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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 03, 2014

**WELL WORK PERMIT**

**Vertical Well**

This permit, API Well Number: 47-5902241, 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 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: HRC1  
Farm Name: HUNTINGTON REALTY CORPOR  
**API Well Number: 47-5902241**  
**Permit Type: Vertical Well**  
Date Issued: 02/03/2014

**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.



5902241  
524500  
650

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

1) Well Operator: TUG FORK DEVELOPMENT Operator ID 59 MINGO County HARVEY District WILSONDALE Quadrangle

02 687

2) Operator's Well Number: HRC 1 3) Elevation: 1230

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

5) Proposed Target Formation(s): LOWER HURON Proposed Target Depth: 3800

6) Proposed Total Depth: 3800 Feet Formation at Proposed Total Depth: WHITE SLATE

7) Approximate fresh water strata depths: 200

8) Approximate salt water depths: 1600

9) Approximate coal seam depths: NONE

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

11) Does land contain coal seams tributary to active mine? YES-SURFACE MINE

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

DRILL VERTICAL WELL TO A TOTAL DEPTH OF 75 FEET BELOW THE LOWER HURON SECTION OF THE DEVONIAN SHALE.  
INSTALL AND CONCRETE CASING AS DESCRIBED BELOW IN THE "CASING AND TUBING PROGRAM". STIMULATE BY FRACTURING .  
WITH NITROGEN IN A GASEOUS STATE.

13) **CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS			FOOTAGE	INTERVALS	CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	Fill -up (Cu. Ft.)
Conductor	13.375	LS	46#	30	30	CONDUCTOR
Fresh Water	9.625	LS	26#	300	300	130
Coal						
Intermediate	7	LS	17#	1880	1880	380
Production	4.5	N-80	9.5#	3800	3800	150
Tubing						
Liners						

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WV Department of  
Environmental Protection

RENAV  
TO SURFACE  
9 W/m

*[Handwritten Signature]*

Packers: Kind: \_\_\_\_\_  
Sizes: \_\_\_\_\_  
Depths Set \_\_\_\_\_





**Nottingham, Justin E**

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**From:** Sam St.Clair <samstclair@huntingtonrealtycorp.com>  
**Sent:** Thursday, December 19, 2013 8:55 AM  
**To:** Bill Cubbedge  
**Cc:** James St.Clair  
**Subject:** Re: Coal Waiver HRC 1 & 2

RE: Waivers for TFD Wells: HRC 1 & 2

Bill Cubbedge  
Tug Fork Development


Sir,  
Huntington Realty Corporation (HRC) acknowledges on 12/11/13, the receipt of the following:  
Two (2) of the following for Wells HRC 1 & 2 submitted by Tug Fork Development and attached:


- **WW-2A: Coal Operator, Owner, or Lessee Waivers,**
- **WV DEP Notice and Application for a Well Work Permit**
- **Notice to Surface Owners**
- **Detailed Maps and Reclamation Plan mapping.**

HRC and has no objections to these applications.

HRC has a Lease with CONSOL of Kentucky, Inc. It is superior to your Lease on these selected locations.

**Sam St.Clair**  
**Huntington Realty Corporation**

 1102 Third Avenue  
River Towers West  
Suite 107  
Huntington, WV 25701

 PO Box 522  
Huntington, WV 25710

**O:304.525.5910**  
**F:304.525.0509**  
**C:304.638.5910**

5902241

7012 1640 0001 5514 2245

**U.S. Postal Service™**  
**CERTIFIED MAIL™ RECEIPT**  
*(Domestic Mail Only; No Insurance Coverage Provided)*

For delivery information visit our website at [www.usps.com](http://www.usps.com)

**OFFICIAL USE**

Postage	\$ 1.32	
Certified Fee	3.10	
Return Receipt Fee (Endorsement Required)		
Restricted Delivery Fee (Endorsement Required)		
<b>Total Postage &amp; Fees</b>	<b>\$ 4.42</b>	

Sent To: Consol Energy, Attn: Tom Mattox  
 Street, Apt. No., or PO Box No.: PO Box 76  
 City, State, ZIP+4: Norcatuck, WV 25685

