

The Office of Oil and Gas; Oil and Gas Wells
West Virginia Department of Environmental Protection

ABANDONED WELL COMPLIANCE

Inspections, Inventory, and Enforcement

West Virginia Code:
Chapter § 22 Article 6 “Administration; Enforcement”
Chapter § 22 Article 10 “Abandoned Well Act”

February 6, 2013

Presentation Coverage

- Regulations “Identified”.
- Database information “Overview”.
- Abandoned well types “Recognized”.
- Bona Fide Future Use “Scope”.
- Legislative Audit “Reporting”.
- Enforcement and “Strategy In-Place”.

Chapter 22 Code Requirement

§ 22-6-19. Same -- Continuance during life of well; dry or abandoned wells.

...

Any well which is completed as a dry hole or which is not in use for a period of twelve consecutive months shall be presumed to have been abandoned and shall promptly be plugged by the operator in accordance with the provisions of this article, unless the operator furnishes satisfactory proof to the director that there is a bona fide future use for such well.

Article 10 “Abandoned Well Act”

§ 22-10-2. Legislative findings . . .

(a) The Legislature finds and declares that:

(1) Oil and gas have been continuously produced in West Virginia for over one hundred years, during which time operators of wells have been required by the laws of this state to plug wells upon cessation of use;

(2) The plugging requirements for certain older oil and gas and other wells may not have been sufficient to protect underground water supplies, to prevent the movement of fluids between geologic horizons, to allow coal operators to mine through such wells safely, nor to allow for enhanced recovery of oil, gas or other mineral resources of this state;

. . .

Rule 35 Series 6 Requirements

“Abandoned Well Rule”

§ 35-6-1. General.

1.1. Scope -- This legislative rule establishes a variety of requirements pertaining to oil and gas wells in West Virginia, the West Virginia Abandoned Well Act, WV Code § 22-10-1 et seq., and more specifically in relation to . . .

- abandoned wells,
- financial responsibility requirements,
- a priority system for plugging abandoned wells,
- the declaration of operator status,
- authorizing interested persons to plug abandoned wells,
- schedules for plugging wells, and
- emergency procedures for abandoned wells.

Annual Production Reporting

§ 35-4-15. Reports.

15.1. Annual Reports of Oil and Gas Production.

15.1.a. An annual report of oil and gas production for each well shall be filed with the Chief on or before the succeeding March 31. This report shall be on Form WR-39, "Report of Annual Production," or in such form as the Chief may approve. The report must identify and state the production from every oil and gas well not yet plugged and abandoned, regardless of the status of the well. The data shall be submitted by the well operator. Oil shall be reported in barrels, and gas shall be reported in thousand cubic feet.

22-6-23 Plugging Requirements

§ 22-6-23. Plugging, abandonment and reclamation of well; notice of intention; bonds; affidavit showing time and manner.

All dry or abandoned wells or wells presumed to be abandoned under the provisions of section nineteen of this article shall be plugged and reclaimed in accordance with this section and the other provisions of this article and in accordance with the rules promulgated by the director. . . .

22-6-24 “Plugging Methodology”

§22-6-24. Methods of plugging well.

General Requirement

- Recover Casings and Tubulars.
- Cement Plugs - oil, gas, salts, workable coal, fresh water strata.
- 6% Gel between plugs.
- Tag plugs as necessary.
- Surface Cement Plug.
- Install Monument with API PERMIT ID (height 30 inch minimum).

Placement of Cement Plugs

- Bottom Wellbore Plug.
- 100 Feet Cement Plugs Minimum.
- Any Oil and Gas Bearing Strata.
- Across Casing Cuts.
- Above shallowest Salt Bearing Strata.
- Workable Coal Strata (twenty inches).
- Fresh Water Bearing Strata.
- Surface Plug.

Coal Protection Strings (Casing-Annulus Cemented)

- 100 Feet Expanding Cement below Coal Protection String.
- Coal Protection String remains (vent or 'coal degas' purpose).
- Well Left for Vent or De-Gas Purposes.

