



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

June 11, 2013

WELL WORK PERMIT

Re-Work

This permit, API Well Number: 47-3902816, issued to COLUMBIA GAS TRANSMISSION, LLC, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

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

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

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

James Martin
Chief

Operator's Well No: 12079
Farm Name: PERRY, JAMES H.
API Well Number: 47-3902816
Permit Type: Re-Work
Date Issued: 06/11/2013

Promoting a healthy environment.

06/14/2013

3902816 R

WW - 2B
(Rev. 8/10)

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

1) Well Operator: Columbia Gas Transmission, LLC
Operator ID: 307032 County: Kanawha District: Elk Quadrangle: Indian-Creek
39 04 Blue 258

2) Operator's Well Number: Coco A 12079 (existing well) 3) Elevation: 1115

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

5) Proposed Target Formation(s): Oriskany Proposed Target Depth: 5369 (actual)

6) Proposed Total Depth: 5447 (actual) Feet Formation at Proposed Total Depth: Oriskany

7) Approximate fresh water strata depths: none rpt'd by driller

8) Approximate salt water depths: 1040 ft (as rpt'd by driller in 1978)

9) Approximate coal seam depths: 105 - 109 ft (as rpt'd by driller in 1978)

10) Approximate void depths,(coal, Karst, other): none rpt'd by driller

11) Does land contain coal seams tributary to active mine? no

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

Kill well. Pull tubing. Fish lost tools. Log and install bridge plug. Replace wellhead. Fracture stimulate (less than 500 bbls fresh water based viscosified system, nitrogen assist, sand)

Approved 15-10-13

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	20	??	??	30	30	none rpt'd
Fresh Water	13-3/8	H-40	48	160	160	150 sx
Coal						
Intermediate	9-5/8	H-40	32	2083	2083	700 sx
Production	7	N-80	23	5343	5343	150 sx
Tubing	2-3/8		* to be removed	5339		
Liners						

All pipe existing

Packers: Kind: none

Sizes: _____

Depths Set * note that casing/tubing listed above is existing - plans are to remove tubing during well work

06/14/2013

3902816R

WW-2A1
(Rev. 1/11)

Operator's Well Number Coco A 12079

**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
J. H. Perry, et ux	Columbia Gas Transmission, LLC	Storage Lease 11347	241 / 136

Received
Office of Oil & Gas

JUN 1

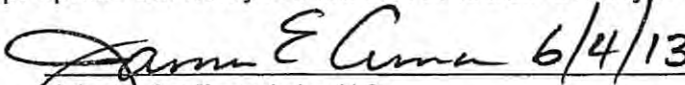
**Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas**

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:

 6/4/13
 Columbia Gas Transmission, LLC
 James E. Amos, Senior Engineer

06/14/2013

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

CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM
GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator Name Columbia Gas Transmission, LLC OP Code 307032

Watershed Falling Rock Creek Quadrangle Blue Indian Creek

Elevation 1115 County Kanawha District Elk

Description of anticipated Pit Waste: no earthen pit to be utilized (all recovered fluids to be captured in tanks)

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

Will a synthetic liner be used in the pit? N/A. If so, what mil.? 1 1/2 - 3

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number 34-167-2-9395 (WVOG); 34-167-2-3862 (HWR-Nichols well))
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain additional UIC wells: 34-121-2-3995 (Hunter-Warren well); 34-121-2-4086 (Hunter-Travis well))

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. no drilling planned - kill and frac fluids are water based

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

Additives to be used? polymer viscosifier, guar, NaCl, KCl, starch, biocide, corrosion inhibitor, pH control

Will closed loop system be used? yes

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. N/A - no drilling planned

-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 James E Amos

Company Official (Typed Name) James E Amos

Company Official Title Senior Engineer

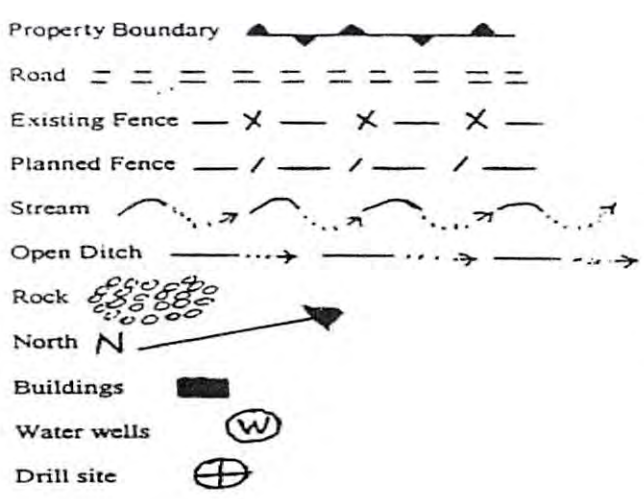
Received
MAY 15 2013
Office of Oil and Gas
Department of Environmental Protection

