



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

October 03, 2013

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-1501042, issued to CABOT OIL & GAS 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.

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: WEBSTER HARDWOOD B-2

Farm Name: HOLCOMB, NORMAN D.

API Well Number: 47-1501042

Permit Type: Plugging

Date Issued: 10/03/2013

Promoting a healthy environment.

10/04/2013

PERMIT CONDITIONS

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

CONDITIONS

1. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
3. Well work activities shall not constitute a hazard to the safety of persons.

- 1) Date September 9, 2013
- 2) Operator's
Well No. Webster-Hardwood B-2
- 3) API Well No. 47-015 - 01042

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

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

5) Location: Elevation 1,182.84' Watershed Hubbard Fork of Adonijah Fork
District Pleasant County Clay Quadrangle Bentree

6) Well Operator Cabot Oil & Gas Corporation 7) Designated Agent Whitney Johnson
Address Five Penn Center West, Ste. 401 Address Cabot Oil & Gas Corporation
Pittsburgh, PA 15276 P.O. Box 450, Glasgow, WV 25086

8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name Ed Gainer Name Francis Brothers
Address P.O. Box 821 Address 622 Church St., N.
Spencer, WV 25276 Ripley, WV 25271

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

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

Work order approved by inspector  Date 9/17/13
10/04/2013

WEBSTER HARDWOOD B-2

API # 47 - 015 - 01042

PLUGGING PROCEDURE

Current Configuration

DTD @ 2477'

8 ⁵/₈" - 32# casing @ 165' KB, cemented to surface

4 ¹/₂" - 10.5# casing @ 2456' KB w/ TOC @ 2122'

2 ³/₈" - 4.6# 10rd tubing @ 2417' KB

Weir perforations: 2409' - 2413'

Injun perforations: 2350' - 2360'

Big Lime perforations: 2310' - 2314'

No coal reported

Fresh water @ 80'

Flow 1191

PROCEDURE

1. Contact Glasgow District Office a minimum of 48 hours prior to starting work
2. Contact state inspector a minimum of 24 hours prior to starting work.
3. MIRU service rig and blow down well.
4. Lay 2" line from wellhead to pit/tank and stake down securely. Vent 4 ¹/₂" x 8 ⁵/₈" annulus.
5. Unpack wellhead and ensure tubing is free and can be pulled.
6. Run rig tools to determine well TD and note any fluid level.
7. MIRU Cementing Company.
8. Pump 5 barrels of 6% Gel.
9. Pump 20 sacks of Class A cement for Cement Plug 1 from 2417' to 2155. ✓
10. Displace with 8 bbls of 6% Gel.
11. POOH with tubing and let cement plug set for a minimum of eight hours.
12. Run freepoint and cut 4 ¹/₂" casing where free. Estimate ±2110'. POOH with casing.
13. TIH with tubing to 2140' and pump 60 barrels of 6% Gel.
14. Pump 40 sacks Class A cement for Cement Plug 2 from 2140' to 1920'.
15. Displace with 7 bbls of 6% Gel.
16. Pull tubing up to 250' and pump 75 sacks of Class A cement for Cement Plug 3 from 250' to surface.
17. TOOH with tubing and lay down.
18. RDMO Cement company
19. Erect Monument according to Law.
20. RDMO.

Set 100 ft cement plug across Elevation

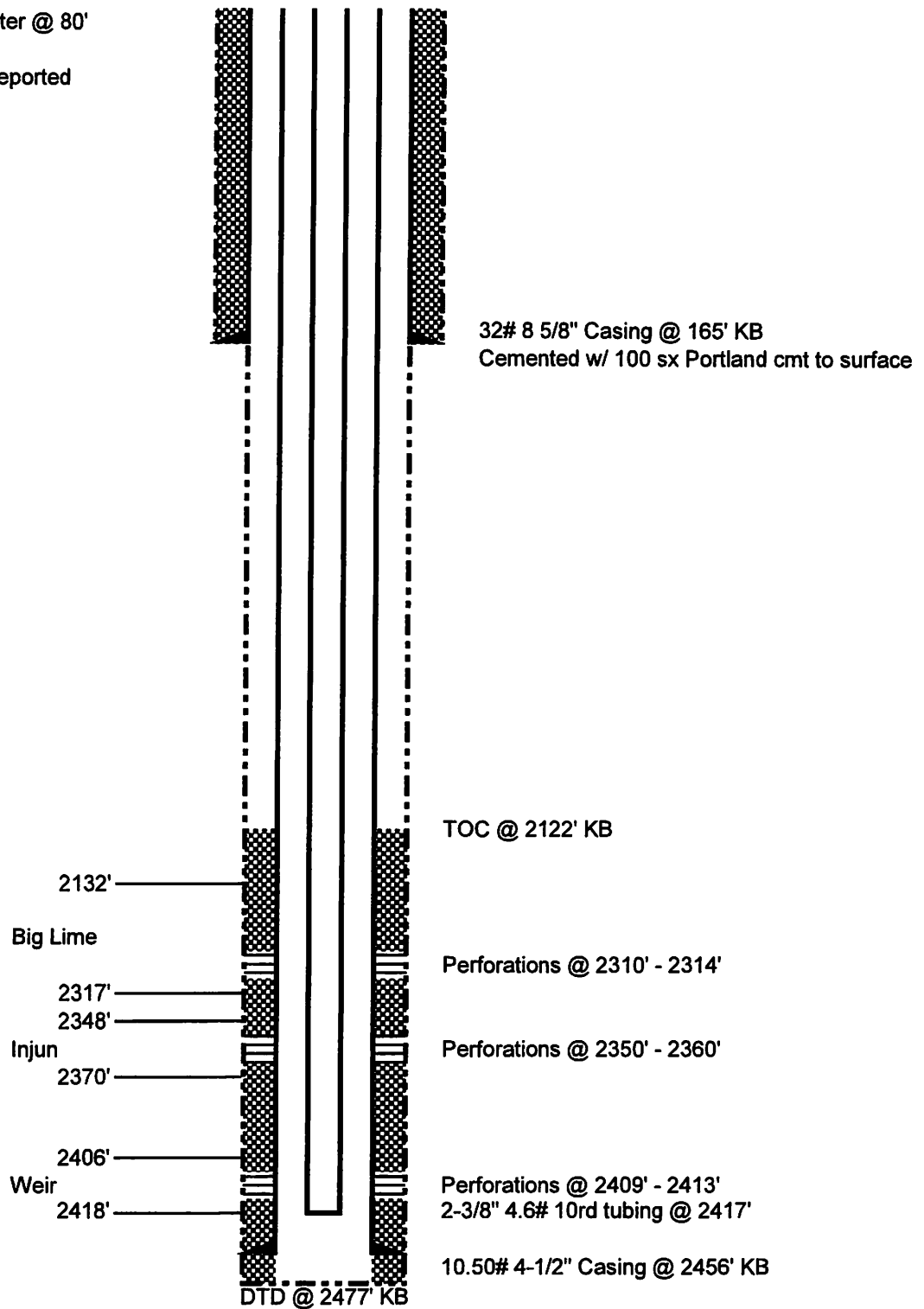
SET FROM 1241' - 1141'

