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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

July 17, 2015

**WELL WORK PLUGGING PERMIT**

**Plugging**

This permit, API Well Number: 47-9901991, 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: CNR 8R  
Farm Name: WALKER, LANDON & ETHEL  
**API Well Number: 47-9901991**  
**Permit Type: Plugging**  
Date Issued: 07/17/2015

**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

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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.
4. This well is under a consent order and must be plugged under the terms of that agreement.

9901991P

July 6, 2015

Mr. & Mrs. Mark Ballance  
114 Drift Creek Road  
Genoa, WV 25517

RE: CNR # 8 P & A  
Lincoln District, Wayne County, WV

Dear Mr. & Mrs. Ballance:

Cabot Oil & Gas Corporation (Cabot) is preparing to plug and abandon the above referenced well.

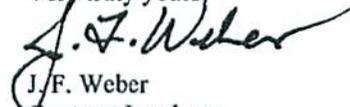
It is understood and agreed that the portion of the existing road utilized for access located on your property will be restored to the condition which existed prior to commencement of operations and that you will assume responsibility for all future maintenance. The production pipeline (Line C - 2514) running from the well will be cut and purged of any residual gas. Water from your existing domestic well and spring located on hillside beside access road will be tested with results provided to you.

Cabot Oil & Gas Corporation its successors or assigns agree to indemnify and hold harmless Mark Ballance and Pamela Ballance, their successors or assigns from all claims, damages, liabilities, causes of action or demand for personal injury or property damage arising from Cabot operations on their lands.

As additional consideration Cabot agrees to pay ~~\$750.00~~ **\$900.00** *J.F.W.*  
*PB MB*

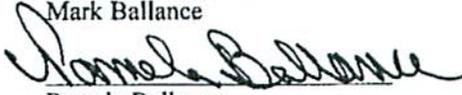
If this is agreeable to you please signify by signing one copy of this letter and returning it in the self-addressed envelope.

Very truly yours,



J.F. Weber  
Contract Landman  
Representing Cabot Oil & Gas Corporation

Agreed to and accepted this 13<sup>th</sup> day of July, 2015

  
Mark Ballance  
  
Pamela Ballance

RECEIVED  
Office of Oil and Gas

JUL 17 2015

WV Department of  
Environmental Protection

9901991A

WW-AB  
Rev. 2/01

1) Date May 20, 2015  
2) Operator's  
Well No. CNR #8  
3) API Well No. 47-089 -01991

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 \_\_\_ or Underground storage \_\_\_) Deep \_\_\_ / Shallow X

5) Location: Elevation 909.74' Watershed West Fork of Twelvepole Creek  
District Lincoln County Wayne Quadrangle Radnor

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

8) Oil and Gas Inspector to be notified 9) Plugging Contractor  
Name Jeremy James Name Contractor Services, Inc.  
Address P.O. Box 147 Address 929 Charleston Road  
Ona, WV 25545 Spencer, WV 25276

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 6-2-15

## CNR #8

### API # 47 - 099 - 01991

## PLUGGING PROCEDURE

### Current Configuration

DTD @ 4106'  
 Elevation - 913'  
 16" - 36# LS conductor @ 37' KB, not cemented  
 9 <sup>5</sup>/<sub>8</sub>" - 32# LS casing @ 583' KB, cemented to surface  
 7" - 17# LS casing @ 1695' KB, cemented to surface  
 4 <sup>1</sup>/<sub>2</sub>" - 10.5# J55 casing @ 4071' KB w/ TOC @ 3430' KB  
 2 <sup>3</sup>/<sub>8</sub>" - 4.7# tubing @ 3939' KB  
 Big Six perforations: 3946' - 3955'  
 Berea formation: 2160 - 2200' (not perforated)  
 Salt Sand: 1095' - 1280'  
 Salt water @ 987'  
 Fresh water @ 175'  
 No coal reported

### PROCEDURE

1. Contact Danville 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 company certified in H2S safety. All personnel on location must be trained in the proper use of respirators and other safety devices. Respiratory equipment is to worn in areas with H2S concentrations that exceed 10 ppm. **NOTE: Big Six tested 900 ppm H2S while drilling.**
4. MIRU service rig and blow down well.
5. Lay 2" line from wellhead to pit/tank and stake down securely. Vent 4 <sup>1</sup>/<sub>2</sub>" x 7" annulus.
6. Unpack wellhead.
7. Pick up additional joint of 2 <sup>3</sup>/<sub>8</sub>" tubing and deepen tubing string to 3970'.
8. MIRU Cementing Company.
9. Pump 18 c.f. of latex cement for cement plug 1 from 3970' to 3770'.
10. Displace with 14 <sup>1</sup>/<sub>2</sub> bbls of 6% Gel.
11. POOH with tubing. Let cement plug set for a minimum of eight hours.
12. Run freepoint and cut 4 <sup>1</sup>/<sub>2</sub>" casing where free. Estimate ±3400'. Pick up casing 1 jt and pump 30 bbls 6% gel.
13. Pump 40 sacks of Class A cement for cement plug 2 from ±3400' to 3200'.
14. Displace with 50 bbls of 6% Gel.
15. Pull casing up to 1750' and pump 45 sacks of Class A cement for cement plug 3 from 1750' to 1550'.
16. Displace with 24 <sup>1</sup>/<sub>2</sub> bbls of 6% Gel.
17. Pull casing up to 1050' and pump 40 sacks of Class A cement for cement plug 4 from 1050' to 850'.
18. Displace with 13 <sup>1</sup>/<sub>2</sub> bbls of 6% Gel.
19. Pull casing up to 200' and pump 40 sacks of Class A cement for cement plug 5 from 200' to surface.
20. TOOH with casing and lay down.
21. RDMO Cement company
22. Erect Monument according to Law.
23. RDMO.

