



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

February 24, 2014

WELL WORK PERMIT

Vertical Well

This permit, API Well Number: 47-5902242, 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: HRC2
Farm Name: HUNTINGTON REALTY CORPOR
API Well Number: 47-5902242
Permit Type: Vertical Well
Date Issued: 02/24/2014

Promoting a healthy environment.

PERMIT CONDITIONS

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

CONDITIONS

1. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6-20, which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
2. Pursuant to 35 CSR § 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.
3. Pursuant to 35 CSR § 4-19.1.c, if the operator is unable to sample and analyze any water well or spring 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.

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* District HARVEY Quadrangle WILSONDALE

2) Operator's Well Number: HRC 2 3) Elevation: 1250

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: 3850

6) Proposed Total Depth: 3850 Feet Formation at Proposed Total Depth: WHITE SLATE

7) Approximate fresh water strata depths: 250

8) Approximate salt water depths: 1650

9) Approximate coal seam depths: NONE ≈ 470'

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 CEMENT TO SURFACE
Coal				500'	500'	CTS
Intermediate	7	LS	17#	1900	1900	380
Production	4.5	N-80	9.5#	3850	3850	150
Tubing						
Liners						

Packers: Kind: _____
 Sizes: _____
 Depths Set _____

gwin

5902242
CK 11013
6500

WW-2A
(Rev. 6-07)

1.) Date: 10/30/13
2.) Operator's Well Number HRC 2
State County Permit
3.) API Well No.: 47- 59 -

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

4) Surface Owner(s) to be served:
(a) Name HUNTINGTON REALTY CORP. ✓
Address PO BOX 522
HUNTINGTON, WV 25710-0522
(b) Name
Address
(c) Name
Address
6) Inspector JEREMY JAMES
Address PO BOX 147
ONA, WV 25545
Telephone 304-951-2596
5) (a) Coal Operator
Name CONSOL ✓
Address PO BOX 76
NAUGATUCK, WV 25685
(b) Coal Owner(s) with Declaration
Name SAME AS SURFACE
Address
(c) Coal Lessee with Declaration
Name SAME AS OPERATOR
Address

TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:

OR Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas

Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22-6 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through ___ on the above named parties by:

- Personal Service (Affidavit attached)
- Certified Mail (Postmarked postal receipt attached)
- Publication (Notice of Publication attached)

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

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator TUG FORK DEVELOPMENT
By: *[Signature]*
Its: W. D. CUBBEDGE
Address 3930 BRANDYWINE DR
CATLETTSBURG, KY 41129
Telephone 606-922-507

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

[Signature]

My Commission Expires 10/13/2014

Oil and Gas Privacy Notice

Notary Public



OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
LISA ROBINETTE
6638 Rt 60 E
Huntington, WV 25705
My Commission Expires October 13, 2016

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

5902242

7013 2630 0000 6741 7560

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

For delivery information visit our website at www.usps.com®

HUNTINGTON WV 25710 OFFICIAL USE

Postage	\$ 1.40	0098
Certified Fee	\$3.30	07
Return Receipt Fee (Endorsement Required)	\$0.00	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 4.70	01/31/2014

Sent To HUNTINGTON REALTY CORP
 Street, Apt. No.,
 or PO Box No. PO BOX 522
 City, State, ZIP+4 HUNTINGTON, WV 25710-0522

PS Form 3800, August 2006 See Reverse for Instructions

7013 2630 0000 6741 7577

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

For delivery information visit our website at www.usps.com®

NAUGATUCK WV 25685 OFFICIAL USE

Postage	\$ 1.40	0098
Certified Fee	\$3.30	07
Return Receipt Fee (Endorsement Required)	\$0.00	Postmark Here
Restricted Delivery Fee (Endorsement Required)	\$0.00	
Total Postage & Fees	\$ 4.70	01/31/2014

Sent To CONSOL ENERGY
 Street, Apt. No.,
 or PO Box No. PO BOX 76
 City, State, ZIP+4 NAUGATUCK, WV 25685

PS Form 3800, August 2006 See Reverse for Instructions

WW-2A1
(Rev. 1/11)

Operator's Well Number HRC 2

**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

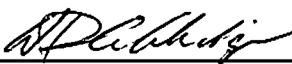
**Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas**

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.