OK
gwin

Webster Hardwood B-2
API 47-015-01042
CURRENT CONFIGURATION

Fresh water @ 80'

No coal reported



Schematic is not to scale

T. Ott 02/11/13



1501042A

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
Oil and Gas Division

WELL RECORD

Rotary Oil _____
Cable _____ Gas
Recycling _____ Comb. _____
Water Flood _____ Storage _____
Disposal _____ (Kind)

Quadrangle Clay
Permit No. Cl-1042

Company <u>Appalachian Exploration & Dev., Inc.</u>	Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Address <u>P.O. Box 628, Charleston, W. Va. 25322</u>				
Farm <u>Webster Hardwood</u> Acres <u>1305.71</u>	Size			
Location (waters) <u>Adonijah Fork</u>	20-16			
Well No. <u>R-2</u> Elev. <u>1191'</u>	Cond.			
District <u>Pleasant</u> County <u>Clay</u>	13-10"			
The surface of tract is owned in fee by _____	9 5/8			
<u>D.E. Bird</u>	8 5/8	160'	160'	
Address <u>Lizemores, West Virginia</u>	7			
Mineral rights are owned by <u>H.V. & G.E. White et al</u> Address <u>Dixie, West Virginia</u>	5 1/2			
Drilling Commenced <u>6/22/75</u>	4 1/2	2448.34'	2448.34'	
Drilling Completed <u>6/29/75</u>	3			
Initial open flow _____ cu. ft. _____ bbls.	2 -3/8"	2414.53'		
Final production <u>196</u> Cu. ft. per day _____ bbls.	Liners Used			
Well open <u>3</u> hrs. before test _____ RP.				
Well treatment details: <u>CP 570#</u>				

Attach copy of cementing record.

Perforated Weir 2409-2413' (4 holes) 2348-58' (8 holes), 1,000 gals. MCA. Balled out. 55,000# 20/40 and 20,000# 10/20 sand, 880 bbls. sand laden. ISIP 1100#. Perforated 2350-60' (8 holes) 2409-2413 (4 holes) Acidized Lime with 500 gals. 15% acid.

Coal was encountered at none logged Feet _____ Inches _____
Fresh water 80 Feet _____ Salt Water 1182 Feet _____
Producing Sand Weir Depth 2409-2413' 2348-58'
Big Lime 2350-60'

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Sand stone			0	130		
Rock and shale			130	165		
Sandy shale			165	214		
Sand-shale			214	379		
Shale and sand			379	592		
Sandy shale			592	877		
Sand-shale			877	1137		
Sand and shale			1137	1182		
Salt sand			1182	1265		
Salt sand			1265	1370		
Salt sand			1370	1522		
Salt sand			1522	1717		
Salt sand			1717	1871		
Shale			1871	2068		
Shale			2068	2129		
Big Lime			2129	2338		
Sand			2338	2361		
Shale			2361	2408		
Sand			2408	2415		
Shale			2415	2477		

10/04/2013

(over)

* Indicates Electric Log tops in the remarks section.

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	Remarks
Cement Record						
Casing			No. of sks.	Type cement		
8-5/8"			100			Regular 3% CaCl ₂ - 1/4# flocele/sk.
4-1/2"			35			Thixotropic

Date: September 5 1975 10/04/2013

APPROVED [Signature] APPALACHIAN EXPLORATION & DEVELOPMENT, INC. Owner

By [Signature] District Production Superintendent (Title)

1) Date: September 9, 2013
2) Operator's Well Number
Webster-Haardwood #B-2
3) API Well No.: 47 - 015 - 01042

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

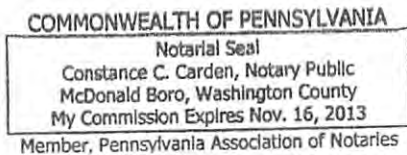
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>See Attached Sheet</u>	Name <u>See Attached Sheet</u>
Address _____	Address _____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>Southern Land Company Limited Partnership</u>
(c) Name _____	Address <u>300 Capital St., Suite 1401</u>
Address _____	<u>Charleston, WV 25301</u>
6) Inspector <u>Ed Gainer</u>	Name <u>Dickinson Properties Limited Partnership</u>
Address <u>P.O. Box 821</u>	Address <u>300 Capital St., Suite 1401</u>
<u>Spencer, WV 25276</u>	<u>Charleston, WV 25301</u>
Telephone <u>(304) 389-7582</u>	(c) Coal Lessee with Declaration
	Name <u>None of Record</u>
	Address _____

