY 27, 20 09
 OPERATORS WELL NO. WV 511946
 API WELL NO. 47-045-022834
 STATE CANCELLED COUNTY CANCELLED PERMIT CANCELLED

MINIMUM DEGREE OF ACCURACY 1/2500 FILE NO. 3850P511946 (276-40)
 PROVEN SOURCE OF ELEVATION DGPS (SUBMETER MAPPING GRADE) SCALE 1" = 2000'

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

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

LOCATION: ELEVATION 1,700' WATERSHED OLDHOUSE BRANCH OF ROCKHOUSE CREEK
 DISTRICT TRIADELPHIA COUNTY LOGAN QUADRANGLE MAN 7.5'

SURFACE OWNER W.W. McDONALD LAND COMPANY ACREAGE 5,990.47±
 ROYALTY OWNER W.W. McDONALD LAND COMPANY LEASE ACREAGE 8,890.505±
 PROPOSED WORK: LEASE NO. 080608

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER

PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION LOWER HURON
 ESTIMATED DEPTH 5,400' (TOTAL VERTICAL DEPTH)

WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT REX C. RAY
 ADDRESS 1710 PENNSYLVANIA AVENUE ADDRESS 1710 PENNSYLVANIA AVENUE
CHARLESTON, WV 25302 CHARLESTON, WV 25302

Jackson Resources Co. Gas Well 232

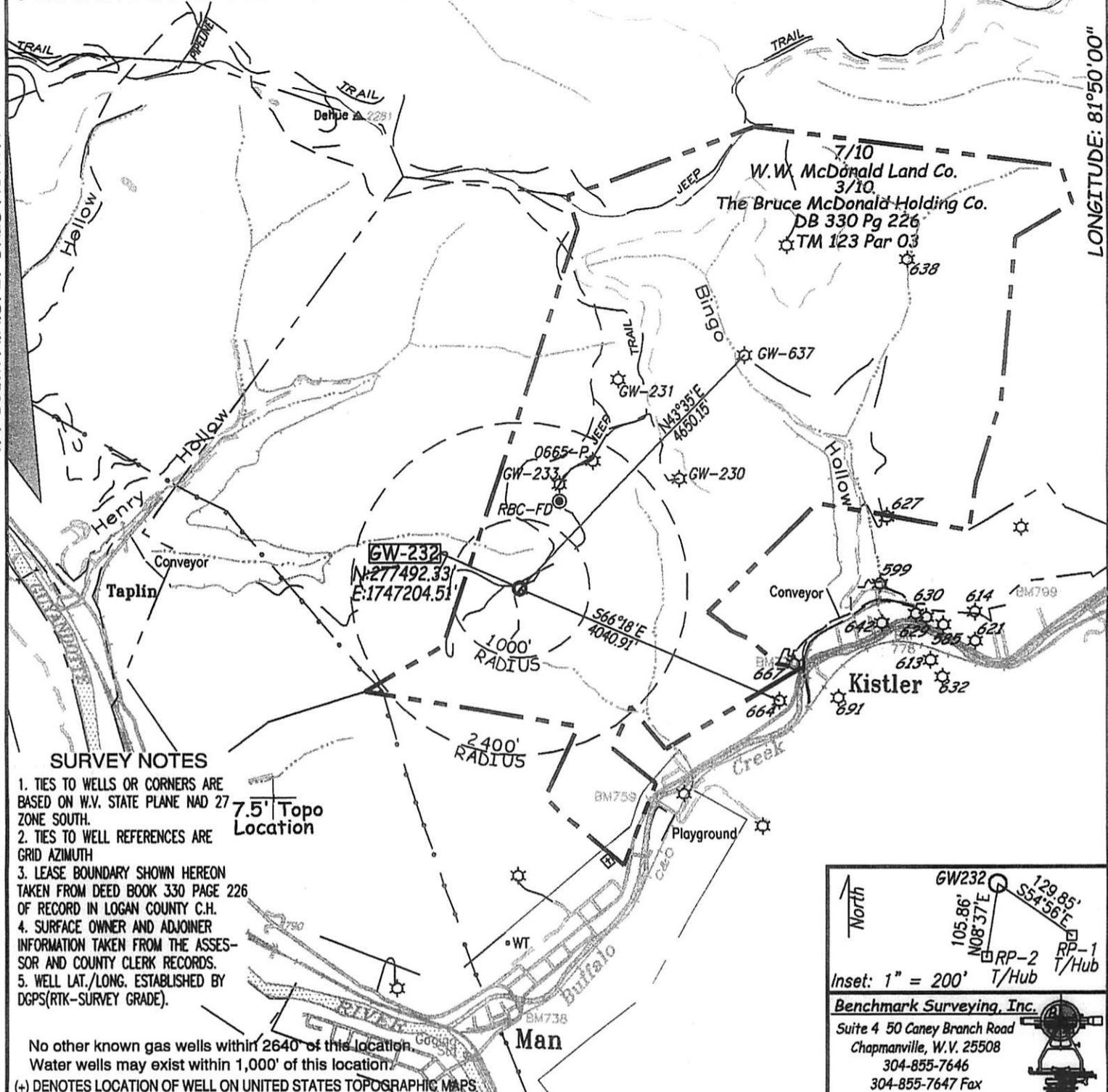
LATITUDE: 37°47'30"

WV South N.A.D. 27 GRID NORTH

LONGITUDE: 81°50'00"

11,960

LATITUDE: 37°45'31.69"



SURVEY NOTES

1. TIES TO WELLS OR CORNERS ARE BASED ON W.V. STATE PLANE NAD 27 ZONE SOUTH.
2. TIES TO WELL REFERENCES ARE GRID AZIMUTH
3. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 330 PAGE 226 OF RECORD IN LOGAN COUNTY C.H.
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS.
5. WELL LAT./LONG. ESTABLISHED BY DGPS(RTK-SURVEY GRADE).

7.5' Topo Location

No other known gas wells within 2640' of this location.
Water wells may exist within 1,000' of this location.

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

North

Inset: 1" = 200' T/Hub

Benchmark Surveying, Inc.
Suite 4 50 Caney Branch Road
Chapmanville, W.V. 25508
304-855-7646
304-855-7647 Fax

FILE NO. 2008-130
DRAWING NO. 232
SCALE 1" = 2,000'
MINIMUM DEGREE OF ACCURACY 1 : 2,500'
PROVEN SOURCE OF ELEVATION NGVD 29 VERTICAL DATUM
VIA OPUS OBSERVATION

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) *[Signature]*
P.S. 837-SU



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



DATE: August 29th 2008
OPERATOR'S WELL NO. 232
API WELL NO.