Well Operator:
By: Its:



 TUG FORK DEVELOPMENT

 OWNER

WW-2B1
(5-12)

Well No. HRC 2

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 WATERWELLS WITHIN 1000' OF PROPOSED DRILL SITE

Environmental Protection

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.? 40 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

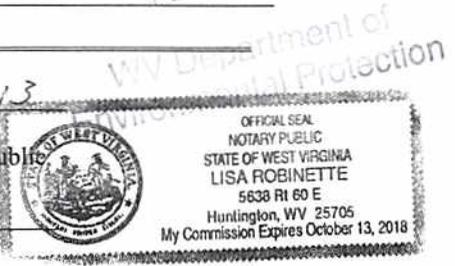
Company Official Title OWNER

Subscribed and sworn before me this 28 day of OCTOBER, 20 13

[Signature] Notary Public

My commission expires 10/13/2018

RECEIVED
Office of Oil and Gas
FEB 09 2014



Form WW-9

Operator's Well No. _____

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)

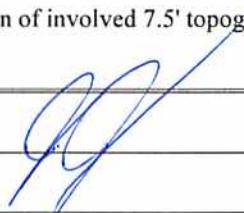
Mulch PAPER(HYDRO SEED) Tons/acre

Seed Mixtures

Seed Type	Area I lbs/acre	Seed Type	Area II 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 GOG Date: 12-13-13

Field Reviewed? () Yes () No



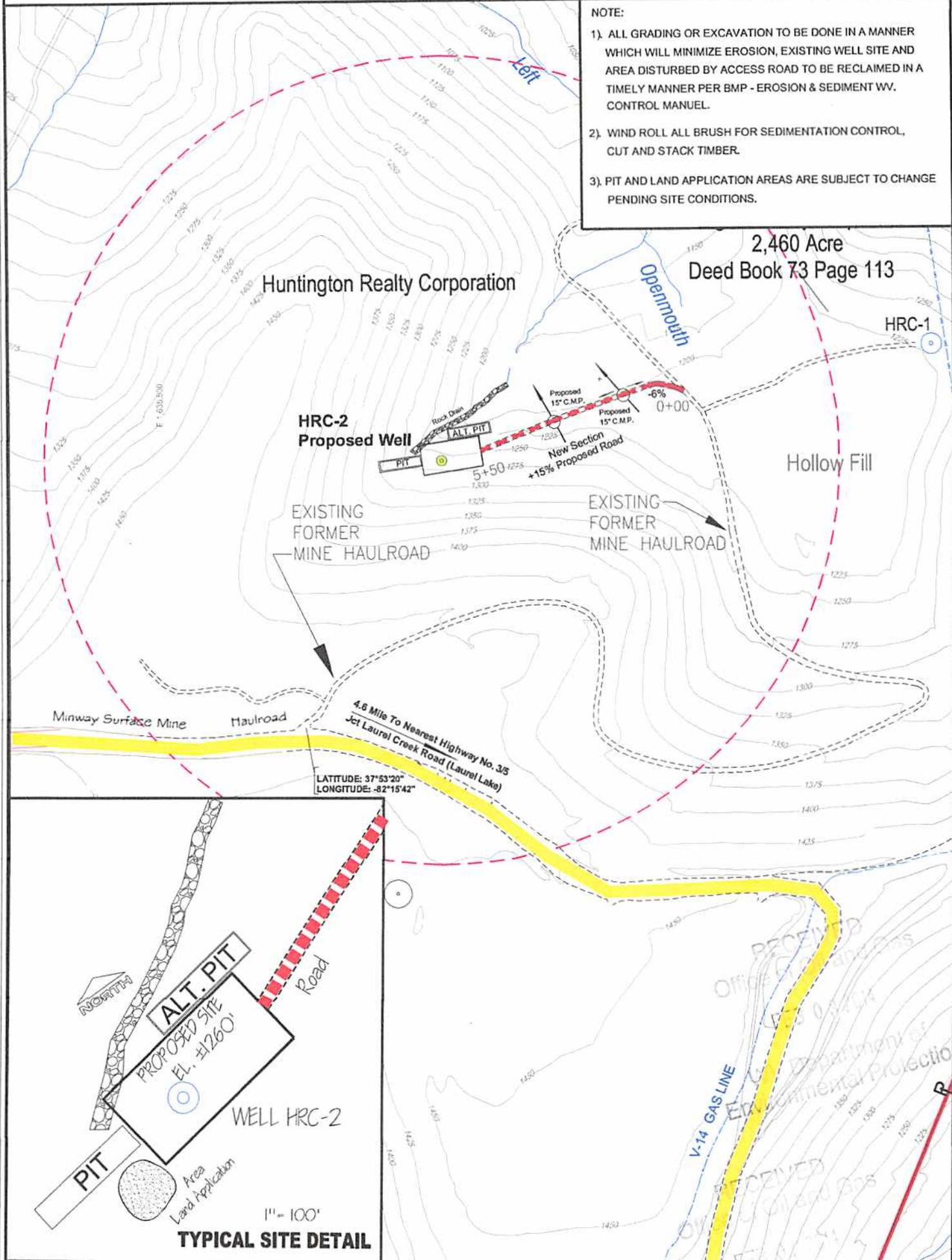
Prepared By:
Tug Valley Surveying, Inc.
 Professional Land Surveying & Mapping
 P.O. Box 862
 Williamson, West Virginia 25661
 (606) 237-1222