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

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

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

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



Well Operator Cabot Oil & Gas Corporation
 By: Kenneth L. Marcum
 Its: Regulatory Supervisor
 Address Five Penn Center West, Suite 401
Pittsburgh, PA 15276
 Telephone 412-249-3850

Subscribed and sworn before me this 9th day of September
Constance C. Carden Notary Public SEP 12 2013
 My Commission Expires November 16, 2013

RECEIVED
Office of Oil & Gas

Oil and Gas Privacy Notice

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

10/04/2013

WV Department of Environmental Protection

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Cabot Oil & Gas Corporation OP Code _____

Watershed (HUC 10) Hubbard Fork of Adonijah Fork Quadrangle Bentree

Elevation 1,182.84' County Clay District Pleasant

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 _____ No X

If so, please describe anticipated pit waste: _____

Will a synthetic liner be used in the pit? Yes _____ No X If so, what ml.? _____

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 No treated pit wastes will be produced)

ANY EFFLUENT MUST BE CONTAINED IN TANKS.

Will closed loop system be used? N/A

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. no drilling proposed

-If oil based, what type? Synthetic, petroleum, etc. _____

Additives to be used in drilling medium? N/A

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. No cuttings produced during plugging operation

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

-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 Kenneth L. Marcum

Company Official (Typed Name) Kenneth L. Marcum

Company Official Title Regulatory Supervisor

Subscribed and sworn before me this 9th day of September, 20 13

Constance C. Carden

COMMONWEALTH OF PENNSYLVANIA
 Notary Public Notarial Seal
 Constance C. Carden, Notary Public
 McDonald Boro, Washington County
 My Commission Expires Nov. 16, 2013
 Member, Pennsylvania Association of Notaries

My commission expires 11/16/2013

10/04/2013

Proposed Revegetation Treatment: Acres Disturbed _____ Prevegetation pH 6.5

Lime 2 Tons/acre or to correct to pH 6.5

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

Mulch Pulp Fiber at 1000 to 1500 Tons/acre

Seed Mixtures

Area I				Area II			
Seed Type		lbs/acre		Seed Type		lbs/acre	
Grain Rye - 100	Red Clover - 5	Fescue - 40		Grain Rye - 100	Red Clover - 5	Fescue - 40	
Annual Rye - 20	White Clover - 5			Annual Rye - 20	White Clover - 5		
Perennial Rye - 10	Alta Sweet Clover - 5			Perennial Rye - 1	Alta Sweet Clover - 5		
Yellow Clover - 5	Birdsfoot Trefoil - 10			Yellow Clover - 5	Birdsfoot Trefoil		