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF "GAS,") PRODUCTION STORAGE DEEP SHALLOW C.B.M.
LOCATION: ELEVATION 1984.25' WATER SHED Un-named Tributary of Buffalo Creek of the Guyandotte River
DISTRICT Triadelphia COUNTY Logan

QUADRANGLE Amherstdale, W.V. 7.5'
SURFACE OWNER W.W. McDonald Land Co. & The Bruce McDonald Holding Co. ACREAGE 1,156.8 Acres
OIL & GAS ROYALTY OWNER McDonald Land/Feamster et. al. LEASE ACREAGE 1,182.05 Acres

LEASE NO. _____
PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON CLEAN OUT AND REPLUG
TARGET FORMATION Devonian ESTIMATED DEPTH _____
WELL OPERATOR Jackson Resources Company DESIGNATED AGENT Dale Coleman
ADDRESS 24 Second Street, Hamlin, West Virginia 25523 ADDRESS 24 Second Street, Hamlin, West Virginia 25523

FORM WW-6

Logan COUNTY NAME PERMIT

Jackson Resources Co. Gas Well 230

LATITUDE: 37°47'30"

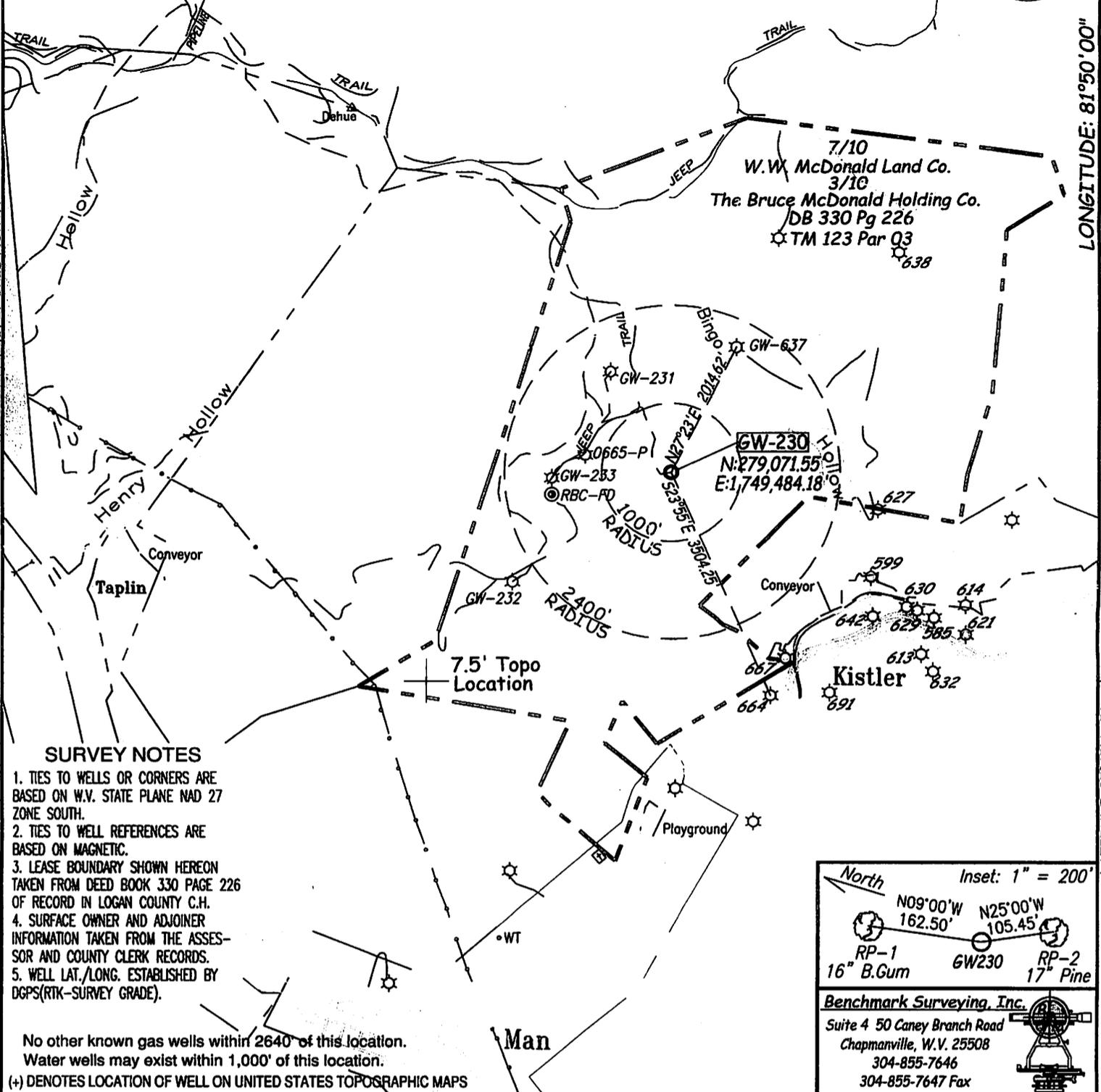
WV South N.A.D. 27 GRID NORTH

LONGITUDE: 81°50'00"

10.362'

LATITUDE: 37°45'47.52" N

LOGAN COUNTY NAME PERMIT



SURVEY NOTES

1. TIES TO WELLS OR CORNERS ARE BASED ON W.V. STATE PLANE NAD 27 ZONE SOUTH.
2. TIES TO WELL REFERENCES ARE BASED ON MAGNETIC.
3. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 330 PAGE 226 OF RECORD IN LOGAN COUNTY C.H.
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS.
5. WELL LAT./LONG. ESTABLISHED BY DGPS(RTK-SURVEY GRADE).