PS Form 3800, August 2006 See Reverse for Instructions

✓

02/07/2014

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE  
Chapter 22, Article 6, Section 8(d)  
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
HUNTINGTON REALTY CORP	TUG FORK DEVELOPMENT	12.5%	106/216

**Acknowledgement of Possible Permitting/Approval  
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources
- WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

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**Office of Oil & Gas**

DEC 16 2013

Well Operator:  
By: Its:

  
 TUG FORK DEVELOPMENT  
 OWNER

WV Department of  
 Environmental Protection

WW-2B1  
(5-12)

Well No. HRC 1

West Virginia Department of Environmental Protection  
Office of Oil and Gas

NOTICE TO SURFACE OWNERS

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

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

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

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

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

Certified Laboratory Name \_\_\_\_\_  
Sampling Contractor \_\_\_\_\_

Well Operator TUG FORK DEVELOPMENT  
Address 3930 BRANDYWINE DR  
CATLETTSBURG, KY 41129  
Telephone 606 922 5087

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

*THERE ARE NO WATER WELLS WITHIN 1000 FEET OF PROPOSED DRILL SITE*

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WW-9  
(5/13)

Page \_\_\_\_\_ of \_\_\_\_\_  
API Number 47 - 59 - \_\_\_\_\_  
Operator's Well No. HRC 1

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name TUG FORK DEVELOPMENT OP Code \_\_\_\_\_

Watershed (HUC 10) OPEN MOUTH OF W FK OF TWELVEPOLE CK Quadrangle WILSONDALE

Elevation \_\_\_\_\_ County MINGO District HARVEY

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

Will a pit be used for drill cuttings? Yes X No \_\_\_\_\_

If so, please describe anticipated pit waste: DRILL CUTTINGS PRODUCED AND INDUCED WATER

Will a synthetic liner be used in the pit? Yes X No \_\_\_\_\_ If so, what ml.? 79 20 MIL.

Proposed Disposal Method For Treated Pit Wastes:

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

Will closed loop system be used? NO

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

-If oil based, what type? Synthetic, petroleum, etc. N/A

Additives to be used in drilling medium? SOAP

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. LEAVE IN PIT

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

-Landfill or offsite name/permit number? \_\_\_\_\_

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

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

Company Official Signature [Signature]  
Company Official (Typed Name) W. D. CUBBEDGE  
Company Official Title OWNER

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Subscribed and sworn before me this 28 day of OCT, 2013

Lisa G Robinnett Notary [Signature]

My commission expires 10/13/2018

Official Seal  
LISA ROBINETTE  
5638 RI 60 E  
HARRISBURG, WV 25705  
My Commission Expires October 13, 2018

Form WW-9

Operator's Well No. HRC1

Proposed Revegetation Treatment: Acres Disturbed .5 Prevegetation pH 7

Lime 2 Tons/acre or to correct to pH 7

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


Mulch PAPER(HYDRO SEED) Tons/acre

Seed Mixtures

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre
FAWN FESCUE	25	SAME AS AREA 1	
ORCHARD GRASS	10		
PERRENIAL & ANNUAL RYE	10		
MEDIUM RED CLOVER	3		

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: 