Tug Fork Development

3930 BRANDWINE DRIVE
 CATLETTSBURG, KENTUCKY 41129

NOTE:

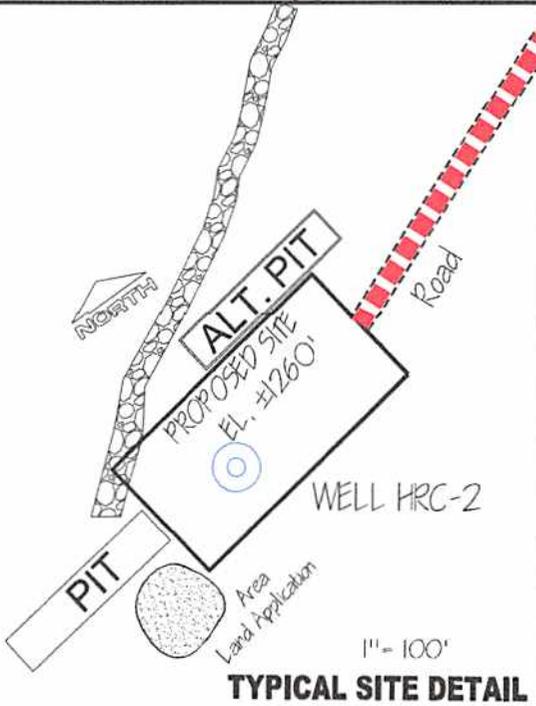
- 1). ALL GRADING OR EXCAVATION TO BE DONE IN A MANNER WHICH WILL MINIMIZE EROSION, EXISTING WELL SITE AND AREA DISTURBED BY ACCESS ROAD TO BE RECLAIMED IN A TIMELY MANNER PER BMP - EROSION & SEDIMENT WV. CONTROL MANUAL.
- 2). WIND ROLL ALL BRUSH FOR SEDIMENTATION CONTROL, CUT AND STACK TIMBER.
- 3).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



LATITUDE: 37°53'20"
 LONGITUDE: -82°15'42"