No other known gas wells within 2640' of this location.
 Water wells may exist within 1,000' of this location.
 (+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

North Inset: 1" = 200'

N09°00'W 162.50' N25°00'W 105.45'

RP-1 16" B.Gum GW230 RP-2 17" Pine

Benchmark Surveying, Inc.
 Suite 4 50 Caney Branch Road
 Chapmanville, W.V. 25508
 304-855-7646
 304-855-7647 Fax

FILE NO. 2008-130
 DRAWING NO. 230
 SCALE 1" = 2,000'
 MINIMUM DEGREE OF ACCURACY 1 : 2,500'
 PROVEN SOURCE OF ELEVATION NGVD 29 VERTICAL DATUM
VIA OPUS OBSERVATION

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) [Signature]
 P.S. 837-SU

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



DATE: March 18th, 2009
 OPERATOR'S WELL NO. 230
 API WELL NO. CANCELLED

WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL STATE COUNTY PERMIT
 (IF "GAS,") PRODUCTION X STORAGE DEEP SHALLOW C.B.M.
 LOCATION: ELEVATION 2092.09' WATER SHED Bingo Hollow of Buffalo Creek of the Guyandotte River
 DISTRICT Triadelphia COUNTY Logan
 QUADRANGLE Amherstdale, W.V. 7.5'
 SURFACE OWNER W.W. McDonald Land Co. & The Bruce McDonald Holding Co. ACREAGE 1,156.8 Acres
 OIL & GAS ROYALTY OWNER McDonald Land/Feamster et. al. LEASE ACREAGE 1,182.05 Acres

LEASE NO.
 PROPOSED WORK: DRILL X CONVERT DRILL DEEPER REDRILL FRACTURE OR
 STIMULATE X PLUG OFF OLD FORMATION PERFORATE NEW
 FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY)

PLUG AND ABANDON CLEAN OUT AND REPLUG
 TARGET FORMATION Devonian ESTIMATED DEPTH
 WELL OPERATOR Jackson Resources Company DESIGNATED AGENT Dale Coleman
 ADDRESS 24 Second Street, Hamlin, West Virginia 25523 ADDRESS 24 Second Street, Hamlin, West Virginia 25523

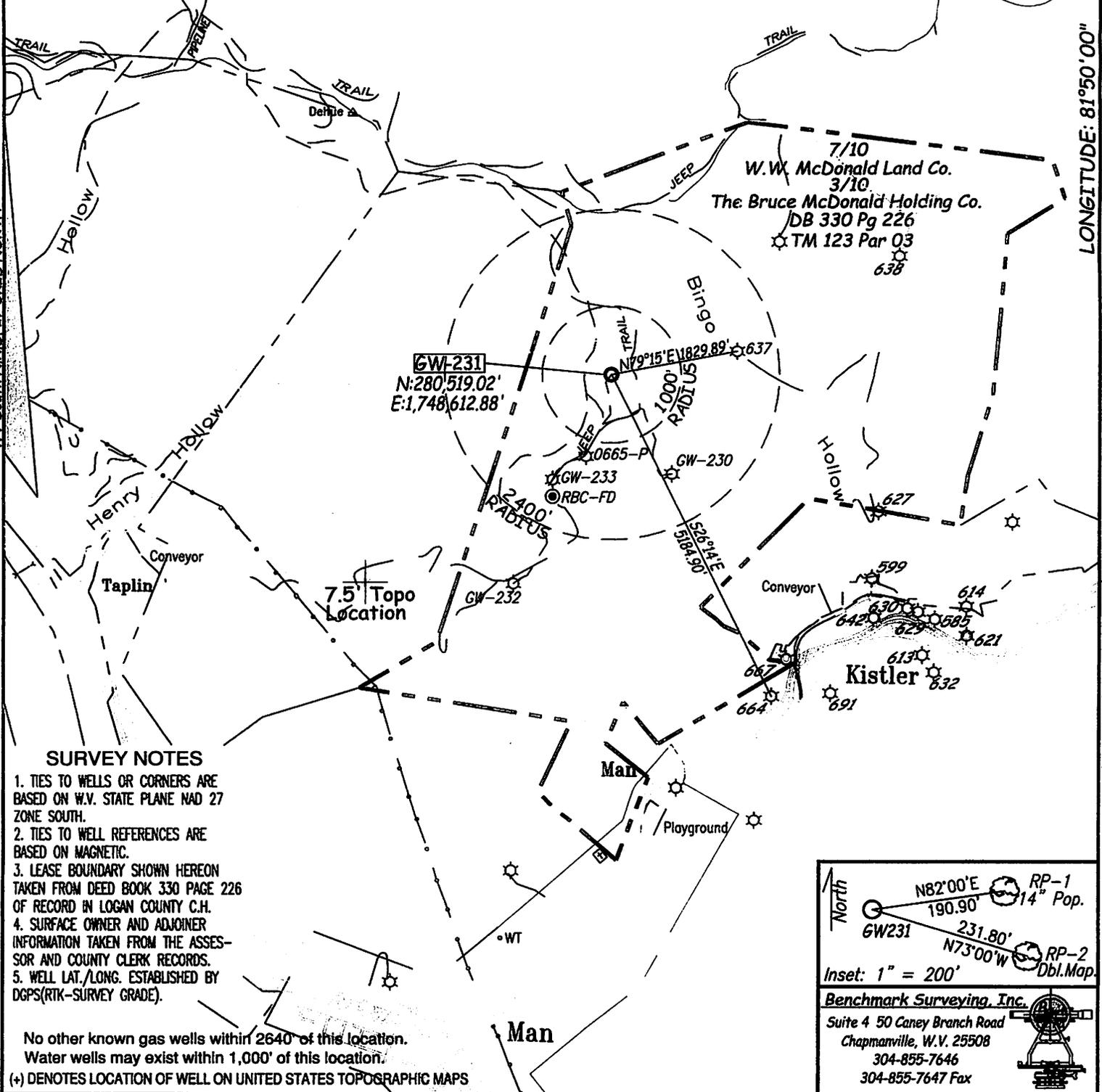
FORM WW-6

Jackson Resources Co. Gas Well 231

LATITUDE: 37°47'30"

WV South N.A.D. 27 GRID NORTH

LONGITUDE: 81°50'00"



SURVEY NOTES

1. TIES TO WELLS OR CORNERS ARE BASED ON W.V. STATE PLANE NAD 27 ZONE SOUTH.
2. TIES TO WELL REFERENCES ARE BASED ON MAGNETIC.
3. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 330 PAGE 226 OF RECORD IN LOGAN COUNTY C.H.
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS.
5. WELL LAT./LONG. ESTABLISHED BY DGPS(RTK-SURVEY GRADE).