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Title: inspector OOG

Date: 12-19 RECEIVED  
Office of Oil & Gas

Field Reviewed? (  ) Yes (  ) No

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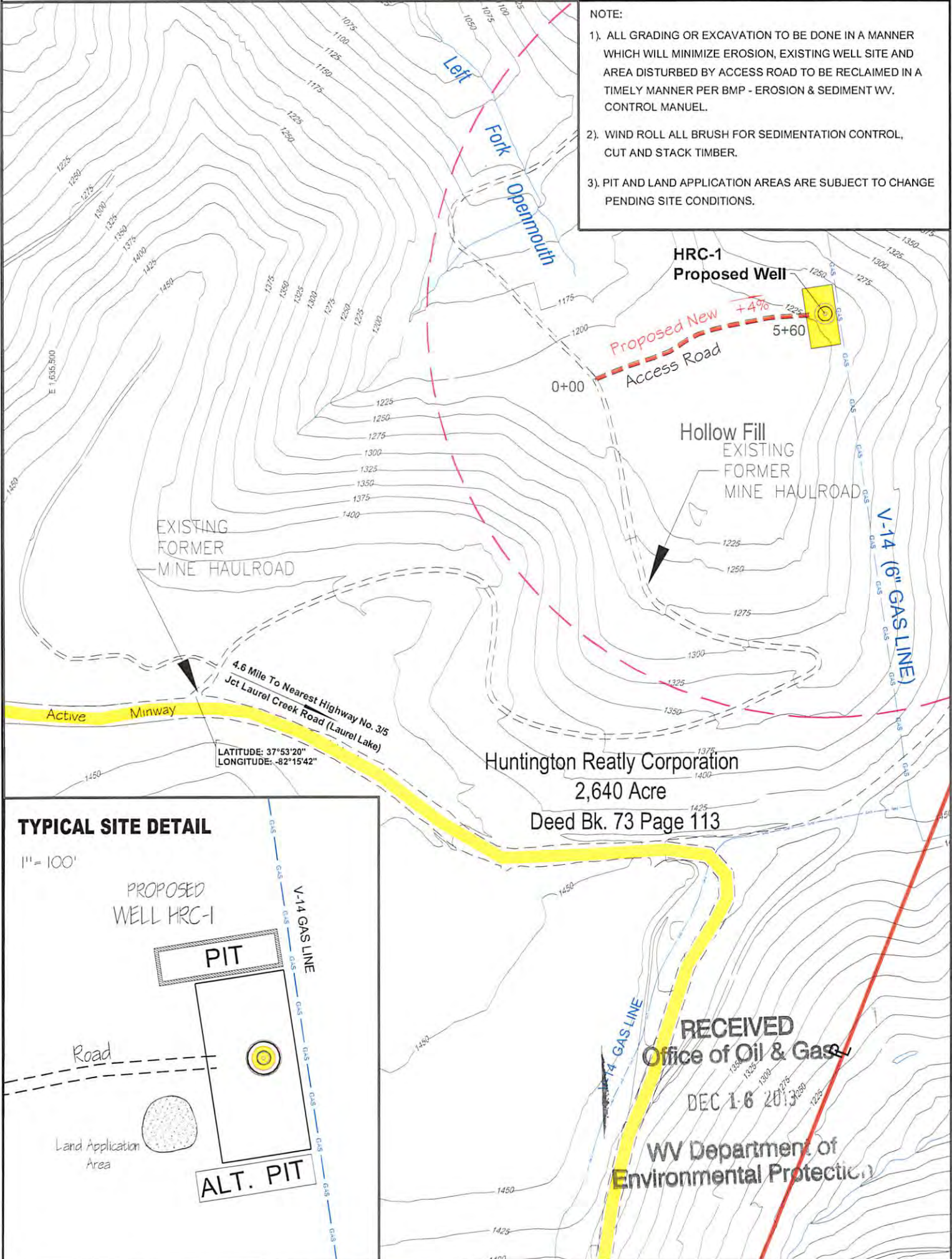




Prepared By:  
**Tug Valley Surveying, Inc.**  
 Professional Land Surveying & Mapping  
 P.O. Box 862  
 Williamson, West Virginia 25661  
 (606) 237-1222