4.6 Mile To Nearest Highway No. 35
 Jet Laurel Creek Road (Laurel Lake)

2,460 Acre
 Deed Book 73 Page 113



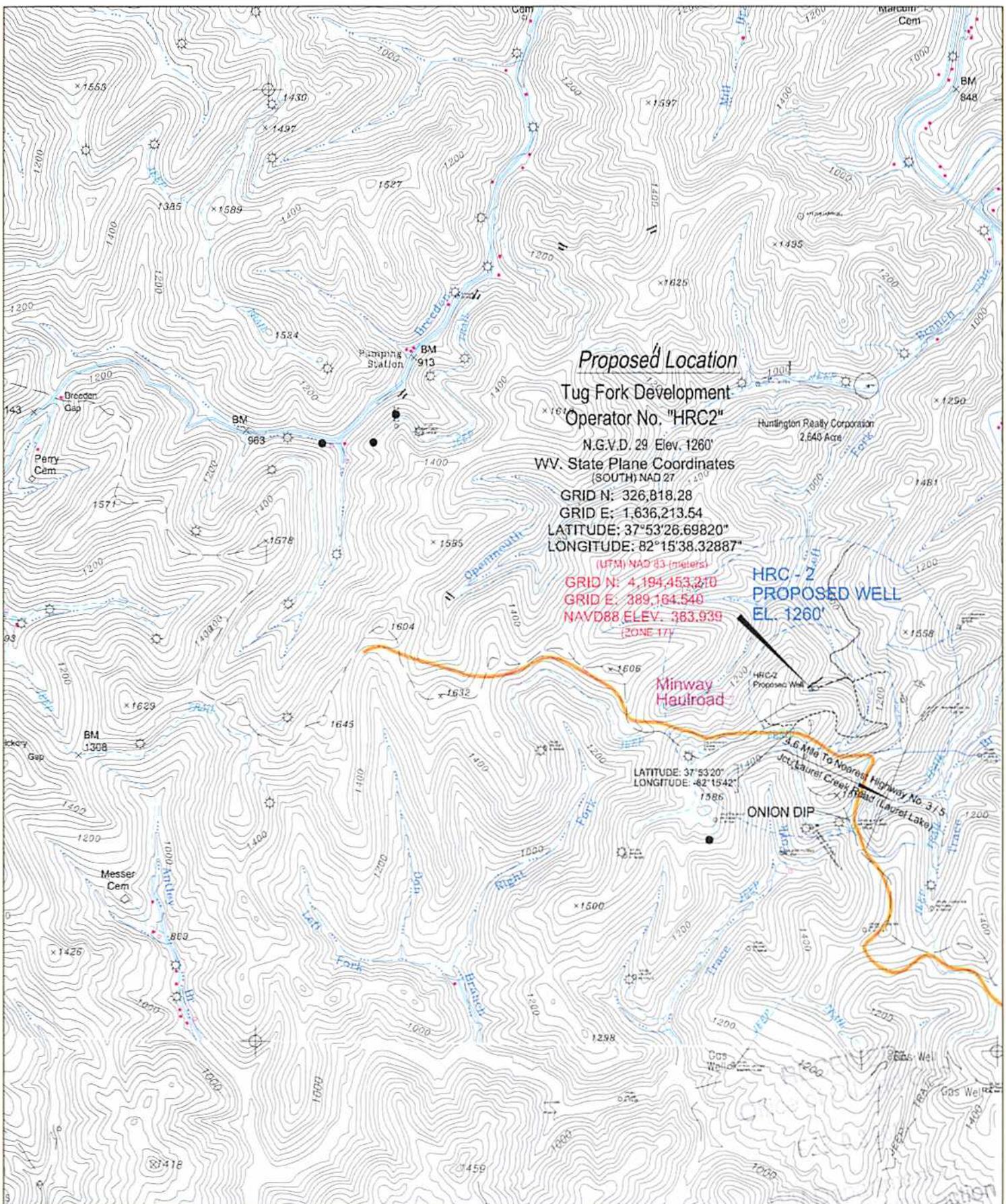
TYPICAL SITE DETAIL

Access Road	---	Diversion	---
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	⊙
Grading Lines	---	Storage Facilities	□