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

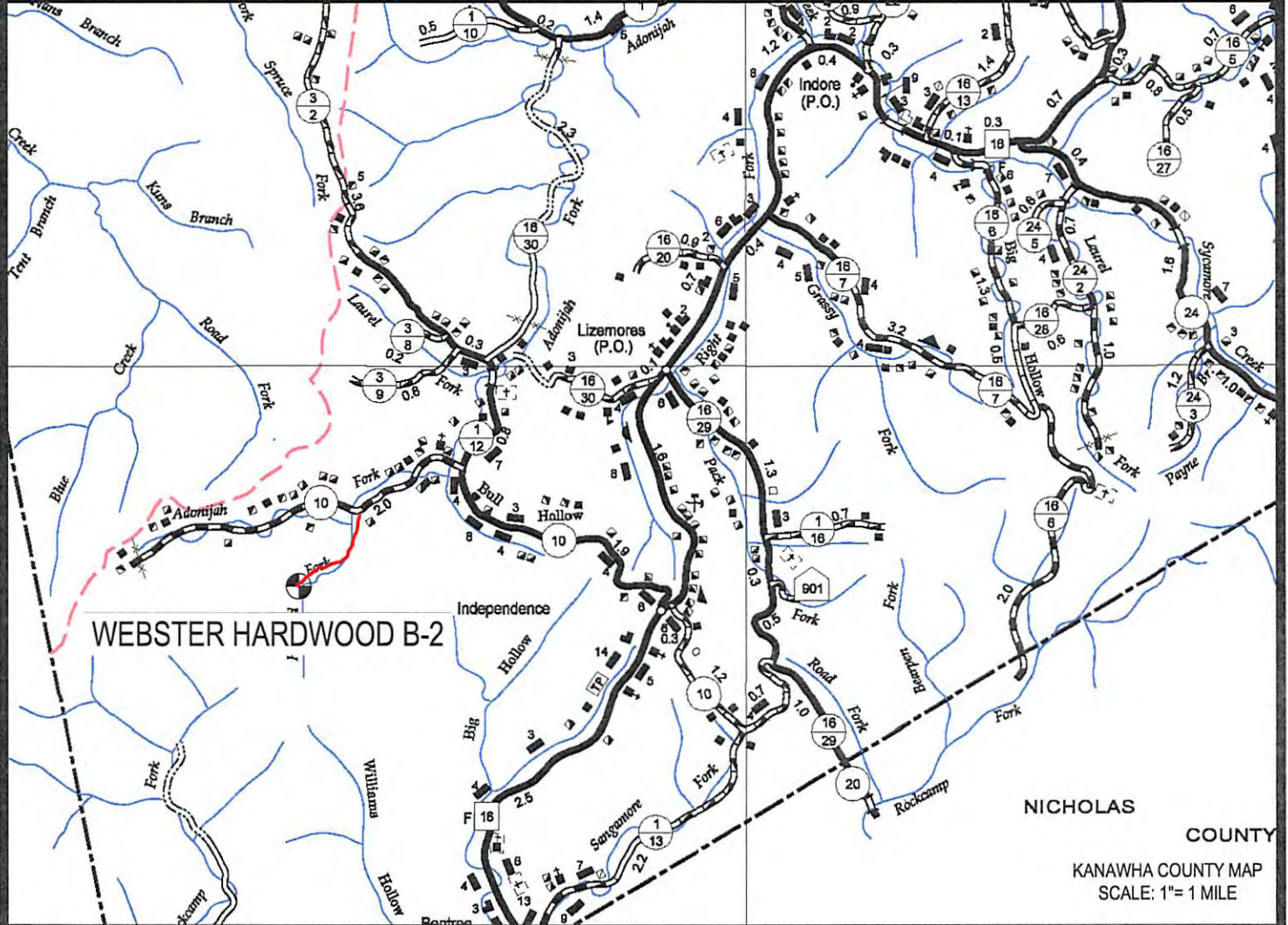
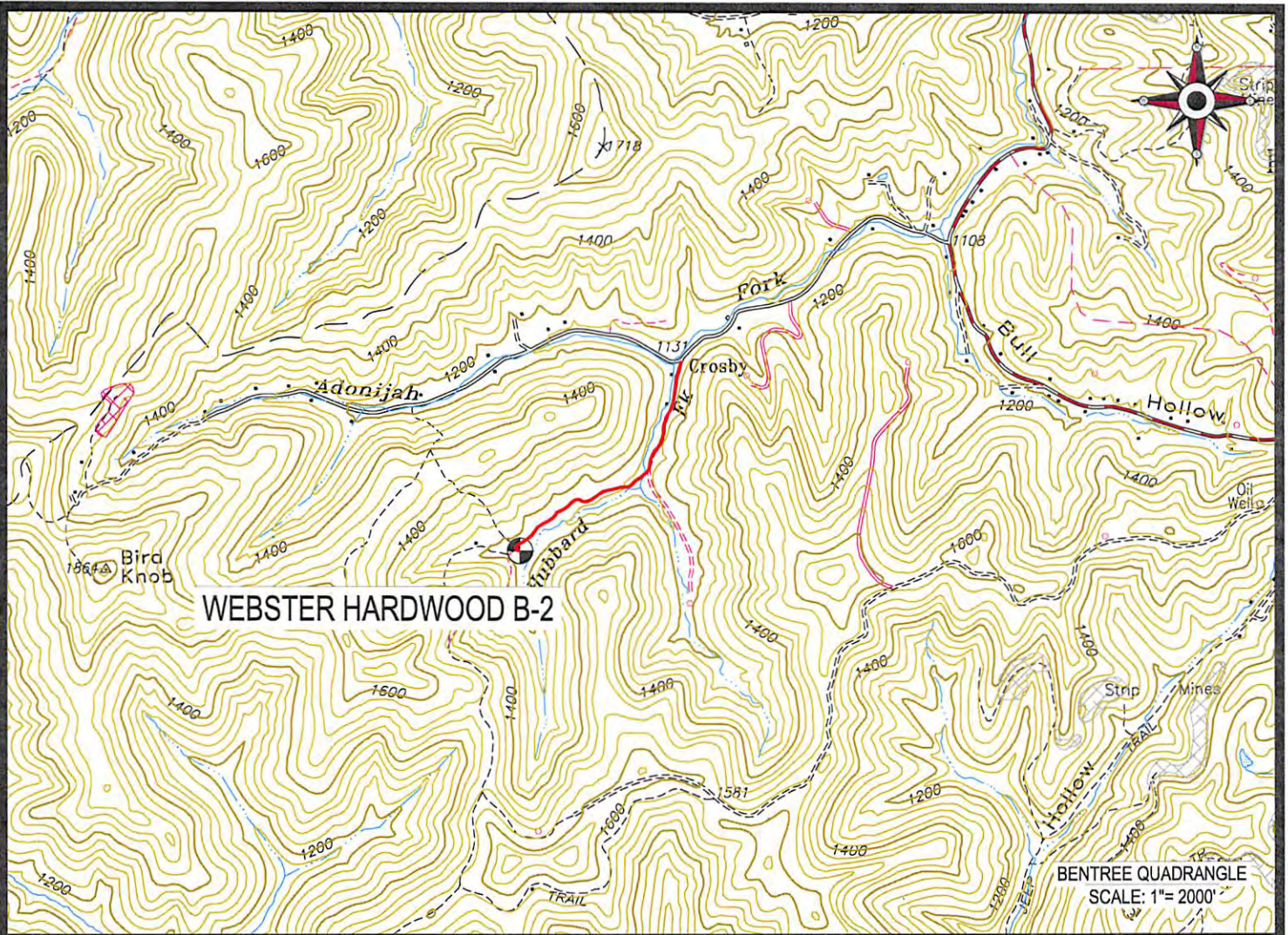
Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: 

Comments: - No pit to be dug -

Title: Inspector Date: 9/17/13

Field Reviewed? () Yes () No



 Cabot Oil & Gas Corporation

WEBSTER HARDWOOD B-2
LOCATION MAP 10/04/2013

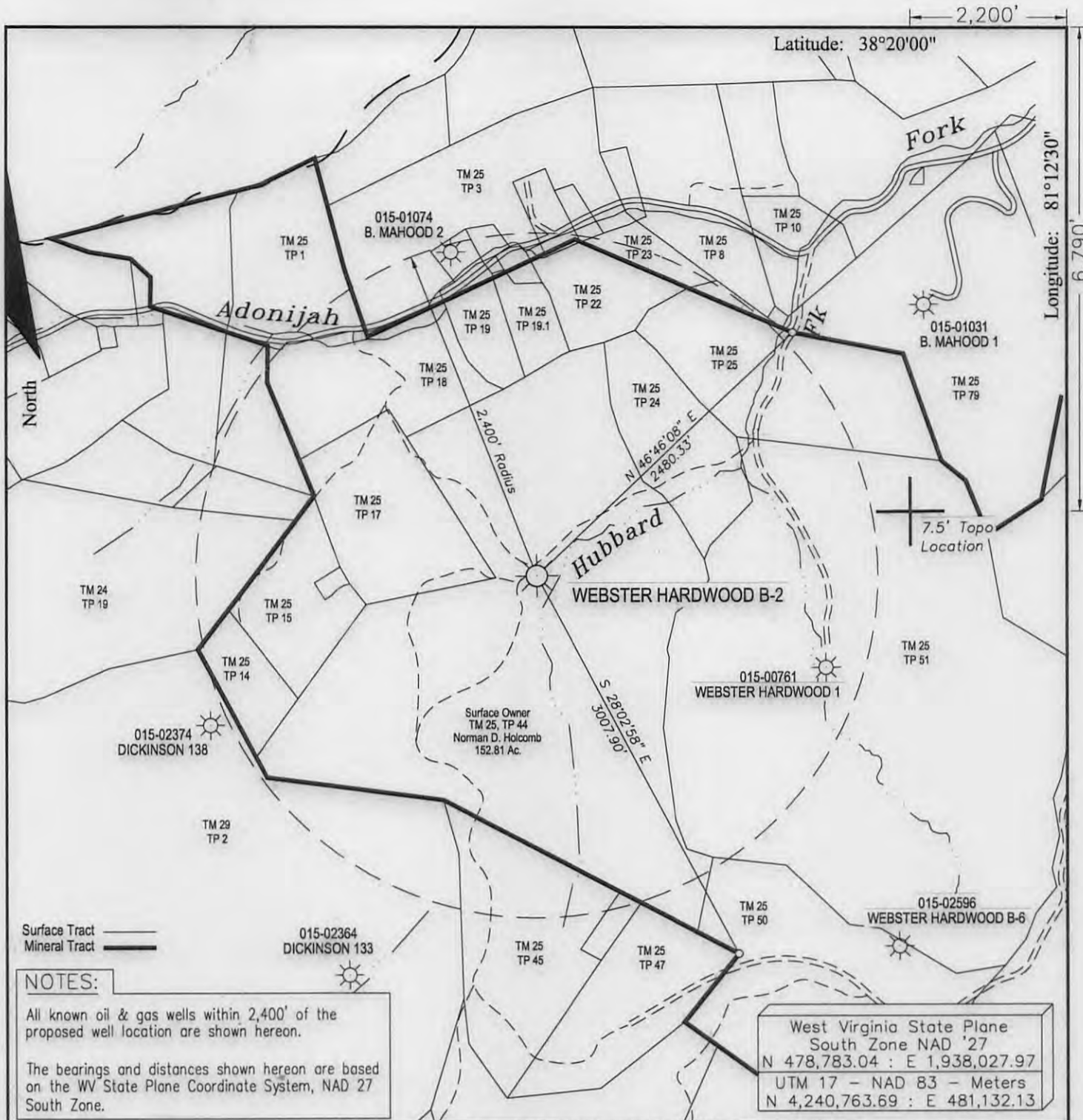
LOCATED ON THE WATERS OF HUBBARD FORK
OF ADONIJA FORK
PLEASANT DISTRICT, CLAY COUNTY, W.VA
BENTREE QUADRANGLE



CUNNINGHAM
LAND SURVEYING & MAPPING SERVICES, LLC

• 5213 STEPHEN WAY •
• CROSS LANES, WEST VIRGINIA 25313 •
• VOICE (304) 561-4129 • FAX (304) 776-0703 •
• E-MAIL ADDRESS • DKCUNNINGHAM@SUDDENLINK.NET •

PROJECT NO. CABOT	DWG. NO. WEBSTER B-2 LOC.DWG
DATE: 05-20-13	SCALE: AS NOTED
CHK'D BY: D.K.C.	FILE: C:\PROJECT FOLDER\CABOT



Surface Tract
Mineral Tract

NOTES:

All known oil & gas wells within 2,400' of the proposed well location are shown hereon.

The bearings and distances shown hereon are based on the WV State Plane Coordinate System, NAD 27 South Zone.

West Virginia State Plane
South Zone NAD '27
N 478,783.04 : E 1,938,027.97
UTM 17 - NAD 83 - Meters
N 4,240,763.69 : E 481,132.13

FILE #:

DRAWING #: Webster B-2 ww6

SCALE: 1" = 1000'

MINIMUM DEGREE

OF ACCURACY: 1 : 12,729

PROVEN SOURCE Global Positioning
OF ELEVATION: System (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 ENVIROMENTAL PROTECTION.

Signed:

Don K. Cunningham

R.P.E.:

L.L.S.: 701



PLACE SEAL HERE

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



DATE: May 20, 2013

OPERATOR'S WELL #: Webster Hardwood B-2

API WELL #: 47 015 01042P
STATE COUNTY PERMIT

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

WATERSHED: Hubbard Fork of Adonijah Fork ELEVATION: 1,182.84'

COUNTY/DISTRICT: Clay / Pleasant QUADRANGLE: Bentree

SURFACE OWNER: Norman D. Holcomb ACREAGE: 152.81

OIL & GAS ROYALTY OWNER: Webster Hardwood Lumber Co. ACREAGE: 1,805 10/04/2013

LEASE #: 47-0656 DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY):

TARGET FORMATION: ESTIMATED DEPTH:

WELL OPERATOR Cabot Oil & Gas Corp.

DESIGNATED AGENT Brian Hall

Address Five Penn Center West, Suite 401

Address P.O. Box 260

City Pittsburgh State PA Zip Code 15276

City Danville State WV Zip Code 25053

1501042P



North Region

September 9, 2013

Chief
West Virginia Division of Environmental Protection
Office of Oil & Gas
601 57th Street
Charleston, WV 25304

RE: Webster-Hardwood B-2
Pleasant District, Clay County, WV
API # 47-015-01042
Written Application to plug and abandon wellbore

Dear Chief:

In accordance with Article 22-6-23 of the Code of State Regulations regarding oil and gas operations, please find attached a formal application for the plug and abandonment of the subject well.

Notices of our intention to plug this wellbore have been sent to surface owner, coal owner, and coal operators associated with this well. Copies of the certified mail receipts are attached for your records.

If you have any questions or need additional information, I can be reached at 412-249-3850.

Sincerely,

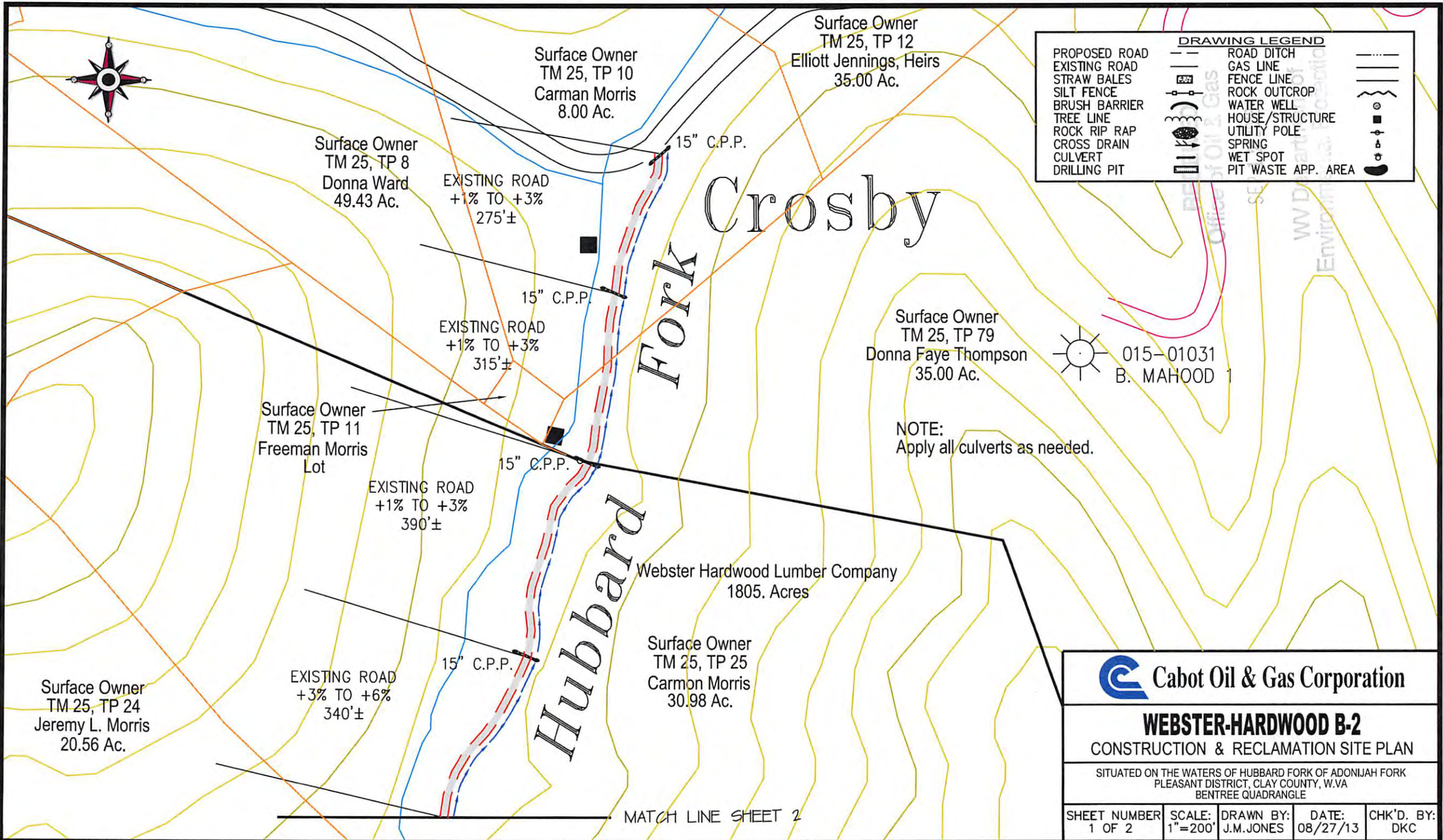
Kenneth L. Marcum
Regulatory Supervisor

RECEIVED
Office of Oil & Gas
SEP 12 2013

WV Department of
Environmental Protection

10/04/2013

1501042P



Surface Owner
TM 25, TP 10
Carman Morris
8.00 Ac.

Surface Owner
TM 25, TP 12
Elliott Jennings, Heirs
35.00 Ac.

Surface Owner
TM 25, TP 8
Donna Ward
49.43 Ac.

EXISTING ROAD
+1% TO +3%
275'±

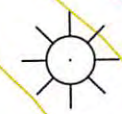
15" C.P.P.

Crosby

15" C.P.P.

EXISTING ROAD
+1% TO +3%
315'±

Surface Owner
TM 25, TP 79
Donna Faye Thompson
35.00 Ac.



015-01031
B. MAHOOD

NOTE:
Apply all culverts as needed.

Surface Owner
TM 25, TP 11
Freeman Morris
Lot

15" C.P.P.

EXISTING ROAD
+1% TO +3%
390'±

Webster Hardwood Lumber Company
1805. Acres

Surface Owner
TM 25, TP 24
Jeremy L. Morris
20.56 Ac.

EXISTING ROAD
+3% TO +6%
340'±

15" C.P.P.

Surface Owner
TM 25, TP 25
Carmon Morris
30.98 Ac.

Hubbard

MATCH LINE SHEET 2

DRAWING LEGEND	
PROPOSED ROAD	ROAD DITCH
EXISTING ROAD	GAS LINE
STRAW BALES	FENCE LINE
SILT FENCE	ROCK OUTCROP
BRUSH BARRIER	WATER WELL
TREE LINE	HOUSE/STRUCTURE
ROCK RIP RAP	UTILITY POLE
CROSS DRAIN	SPRING
CULVERT	WET SPOT
DRILLING PIT	PIT WASTE APP. AREA

Cabot Oil & Gas Corporation

WEBSTER-HARDWOOD B-2 CONSTRUCTION & RECLAMATION SITE PLAN

SITUATED ON THE WATERS OF HUBBARD FORK OF ADONIJAH FORK
PLEASANT DISTRICT, CLAY COUNTY, W.VA
BENTREE QUADRANGLE

SHEET NUMBER 1 OF 2	SCALE: 1"=200'	DRAWN BY: J.M.JONES	DATE: 08/27/13	CHK'D. BY: DKC
------------------------	-------------------	------------------------	-------------------	-------------------

1501042

DRAWING LEGEND		
PROPOSED ROAD	ROAD DITCH	
EXISTING ROAD	GAS LINE	
STRAW BALES	FENCE LINE	
SILT FENCE	ROCK OUTCROP	
BRUSH BARRIER	WATER WELL	
TREE LINE	HOUSE/STRUCTURE	
ROCK RIP RAP	UTILITY POLE	
CROSS DRAIN	SPRING	
CULVERT	WET SPOT	
DRILLING PIT	PIT WASTE APP. AREA	



MATCH LINE SHEET 1

Surface Owner
 TM 25, TP 25
 Carmon Morris
 30.98 Ac.

Surface Owner
 TM 25, TP 44
 Norman D. Holcomb
 152.81 Ac.

Surface Owner
 TM 25, TP 51
 Carmon Morris
 180.73 Ac.

Surface Owner
 TM 25, TP 24
 Jeremy L. Morris
 20.56 Ac.

Hubbard Fork

NOTE:
 Apply all culverts as needed.

Note:
 Tanks will be used instead of drilling pit(s),
 and may be adjusted to the most
 environmental safe site to meet the
 requirements of the WVDEP.

<p>WEBSTER-HARDWOOD B-2 CONSTRUCTION & RECLAMATION SITE PLAN</p>				
<p>SITUATED ON THE WATERS OF HUBBARD FORK OF ADONIJAH FORK PLEASANT DISTRICT, CLAY COUNTY, W.VA BENTREE QUADRANGLE</p>				
SHEET NUMBER	SCALE:	DRAWN BY:	DATE:	CHK'D. BY:
2 OF 2	1"=200'	J.M.JONES	05-17-13	DKC

WEBSTER-HARDWOOD B-2
 API #015-01042

RECEIVED
 Office of the
 SEP 12 2013
 WV Department of
 Environmental & Professional

GENERAL NOTES:

THIS DRAWING REPRESENTS A SCHEMATIC REPRESENTATION OF THE PROPOSED WELL SITE AND ACCESS ROAD. PROPOSED STRUCTURES SUCH AS THE DRILLING PIT, ROADWAY, CULVERTS, SEDIMENT BARRIERS, ETC. ARE SHOWN IN THEIR APPROXIMATE PREPLANNING CONFIGURATION. GIVEN UNFORESEEN CIRCUMSTANCES, THE AS-BUILT LOCATION OF THESE STRUCTURES MAY VARY SLIGHTLY FROM THE LOCATION SHOWN ON THE ATTACHED DRAWINGS.

ALL ROADS SHOWN THEREON ARE EXISTING UNLESS OTHERWISE NOTED AND SHALL BE MAINTAINED IN ACCORDANCE WITH GUIDELINES AND REQUIREMENTS OF WEST VIRGINIA DEPARTMENT OF OIL AND GAS EROSION AND SEDIMENT CONTROL MANUAL.

ALL CULVERTS SHOWN ON THIS DRAWING ARE PROPOSED AND WILL BE A MINIMUM OF 15" IN DIAMETER UNLESS OTHERWISE NOTED.

DITCH LINES AND CULVERTS WILL BE INSTALLED WHENEVER PRACTICAL. HOWEVER PORTIONS OF THE EXISTING/ PROPOSED ROADS WHICH ARE LOCATED IN SOLID ROCK SHALL NOT REQUIRE DITCHES OR CROSS DRAINS, UNLESS OTHERWISE WARRANTED BY FIELD CIRCUMSTANCES.

SUPPLEMENTAL DRAINAGE AND/OR SEDIMENT CONTROL STRUCTURES MEASURES IN ADDITION TO THOSE SHOWN ON THE ATTACHED DRAWINGS WILL BE INSTALLED WHEN AND WHERE DEEMED NECESSARY. SUCH ADDITIONAL MEASURES MAY CONSIST OF EITHER STRAW BALES, SILT FENCES OR OTHER MEASURES OUTLINED IN THE WEST VIRGINIA DEPARTMENT OF OIL AND GAS EROSION AND SEDIMENT CONTROL FIELD MANUAL.

SEDIMENT BASINS (TRAPS) WILL BE CONSTRUCTED AT ALL CULVERTS AND CROSS DRAINS INLETS AS REQUIRED IN THE WEST VIRGINIA DEPARTMENT OF OIL AND GAS EROSION AND SEDIMENT CONTROL MANUAL. FIELD CONDITIONS SUCH AS ROCK OUTCROPS AND BEDROCK MAY PROHIBIT INLET TRAPS BEING INSTALLED WHEN THESE CONDITIONS EXIST. ADDITIONAL EROSION CONTROL MEASURES SHALL BE EVALUATED AND UTILIZED AS NEEDED.

A SEDIMENT BARRIERS OF EITHER BRUSH, STRAW BALES, FILTER FENCE, ETC. WILL BE INSTALLED AND MAINTAINED BELOW THE OUT FALL OF ALL PROPOSED CULVERTS AND AT ALL OTHER STORM WATER DRAINAGE POINTS FROM EITHER THE ROADWAY OR THE LOCATION.