Add cement Plug 2250-2100

Tag all plugs + reset if needed *[Signature]*

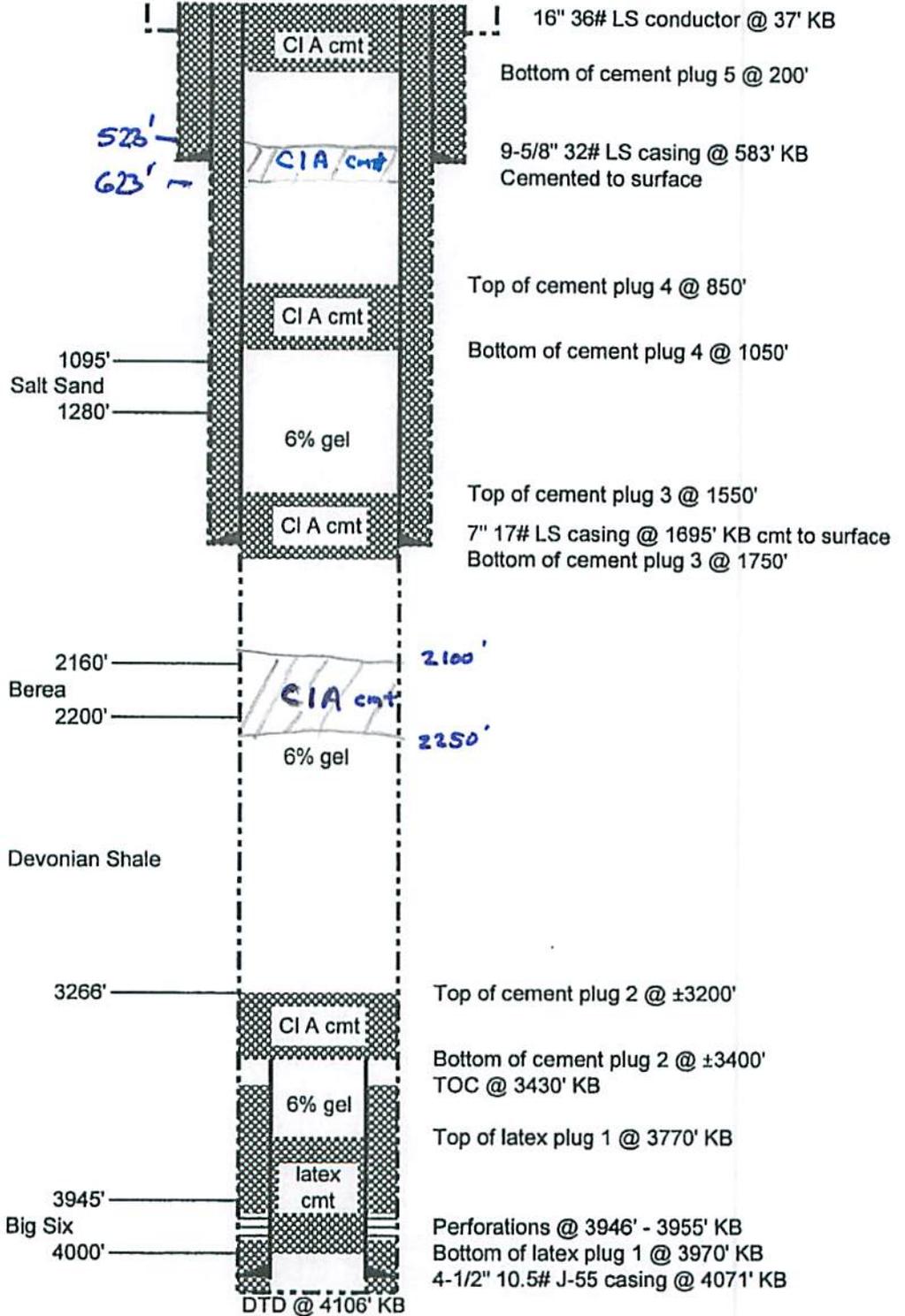
*gwm* ADD CEMENT PLUG FROM 623'-523'.

CNR #8  
API 47-099-01991  
PROPOSED CONFIGURATION  
Elevation - 913'

Fresh water @ 175'

No coal reported

Salt water @ 987'



Schematic is not to scale

T. On 04/21/15

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas  
Well Operator's Report of Well Work

Farm Name: Landon H. & Ethel Walker Operator Well No.: CNR #8R Workover

LOCATION: Elevation: 913' Quadrangle: Radnor  
District: Lincoln County: Wayne  
Latitude: 3910' feet South of 38° DEG. 07' MIN. 30" SEC.  
Longitude: 11950' feet West of 82° DEG. 25' MIN. 00" SEC.

Company: Cabot Oil & Gas Corporation  
900 Lee Street East, Suite 500  
Charleston, WV 25301

Agent: Thomas S. Liberatore  
Inspector: Gary Scites  
Permit Issued: 5/17/2007  
Well Work Commenced: August 20, 2007  
Well Work Completed: August 28, 2007  
Verbal Plugging: \_\_\_\_\_  
Permission granted on: \_\_\_\_\_  
Rotary  Cable \_\_\_\_\_  
Total Depth (feet) 4106  
Fresh Water Depths (ft) See Original WR-35  
Salt Water Depths (ft) See Original WR-35  
Is coal being mined in area (Y/N)? See Original WR-35  
Coal Depths (ft) See Original WR-35

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
16"	29'	29'	Existing
9-5/8"	573'	573'	Existing
7"	1686'	1686'	Existing
4-1/2"		4064'	Existing
2-3/8"			
3939' <b>RECEIVED</b> Office of Oil & Gas JUN 10 2009 WV Department of Environmental Protection			

**OPEN FLOW DATA**

Producing Formation Lockport Pay Zone Depth (ft) 3949' - 3955'  
Gas: Initial Open Flow 0 MCF/d Oil: Initial Open Flow 0 Bbl/d  
Final Open Flow 10 MCF/d Final Open Flow 0 Bbl/d  
Time of open flow between initial and final tests 4 Hours  
Static rock pressure 60 psig surface pressure after 60 Hours