No other known gas wells within 2640' of this location.
 Water wells may exist within 1,000' of this location.
 (+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

North

RP-1
N82°00'E 190.90' 14" Pop.

GW231 231.80'

RP-2
N73°00'W Dbl. Map.

Inset: 1" = 200'

Benchmark Surveying, Inc.
 Suite 4 50 Caney Branch Road
 Chapmanville, W.V. 25508
 304-855-7646
 304-855-7647 Fax

FILE NO. 2008-130
 DRAWING NO. 231
 SCALE 1" = 2,000'
 MINIMUM DEGREE OF ACCURACY 1:2,500'
 PROVEN SOURCE OF ELEVATION NGVD 29 VERTICAL DATUM
VIA OPUS OBSERVATION

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) [Signature]
 P.S. 837-SU

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



DATE: March 18th 2009
 OPERATOR'S WELL NO. 231
 API WELL NO. 47-045-02338

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___ STATE COUNTY PERMIT
 (IF "GAS,") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW ___ C.B.M. ___ CANCELLED
 LOCATION: ELEVATION 2162.98' WATER SHED Henry Hollow of the Guyandotte River
 DISTRICT Triadelphia COUNTY Logan
 QUADRANGLE Amherstdale, W.V. 7.5'

SURFACE OWNER W.W. McDonald Land Co. & The Bruce McDonald Holding Co. ACREAGE 1,156.8 Acres
 OIL & GAS ROYALTY OWNER McDonald Land/Feamster et. al. LEASE ACREAGE 1,182.05 Acres

LEASE NO. _____
 PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 TARGET FORMATION Devonian ESTIMATED DEPTH _____
 WELL OPERATOR Jackson Resources Company DESIGNATED AGENT Dale Coleman
 ADDRESS 24 Second Street, Hamlin, West Virginia 25523 ADDRESS 24 Second Street, Hamlin, West Virginia 25523

FORM WV-6

LOGAN COUNTY NAME PERMIT

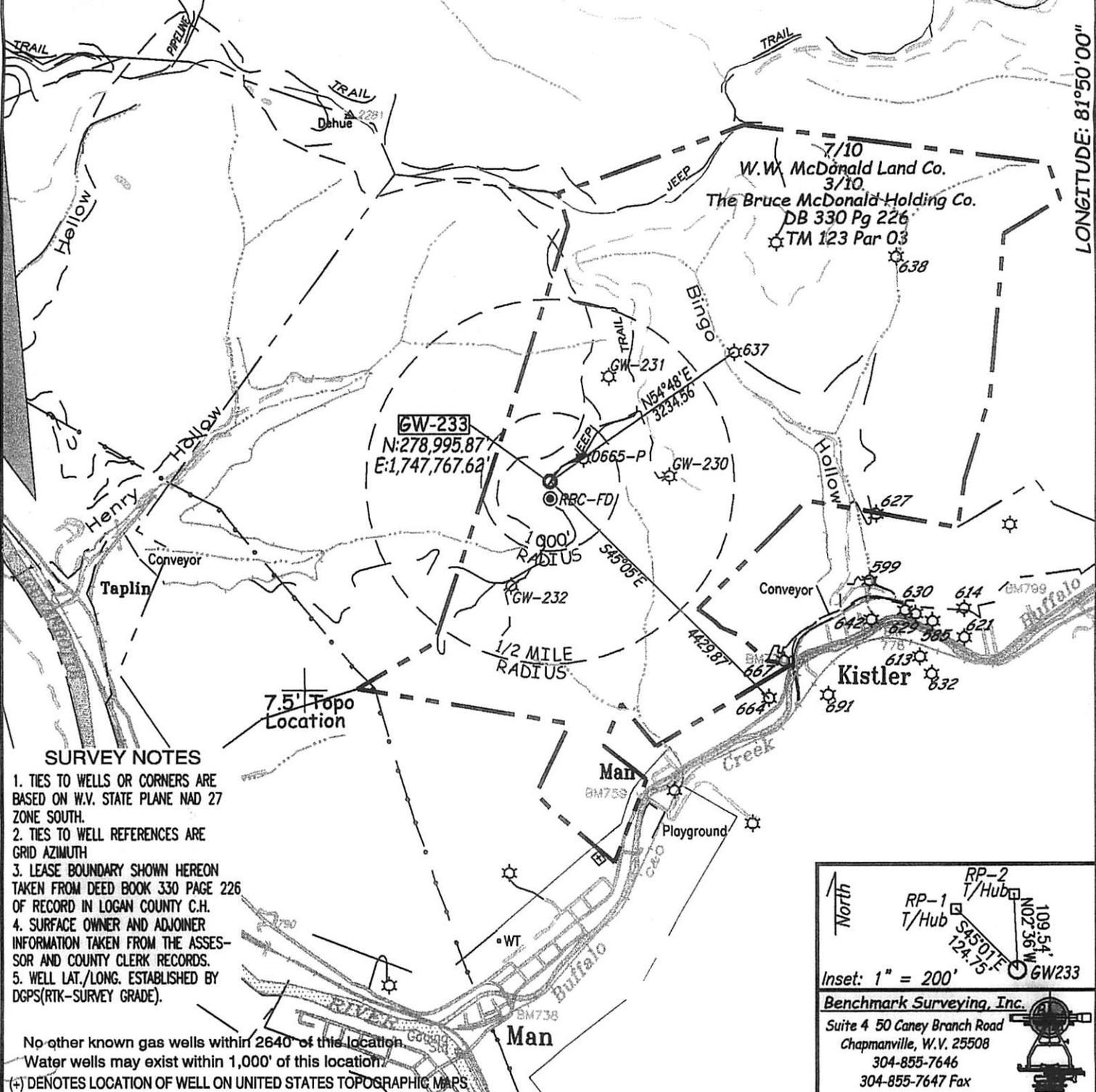
Jackson Resources Co. Gas Well 233

WV South N.A.D. 27 GRID NORTH

LONGITUDE: 81°50'00"

10,452'

LATITUDE: 37°45'46.61"N



- SURVEY NOTES**
1. TIES TO WELLS OR CORNERS ARE BASED ON W.V. STATE PLANE MAD 27 ZONE SOUTH.
 2. TIES TO WELL REFERENCES ARE GRID AZIMUTH
 3. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 330 PAGE 226 OF RECORD IN LOGAN COUNTY C.H.
 4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS.
 5. WELL LAT./LONG. ESTABLISHED BY DGPS(RTK-SURVEY GRADE).