Coal Protection Strings (Casing-Annulus Open)

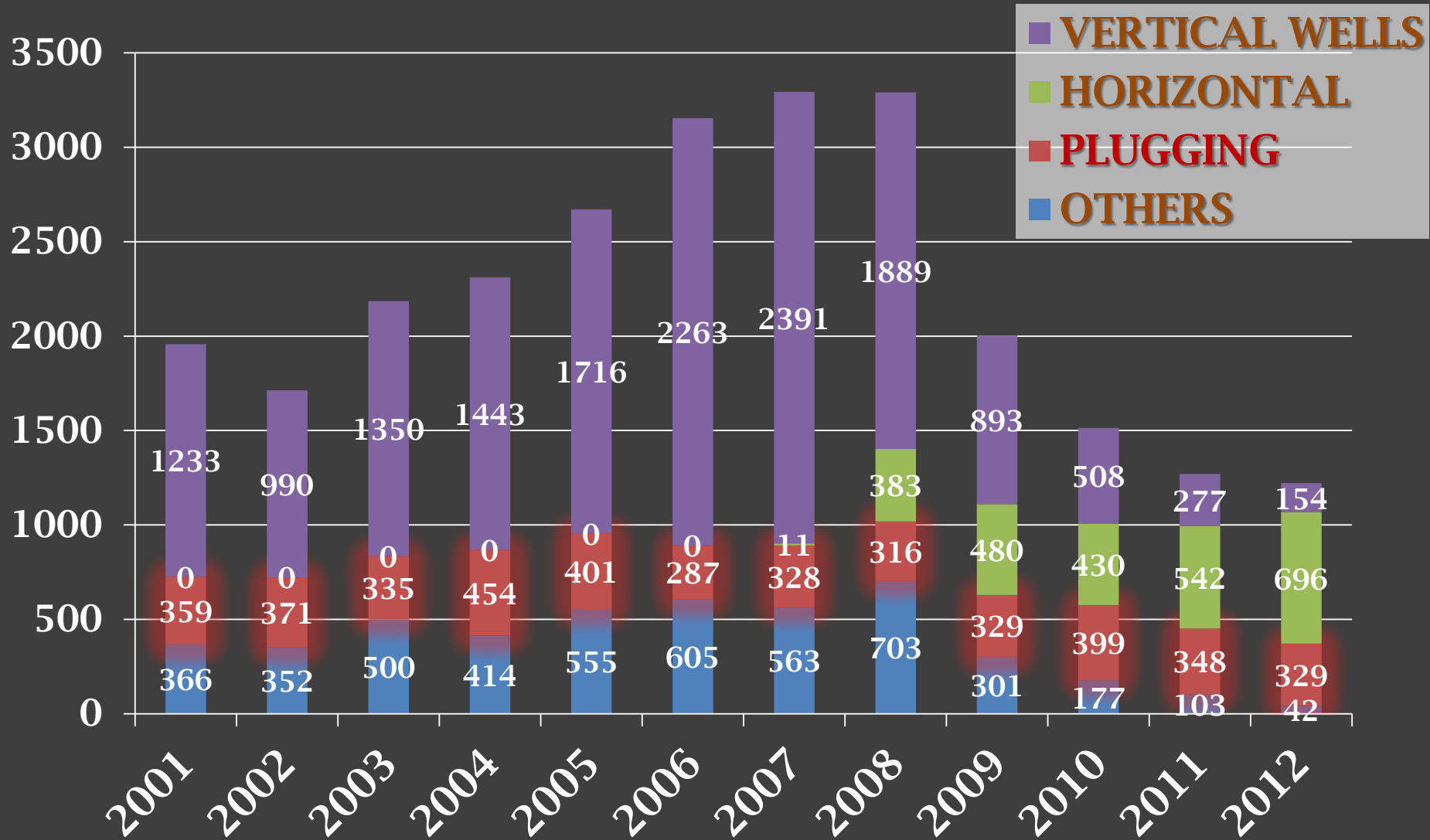
- Recover Coal Protection String.
- Cement across Coal Strata.
- Surface and Fresh Water Strata plugged.
- Install Monument.