Second Producing Formation \_\_\_\_\_ Pay Zone Depth (ft) \_\_\_\_\_  
Gas: Initial Open Flow \_\_\_\_\_ MCF/d Oil: Initial Open Flow \_\_\_\_\_ Bbl/d  
Final Open Flow \_\_\_\_\_ MCF/d Final Open Flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock pressure \_\_\_\_\_ psig surface pressure after \_\_\_\_\_ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1.) DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2.) THE WELL LOG WHICH IS SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE

For: CABOT OIL & GAS CORPORATION  
By: [Signature] Drilling Superintendent  
Date: 1/15/09

STAGE	PERFS	ACID 15% HCl	FOAM	SAND (lbs)	NITROGEN (scf)	BDP	MTP	ISIP
Re-Stim								
1-Lockport	3949-3955 (36)	X-Link Gel		17,532		4039	2432	

**Received**  
Office of Oil & Gas  
MAY 28 2015

FORMATION	TOP	BOTTOM	REMARKS
Sand/Shale	Surface	1070	
Shale	1070	1095	
Salt Sand	1095	1280	
Shale	1280	1345	
Big Lime	1345	1550	
Shale	1550	1638	
Injun shale	1638	1666	
Berea	1666	2160	
Devonian Shale	2160	2200	
Limestone	2200	3266	
Dolomite	3266	3465	
Lockport	3465	3945	
Big Six	3945	3956	
Shale	3956	4000	
	4000	4106	TD

Radnor 2

9901991A

WR-35

**RECEIVED**  
Office of Oil & Gas  
Permitting  
**JAN 03 2000**  
WV Division of  
Environmental Protection

Date: 17-Nov-99  
API # 47-099-01991

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas  
Well Operator's Report of Well Work

Reviewed K

Farm name: Walker, Landon & Ethel Operator Well No.: CNR #8R

LOCATION: Elevation: 913' Quadrangle: Radnor  
District: Lincoln County: Wayne  
Latitude: 3.910 feet South of 38 DEG. 7 MIN. 30 SEC.  
Longitude: 11.950 feet West of 82 DEG. 25 MIN. 0 SEC.

Company: Cabot Oil & Gas Corporation  
400 Fairway Drive: Suite 400  
Coraopolis, PA 15108-4308

Agent: John Abshire  
Inspector: David Belcher  
Permit Issued: 5/28/99  
Well Work Commenced: 10/25/99  
Well Work Completed: 11/19/99  
Verbal Plugging  
Permission granted on:  
Rotary X Cable \_\_\_\_\_  
Total Depth (feet) 4106'  
Fresh Water Depths (ft) 175'  
Salt Water Depths (ft) 987'

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill up Cu. Ft.
16"	29'	29'	
9-5/8"	573'	573'	250 sks Class "A"
7"	1686.4'	1686.4'	280 sks Class "A"
4-1/2"	4064'	4064'	100 sks Latex

Is coal being mined in area (Y / N)? \_\_\_\_\_  
Coal Depths (ft) \_\_\_\_\_

**OPEN FLOW DATA**

Producing formation Lockport Pay zone depth (ft) 3946' - 3955'  
Gas: Initial open flow 550 MCF/d Oil: Initial open flow N/A Bbl/d  
Final open flow 421 MCF/d Final open flow N/A Bbl/d  
Time of open flow between initial and final tests 4 Hours  
Static rock pressure 720 psig (surface pressure after 14 Hours)

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock pressure \_\_\_\_\_ psig (surface pressure after \_\_\_\_\_ Hours)

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, MANUFACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: CABOT OIL & GAS CORPORATION

By: Ray Rudnick  
Date: 12-20-99

Received  
Office of Oil & Gas  
MAY 28 2005

Radnor

WAY-1991

## OPEN FLOW DATA

Perf'd Lockport @ 3946'3955'. Pumped 24 bbls of fluid to displace 250 gals of 15% HCl acid into formation. Swabbed well off.

FORMATION	TOP	BOTTOM	REMARKS
Sand/Shale	0	1070	
Shale	1070	1095	
Salt Sand	1095	1280	
Shale	1280	1345	
Big Lime	1345	1550	
Shale	1550	1638	
Injun	1638	1666	
Shale	1666	2160	
Berea	2160	2200	
Devonian Shale	2200	3266	
Limestone	3266	3465	
Dolomite	3465	3945	
Lockport	3945	3956	
Big Six	3956	4000	
Shale	4000	4106 - TD	

Received  
Office of Oil & Gas  
MAY 28 2015

9901991P

WW-4A  
Revised 6-07

1) Date: May 20, 2015  
2) Operator's Well Number  
CNR #8  
3) API Well No.: 47 - 099 - 01991 P

**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>Brian K. Walker &amp; Laurie F. Walker</u>	Name <u>None</u>
Address <u>P.O. Box 724</u>	Address _____
<u>Hudson, OH 44236</u>	_____
(b) Name <u>Mark Ballance &amp; Pamela Ballance</u>	(b) Coal Owner(s) with Declaration
Address <u>114 Drift Creek Road</u>	Name <u>Northfolk Southern Railway</u>
<u>Genoa, WV 25517</u>	Address <u>c/o Pocahontas Land Corp. P.O. Box 1517</u>
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Jeremy James</u>	(c) Coal Lessee with Declaration
Address <u>P.O. Box 147</u>	Name <u>None of record</u>
<u>Ona, WV 25545</u>	Address _____
Telephone <u>(304) 951-2596</u>	_____

**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.

<b>COMMONWEALTH OF PENNSYLVANIA</b> Notarial Seal Constance C. Carden, Notary Public McDonald Boro, Washington County My Commission Expires Nov. 16, 2017 <small>MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES</small>	Well Operator	<u>Cabot Oil &amp; Gas Corporation</u>
	By:	<u>Kenneth L. Marcum</u> <i>Kenneth L. Marcum</i>
	Its:	<u>Regulatory Supervisor</u>
	Address	<u>Five Penn Center West, Ste. 401</u>
	Telephone	<u>(412) 249-3850</u>

Received  
Office of Oil & Gas

Subscribed and sworn before me this 20th day of May, 2015 MAY 28 2015  
Constance C. Carden Notary Public  
My Commission Expires November 16, 2017

**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](mailto:depprivacyoffier@wv.gov).

9901991A

WW-9  
(5/13)

Page \_\_\_\_\_ of \_\_\_\_\_  
API Number 47 - 099 - 01991  
Operator's Well No. CNR #8

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) West Fork of Twelvepole Creek Quadrangle Radnor

Elevation 909.74 County Lincoln District Wayne

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.? 20 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)

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

Received  
Office of Oil & Gas

Subscribed and sworn before me this 20th day of May MAY 28 2015

Constance C. Carden

My commission expires 11/16/2013 11/16/2017

COMMONWEALTH OF PENNSYLVANIA  
Notary Public  
Constance C. Carden, Notary Public  
McDonald Boro, Washington County  
My Commission Expires Nov. 16, 2017  
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Form WW-9

Operator's Well No. \_\_\_\_\_

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	
Seed Type	lbs/acre
Grain Rye - 100	Red Clover - 5 Fescue - 40
Annual Rye - 20	White Clover - 5
Perennial Rye - 10	Alta Sweet Clover - 5
Yellow Clover - 5	Birdsfoot Trefoll - 10

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

Attach:

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

Photocopied section of involved 7.5' topographic sheet.

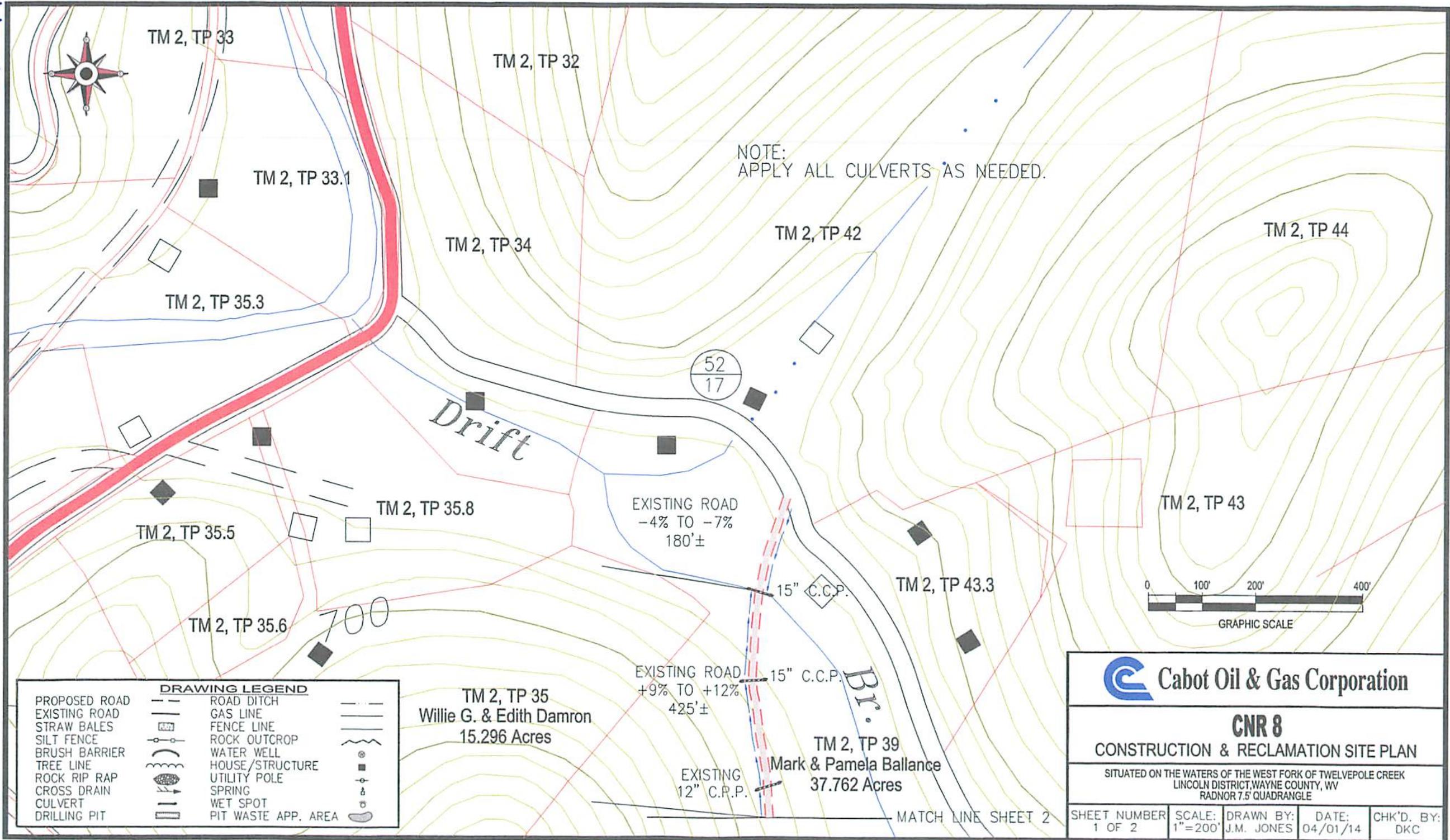
Plan Approved by: \_\_\_\_\_

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

Title: inspector OOG Date: 6-2-15

Field Reviewed?  Yes  No

9901991P



**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	

TM 2, TP 35  
 Willie G. & Edith Damron  
 15.296 Acres

TM 2, TP 39  
 Mark & Pamela Ballance  
 37.762 Acres

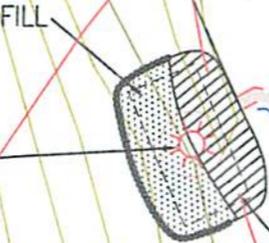
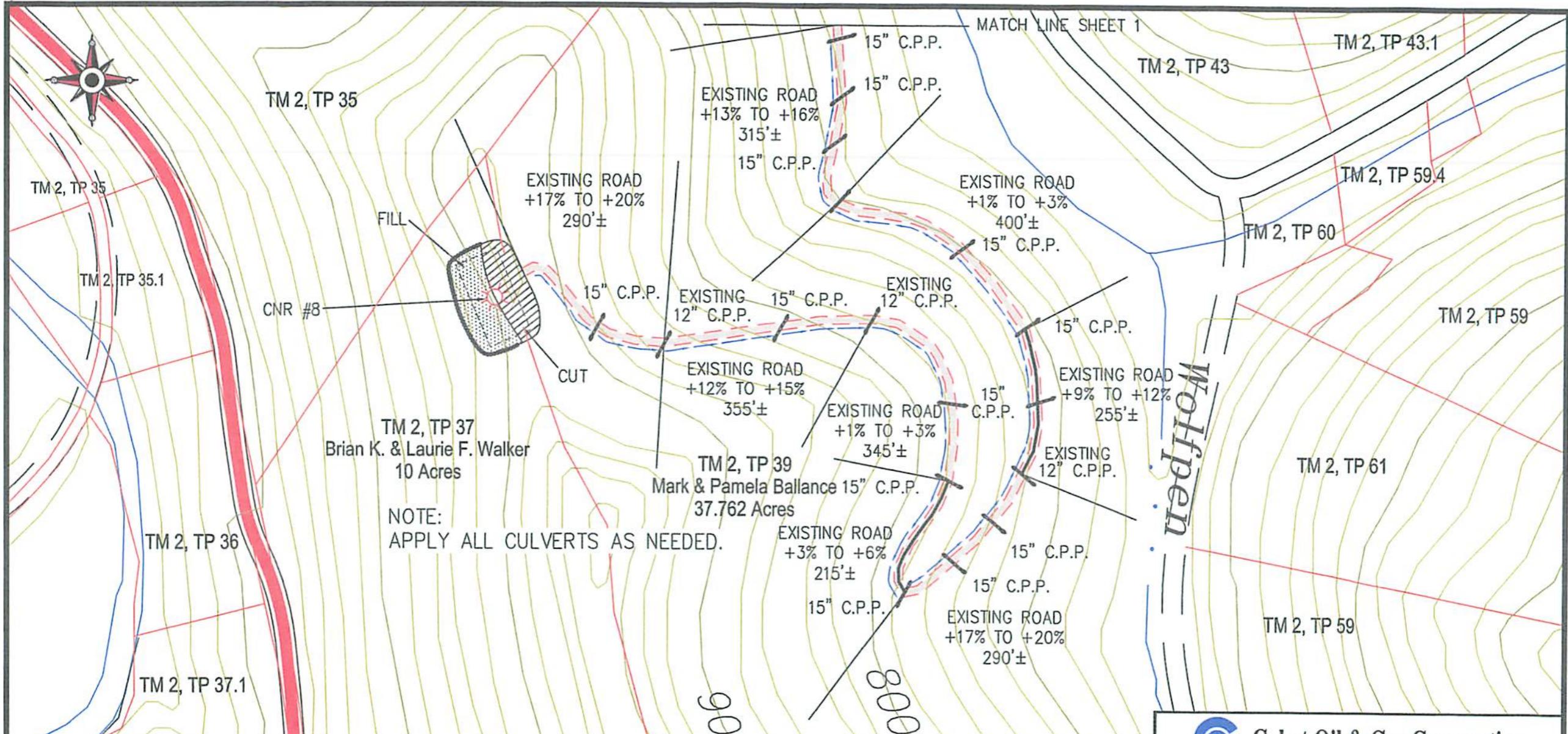
**Cabot Oil & Gas Corporation**

**CNR 8**  
 CONSTRUCTION & RECLAMATION SITE PLAN

SITUATED ON THE WATERS OF THE WEST FORK OF TWELVEPOLE CREEK  
 LINCOLN DISTRICT, WAYNE COUNTY, WV  
 RADNOR 7.5' QUADRANGLE

SHEET NUMBER 1 OF 2	SCALE: 1"=200'	DRAWN BY: J.M. JONES	DATE: 04/01/14	CHK'D. BY: DKC
------------------------	-------------------	-------------------------	-------------------	-------------------

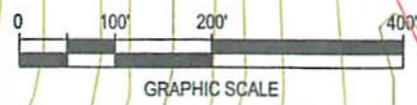
99019910



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.

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	



<b>CNR 8</b> <b>CONSTRUCTION &amp; RECLAMATION SITE PLAN</b>				
SITUATED ON THE WATERS OF THE WEST FORK OF TWELVEPOLE CREEK LINCOLN DISTRICT, WAYNE COUNTY, WV RADNOR 7.5' QUADRANGLE				
SHEET NUMBER 2 OF 2	SCALE: 1"=200'	DRAWN BY: J.M. JONES	DATE: 04/01/14	CHK'D. BY: DKC

**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



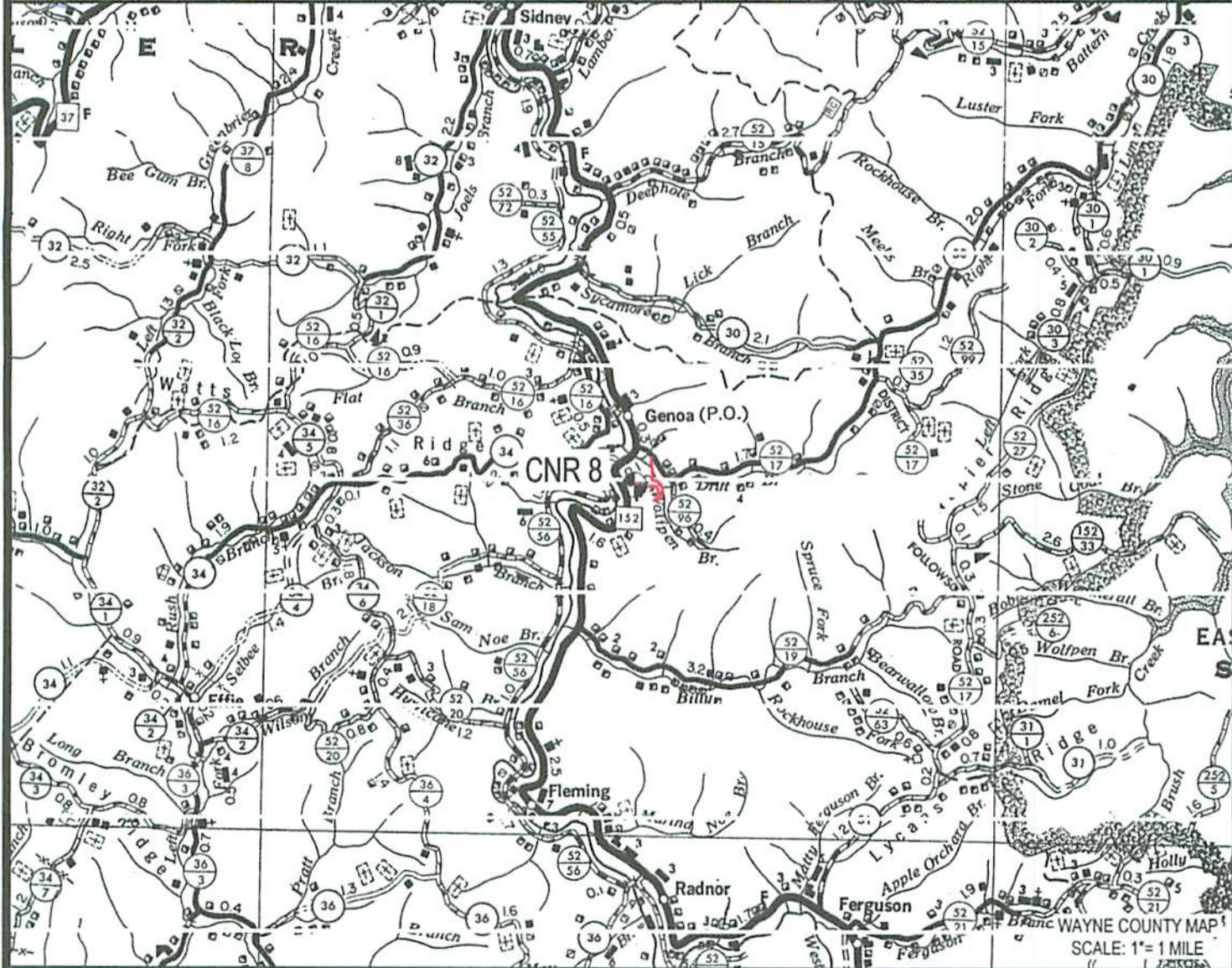
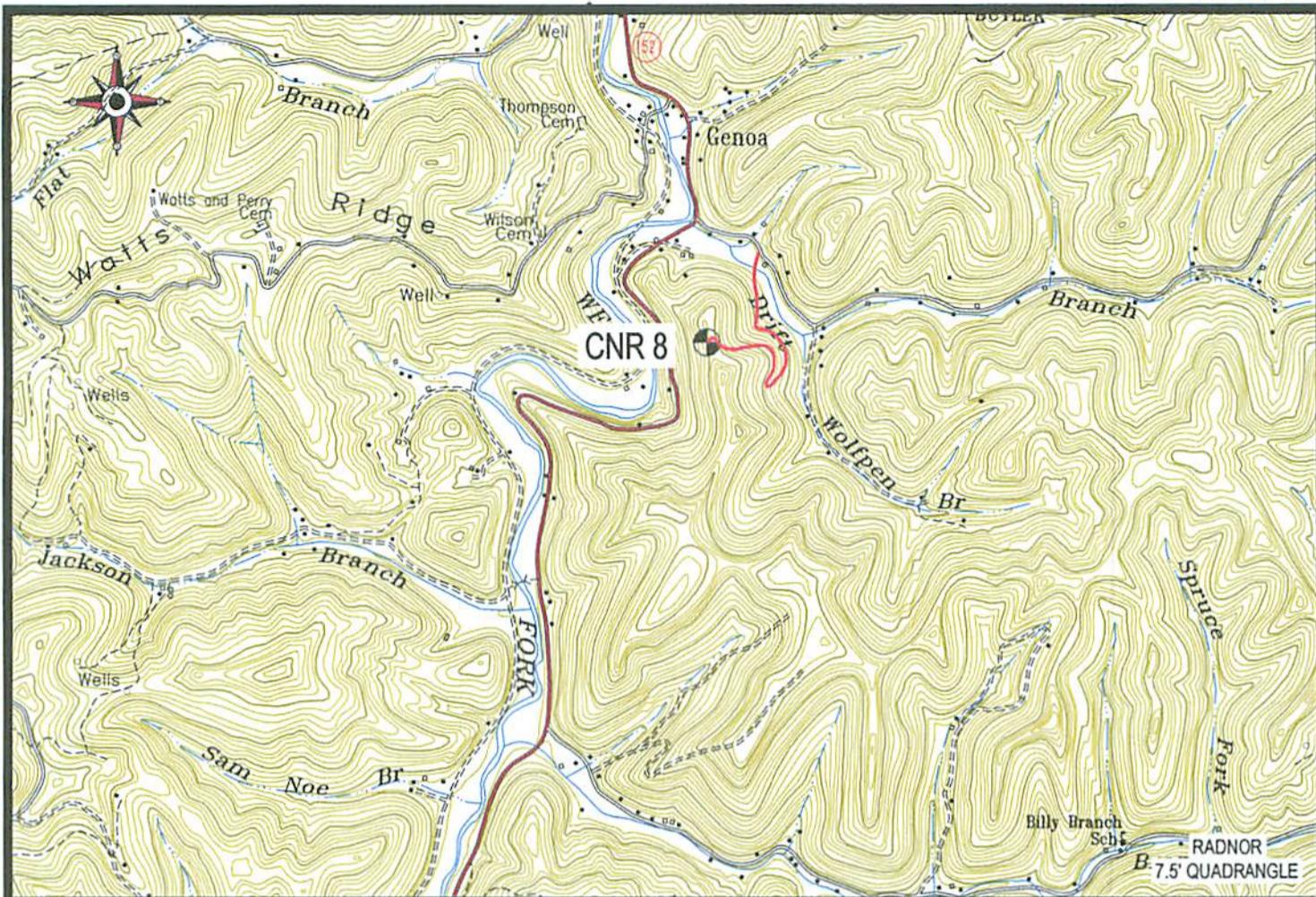
1-800-245-4848

**DRAWING LEGEND**

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

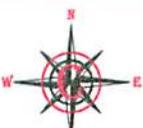
**DRIVING DIRECTIONS FOR CNR 8**

- 1.) FROM WAYNE, WV DRIVE SOUTH ON RT. 152 FOR APPROXIMATELY 10.3± MILES TO SECONDARY ROUTE 52/17 (DRIFT BRANCH) LOCATED ON THE LEFT-HAND SIDE OF RT. 152.
- 2.) TURN LEFT ONTO ROUTE 52/17 AND TRAVEL APPROXIMATELY 0.2± MILES TO THE BEGINNING OF THE EXISTING ACCESS ROAD LOCATED ON THE RIGHT-HAND SIDE OF THE ROAD.
- 3.) FROM THE AFOREMENTIONED SITE, FOLLOW THE EXISTING ROAD FOR APPROXIMATELY 0.6± MILES TO THE EXISTING WELL SITE IN THE FIELD AS SHOWN ON THE "CONSTRUCTION AND RECLAMATION PLAN".



 Cabot Oil & Gas Corporation

**CNR 8** received  
Office of Oil & Gas  
LOCATION MAP

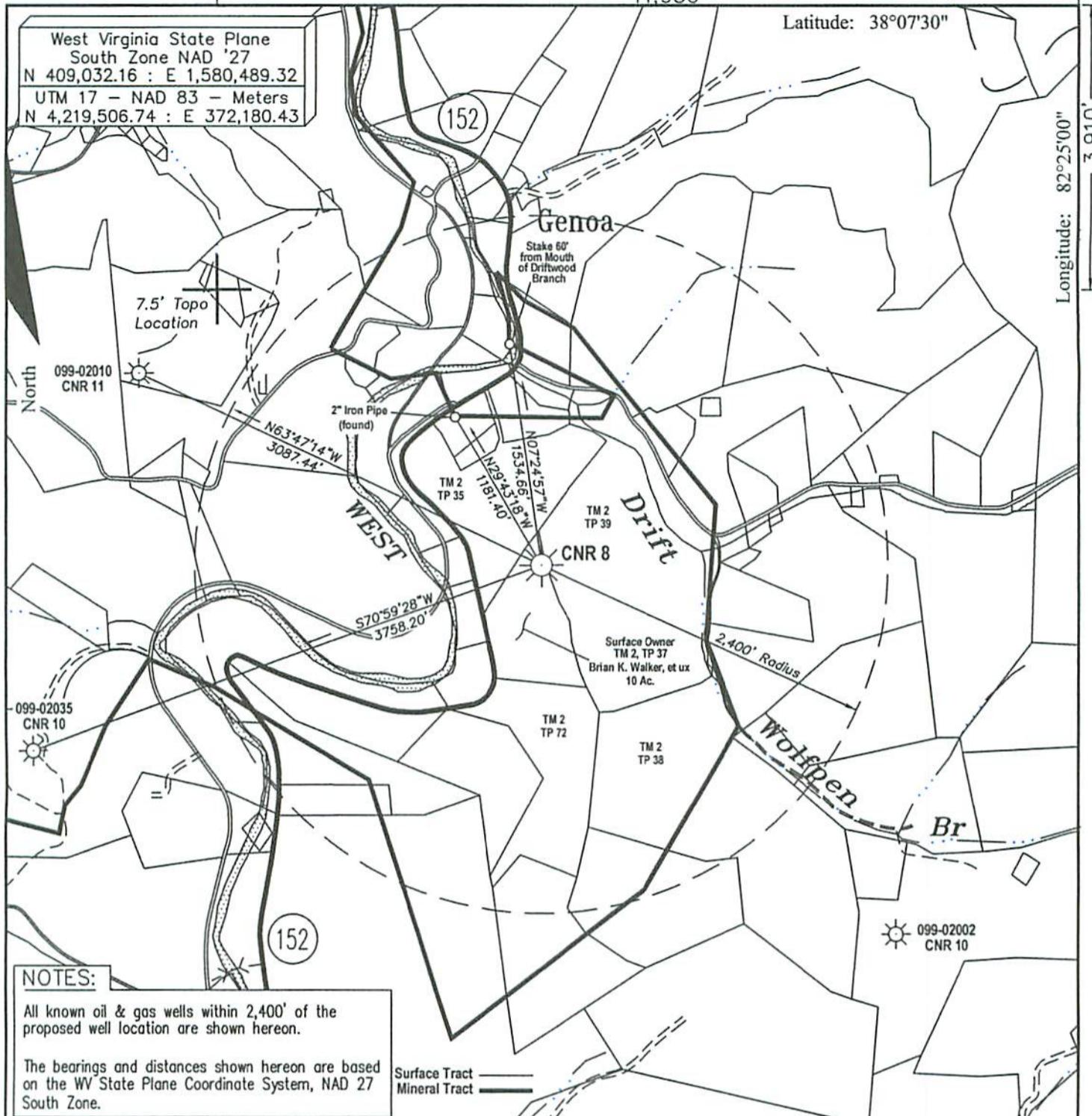
 **CUNNINGHAM**

LOCATED ON THE WATERS OF THE  
WEST FORK OF TWELVEPOLE CREEK  
LINCOLN DISTRICT, WAYNE COUNTY, WV  
WAYNE 7.5' QUADRANGLE

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. CNR 8 LOC
DATE: 04/01/14	SCALE: AS NOTED
DRAWN BY: J. JONES	CHK'D BY: D.K.C.
	FILE: C:\PROJECT FOLDER\CABOT

9901991P



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.