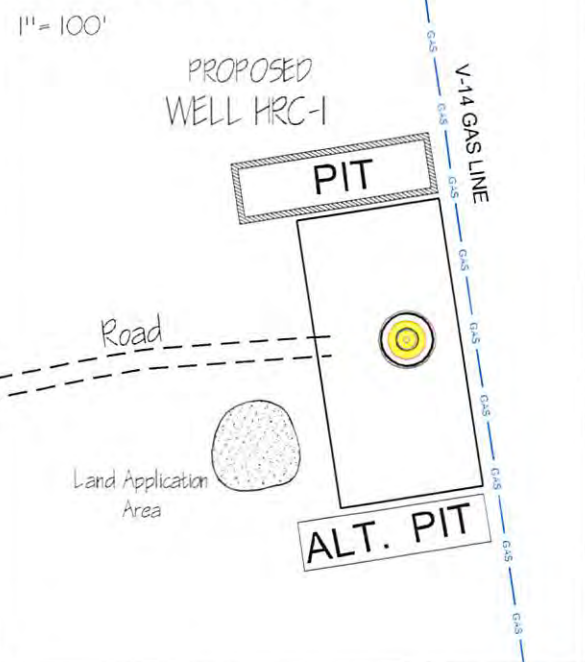
# Tug Fork Development

3930 BRANDWINE DRIVE  
 CATLETTSBURG, KENTUCKY 41129



- NOTE:
- 1). ALL GRADING OR EXCAVATION TO BE DONE IN A MANNER WHICH WILL MINIMIZE EROSION, EXISTING WELL SITE AND AREA DISTURBED BY ACCESS ROAD TO BE RECLAIMED IN A TIMELY MANNER PER BMP - EROSION & SEDIMENT WV. CONTROL MANUAL.
  - 2). WIND ROLL ALL BRUSH FOR SEDIMENTATION CONTROL, CUT AND STACK TIMBER.
  - 3). PIT AND LAND APPLICATION AREAS ARE SUBJECT TO CHANGE PENDING SITE CONDITIONS.