Division Of Environmental Protection
 Office Of Oil & Gas
 Charleston

WELL SITE RECLAMATION PLAN
GAS WELL HRC-2
 Tug Fork Development

QUADRANGLE: Wilsondale
 COUNTY: Mingo LEASE # _____
 DATE: 9 January 2014 SCALE 1" = 300'
 DRAWING FILE: Rec-Plan-HRC-2



Proposed Location
Tug Fork Development
Operator No. "HRC2"
 N.G.V.D. 29 Elev. 1260'
 WV. State Plane Coordinates
 (SOUTH) NAD 27
 GRID N: 326,818.28
 GRID E: 1,636,213.54
 LATITUDE: 37°53'26.69820"
 LONGITUDE: 82°15'38.32887"

(UTM) NAD 83 (meters)
GRID N: 4,194,453.270
GRID E: 389,164.540
NAVD88 ELEV. 363.939
 (ZONE 17)

Minway Haulroad

LATITUDE: 37°53'20"
 LONGITUDE: 82°15'42"

**HRC - 2
 PROPOSED WELL
 EL. 1260'**

ONION DIP

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

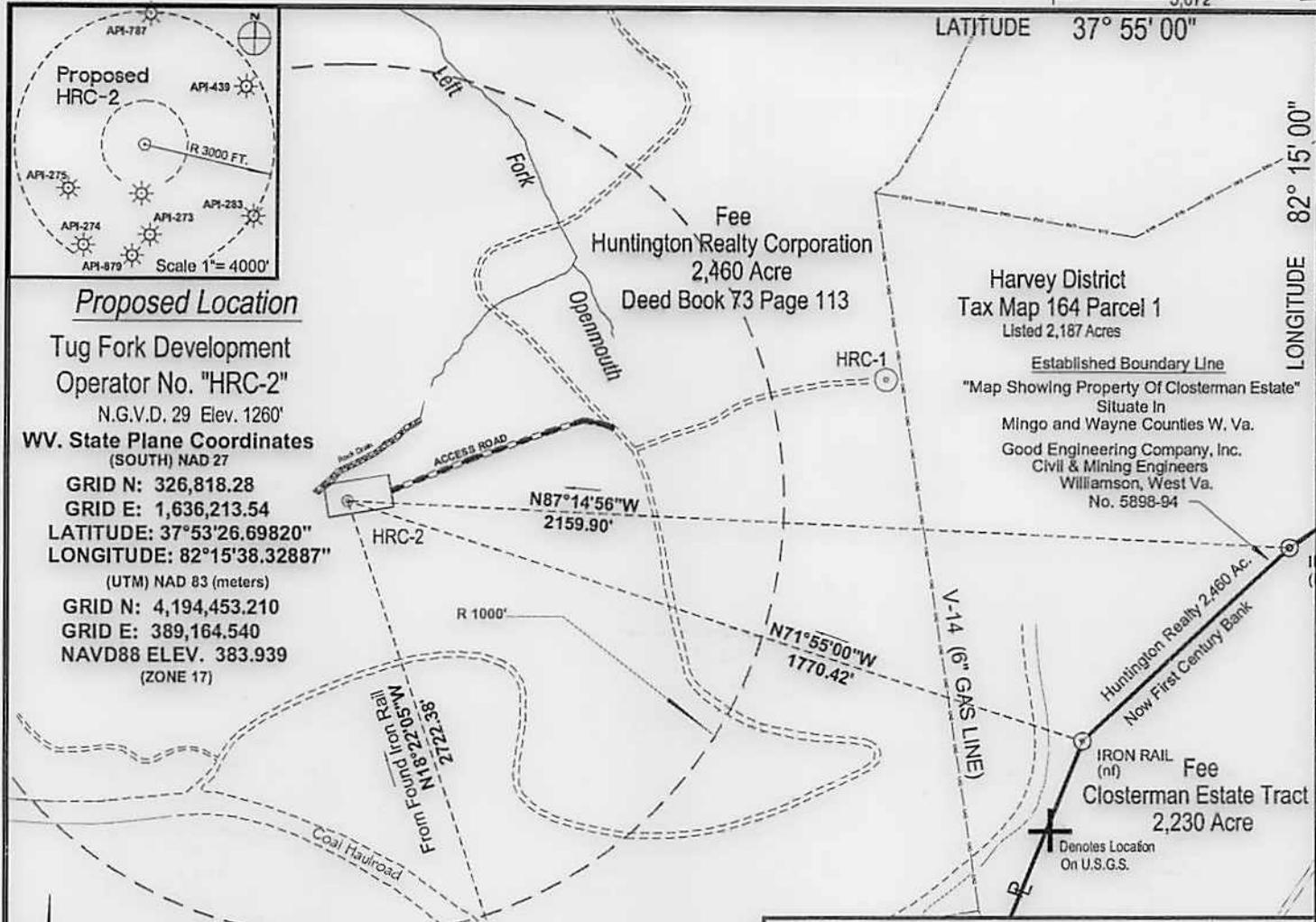
**GENERAL LOCATION MAP
 ACCESS ROAD TO HRC-2**