Plugging of Wells

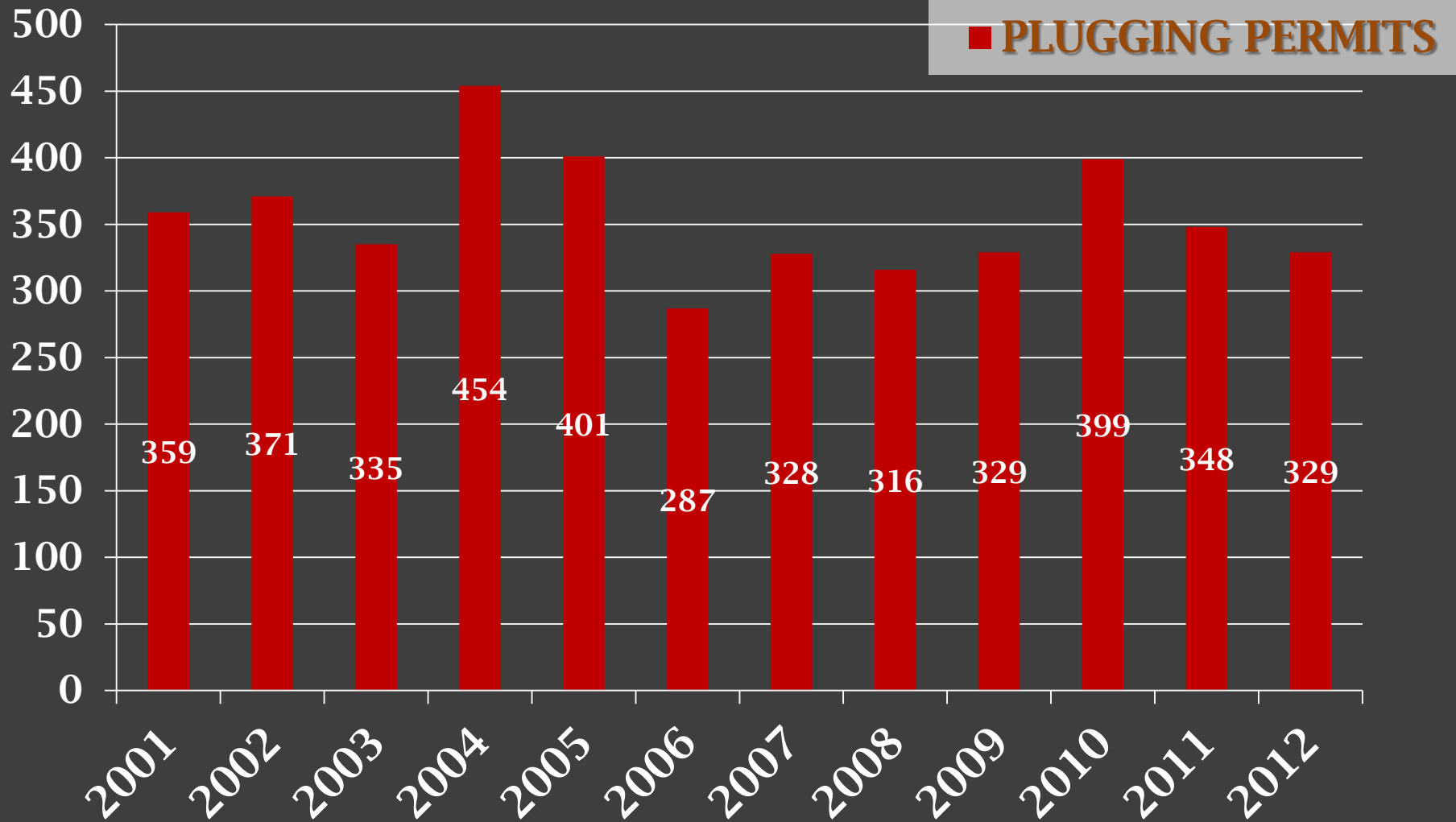
Methodology *and* Inspection

PERMIT TREND

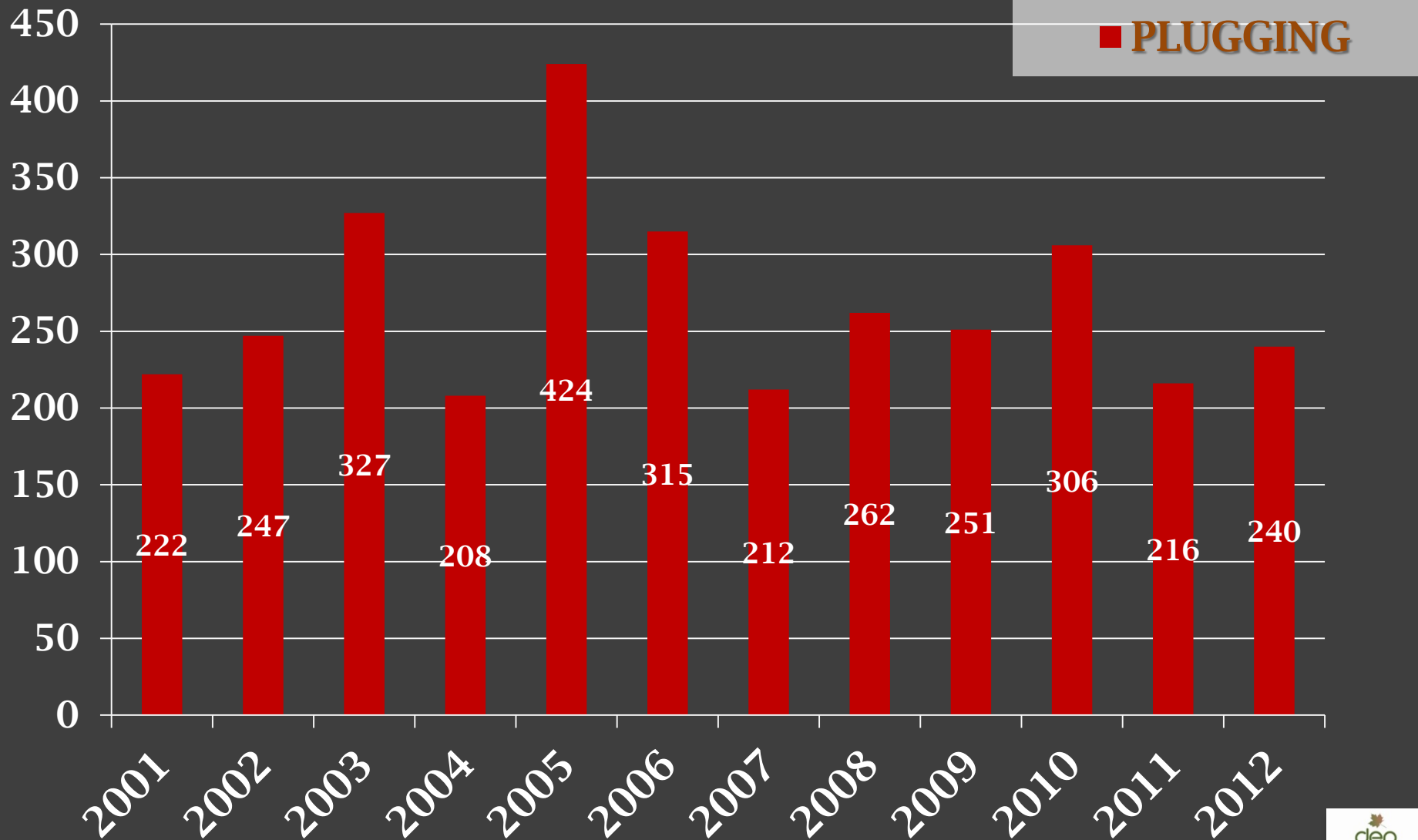
ALL PERMITS ISSUED



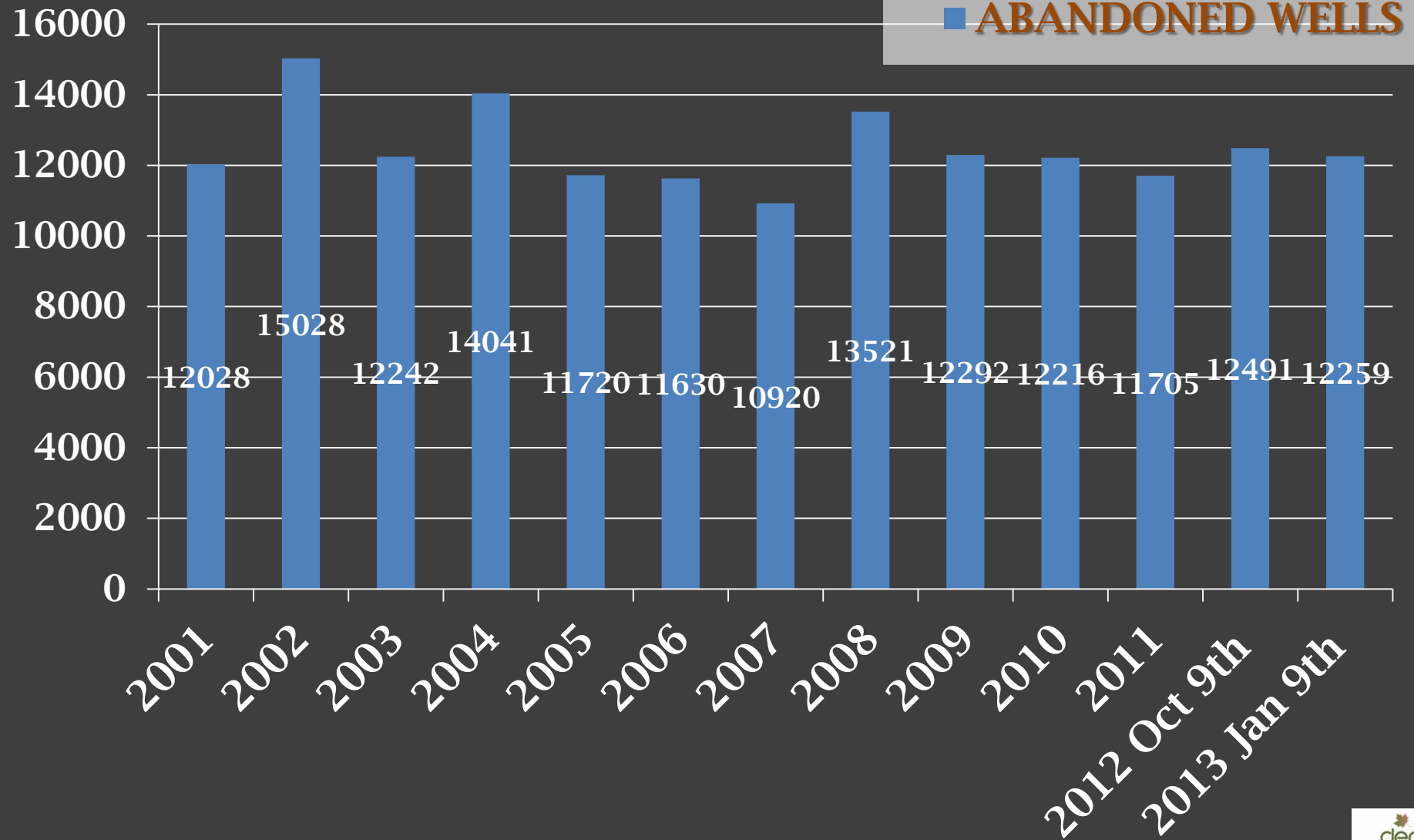
PLUGGING PERMITS ISSUED



WELL PLUGGING



ABANDONED WELLS

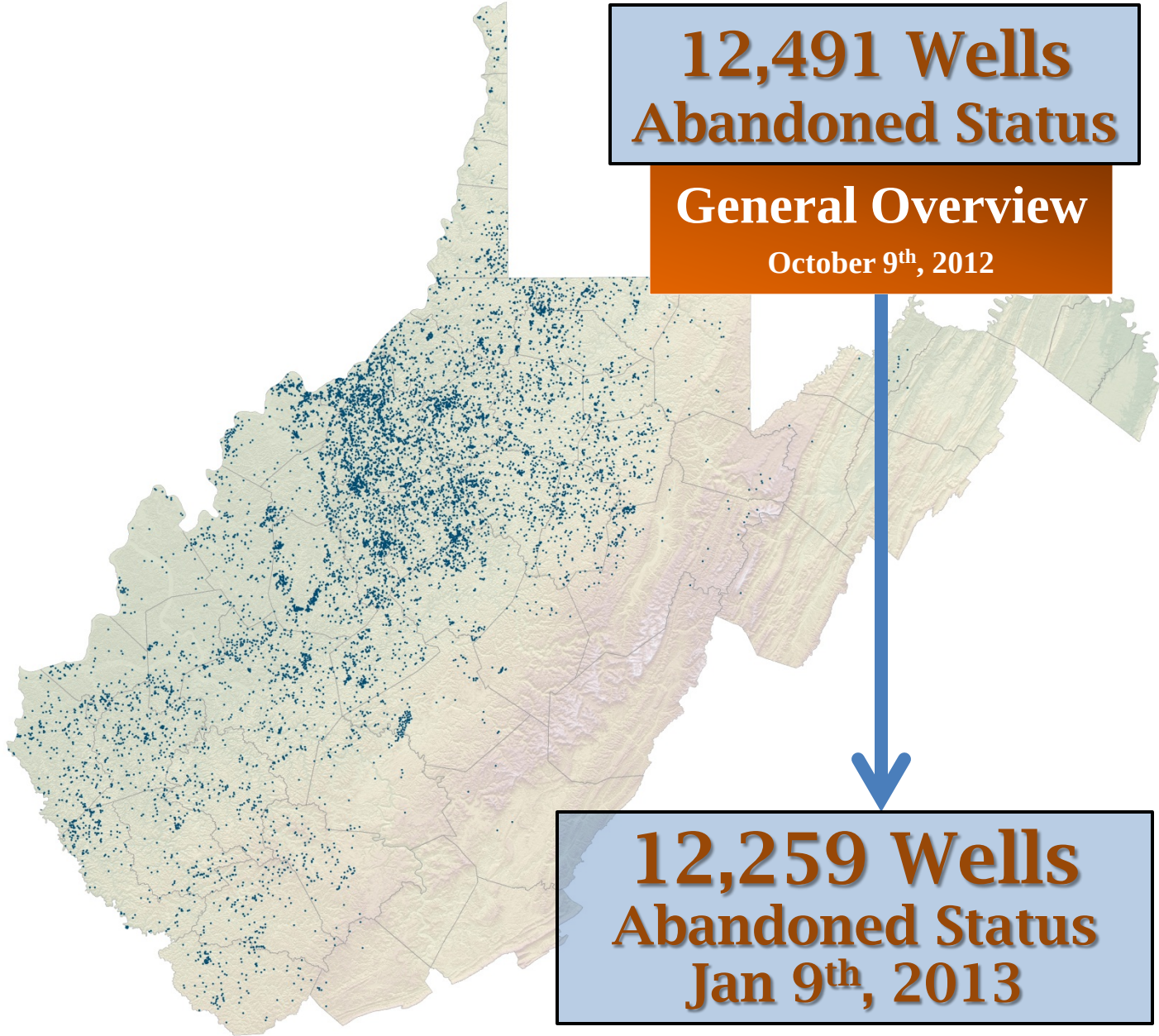


API - ABANDONED WELLS

**12,491 Wells
Abandoned Status**

General Overview

October 9th, 2012



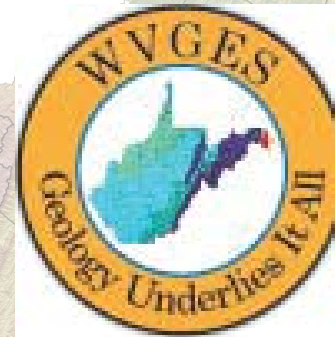
**12,259 Wells
Abandoned Status
Jan 9th, 2013**

PRE-29 WELLS DATA BASE



**54,891 Wells
Not Confirmed!**

**30000 to 90000
Series Database**



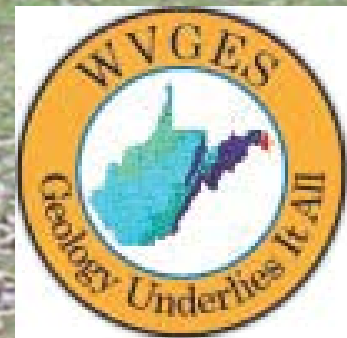
General Overview

October 9th, 2012

Only few wells are located by surveys conducted