### TYPICAL SITE DETAIL



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Access Road	-----	Diversions	-----
Existing Fence	x-x-x-x-x-x	Spring	○→
Proposed Fence	---x---	Drain Pipe	○→
Stream	~~~~~	Water Way	←○→
Open Ditch	~~~~~	Cross Drain	
Ditch	~~~~~	Art. Filter Strip	
Rock	⬮	Cutwalls	○
Building	□	Compact Fill Walls	○
Water Well	⊙	App. Of Pit Waste	⊙
Drill Site	○	Tanks	⊙
Gathering Lines	-----	Storage Facilities	⊙

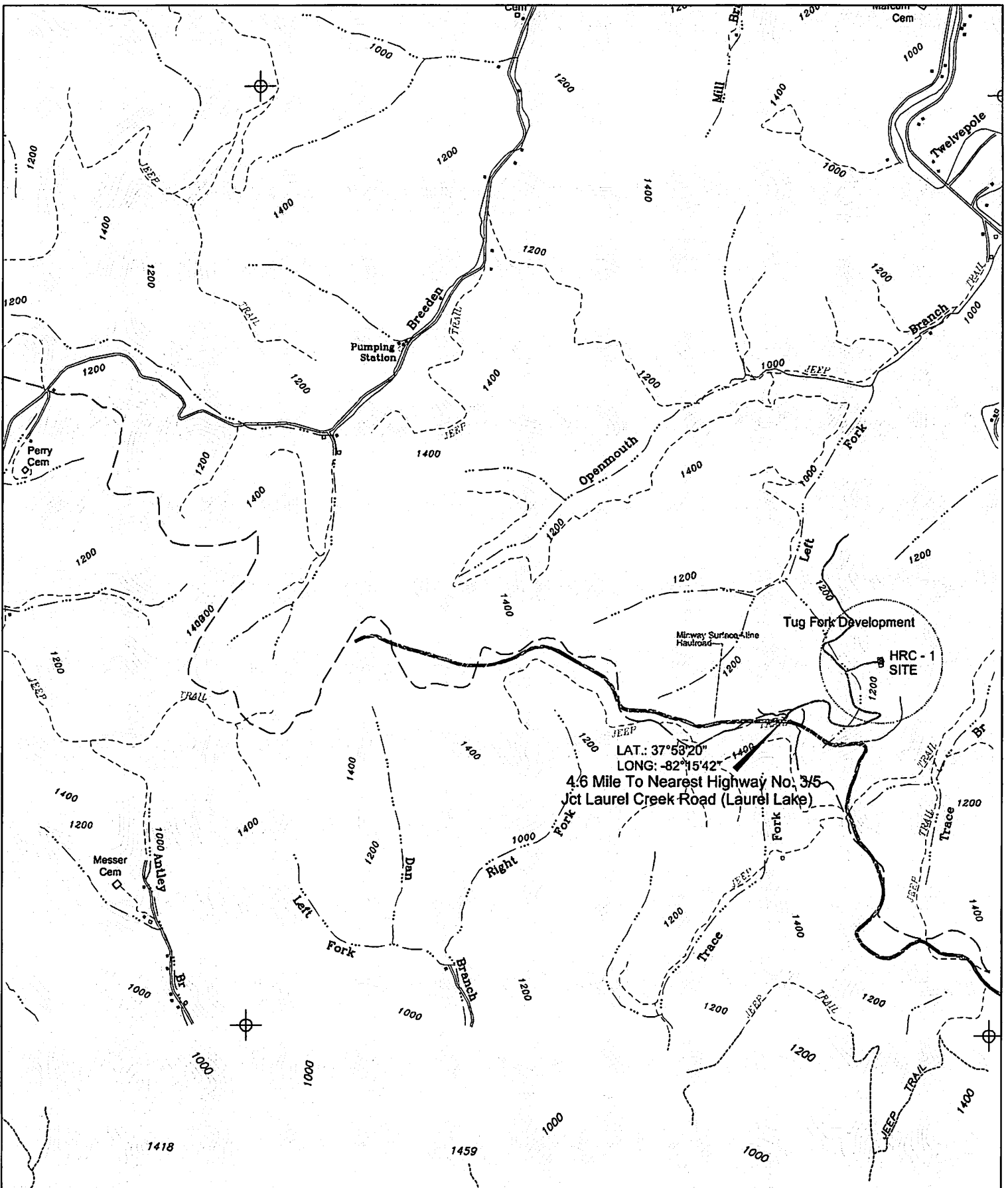
Division Of Environmental Protection  
 Office Of Oil & Gas  
 Charleston