Subscribed and sworn before me this 10th day of May, 2013

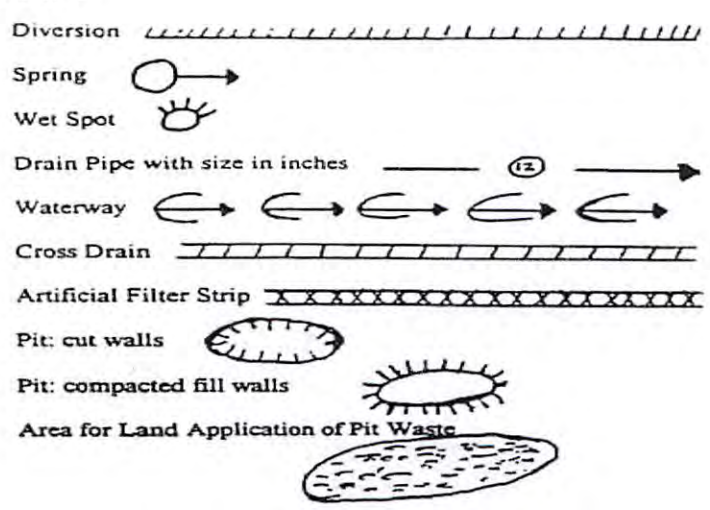
Margh 22 2013 Mary Marie Clendenin Notary Public

My commission expires _____





LEGEND



Proposed Revegetation Treatment: Acres Disturbed < 1 acre Prevegetation pH 6

Lime 2 Tons/acre or to correct to pH 6.5

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

Mulch 2 Tons/acre

Seed Mixtures

Seed Type	Area I	lbs/acre
Orchard Grass		20
Ledino Clover		10
Annual Rye		20

Seed Type	Area II	lbs/acre
Orchard Grass		20
Ledino Clover		10
Annual Rye		20

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [Signature]

Comments: _____

Title: Inspector Orleans

Date: 5-10-13

Field Reviewed? () Yes () No

Received

MAY 15 2013

Office of Oil and Gas
WV Dept. of Environmental Protection



RECLAMATION PLAN

Coco A storage well 12079 (existing well)

- all existing road drains and culverts to be maintained during duration of project
- BMPs to be utilized where applicable
- road material to be applied as needed

steep slope away from site

Coco A well 12079

Handshaw Road

perimeter of site

moderate slope down to level site

Google earth

© 2013 Google

received
 Google earth
 MAY 15 2013
 feet
 meters

600 200

WV Dept. of Environmental Protection
 Office of Oil and Gas

06/14/2013

3902816 R



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

Rotary
Spudder
Cable Tools
Storage

Quadrangle Blue Creek
Permit No. Kan. 2816

WELL RECORD

Oil or Gas Well Gas
(KIND)

Company Columbia Gas Transmission Corp.
Address P.O. Box 1273 Charleston, W. Va.
Farm James H. Perry Acres 162
Location (waters) Blue Creek
Well No. 12079 Elev. 1103
District Elk County Kanawha
The surface of tract is owned in fee by John P. Jackson
Address Blue Creek, W. Va.
Mineral rights are owned by Joseph Perry
Address Elkview, W. Va.
Drilling commenced 3-3-78
Drilling completed 3-15-78
Date Shot From To

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16.			
13 3/8"	149'	149'	
10.			Size of
9-5/8"	2083	2083	
7"	5343	5343	Depth set
5 3/16			
4 1/2			
3			Perf. top
2 3/8"	5359	5359	Perf. bottom
Liners Used			Perf. top
			Perf. bottom

Open Flow /10ths Water in Inch
/10ths Merc. in Inch
Volume Cu. Ft.
Rock Pressure lbs. hrs.
Oil bbls., 1st 24 hrs.
WELL ACIDIZED (DETAILS) 1000 gal.
MCA 15%
WELL FRACTURED (DETAILS) Water frac using 840 BBLs and 20,000# 20-40 mesh sand.