A photograph of a tree trunk with a metal well cap protruding from it. The tree bark is rough and textured. The metal cap is dark and has a circular shape with a central protrusion. The background shows a grassy area and some trees.

**Example
Series Well “Pre-29”**



Scope “Bona Fide Future Use”

§ 35-5-1. Series 5 General.

5.1.1. **Scope** -- This legislative rule establishes requirements pertaining to the operator's designation of bona fide future use of wells and certification of inactive status and information and data to be required by the chief as necessary to such designation.

Procedure Bona Fide Future Use

§ 35-5-3. Procedure for Designation of Bona Fide Future Use.

3.1. Any operator seeking designation of bona fide future use for a well shall submit to the chief a Designation of Bona Fide Future Use on forms prescribed by the chief which shall require the following information:

- ✓ 3.1.a. The name and address of the operator;
- ✓ 3.1.b. The location of the well;
- ✓ 3.1.c. The API number of the well;
- ✓ 3.1.d. A viable plan for utilizing the well including an estimated time for commencement of the future use of the well; . . . and
- ✓ 3.1.e. Any other information requested by the chief.

Demonstration bona fide future use

§35-5-4. Demonstration of Designation of Bona Fide Future Use.

4.1. For any well which is not in active status, an operator must demonstrate bona fide future use to avoid having such well deemed abandoned under WV Code §22-6-19. In order to establish bona fide future use, the operator shall submit information and data sufficient to satisfy the chief that there is a bona fide future use for the well. The operator should consider the following information:

Demonstration bona fide future use

- 4.1.a. The date on which the well was completed;
- 4.1.b. The method which the well meets the financial responsibility requirements of WV Code §22-10-4 and §22-10-5;
- 4.1.c. The date on which the well first produced;
- 4.1.d. The results of the initial gas-oil ratio test;
- 4.1.e. The last date on which the well was producing;
- 4.1.f. The average monthly production at the time production ceased;
- 4.1.g. The formation(s) from which the well produced;
- 4.1.h. The estimated remaining recoverable reserves associated with the well without reworking the well;
- 4.1.i. Whether reworking the well to recover additional reserves is possible;
- 4.1.j. The estimated remaining recoverable reserves associated with the well after reworking;
- 4.1.k. The method used to establish reserve estimates in subdivisions 4.1.h and 4.1.j;

