

# **§22-6A**

# **Horizontal Well Permitting**



west virginia department of environmental protection

**Gene C. Smith**  
**Assistant Chief of Permitting**  
**Office of Oil and Gas**

**Marcellus Academy, West Virginia Wesleyan**  
**July 13, 2013**

# Legislation Governing Horizontal Drilling in West Virginia

§22-6 portion of West Virginia Environmental Resources law governing Oil and Gas Wells

August 22, 2011: Emergency Rule §35-8 was enacted to increase oversight of horizontal drilling

Dec. 14, 2011: §22-6A Horizontal Well Control Act enacted

July 1<sup>st</sup>, 2013: §35-8 Rules Governing Horizontal Well Development went into effect

# Definition of a Well Applicable to §22 6A (H6A) Legislation

## H6A Applies to:

“...any natural gas well ...drilled using a **horizontal** drilling method, and which disturbs **three acres or more** of surface, excluding pipelines, gathering lines and roads, **or utilizes more than two hundred ten thousand gallons of water** in any thirty day period”

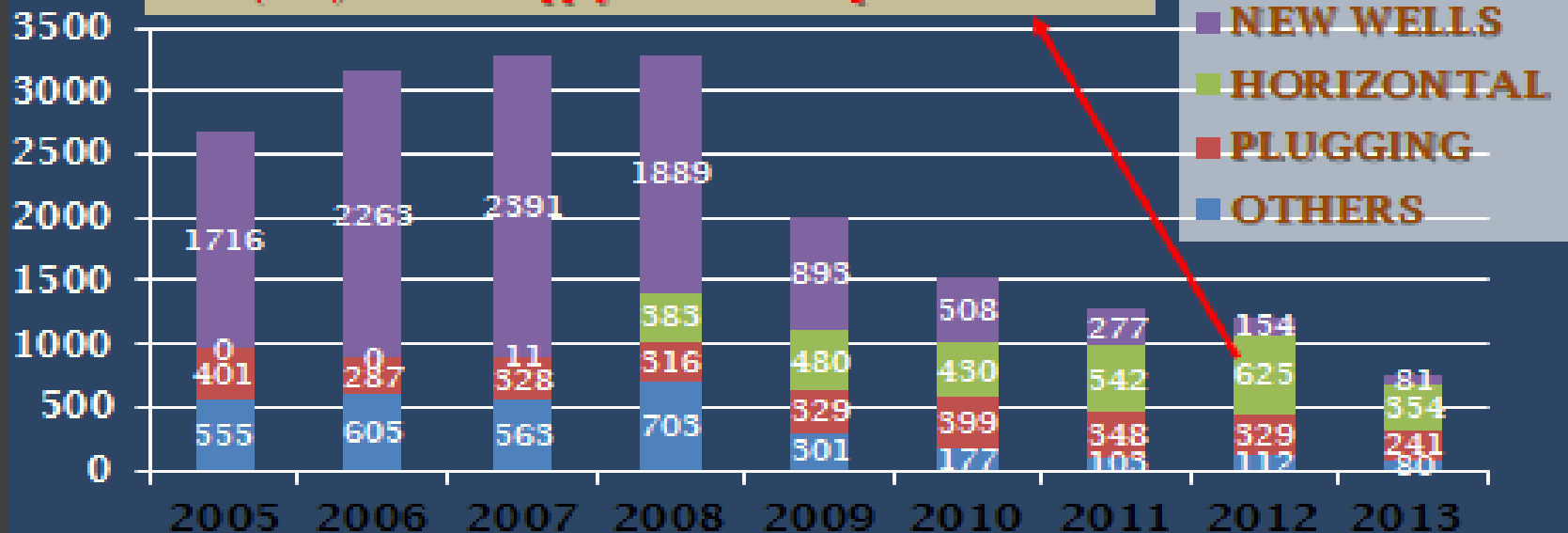
( 22-6A-3)