Attach copy of cementing record.
CASING CEMENTED 13-3/8 SIZE 150 No. Ft. 3-5-78 Date
Amount of cement used (bags) 150 sacks - Neat Cement
Name of Service Co. Halliburton Services
COAL WAS ENCOUNTERED AT FEET INCHES
FEET INCHES FEET INCHES
FEET INCHES FEET INCHES

RESULT AFTER TREATMENT (Initial open Flow or bbls.) 11.6 million MCF
ROCK PRESSURE AFTER TREATMENT 1470 HOURS 24
Fresh Water Feet Salt Water Salt Sand Feet 1040'
Producing Sand Oriskany Depth 5369-5417'

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
Sand&Shale			0	105			
Coal			105	109			
Sand&Shale			109	890			
Salt Sand			890	1490	Water	1040	
RedRock&Shale			1490	1610			
Big Lime			1610	1825			
Injun Sand			1825	1870			
Weir Sand			1870	2065			
Shale			2065	5226			
Lime			5226	5369			
Oriskany			5369	5417			

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MAY 15 2013
Office of Oil and Gas
WV Dept. of Environmental Protection

WELL NO. 12079		FIELD Coco-A			DATE WORK STARTED		DATE WORK COMPLETED 7-19-78	
DATE DRILLING STARTED 3-3-78		DATE DRILLING COMPLETED 3-15-78		SHUT-IN DATE 3-19-78		TOTAL DEPTH 5447'		PLUGGED BACK TO
HOLE SIZE	Bit Gauge (inches)	17 1/2"	12 1/4"	8-3/4"	6-1/8"	FORMATION RECORD		
	From - To (feet)	160'	2100'	5330'	5447'	FORMATION	FROM	TO
CASING & TUBING <small>(All Measurements Less Threads)</small>	Size (O.D.)	13-3/8"	9-5/8"	7"	2-3/8"	Sand&Shale	0	105
	Weight/Foot	48#	32#	23#	4.6#	Coal	105	109
	Steel Grade	H-40	JK-55	N-80	SK-55	Sand&Shale	109	890
	Coupling Type	Long	Short	Short	NU	SaltSand	890	1490
	Setting Depth	149'	2083	5343	5359	RedRock&Sh	1490	1610
	Left in Hole	149'	2083	5343	5359	Lime	1610	1825
CEMENT RECORD	No. of Sacks	150	600/100	150		InjunSand	1825	1870
	Type	Neat	Poz/Neat	Neat		Weir Sand	1870	2065
	Weight (# Gallon)	15.3	-	15.3		Shale	2065	5369
	Return to Surface	Yes	Yes	No		Oriskany	5369	5417
	Plug Down Pressure	-	1000PSIG	1000PSIG				
DOWN HOLE EQUIPMENT	Manufacturer	-	Hallib.	Hallib.				
	Type	-	GS & FC	GS & FC				
	Size	-	9-5/8"	7"				
	Setting Depth	-	2083-2068	5343-5300				
PERFORATING RECORD	From (feet)							
	To (feet)	Open Hole Completion						
	No. Shots Perfor.							
	Kind of Shot							
	Date							
Service Co.								

STIMULATION RECORD	Formation	Oriskany		Formation			Formation		
	From	5369'	To 5147'	From		To			
	Date								
	Type	H ₂ O Frac.							
	Fluid (Total Bbl.)	840 BBLs							
Propping Agent (#)	20,000# 20-40 Sand								
Service Co.	Halliburton								

OPEN FLOW TESTS		BEFORE	AFTER	BEFORE	AFTER	BEFORE	AFTER
	Date		7-28-78				
	Open Flow		11.6MMCF				
	Duration (hour)		8 hrs.				
	Type Gauge		SideStatic				
Size Opening		4"					

WELLHEAD PRESSURE TESTS	START DATE	7-25-78					
	1 Minute	"					
	3 Minutes	"					
	5 Minutes	"					
	10 Minutes	"					
	20 Minutes	"					
	24 Hours	"					
	48 Hours	"					
72 Hours	1470 PSIG						

LOGGING RECORD	ELEVATION	1103'		DISTANCE TO GROUND	15'	
	DEPTH MEASUREMENT TAKEN FROM	<input checked="" type="checkbox"/> Kelly Bushing <input type="checkbox"/> Ground <input type="checkbox"/> Other (specify) _____				
	Logged By (company)	Schiumberger Well Service				
	Type of Log	Gamma Ray	Compensated	Density		
	Date	3-15-78	3-15-78			
	From (feet)	5428	5428			
	To (feet)	Surface	Surface			