## WELL SITE RECLAMATION PLAN

**GAS WELL HRC -1**  
 Tug Fork Development

QUADRANGLE: Wilsondale  
 COUNTY: Mingo LEASE # \_\_\_\_\_  
 DATE: 22 October 2013 SCALE 1" = 300'  
 DRAWING FILE: Rec-Plan-HRC-1





LAT: 37°53'20"  
 LONG: -82°15'42"  
 4.6 Mile To Nearest Highway No. 315  
 Jct Laurel Creek Road (Laurel Lake)

TUG FORK DEVELOPMENT, INC.  
 3930 BRANDWINE DRIVE  
 CATLETTSBURG, KENTUCKY 41129

**GENERAL LOCATION MAP  
 ACCESS ROAD TO HRC1**

WILSONDALE/NAUGATUCK QUADRANGLE  
 SCALE 1" = 2,000 FEET

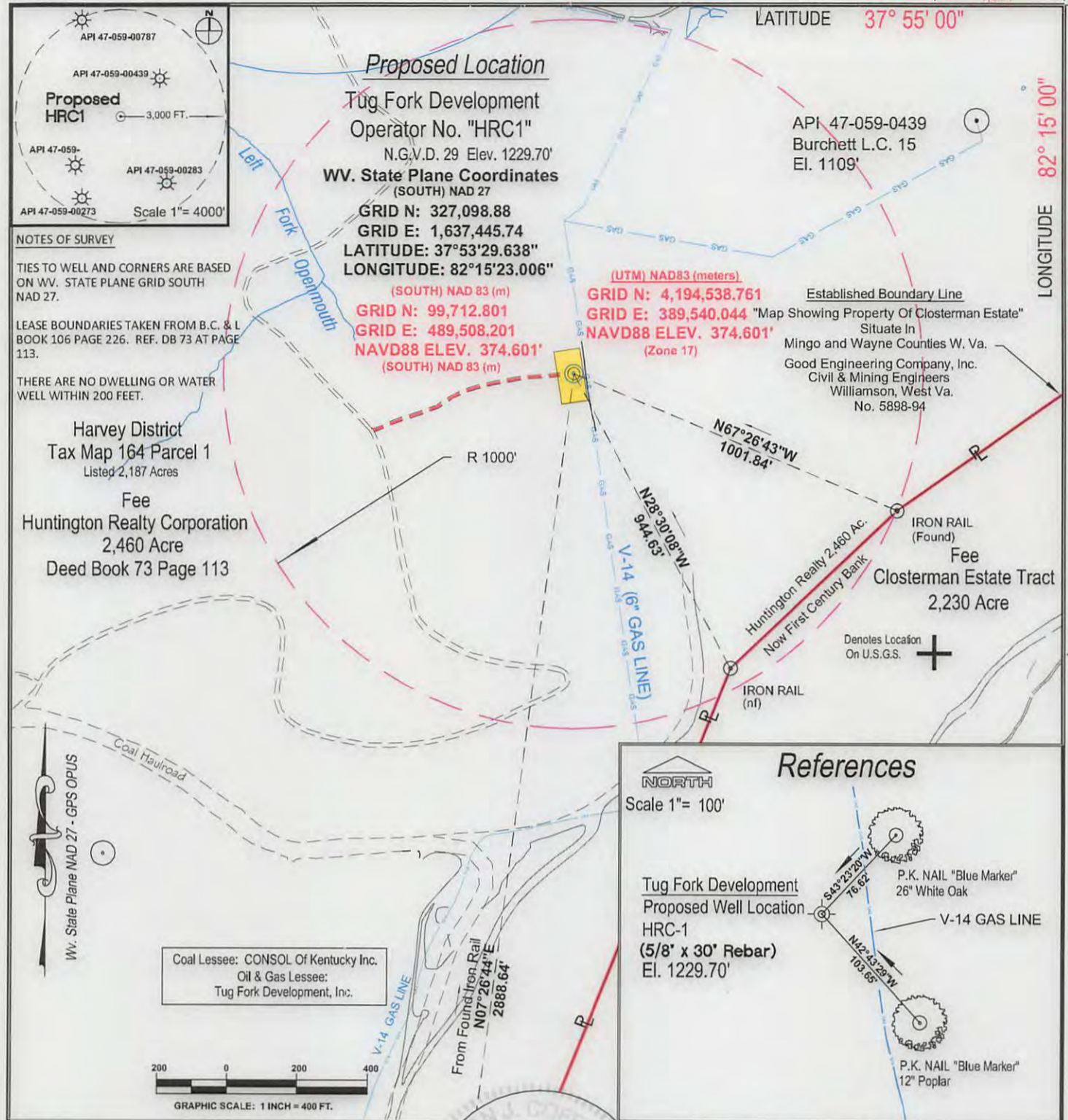
22 October 2013

Prepared By:  
 Tug Valley Surveying, Inc.  
 P.O. BOX 862  
 Williamson, W. V. 25661



02/07/2014





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.

*Alan J. Coffey*  
 Alan J. Coffey, PLS No. 869su



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

DATE 22 October, 20 13

OPERATORS WELL NO. HRC1

API WELL NO. 47 - 059 - 02241  
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1: 5,000 FILE NO. \_\_\_\_\_  
 PROVEN SOURCE OF ELEVATION: U.S.G.S. (N.G.V.D. 29) Benchmark "G-158" El. 1587.60' GPS OPUS SCALE 1" = 400 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 1229.70' Watershed Left Fork Of Openmouth Br. Of Twelvepole Creek  
 District HARVEY County MINGO Quadrangle Wilsondale 7 1/2 Minute

SURFACE OWNER Huntington Realty Corporation ACREAGE ± 2460 Less 277  
 ROYALTY OWNER Huntington Realty Corporation LEASE ACREAGE ± 2460

PROPOSED WORK:  
 DRILL X CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR STIMULATE \_\_\_  
 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 ± 3,950'

WELL OPERATOR Tug Fork Development DESIGNATED AGENT DAVE BARTRAN  
 ADDRESS: 3930 BRANDWINE DRIVE, CATLETTSBURG, KENTUCKY 41129 ADDRESS P.O. BOX 306 MILTON, WV. 25541

COUNTY PERMIT

02/07/2014