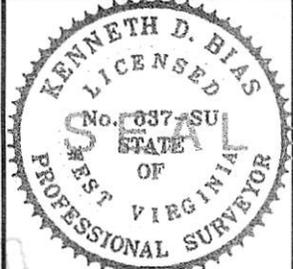
No other known gas wells within 2640' of this location.
 Water wells may exist within 1,000' of this location.
 (+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

Inset: 1" = 200'

Benchmark Surveying, Inc.
 Suite 4 50 Caney Branch Road
 Chapmanville, W.V. 25508
 304-855-7646
 304-855-7647 Fax

FILE NO. 2008-130
 DRAWING NO. 233
 SCALE 1" = 2,000'
 MINIMUM DEGREE OF ACCURACY 1:2,500'
 PROVEN SOURCE OF ELEVATION NGVD 29 VERTICAL DATUM
VIA OPUS OBSERVATION

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) Kenneth D. Bias
 P.S. 837-SU



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

DATE: October 8th 2008
 OPERATOR'S WELL NO. 233
 API WELL NO. 47 - 045 - 02339

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

LOCATION: ELEVATION 2190.97' WATER SHED Un-named Tributary of Buffalo Creek of the Guyandotte River
 DISTRICT Triadelphia COUNTY Logan
 QUADRANGLE Amherstdale, W.V. 7.5'

SURFACE OWNER W.W. McDonald Land Co. & The Bruce McDonald Holding Co. ACREAGE 1,156.8 Acres
 OIL & GAS ROYALTY OWNER McDonald Land/Feamster et. al. LEASE ACREAGE 1,182.05 Acres
 LEASE NO. _____

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

PLUG AND ABANDON CLEAN OUT AND REPLUG
 TARGET FORMATION Devonian ESTIMATED DEPTH _____

WELL OPERATOR Jackson Resources Company DESIGNATED AGENT Dale Coleman
 ADDRESS 24 Second Street, Hamlin, West Virginia 25523 ADDRESS 24 Second Street, Hamlin, West Virginia 25523

FORM WW-6

LOGAN COUNTY NAME PERMIT

ISLAND CREEK COAL COMPANY LEASE

60,000 ACRES ±

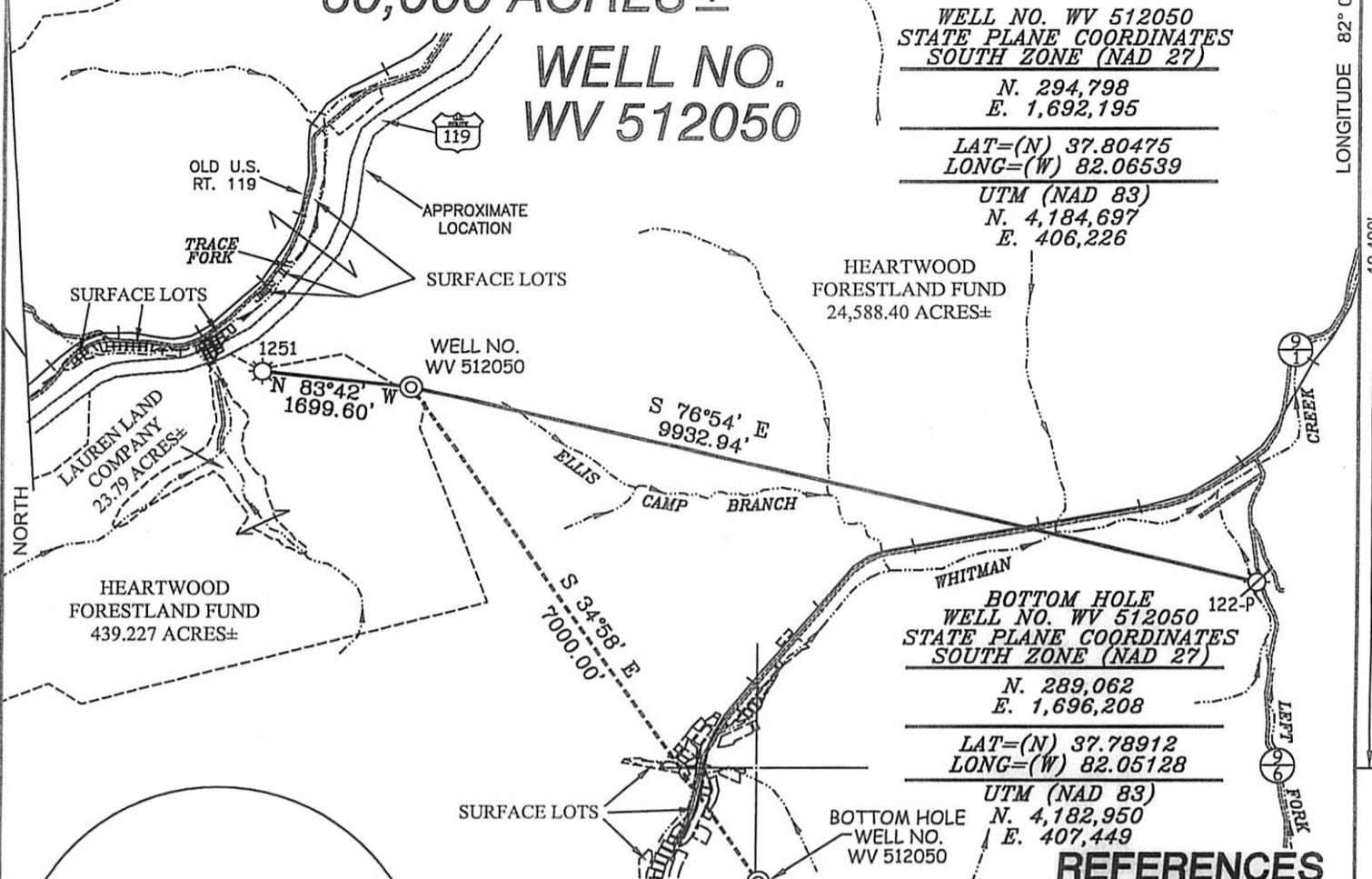
WELL NO. WV 512050

WELL NO. WV 512050
STATE PLANE COORDINATES
SOUTH ZONE (NAD 27)

N. 294,798
E. 1,692,195

LAT=(N) 37.80475
LONG=(W) 82.06539

UTM (NAD 83)
N. 4,184,697
E. 406,226



BOTTOM HOLE
WELL NO. WV 512050
STATE PLANE COORDINATES
SOUTH ZONE (NAD 27)

N. 289,062
E. 1,696,208

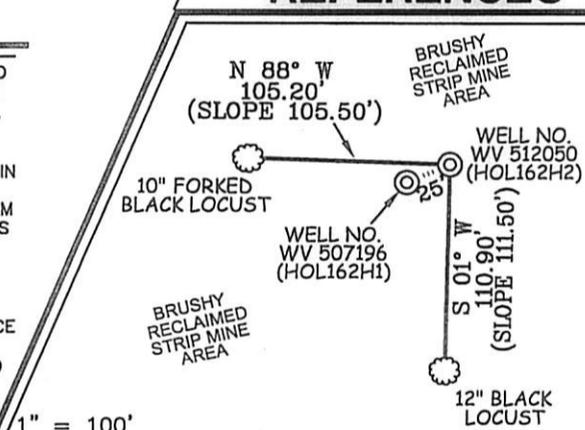
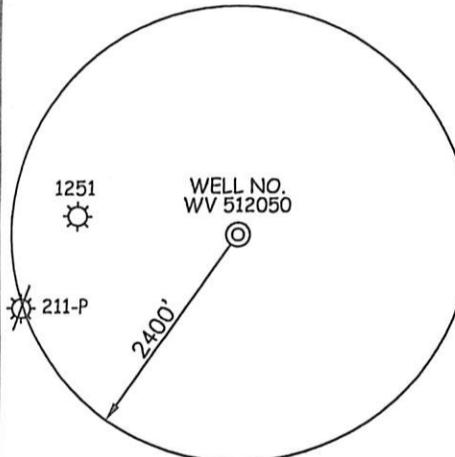
LAT=(N) 37.78912
LONG=(W) 82.05128

UTM (NAD 83)
N. 4,182,950
E. 407,449

REFERENCES

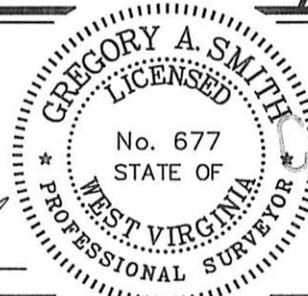
NOTES ON SURVEY

1. TIES TO WELLS AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM SOUTH ZONE NAD '27.
2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 04/27/10.
3. LEASE BOUNDARY DOES NOT APPEAR WITHIN THE SCOPE OF THIS PLAT.
4. SURFACE OWNER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF LOGAN COUNTY IN SEPTEMBER, 2009.
5. WELL LAT./LONG. ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).
6. TAX MAPS & OTHER SOURCES INDICATE NUMEROUS SMALL LOTS LOCATED ALONG TRACE FORK AND WHITMAN CREEK.
7. ORIGINAL PLAT DATED 11/17/09 REVISED 01/08/10 NOW VOID. WELL MOVED 04/27/10 NORTHEAST 164'±.



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 MAY 03, 20 10
OPERATORS WELL NO. WV 512050
API WELL NO. 47-045-02344H
STATE WV COUNTY LOGAN PERMIT CANCELLED

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 3890P512050RM (299-41)
PROVEN SOURCE OF ELEVATION DGPS (SUBMETER MAPPING GRADE) SCALE 1" = 2000'

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

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

LOCATION:
ELEVATION 1,619' WATERSHED TRACE FORK OF COPPERAS MINE FORK
DISTRICT ISLAND CREEK COUNTY LOGAN QUADRANGLE HOLDEN 7.5'

SURFACE OWNER HEARTWOOD FORESTLAND FUND ACREAGE 24,588.40± & 439.227±
ROYALTY OWNER ISLAND CREEK CORPORATION LEASE ACREAGE 60,000±
PROPOSED WORK: LEASE NO. 080662
DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER
PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION LOWER HURON
ESTIMATED DEPTH 4,850' (TOTAL VERTICAL DEPTH)

WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT REX C. RAY
ADDRESS 1710 PENNSYLVANIA AVENUE ADDRESS 1710 PENNSYLVANIA AVENUE
CHARLESTON, WV 25302 CHARLESTON, WV 25302

ISLAND CREEK COAL COMPANY LEASE

60,000 ACRES ±

WELL NO. WV 507196

BOTTOM HOLE WELL NO. WV 507196 STATE PLANE COORDINATES SOUTH ZONE (NAD 27)

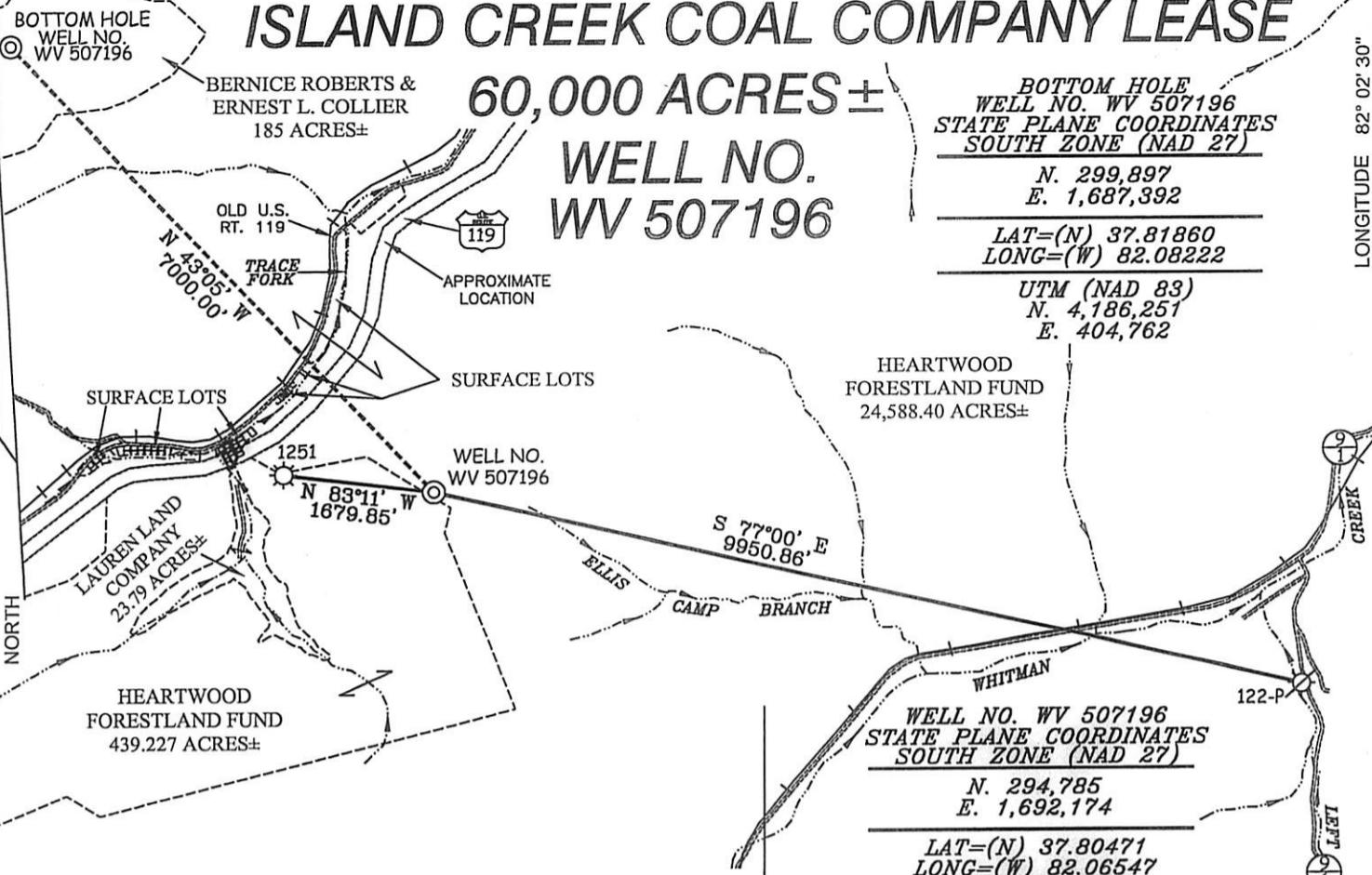
N. 299,897
E. 1,687,392

LAT=(N) 37.81860
LONG=(W) 82.08222

UTM (NAD 83)
N. 4,186,251
E. 404,762

LONGITUDE 82° 02' 30"

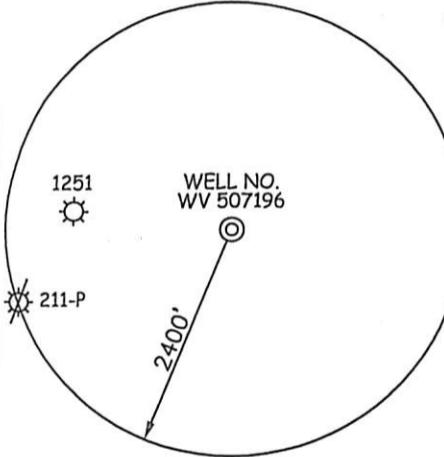
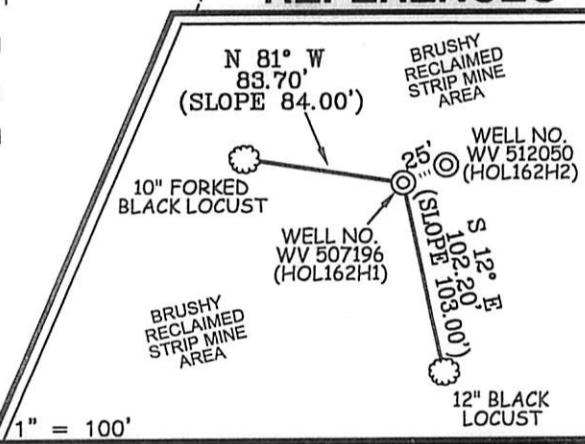
10,410'



NOTES ON SURVEY

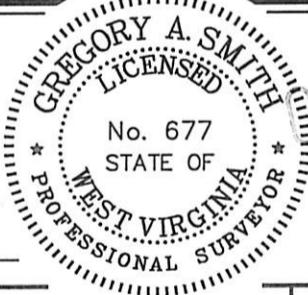
1. TIES TO WELLS AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM SOUTH ZONE NAD '27.
2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 04/27/10.
3. LEASE BOUNDARY DOES NOT APPEAR WITHIN THE SCOPE OF THIS PLAT.
4. SURFACE OWNER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF LOGAN COUNTY IN SEPTEMBER, 2009.
5. WELL LAT./LONG. ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).
6. TAX MAPS & OTHER SOURCES INDICATE NUMEROUS SMALL LOTS LOCATED ALONG TRACE FORK AND WHITMAN CREEK.
7. ORIGINAL PLAT DATED 11/17/09 REVISED 01/08/10 NOW VOID. WELL MOVED 04/27/10 NORTHEAST 118' ±.

REFERENCES



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 MAY 03, 20 10
 OPERATORS WELL NO. WV 507196
 API WELL NO. 47 - 045 - 02345
 STATE Revised COUNTY Permit

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 3890P507196RM (299-41)
 PROVEN SOURCE OF ELEVATION DGPS (SUBMETER MAPPING GRADE) SCALE 1" = 2000'

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



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

LOCATION: ELEVATION 1,619' WATERSHED TRACE FORK OF COPPERAS MINE FORK
 DISTRICT ISLAND CREEK COUNTY LOGAN QUADRANGLE HOLDEN 7.5'
 SURFACE OWNER HEARTWOOD FORESTLAND FUND ACREAGE 24,588.40 ± & 439.227 ±
 ROYALTY OWNER ISLAND CREEK CORPORATION LEASE ACREAGE 60,000 ±
 PROPOSED WORK: LEASE NO. 080662
 DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER
 PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION LOWER HURON
 ESTIMATED DEPTH 4,850' (TOTAL VERTICAL DEPTH)

WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT REX C. RAY
 ADDRESS 1710 PENNSYLVANIA AVENUE ADDRESS 1710 PENNSYLVANIA AVENUE
CHARLESTON, WV 25302 CHARLESTON, WV 25302

COUNTY NAME

PERMIT

EQT PRODUCTION COMPANY (McDONALD / CHAFIN LAND) WELL NO. WV 511643

BOTTOM HOLE
WELL NO. WV 511643
STATE PLANE COORDINATES
SOUTH ZONE (NAD 27)

N. 258,329
E. 1,731,076

LAT=(N) 37.70575
LONG=(W) 81.92956

UTM (NAD 83)
N. 4,173,586
E. 418,075

WELL NO. WV 511643
STATE PLANE COORDINATES
SOUTH ZONE (NAD 27)

N. 252,277
E. 1,734,594

LAT=(N) 37.689223
LONG=(W) 81.917194

UTM (NAD 83)
N. 4,171,742
E. 419,147

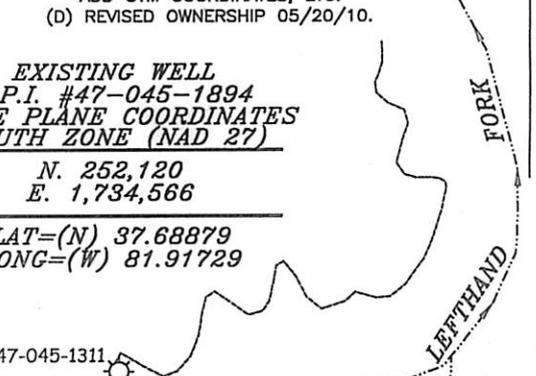
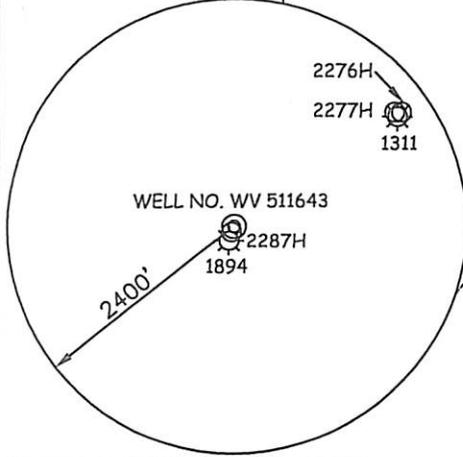
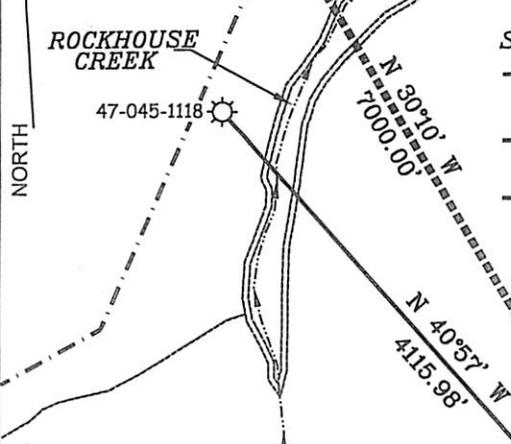
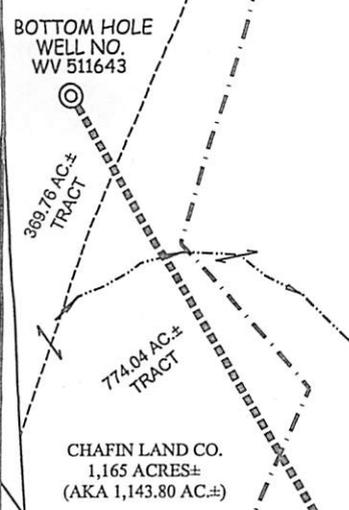
EXISTING WELL
A.P.I. #47-045-1894
STATE PLANE COORDINATES
SOUTH ZONE (NAD 27)

N. 252,120
E. 1,734,566

LAT=(N) 37.68879
LONG=(W) 81.91729

NOTES ON SURVEY

1. TIES TO WELLS AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM SOUTH ZONE NAD '27.
2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 12/17/07.
3. LEASE BOUNDARY TAKEN FROM LEASE BOOKS 14 PAGE 399 & 15 PAGE 120.
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF LOGAN COUNTY IN JANUARY, 2008.
5. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).
6. (A) ORIGINAL PLAT DATED 03/11/08
(B) REVISED 02/11/10 TO ROTATE & EXTEND HORIZONTAL LEG & CHANGE BOTTOM HOLE COORDINATES, ETC.
(C) REVISED 05/10/10 TO ROTATE HORIZONTAL LEG, CHANGE BOTTOM HOLE COORDINATES & ADD UTM COORDINATES, ETC.
(D) REVISED OWNERSHIP 05/20/10.



REFERENCES

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

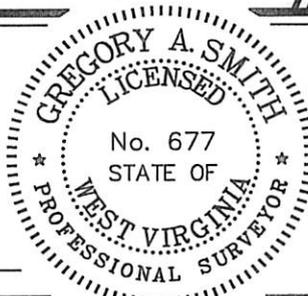
DATE MAY 10, 20 10

OPERATORS WELL NO. WV 511643

API WELL NO. 47-045-02350H
STATE COUNTY PERMIT

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*



MINIMUM DEGREE OF ACCURACY 1/2500 FILE NO. 3850P511643R3 (253-03, 246-68)
PROVEN SOURCE OF ELEVATION DGPS (SUBMETER MAPPING GRADE) SCALE 1"=1,000'

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



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

LOCATION: ELEVATION 1,461' WATERSHED LEFTHAND FORK OF ROCKHOUSE CREEK

DISTRICT TRIADELPHIA COUNTY LOGAN QUADRANGLE MAN 7.5'

SURFACE OWNER W.W. McDONALD LAND COMPANY ACREAGE 5,990.47±

ROYALTY OWNER W.W. McDONALD LAND COMPANY ET AL (P/O 8,890.505 AC.±) / CHAFIN LAND COMPANY (1,165 AC.± A.K.A. 1,143.80 AC.±) LEASE NO. 080608 / 080571

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER

PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION LOWER HURON
ESTIMATED DEPTH 5,080' (TOTAL VERTICAL DEPTH)

WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT REX C. RAY
ADDRESS 1710 PENNSYLVANIA AVENUE ADDRESS 1710 PENNSYLVANIA AVENUE
CHARLESTON, WV 25302 CHARLESTON, WV 25302

LONGITUDE 81°55'00"

COUNTY NAME PERMIT