WILSONDALE/NAUGATUCK QUADRANGLE
 SCALE 1" = 2000 FEET

22 October 2013

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



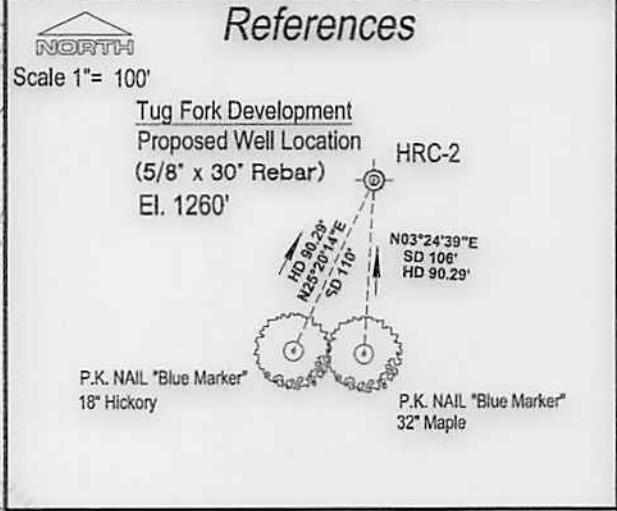


Proposed Location
Tug Fork Development
Operator No. "HRC-2"
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GRID N: 326,818.28
GRID E: 1,636,213.54
LATITUDE: 37°53'26.69820"
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 (UTM) NAD 83 (meters)
GRID N: 4,194,453.210
GRID E: 389,164.540
NAVD88 ELEV. 383.939
 (ZONE 17)

Harvey District
Tax Map 164 Parcel 1
 Listed 2,187 Acres
 Established Boundary Line
 "Map Showing Property Of Closterman Estate"
 Situate In
 Mingo and Wayne Counties W. Va.
 Good Engineering Company, Inc.
 Civil & Mining Engineers
 Williamson, West Va.
 No. 5898-94

NOTES OF SURVEY
 TIES TO WELL AND CORNERS ARE BASED ON WV. STATE PLANE GRID SOUTH NAD 27.
 LEASE BOUNDARIES TAKEN FROM B.C. & L BOOK 106 PAGE 226. REF. DB 73 F.T PAGE 113.
 THERE ARE NO DWELLING OR WATER WELL WITHIN 200 FEET.

Coal Lessee: CONSOL Of Kentucky Inc.
 Oil & Gas Lessee: Tug Fork Development, Inc.



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 9 January 20 14
 OPERATORS WELL NO. HRC2
 API WELL NO. 47 - 059 - 02242
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1: 5,000
 PROVEN SOURCE OF ELEVATION: U.S.G.S. (N.G.V.D. 29) Benchmark "G-158" El. 1587.60' GPS OPUS
 FILE NO. _____
 SCALE 1" = 400 FEET

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

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

LOCATION: Elevation 1260' 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 Ac.
 ROYALTY OWNER Huntington Realty Corporation LEASE ACREAGE ± 2460

PROPOSED WORK: DRILL 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

9-402

COUNTY PERMIT