Demonstration bona fide future use

- 4.1.l. Whether secondary recovery is possible;
- 4.1.m. Whether production from other formations is possible;
- 4.1.n. Whether the well can be drilled deeper;
- 4.1.o. The estimated cost to deepen the well;
- 4.1.p. Whether the well is covered by a gas sales contract;
- 4.1.q. Whether the well is connected to a gas meter, or how it is measured at the transfer of ownership or custody;
- 4.1.r. Other equipment connected to the well;
- 4.1.s. Whether the well is connected to a pipeline system;
- 4.1.t. A description of the line pressure of the receiving pipeline;
- 4.1.u. Whether a compressor is in place and whether it is in use on the well;
- 4.1.v. If the well is not connected to a pipeline, the distance to the nearest pipeline that would accept production from the well;
- 4.1.w. Whether a shut-in royalty is being paid;
- 4.1.x. The operator's schedule for putting the well into production;

Demonstration bona fide future use

- 4.1.y. Whether the well is capable of use for gas storage;
- 4.1.z. Whether the well is capable of being used as a liquid injection well;
- 4.1.aa. Whether money has been escrowed for use to plug the well in the future; and
- 4.1.bb. Any other information which the operator considers relevant to establishing a bona fide future use.

Agency Review

“PERFORMANCE AUDIT”

Office of Oil and Gas

Department of Environmental Protection

West Virginia Legislative Audit:

- Joint committee on Government Operations
- Joint committee on Government Organization
- Performance Evaluation & Research Division

September 2012

PE 12-10-523

Executive Summary

Audit Overview:

- **Issue 1** - The Office of Oil and Gas is not enforcing statutory requirements as they concern **abandoned oil and gas wells** which is causing the number of abandoned wells to increase.

Supportive Findings

- There are approximately 13,000 abandoned oil and gas wells in West Virginia.
- 36.1% are listed as having no known operator.
- 44.4% are currently registered to known operators who do not have an abandoned well initiative compliance agreement.
- 19.2% are registered to known operators that are in the 10-year Abandoned Well Initiative program.
- The remaining 0.3% , 34 wells are in the Bona Fide Future Use Program.

Recommendations

1. The Legislative Auditor recommends that the OOG program the ERIS database to alert it any time a well is out of production for a period longer than 12 months since this is a key determination of abandoned well status set by Code.
2. The Legislative Auditor recommends that when a well is out of production for a period longer than 12 months, the OOG should enforce the Code and require the operator to either:
 - Plug the well
 - Place it back into production
 - Place it into Bona Fide Future Use, or
 - Place it into a long-term compliance initiative agreement

Recommendations (cont.)

3. The Legislative Auditor recommends that the OOG update the database system and data entry procedures to avoid and eliminate errors such as missing and inconsistent information.
4. The Legislative Auditor recommends that the OOG incorporate performance goals and measures to address its compliance with the Code for wells that are out of production longer than 12 consecutive months and place them in the executive budget operating detail and OOG website.

Department of Environmental Protection

Office of Oil and Gas

Response

ISSUE 1:

- The DEP has been short staffed for years due to a lack of funding.
- Special Legislative Session passed bill in December 2011 allowing Office of Oil and Gas to increase permit fees to deal with Marcellus Shale drilling and fill vacancies, hiring additional staff for this purpose allows dedication of more staff time to inspection and enforcement.
- Office of Oil and Gas plans to program current database system to automatically generate a letter to the operator when production reports are not received or when a well has been out of production for more than 12 consecutive months. . . . If no action is taken by the operator to bring the well into compliance, enforcement action would be taken and the operator would be required to:

Department of Environmental Protection Office of Oil and Gas

Response

ISSUE 1: (Cont.)