# PERMIT TREND

## PERMITS ISSUED

**Horizontal 22-6A Permits - 20 Operators**

**(416) Permits apply to H6A Requirements**



**Approximately 250 Marcellus Wells Drilled/Completed YEARLY**

July  
10th

**Drilling Rigs Statewide Currently**

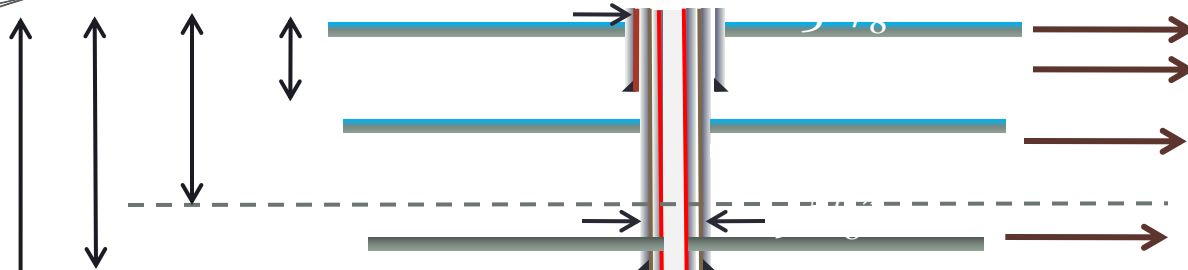
**45 Total Reported (30) Marcellus Operations**



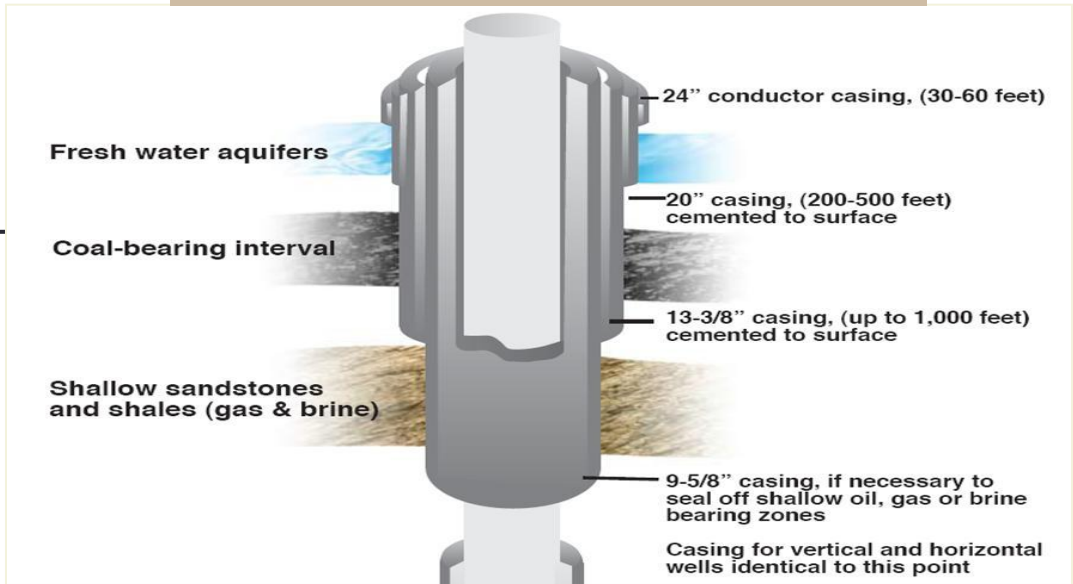
# General Well-Bore Construction

- **Conductor Casing**— Unconsolidated ground Protection
  - Cement Circulated throughout casing annulus.
- **Surface Casing**— Ground Water Protection
  - Cement Circulated throughout casing annulus.
- **Coal Protection Casing**— Mineral Protection
  - Cement Circulated throughout casing annulus.
- **Intermediate Casing**— Critical Well Control @ Drilling
  - Deep Wells and Abnormal/High Pressure Expectations.
- **Production Casing**— Critical Fracturing (Completion) and Production Isolation.

# A Typical Marcellus Wellbore West Virginia



## Multiple casings & objectives



Run to Lateral Ends

Laterals Increasing to Two Miles

Marcellus Formation

# H6A Application Requirements

## H6A Checklist Page 1

### Horizontal 6A Well Permit App. Checklist

OPERATOR: \_\_\_\_\_  
PAD NAME: \_\_\_\_\_ WELL: \_\_\_\_\_  
PAD BUILT:  YES  NO DATE REVIEWED: \_\_\_\_\_ INT. \_\_\_\_\_  
REVIEWED BY (APPLICANT): \_\_\_\_\_  
APPLICANT SIGNATURE: \_\_\_\_\_

### CHECKLIST FOR FILING A PERMIT HORIZONTAL 6A WELL

Please include these required elements in the Horizontal Well 6A applications, in order listed below.  
Do not use staples.