REMARKS

06/14/2013
Received

PREPARED BY A. O. Eplin	DATE 9 13 78	APPROVED BY	DATE
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MAY 15 2013
Office of Oil and Gas
WV Dept. of Environmental Protection

2902816R

(ROMANCE)



BLUE CREEK QUADRANGLE
WEST VIRGINIA
TOPOGRAPHIC SERIES

(CLIO)



Recd
MAY 15 2013
Copyright of Environmental Protection Agency
Copyright of Oil and Gas

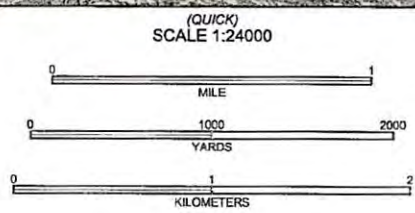
(BIG CHIMNEY)

(GLENDEIN)

(CHARLESTON EAST)

(MAMMOTH)

Produced by MyTopo Terrain Navigator
Topography based on USGS 1:24,000 Maps
North American 1983 Datum (NAD83)
Polyconic Projection
To place on the predicted North American 1927 move the
projection lines 11M N and 14M E



CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM 1929

BLUE CREEK, WV
1957

06/14/2013

LATITUDE 38°25'00"

4,115'

LONGITUDE 81°25'00"

7,450'

GAS WELL

GAS WELL

CONNIE SHAFFER
DEED BOOK 1746 PAGE 466
TAX MAP 39 PARCEL 90.1

UTM METERS (NAD83)
N-4249874.59
E-462376.44

LAT.=38°23'46.32"
LONG.=81°25'51.65"

WELL #12079

HANSHAW ROAD
ROUTE 902/23

2" IRON PIPE

815'
N 85°06' E

2" IRON PIPE

7.5 LOC.

N 84°32' E
368'

CARLOS HIVELY
DEED BOOK 1781 PAGE 573
TAX MAP 39 PARCEL 90.2

PERRY CEMETERY
DEED BOOK 455 PAGE 263
TAX MAP 39 PARCEL 89

SECONDARY ROUTE 49/2

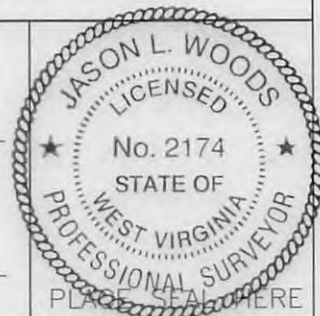
JOHNNY P. & THELMA R.
JACKSON
DEED BOOK 1718 PAGE 574
TAX MAP 39 PARCEL 90

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS REVISED 6/5/13

FILE No 13-100-010
DRAWING No. 13-100-010
SCALE 1"=500'
MINIMUM DEGREE OF
ACCURACY 1:200
PROVEN SOURCE OF
ELEVATION TRIMBLE PRO XH
GPS UNIT

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 REGU-
LATIONS ISSUED AND PRESCRIBED BY THE
DIVISION OF ENVIRONMENTAL PROTECTION.

(SIGNED) Jason L. Woods 6-6-13
JASON L. WOODS PS #2174



STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
NITRO, WV



DATE APRIL 19 20 13
OPERATOR'S WELL No. 12079
API WELL No.

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
LOCATION: ELEVATION 1115 WATER SHED FALLING ROCK CREEK
DISTRICT ELK COUNTY KANAWHA
QUADRANGLE BLUE CREEK

SURFACE OWNER JOHNNY P. & THELMA R. JACKSON ACREAGE 10.19
OIL & GAS ROYALTY OWNER J. H. PERRY, ET UX LEASE ACREAGE 162
LEASE No. 11347

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR
STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW
FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) FRAC

06/14/2013

PLUG AND ABANDON CLEAN OUT AND REPLUG
TARGET FORMATION ORISKANY ESTIMATED DEPTH 5450
WELL OPERATOR COLUMBIA GAS TRANSMISSION, LLC DESIGNATED AGENT PAUL AMICK
ADDRESS PO BOX 1273, CHARLESTON, WV ADDRESS P.O. BOX 1273, CHARLESTON W.V.
25325-1273 25325-1273

FORM IV-6 (8-78)

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
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JOH P

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