1. PLUG THE WELL

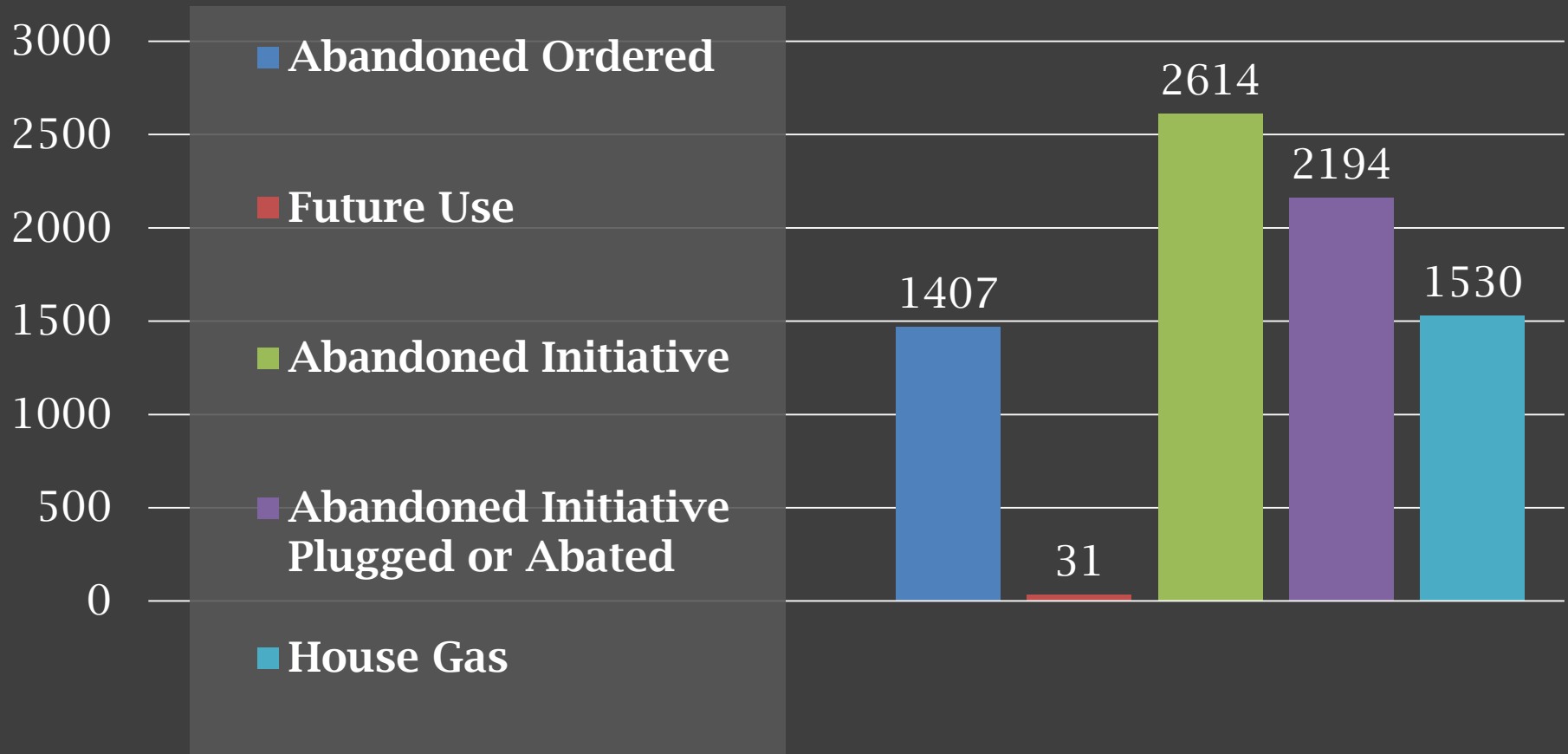
2. PLACE IT BACK INTO PRODUCTION

3. PLACE IT IN THE BONA FIDE FUTURE USE PROGEAM

4. PLACE IT INTO A LONG-TERM COMPLIANCE
INITIATIVE PROGRAM

- With an increased enforcement staff, the Office of Oil and Gas will follow up with operators to ensure the wells are in compliance.
- The missing information in the database shall be resolved by a letter to the operator and/or enforcement action.
- These efforts should assist in the reduction of the number of Abandoned Wells in the future.

2013 Jan 2nd Well Status



Abandoned Well Enforcement Strategies

Strategy Proposed

- ✓ Operators with abandoned wells are recognized.
- ✓ OOG Staff approaching Operating Company Representatives.
- ✓ Options are identified during initial contacts.
- ✓ OOG Staff following up with Operators on delinquent responses.
- ✓ Enforcement actions are likely without responses.

Abandoned Well Enforcement Strategies

Orders & BFUs Established

- ✓ Abandoned Well Enforcement leaders are the contacts for Plugging Schedules or Bona Fide Future Use of wells.
- ✓ Operators, within thirty (30) days, must submit 'List of wells & supporting data' for Bona Fide Future Use and/or Plugging Schedules.
- ✓ Abandoned Wells may be transferred by issuance of a Transfer Order however requirements from the receiving company are:
 1. Bona Fide Future Use demonstrations within thirty (30) days and/or
 2. Plugging Schedules provided within sixty (60) days particularly for wells not approved for BFU.

Abandoned Well Enforcement Strategies

Orders & BFUs Established

- ✓ Abandoned Well Enforcement leaders review request for Bona Fide Future Use –
 - Approval/denial decisions.
- ