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**west virginia** department of environmental protection

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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

February 04, 2014

**WELL WORK PERMIT**  
**Secondary Recovery Well**

This permit, API Well Number: 47-3305801, issued to HG ENERGY, LLC, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

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

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



James Martin  
Chief

Operator's Well No: S.E. ADAMS NO. 146  
Farm Name: HILARY HEIGHTS LTD  
**API Well Number: 47-3305801**  
**Permit Type: Secondary Recovery Well**  
Date Issued: 02/04/2014

Promoting a healthy environment.

02/07/2014

# PERMIT CONDITIONS

West Virginia Code § 22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

## CONDITIONS

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1. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6-20, which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
2. Pursuant to 35 CSR § 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.
3. Pursuant to 35 CSR § 4-19.1.c, if the operator is unable to sample and analyze any water well or spring within one thousand (1,000) feet of the permitted well location, the Office of Oil and Gas requires the operator to sample, at a minimum, one water well or spring located between one thousand (1,000) feet and two thousand (2,000) feet of the permitted well location.
4. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
5. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
6. During the surface casing and cementing process, in the event cement does not return to the surface, or any other casing string that is permitted to circulate cement to the surface and does not return to the surface, the oil and gas inspector shall be notified within twenty-four (24) hours.
7. Well work activities shall not constitute a hazard to the safety of persons.

WW-3B  
10/07



1) Date December 18, 2013  
2) Operator's Well No. S. E. Adams No. 146  
3) API Well No. 47 - 033 -  
State            County            Permit             
4) UIC Permit No. UIC2R03301AP

**STATE OF WEST VIRGINIA  
NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION  
FOR THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS**

- 5) WELL TYPE: Liquid Injection  Gas Injection (not storage)  Waste Disposal
- 6) LOCATION: Elevation 1218' Watershed Ten Mile Creek  
District Tenmile **09** County Harrison **33** Quadrangle Salem 7.5' **596**
- 7) WELL OPERATOR: HG Energy, LLC 494497948  
5260 Dupont Road  
Parkersburg, WV 26101
- 8) DESIGNATED AGENT: Mike Kirsch  
5260 Dupont Road  
Parkersburg, WV 26101
- 9) OIL & GAS INSPECTOR TO BE NOTIFIED: Name Sam Ward  
Address P. O. Box 2327  
Buckhannon, WV 26201
- 10) DRILLING CONTRACTOR: Name             
Address
- 11) PROPOSED WELL WORK: Drill  Drill Deeper  Redrill  Stimulate   
Plug Off Old Formation  Perforate New Formation  Convert   
Other Physical Change in Well (specify)
- 12) Geological target formation Fifth Sand Depth 3,127 Ft. (Top) to 3,138 Ft. (Bottom)
- 13) Estimated depth of completed well (or actual depth of existing well) 3275' TMD Ft.
- 14) Approximate water strata depths: Fresh 150 Ft. Salt 1,325 Ft.
- 15) Approximate coal seam depths: 602 Ft.
- 16) Is coal being mined in the area?  Yes  No
- 17) Virgin reservoir pressure in target formation: 1,250 psig. Source Estimated
- 18) Estimated reservoir fracture pressure: 2,650 psig.
- 19) MAXIMUM PROPOSED INJECTION OPERATIONS: Volume per hour 25 BBL Bottom Hole Pressure 2,400 psi
- 20) DETAILED IDENTIFICATION OF MATERIALS TO BE INJECTED, INCLUDING ADDITIVES and other chemicals as needed to maintain water quality and improve oil recovery. Fresh water, produced water, bactericides
- 21) FILTERS (IF ANY) Cartridge filters and/or coal bed filters
- 22) SPECIFICATION FOR CATHODIC PROTECTION AND OTHER CORROSION CONTROL

*SDW  
12/23/2013  
MAG*

23) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILLUP OR SACKS (CU. FT.)	PACKERS
	Size	Grade	Weight	New	Used	For Drilling	Left in Well		
Conductor									Kinds
Fresh Water	7"	L.S.	17#	X		675'	675'	Cement to Surface	Tension
Coal									Sizes
Intermediate									2.375" x 4.5"
Production	4 1/2"	J-55	10.5#	X		3275'	3275'	150 sacks	Depths Set
Tubing	2 3/8"	J-55	4.6 #	X		3075'	3075'		2975'
Liners									Perforations
									Top Bottom

24) APPLICANTS OPERATING RIGHTS were acquired from Sarah E. Adams  
by Deed  Lease  Other Contract  Dated July 26, 1899 of record in the  
Harrison County Clerk's Office in            Book 110 at Page 144

WW-3A  
10/07



1) Date: December 18, 2013  
2) Operator's Well No. S. E. Adams No. 146  
3) API Well No. 47 033 -  
State County Permit  
4) UIC Permit No. UIC2R03301AP

CK2490  
65000

STATE OF WEST VIRGINIA  
NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION  
FOR THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

5) Surface Owner(s) To Be Served  
(a) Name Hilary Heights LTD - Beth A Taylor  
Address 142 Valley Street  
Salem, WV 26424  
(b) Name Stacy & Lori Bokey ✓  
Address Rt. 1, Box 299 - 46  
Mt. Clare, WV 26408  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_  
6) Inspector Sam Ward  
Address P. O. Box 2327  
Buckhannon, WV 26201  
Telephone 389-7583

7 (a) Coal Operator  
Name NA  
Address \_\_\_\_\_  
7 (b) Coal Owner(s) With Declaration Of Record  
Name NA  
Address \_\_\_\_\_  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
7(c) Coal Lessee With Declaration Of Record  
Wolf Run Mining Co. ✓  
2708 Cranberry Square  
Morgantown, WV 26505

TO THE PERSON(S) NAMED ABOVE: You should have received this form and the following documents:

- (1) The Application for a Liquid Injection or Waste Disposal Well Work Permit on Form WW-3(B), which sets out the parties involved in the drilling or other work;
- (2) The plat (surveyor's map) showing the well location on Form WW-6; and
- (3) The Construction and Reclamation Plan on Form WW-9 (unless the well work is only to plug a well), which sets out the plan for erosion and sediment control and for reclamation for the site and access road.

The date proposed for the first injection or waste disposal is To be determined

THE REASON YOU RECEIVED THESE DOCUMENTS IS THAT YOU HAVE RIGHTS REGARDING THE APPLICATION WHICH ARE SUMMARIZED IN THE "INSTRUCTIONS" ON FORM WW-3(A) DESIGNATED TO YOU. HOWEVER YOU ARE NOT REQUIRED TO TAKE ANY ACTION AT ALL.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a Well Work Permit with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to a well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, the plat, and the Construction and Reclamation Plan have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of the mailing or delivery to the Chief.

The person signing this document shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Well Operator HG Energy, LLC  
Address 5260 Dupont Road  
Parkersburg, WV 26101  
By: Diane C. White  
Its: Accountant

Signature

Diane C White

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at: [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov)

WW-2B1

Well No. S. E. Adams No. 146

West Virginia Department of Environmental Protection  
Office of Oil and Gas

NOTICE TO SURFACE OWNERS

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

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

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

If no water well or spring is located within 1000 feet, the Chief may require the operator to sample and analyze water from a water well or spring within 2000 feet of the proposed well site.

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

The laboratory used by the operator to analyze the samples will be approved by the Chief. The operator named below has decided to use the following laboratory to analyze the water samples:

Contractor Name Sturm Environmental Services  
 Well operator's private laboratory

Well Operator HG Energy, LLC  
Address 5260 Dupont Road  
Parkersburg, WV 26101  
Telephone 304-420-1119

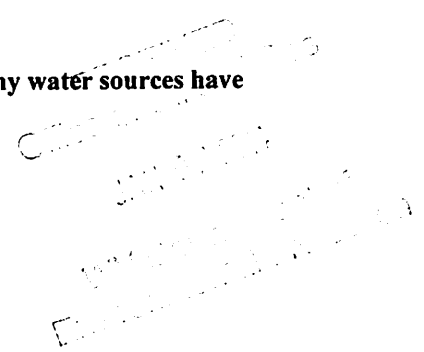
FOR OPERATOR'S USE ONLY: Below, or on an attached page, list those persons which were given this notice. Place an asterisk beside the one(s) that contacted you and requested sampling and analyses. If there were no requests made, indicate by underlining which one you have selected to sample and analyze.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

**No known Water Supply Sources are located within 1000' of proposed well but many water sources have been tested in conjunction with this Wolf Summit drilling program**

Pertinent to this well site are:

Stacy & Lori Bokey  
Rt. 1, Box 299 - 46  
Mt. Clare, WV 26408

Hilary Heights - Attn: Beth A Taylor  
142 Valley Street  
Salem, WV 26426



02/07/2014



**HG Energy, LLC**  
5260 Dupont Road  
Parkersburg, WV 26101  
(304) 420-1100 - Office  
(304) 863-3172 - Fax

December 18, 2013

Sturm Environmental Services  
P.O. Box 650  
Bridgeport, WV 26330

Attention: Pre – Drill Water Testing for Sarah E. Adams 146 & 148

Dear Ms. Hoops:

HG Energy LLC is in the process of requesting a drilling permit for the Sarah E Adams 146 & 148 wells in the Ten Mile District of Harrison County, in our Wolf Summit field. The DEP has requested standard water sampling in this case. We would like for Sturm Environmental Services to test the water supply sources listed on the enclosed form for the parameters outlined in 38CSR18 19.3.2 including:

1. PH
2. Iron
3. Total Dissolved Solids
4. Chlorides
5. Detergents (MBAS)

In some cases we are uncertain as to how many water supply sources a landowner is using. Please inquire as to the number that are in use and sample all of them. If you discover additional landowners with water sources, please include them as well. Also include the reason why the sample was not taken, if any. Please include the GPS coordinates for the location of the water sources and the Well Name on all documents.

Enclosed is a listing with the owners of the water supply sources to be tested. Please contact them and schedule your testing dates to allow the landowners to be present if desired. Also please communicate your testing plans to the appropriate field supervisor as listed on the attached form.

Upon completion of analysis, please send the results to this office, to my attention.

If you have any questions regarding this project feel free to call me at (304) 420-1119.

Very truly yours,

Diane C. White

Enclosures

02/07/2014

### Water Supply Source Testing Request for:

Wolf Summit - 2013

Date: 12/18/2013

**Contact Information**

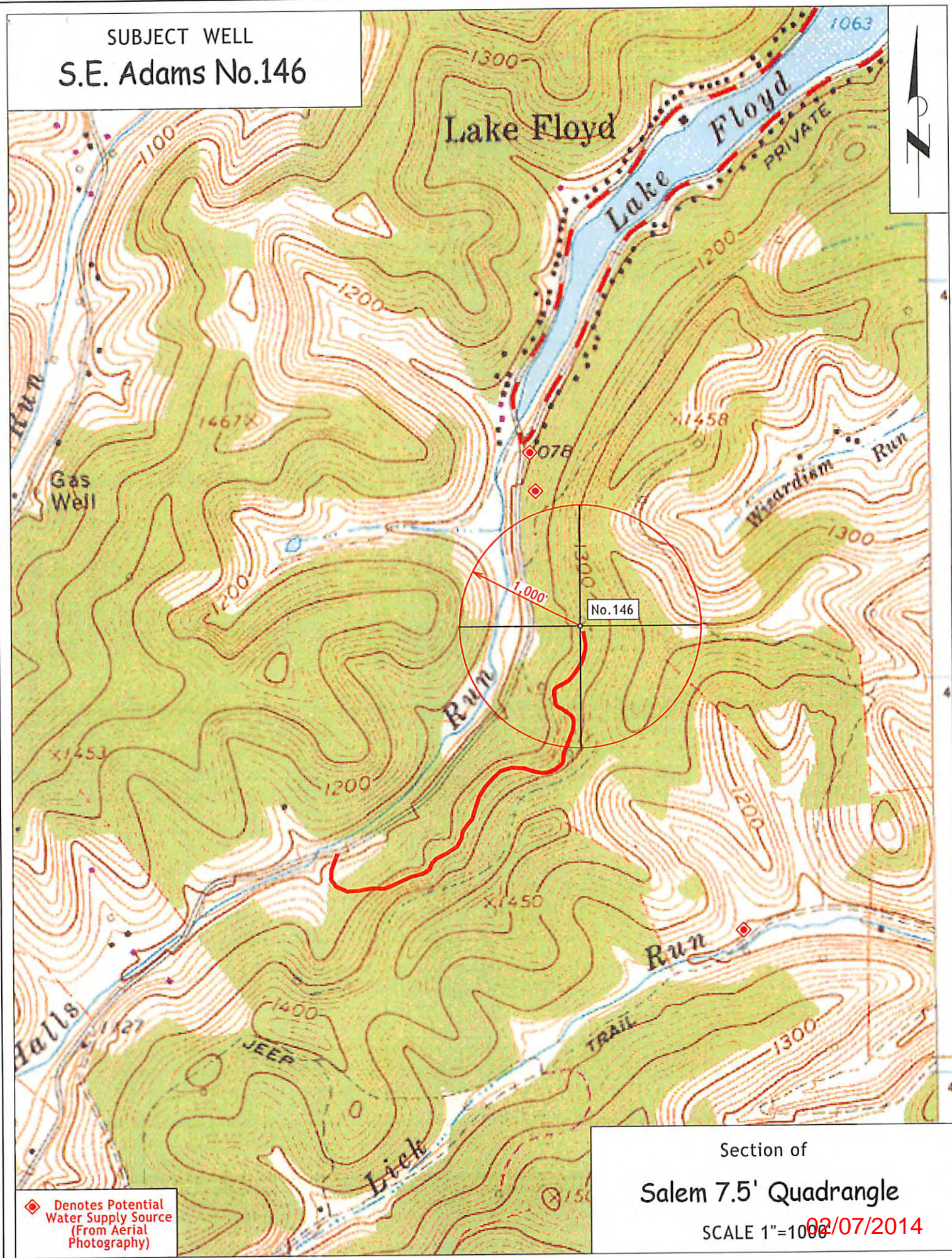
Foreman: Pat Taylor  
Phone: 304-782-2216  
Cell: 304-677-2306

**Well Reference: Sarah E. Adams 146, 148, 249, 150, 151**

No.	Name	Phone	Comment
1	Micheal & Lori Nardella 309 John Street Clarksburg, WV 26301	624-8844	Map 302, parcel 81
2	Hilary Heights Ltd Attn: Beth Arnold Taylor 142 Valley Drive Salem, WV 26426	782-2222	Map 302, parcel 81
3	Stacy & Lori Bokey Rt. 1, Box 299-46 Mount Clare, WV 26408	624-1038	Map 302, parcel 81
4			
5			

Well Reference:			
	Ten Mile District in Harrison County, Tax Map 323		

SUBJECT WELL  
S.E. Adams No.146



◆ Denotes Potential Water Supply Source (From Aerial Photography)

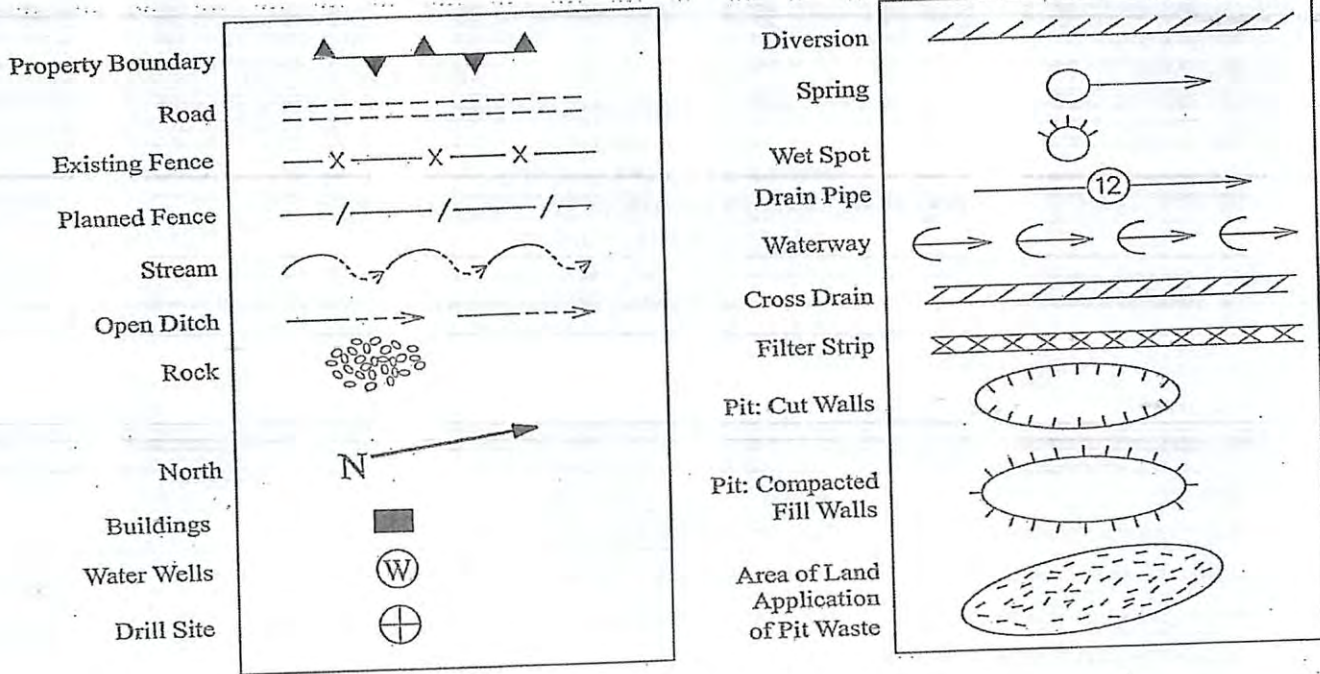
Section of  
Salem 7.5' Quadrangle

SCALE 1"=1000' 02/07/2014





**Legend**



Proposed Revegetation Treatment: Acres Disturbed Area I Approx. 1.0 Ac. Prevegetation pH \_\_\_\_\_

Area II Approx. 1.0 Ac.

Lime 2 Tons/Acre or Correct to pH 6.5  
 Fertilizer (10-20-20 or Equivalent) 500 Lbs./Acre (500 lbs. Minimum)  
 Mulch Straw 2 Tons/Acre

**SEED MIXTURES**

<u>Area I (Location)</u>	
Seed Type	Lbs./Ac.
Tall Fescue	40
Ladino Clover	5

<u>Area II (Road)</u>	
Seed Type	Lbs./Ac.
Tall Fescue	40
Ladino Clover	5

**Received**  
 JAN - 2 2014  
 WV Dept. of Oil and Gas  
 Office of Environmental Protection

Attach:  
 Drawing(s) of road, location, pit and proposed area for land application  
 Photocopied section of involved 7.5' topographic sheet.

Plan approved by: S. D. Wannatt Michael D. Huff  
 Comments: Pre-seed/mulch all disturbed areas as soon as reasonably possible per WV DEP EIS Manual. Upgrade EIS as necessary  
 Title: Oil & Gas Inspector Date: 12/23/2013

Field Reviewed? ( Y ) Yes ( ) No



# WOLF SUMMIT WATERFLOOD

Harrison County, W.Va.

## RECLAMATION PLAN SHOWING ROAD SYSTEMS TO BE USED FOR 2013-14 DRILLING PROGRAM

NOVEMBER 14, 2013

0 800  
SCALE 1" = 800'

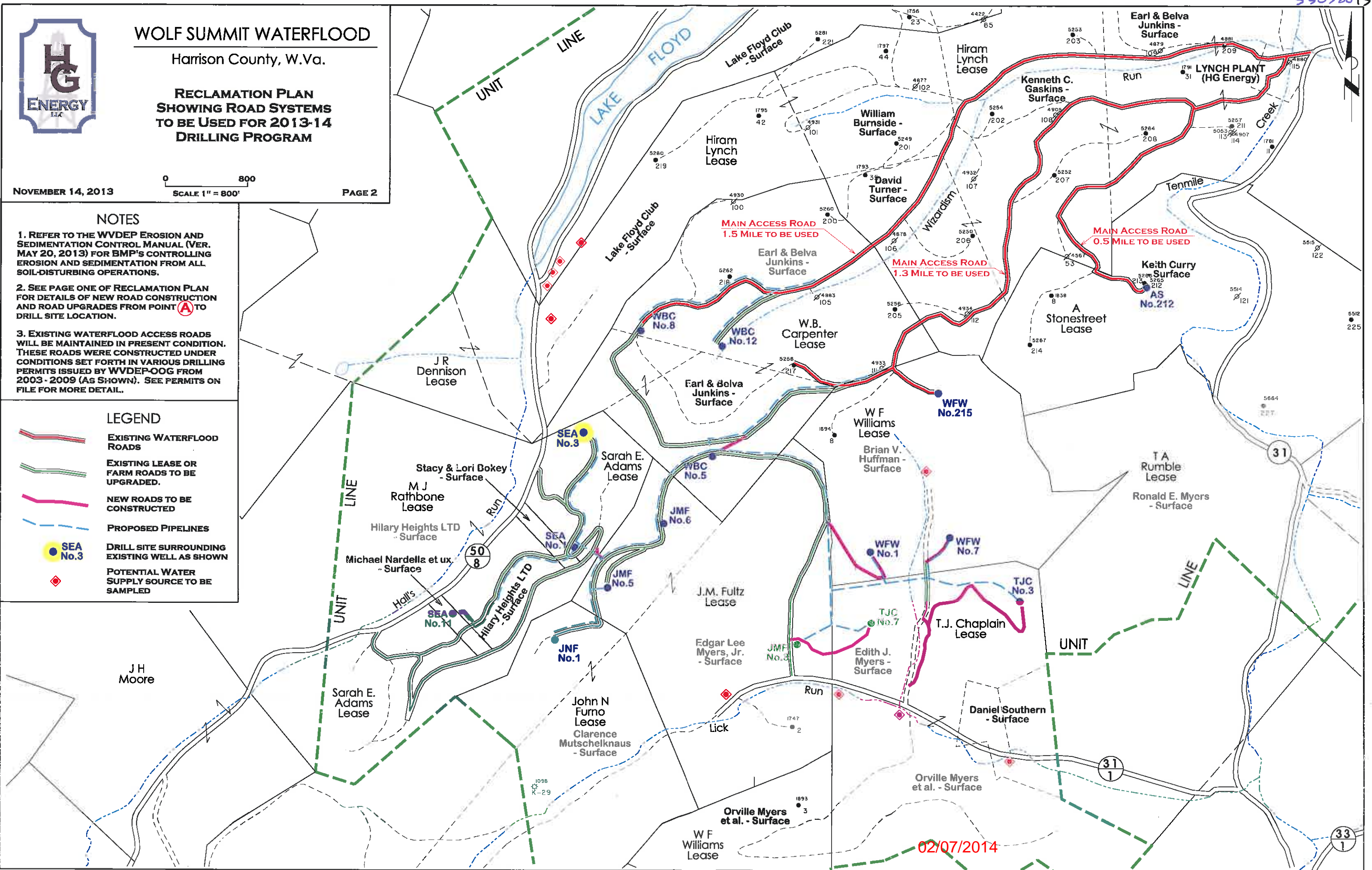
PAGE 2

### NOTES

1. REFER TO THE WVDEP EROSION AND SEDIMENTATION CONTROL MANUAL (VER. MAY 20, 2013) FOR BMP'S CONTROLLING EROSION AND SEDIMENTATION FROM ALL SOIL-DISTURBING OPERATIONS.
2. SEE PAGE ONE OF RECLAMATION PLAN FOR DETAILS OF NEW ROAD CONSTRUCTION AND ROAD UPGRADES FROM POINT (A) TO DRILL SITE LOCATION.
3. EXISTING WATERFLOOD ACCESS ROADS WILL BE MAINTAINED IN PRESENT CONDITION. THESE ROADS WERE CONSTRUCTED UNDER CONDITIONS SET FORTH IN VARIOUS DRILLING PERMITS ISSUED BY WVDEP-OOG FROM 2003 - 2009 (AS SHOWN). SEE PERMITS ON FILE FOR MORE DETAIL.

### LEGEND

- EXISTING WATERFLOOD ROADS
- EXISTING LEASE OR FARM ROADS TO BE UPGRADED.
- NEW ROADS TO BE CONSTRUCTED
- PROPOSED PIPELINES
- SEA No.3
- DRILL SITE SURROUNDING EXISTING WELL AS SHOWN
- POTENTIAL WATER SUPPLY SOURCE TO BE SAMPLED



02/07/2014

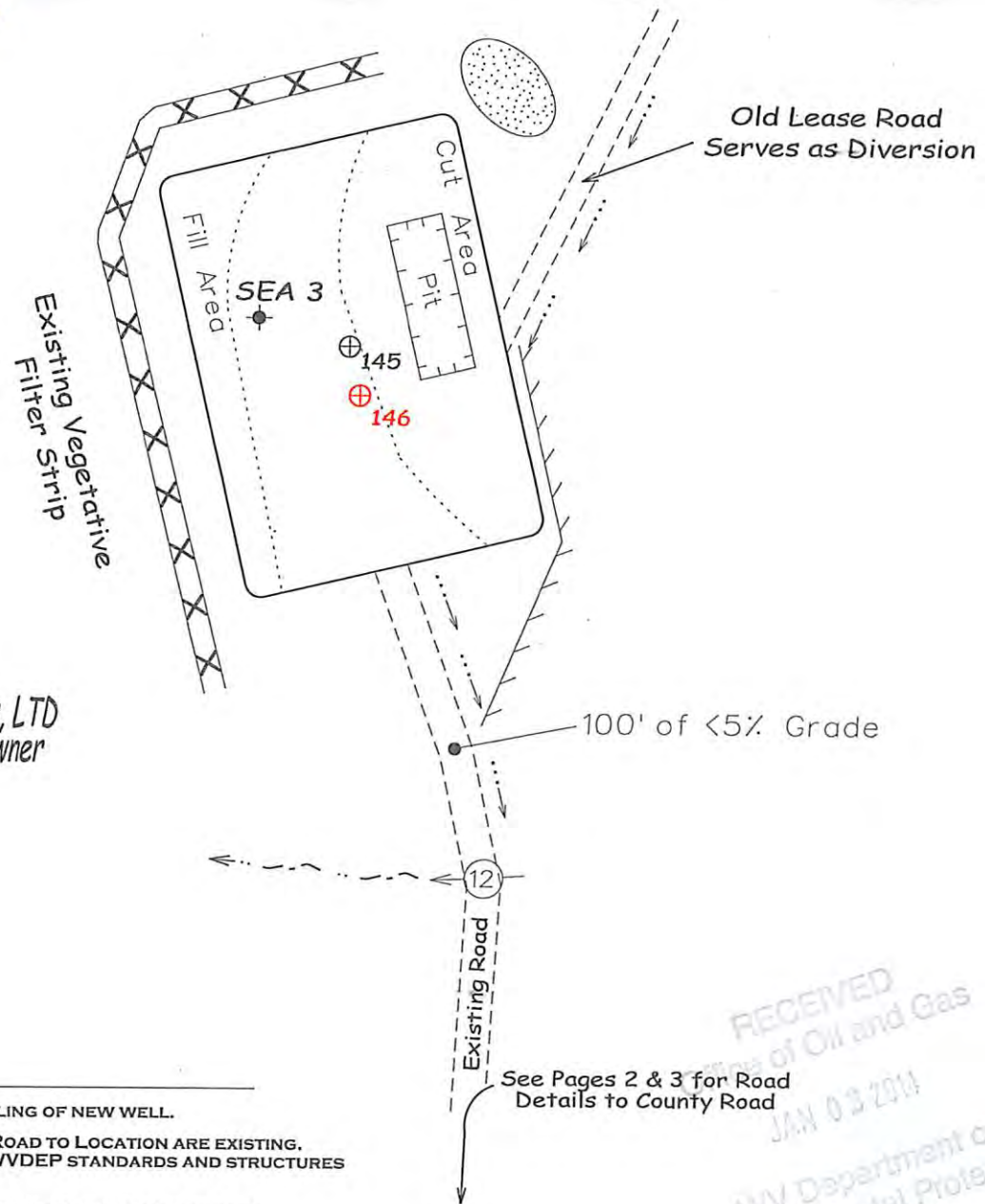


# Reclamation Plan For: Sarah E. Adams No. 146

**NOTE**  
REFER TO THE WVDEP  
EROSION AND SEDIMENT CONTROL  
FIELD MANUAL VER. MAY 2012 FOR  
BMPs CONTROLLING EROSION AND  
SEDIMENT FROM SOIL-DISTURBING  
OPERATIONS.

*Hilary Heights, LTD*  
- Surface Owner

SDW  
12/23/2013  
MAG



*Hilary Heights, LTD*  
- Surface Owner

**Notes:**

- REQUESTED PERMIT IS FOR DRILLING OF NEW WELL.
- ACCESS ROADS FROM COUNTY ROAD TO LOCATION ARE EXISTING. ROADS WILL BE UPGRADED TO WVDEP STANDARDS AND STRUCTURES INSTALLED AS SHOWN.
- ALL DISTURBED AREAS WILL BE RE-VEGETATED AS OUTLINED ON FORM WW-9.
- MAINTAIN SEDIMENT BARRIERS AND DRAINAGE STRUCTURES.
- ALL ROAD GRADES <5% EXCEPT AS NOTED.
- LOCATION OF DRILL PIT MAY BE CHANGED BASED ON AS-BUILT CONSIDERATIONS.
- DRAWING NOT TO SCALE.

See Pages 2 & 3 for Road  
Details to County Road

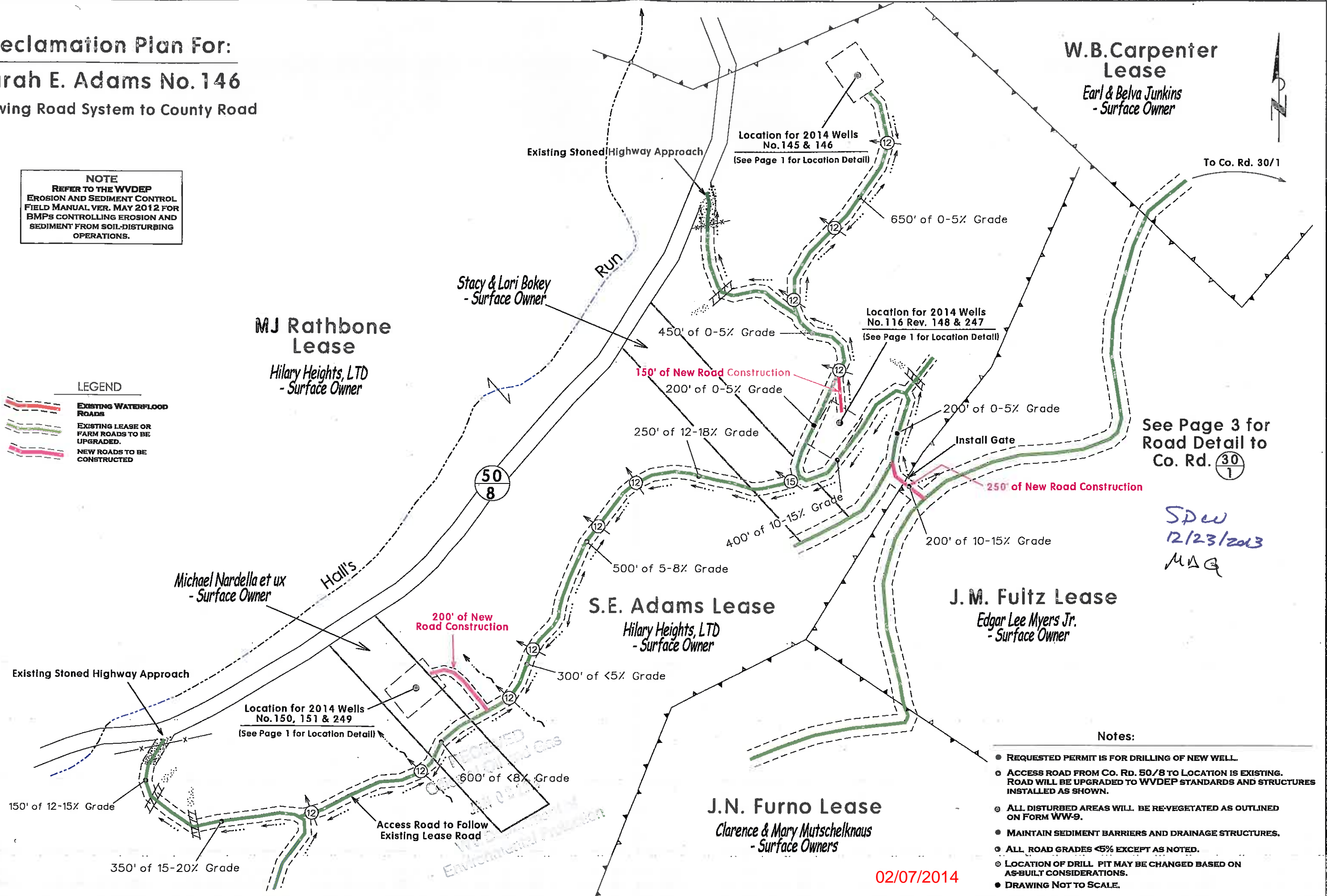
RECEIVED  
Department of Oil and Gas  
JAN 03 2014  
WV Department of  
Environmental Protection


# Reclamation Plan For: Sarah E. Adams No. 146 Showing Road System to County Road

**NOTE**  
REFER TO THE WVDEP  
EROSION AND SEDIMENT CONTROL  
FIELD MANUAL VER. MAY 2012 FOR  
BMPs CONTROLLING EROSION AND  
SEDIMENT FROM SOIL-DISTURBING  
OPERATIONS.

**LEGEND**

-  EXISTING WATERFLOOD ROADS
-  EXISTING LEASE OR FARM ROADS TO BE UPGRADED.
-  NEW ROADS TO BE CONSTRUCTED



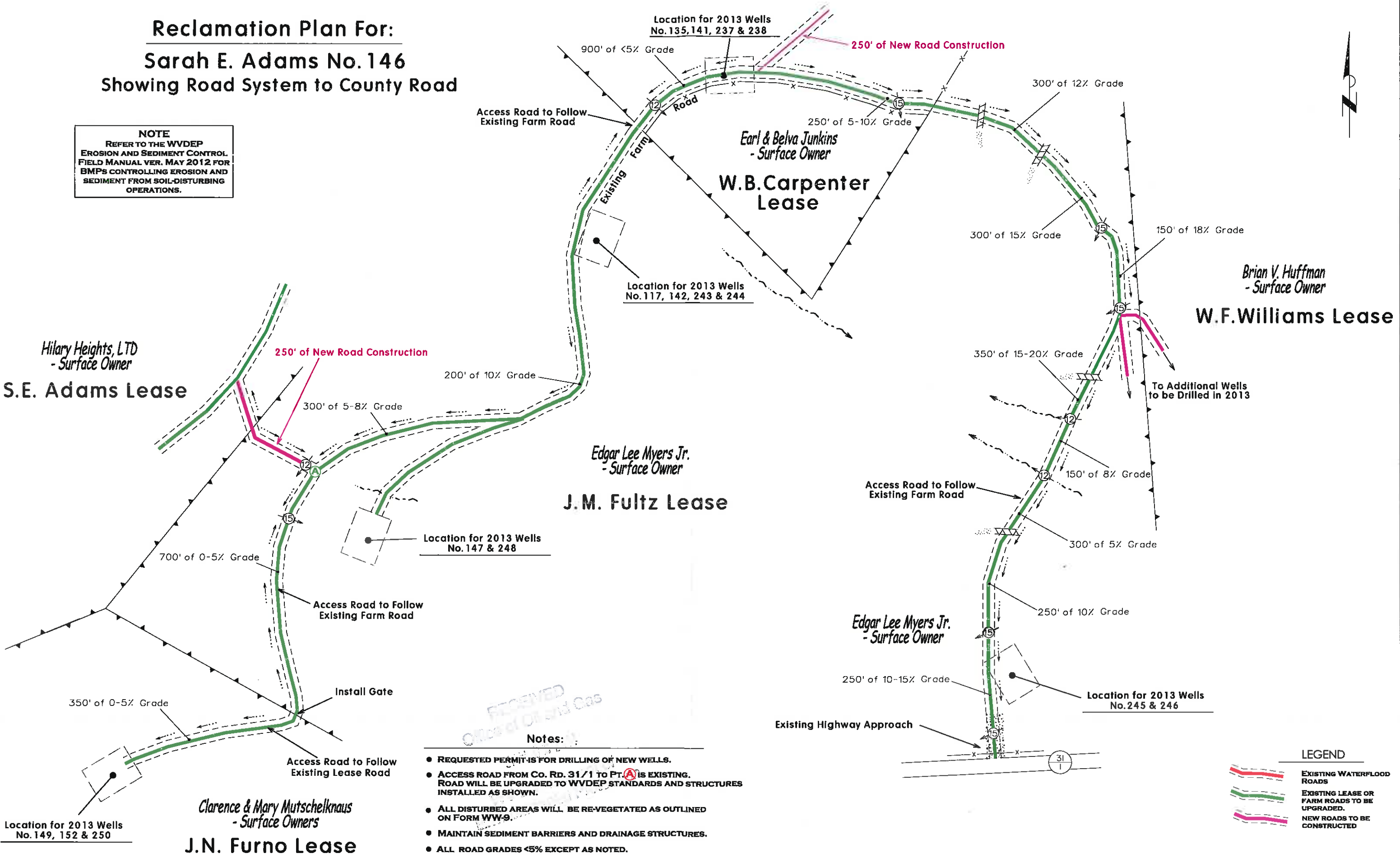
See Page 3 for  
Road Detail to  
Co. Rd. 

SPW  
12/23/2013  
MAG

- Notes:**
- REQUESTED PERMIT IS FOR DRILLING OF NEW WELL.
  - ACCESS ROAD FROM Co. Rd. 50/8 TO LOCATION IS EXISTING. ROAD WILL BE UPGRADED TO WVDEP STANDARDS AND STRUCTURES INSTALLED AS SHOWN.
  - ALL DISTURBED AREAS WILL BE RE-VEGETATED AS OUTLINED ON FORM WW-9.
  - MAINTAIN SEDIMENT BARRIERS AND DRAINAGE STRUCTURES.
  - ALL ROAD GRADES <5% EXCEPT AS NOTED.
  - LOCATION OF DRILL PIT MAY BE CHANGED BASED ON AS-BUILT CONSIDERATIONS.
  - DRAWING NOT TO SCALE.

# Reclamation Plan For: Sarah E. Adams No. 146 Showing Road System to County Road

**NOTE**  
REFER TO THE WVDEP  
EROSION AND SEDIMENT CONTROL  
FIELD MANUAL VER. MAY 2012 FOR  
BMPs CONTROLLING EROSION AND  
SEDIMENT FROM SOIL-DISTURBING  
OPERATIONS.

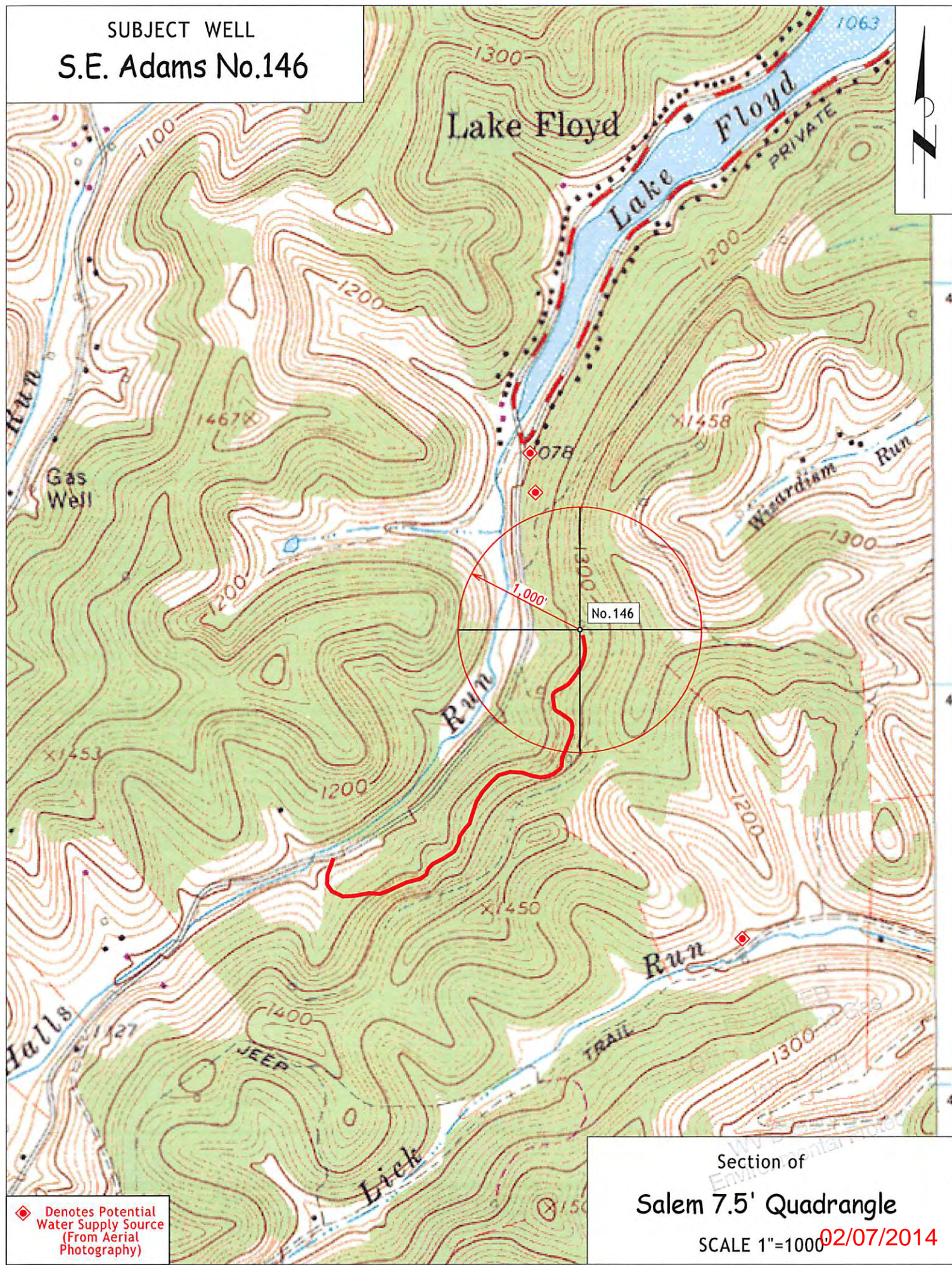


- Notes:**
- REQUESTED PERMIT IS FOR DRILLING OF NEW WELLS.
  - ACCESS ROAD FROM Co. Rd. 31/1 TO PT. (A) IS EXISTING. ROAD WILL BE UPGRADED TO WVDEP STANDARDS AND STRUCTURES INSTALLED AS SHOWN.
  - ALL DISTURBED AREAS WILL BE RE-VEGETATED AS OUTLINED ON FORM WW-9.
  - MAINTAIN SEDIMENT BARRIERS AND DRAINAGE STRUCTURES.
  - ALL ROAD GRADES <math><5\%</math> EXCEPT AS NOTED.
  - LOCATION OF DRILL PIT MAY BE CHANGED BASED ON AS-BUILT CONSIDERATIONS.
  - DRAWING NOT TO SCALE.



02/07/2014

SUBJECT WELL  
S.E. Adams No.146



◆ Denotes Potential Water Supply Source (From Aerial Photography)

Section of  
Salem 7.5' Quadrangle

SCALE 1"=1000' 02/07/2014

(BOT. HL: LON:-80°30'39.6") LON:-80°30'36.9"

2900

**SURVEY NOTES**

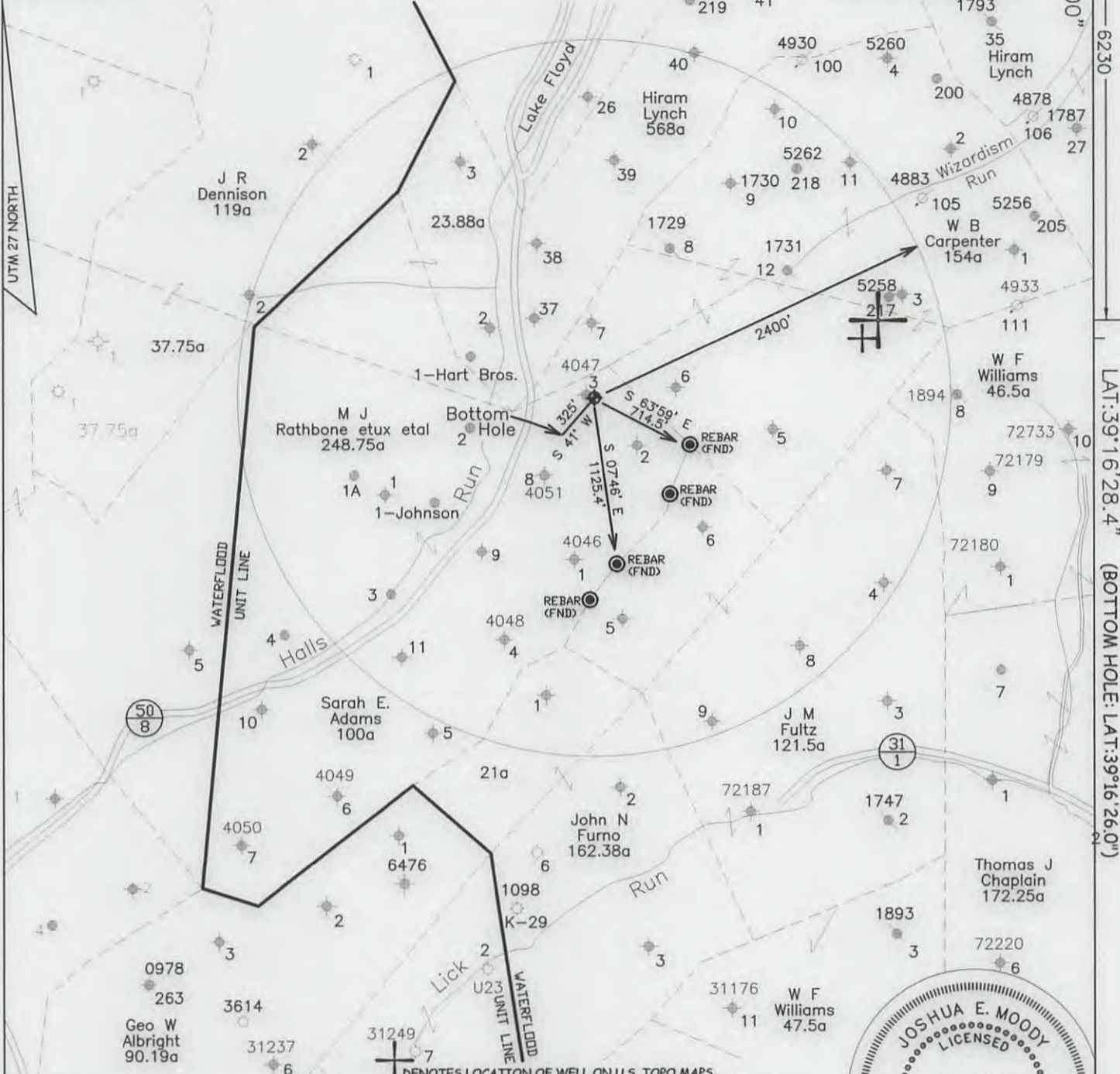
1 - Well ties and Latitude and Longitude were measured by Topcon Hiper GA survey grade GPS. Bearings are referenced to UTM Grid North (Zone 17 North - NAD 1927).

2 - Surface owners, adjoining information, Lease names, & line mapping obtained from HGE GIS system.

3 - No Title Opinion was provided to the Surveyor during this survey. This survey is subject to a complete title Opinion.

UTM Coordinates (Zone 17N-NAD 1983)		LOCATION REFERENCES	
Surface	N-4,347,370m. E-542,261m.	UTM 27 N 71°39' W 55.7' EX: WELL S 41°34' E 120.6' 15" WO	
Bottom Hole	N-4,347,295m. E-542,196m.	Brg. Direction is prop. well to the ref.	

LAT: 39°17'30"  
**MAP OF  
 H.G. ENERGY, LLC  
 -WATERFLOOD UNIT-  
 S.E. ADAMS 146**



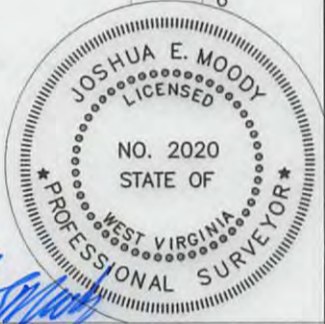
⊕ DENOTES LOCATION OF WELL ON U.S. TOPO MAPS.

JOB # 13-014  
 DRAWING # 13LAKEFLOYD FOLDER  
 SCALE 1" = 1500'  
 MINIMUM DEGREE OF ACCURACY 1/2500  
 PROVEN SOURCE OF ELEV. BENCH MARK H-80

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 PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
**MOODY LAND SURVEYING, LLC**  
 ST. MARYS, WV 26170



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS

JOSHUA E. MOODY, P.S. 2020  
 DATE 9/17/13  
 OPERATOR'S WELL  
 S.E. ADAMS # 146

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  HORIZONTAL   
 (IF "GAS") PRODUCTION  STORAGE  DEEP  SHALLOW   
 LOCATION: ELEVATION 1218' WATERSHED TEN MILE CREEK API WELL # 058015  
 DISTRICT TEN MILE COUNTY HARRISON STATE 47 COUNTY 033 PERMIT 058015  
 QUADRANGLE SALEM 7.5'

SURFACE OWNER HILARY HEIGHTS LTD ACREAGE 241.54 ACRES +/-  
 OIL & GAS ROYALTY OWNER HILARY HEIGHTS LTD., et al LEASE ACREAGE 100 ACRES +/-  
 PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION   
 OTHER PHYSICAL CHANGE IN WELL (SPECIFY) WILL BE DRILLED DIRECTIONALLY (S 41° W 325')  
 PLUG & ABANDON  CLEAN OUT & REPLUG   
 TARGET FORMATION 5TH SAND ESTIMATED DEPTH MD= 3,275'  
 WELL OPERATOR H.G. ENERGY, LLC DESIGNATED AGENT MIKE KIRSCH  
 ADDRESS 5260 DuPONT ROAD ADDRESS 5260 DuPONT ROAD  
PARKERSBURG, WV 26101 PARKERSBURG, WV 26101

02/07/2014

LON: 80°30'00" 6230  
 LAT: 39°16'28.4" (BOTTOM HOLE: LAT:39°16'26.0")