ALL NECESSARY TIMBER OR BRUSH WILL BE REMOVED FROM ROUTE OF THE ROADWAY AND LOCATION BY CLEANING AND GRUBBING ACTIVITIES. ANY SALVAGEABLE TIMBER WILL BE CUT AND STACKED TO THE SIDE OF THE ROADWAY OR REMOVED TO A STOCKPILE AREA. THE REMAINING TIMBER OR BRUSH WILL BE CUTUP AND WIND ROWED BELOW THE OUTSLOPE OF THE CONSTRUCTION AREAS TO BE UTILIZED AS A SEDIMENT BARRIER.

SEPARATE PERMITS WILL BE OBTAINED FROM THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION FOR ALL POINTS OF INGRESS AND EGRESS FROM COUNTY AND STATE ROADS. THESE INGRESS AND EGRESS POINTS WILL BE MAINTAINED IN ACCORDANCE WITH CURRENT WEST VIRGINIA DEPARTMENT OF TRANSPORTATION REGULATIONS. A STABILIZED CONSTRUCTION ENTRANCE CONSISTING OF 8" OF CRUSHED STONE WILL BE CONSTRUCTED FOR A MINIMUM DISTANCE OF 50' FROM THE INGRESS AND EGRESS POINTS OF ALL PUBLIC ROADWAYS IN ACCORDANCE WITH CURRENT WEST VIRGINIA DEPARTMENT OF TRANSPORTATION REGULATIONS.

ALL CULVERTS SHOWN ON THE ATTACHED DRAWINGS ARE TO BE CONSIDERED PERMANENT AND WILL REMAIN IN PLACE AFTER COMPLETION OF CONSTRUCTION ACTIVITIES UNLESS NOTED OTHERWISE. A STABILIZED OUTLET CONTROL DEVICE SUCH AS RIP RAP, NATURAL STONE, BRUSH, ETC. WILL BE INSTALLED BELOW THE OUT FALL OF ANY ROADWAY CULVERT(S) WHICH ARE NOT LOCATED IN A STREAM OR CREEK.

PERMANENT CROSS DRAINS OR WATER BARS WILL BE INSTALLED AS AN INTEGRAL PART OF THE RECLAMATION PROCESS AND SHALL BE SPACED IN ACCORDANCE WITH AS-BUILT ROADWAY SLOPES AND TABLE 11-4 OF THE WEST VIRGINIA DEPARTMENT OF OIL AND GAS EROSION AND SEDIMENT CONTROL FIELD MANUAL.

TEMPORARY SEEDING AND MULCHING WILL BE UTILIZED TO PROVIDE A VEGETATIVE COVER ON ALL DISTURBED AREAS I.E. ROADWAYS, LOCATION, ROAD/LOCATION SLOPES AND ANY OTHER AREAS THAT ARE DISTURBED BY CONSTRUCTION ACTIVITIES.

THE LOCATION OF DRILLING PIT(S) MAY BE ADJUSTED TO THE MOST ENVIRONMENTAL SAFE SITE TO MEET THE REQUIREMENTS OF THE WVDEP.

CONTRACTORS NOTE:

IT IS THE RESPONSIBILITY OF THE CONSTRUCTION CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION AND CONDITION OF ALL UNDERGROUND UTILITIES, SANITARY SEWERS, STORM SEWERS, ETC. PRIOR TO THE COMMENCEMENT OF ANY/OR CONSTRUCTION ACTIVITIES. DIG WITH C.A.R.E. CALL MISS UTILITY 1-800-245-4848.

ROAD GRADE (%)	DISTANCE (FT)
1	400
2	250
5	135
10	80
15	60
20	45

ROAD GRADE (%)	DISTANCE (FT)
2-5	500-300
6-10	300-200
11-15	200-100
16-20	100



1-800-245-4848

DRAWING LEGEND

- PROPOSED ROAD
- EXISTING ROAD
- STRAW BALES
- SILT FENCE
- BRUSH BARRIER
- TREE LINE
- ROCK RIP RAP
- CROSS DRAIN
- CULVERT
- DRILLING PIT
- ROAD DITCH
- GAS LINE
- FENCE LINE
- ROCK OUTCROP
- WATER WELL
- HOUSE/STRUCTURE
- UTILITY POLE
- SPRING
- WET SPOT
- PIT WASTE APP. AREA

DRIVING DIRECTIONS FOR WEBSTER-HARDWOOD B-2.

- 1.) FROM CHARLESTON, W.VA DRIVE NORTH ON I-79 19 MILES± TO EXIT 19 TO U.S. 119.
- 2.) TURN RIGHT ONTO U.S. 119 SOUTH AND GO 2.5 MILES± TO ROUTE 4.
- 3.) TURN RIGHT ONTO ROUTE 4 AND GO 4.0 MILES± TO LIZEMORE ROAD.
- 4.) TURN RIGHT ONTO LIZEMORE ROAD AND GO 7.1 MILES± TO ROUTE 1/7 PORTER CREEK ROAD.
- 5.) TURN RIGHT ONTO ROUTE 1/7 PORTER CREEK ROAD AND GO 4.4 MILES± TO COON RIDGE ROAD.
- 6.) TURN RIGHT ONTO COON RIDGE ROAD AND GO 4.0 MILES± TO ROUTE 11/2.
- 7.) TURN RIGHT ONTO ROUTE 11/2 AND GO 0.8 MILES± TO ROUTE 10/INDEPENDENCE ROAD.
- 8.) TURN RIGHT ONTO ROUTE 10/INDEPENDENCE ROAD AND GO 0.7 MILES± TO HUBBARD CREEK ROAD LOCATED ON LEFTHAND SIDE OF THE ROAD.
- 9.) FROM THE FOREMENTIONED SITE, FOLLOW THE EXISTING ROAD APPROXIMATELY 0.6 MILES± TO THE EXISTING WELL LOCATION AS SHOWN ON THE "CONSTRUCTION AND RECLAMATION PLAN".

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 WV Dept of Environmental Protection