First Well	Subsequent Well
\$10,150.00 <input type="checkbox"/>	\$5,150.00 <input type="checkbox"/>

- Fees
- Checklist / Cover letter
- [WW-6B](#) Notice of Application  Field Approved
- Cement Additives
- Well Bore Schematic
- [WW-PN](#) Application Notice by Publication
- Public Notice (dated copy of advertisement or affidavit of publication)
- [WW-6A](#) Notice of Application notarized w/ any attachments
- Topographic Map with labeled surrounding water wells
- Certified Mail receipts for WW-6A
- [WW-6AC](#) Notice Certifications, notarized
- [WW-6A3](#) Notice of Entry for Plat Survey
- Certified Mail receipts for WW-6A3
- [WW-6A4](#) Notice of Intent to Drill
- Certified Mail receipts for WW-6A4

- Checklist is used by Operators to prepare application and by DEP OOG reviewers to review application
- Each item is reviewed for receipt, accuracy, and adherence to all applicable laws
- Can be found at 22-6A Horizontal Well Permit Application Page:  
<http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits>

# H6A Application Requirements

## H6A Checklist Page 2

[WW-6A5](#) Notice of Planned Operation

Certified Mail receipts for WW-6A5

[WW-6RW](#) Well Location Restriction Waiver

[WW-6AW](#) Voluntary Statement of No Objection

\_\_\_\_\_ Waiver for Surface Owner at Wellhead

\_\_\_\_\_ Waiver for Surface Owner for Roads or other Disturbances

\_\_\_\_\_ Waiver for Coal Owner, Operator or Lessee

\_\_\_\_\_ Waiver for surface owner for Impoundment or Pit

\_\_\_\_\_ Waiver for Surface Owner or Water Purveyor within 1500 feet of Center of Pad

\_\_\_\_\_ Waiver for Natural gas Storage Field Operator

[WW-6A1](#) Lease Information

Road Crossing Letter

Road Bonding Agreement / DOH Certification

[WW-9](#) Fluids/Cuttings Disposal and Reclamation Plan

\_\_\_\_\_ Field Approved

Frac Additives List of Chemical Names & CAS #s

Site Safety Plan

\_\_\_\_\_ Field Approved

Site Construction, Reclamation, Erosion & Sediment Control Plans

\_\_\_\_\_ Field Approved

Topographic Map w/water purveyors, showing access road

Mylar Plat (Signed and sealed) (Surface Owner matches WW-6A)

[Water Management Plan](#)

\_\_\_\_\_ DWWM Approval

Copy of To Scale Plans

Inspector packet mailed to inspector (Plat, Topographic Map, WW-6B, WW-9, All Plans)

Bond (\$250,000)

Operator is registered with the SOS

- Certain items are reviewed by field staff before office personnel begin to review
- Water Management Plan is reviewed by DEP Division of Water and Waste Management personnel



# H6A Application Requirements

## Horizontal 6A Well Permit App. Checklist

Workers Compensation / Unemployment Insurance account is OK

Professional Engineer/Company has COA

Check for Mine Data at proposed coordinates

Check for Floodplain Data at proposed coordinates

[IMP-1A](#) Associated Pit or Impoundment

[WW-6A7](#) Well Restrictions Form w/ Signature

At Least 100 Feet from Pad and LOD (including any E&S Control Feature) to any Perennial Stream, Lake, Pond, Reservoir or Wetland

DEP Waiver and Permit Conditions

At Least 300 Feet from Pad and LOD (including any E&S Control Feature) to any Naturally Producing Trout Stream

DEP Waiver and Permit Conditions

At Least 1000 Feet from Pad and LOD (including any E&S Control Feature) to any Groundwater Intake or Public Water Supply

DEP Waiver and Permit Conditions

At Least 250 Feet from an Existing Water Well or Developed Spring to Well Being Drilled

Surface Owner Waiver and Recorded with County Clerk, OR

DEP Variance and Permit Conditions

At Least 625 Feet from an Occupied Dwelling Structure to the Center of the Pad

Surface Owner Waiver and Recorded with County Clerk, OR

DEP Variance and Permit Conditions

At Least 625 Feet from Agricultural Buildings Larger than 2500 Square Feet to the Center of the Pad

Surface Owner Waiver and Recorded with County Clerk, OR

DEP Variance and Permit Conditions

## H6A Checklist Page 3

- Reviewer checks outside sources for Operator compliance:
  - Secretary of State registered Business Organization
  - Workers Comp/Unemployment claims
  - WV Certified Professional Engineer
- Reviewer checks whether well will be located near an active or abandoned coal mine, whether it is in a flood plain

Operator's Well Number \_\_\_\_\_

**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
_____	_____	_____	_____

**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: \_\_\_\_\_

# Office of Oil and Gas WELL WORK PERMIT APPLICATION

## WW-2A1 Form submitted

## *Acknowledgement of Other Permits Permitting/Approval*

# H6A Well Location Restrictions