FILE #: \_\_\_\_\_  
 DRAWING #: cnr 8 ww6  
 SCALE: 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY: 1 : 12,729  
 PROVEN SOURCE OF ELEVATION: Global Positioning 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



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

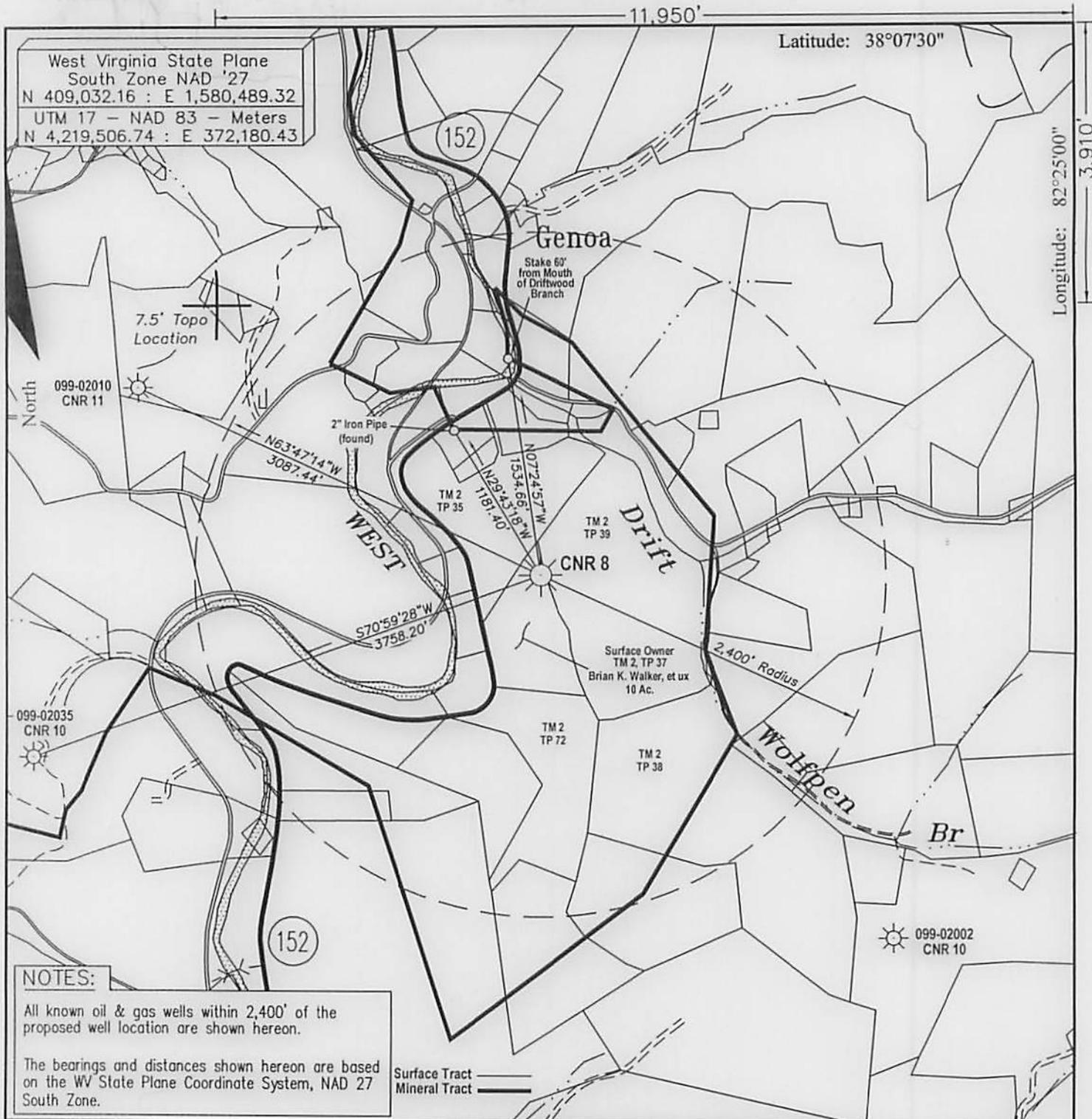


DATE: April 1, 2014  
 OPERATOR'S WELL #: CNR 8  
 API WELL #: 47 099 01991P  
 STATE COUNTY PERMIT

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

WATERSHED: West Fork of Twelvepole Creek ELEVATION: 909.74'  
 COUNTY/DISTRICT: Wayne / Lincoln QUADRANGLE: Radnor  
 SURFACE OWNER: Brian K. Walker, et ux ACREAGE: 10  
 OIL & GAS ROYALTY OWNER: Columbia Natural Resources, Inc. ACREAGE: 1,385  
 LEASE #: 47-10411 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 Whitney Johnson  
 Address Five Penn Center West, Suite 401 Address P.O. Box 450  
 City Pittsburgh State PA Zip Code 15276 City Glasgow State WV Zip Code 25086



**NOTES:**

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Surface Tract  
Mineral Tract

FILE #: \_\_\_\_\_  
 DRAWING #: cnr 8 ww6  
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(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
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TARGET FORMATION: \_\_\_\_\_ ESTIMATED DEPTH: \_\_\_\_\_

WELL OPERATOR Cabot Oil & Gas Corp. DESIGNATED AGENT Whitney Johnson  
 Address Five Penn Center West, Suite 401 Address P.O. Box 450  
 City Pittsburgh State PA Zip Code 15276 City Glasgow State WV Zip Code 25086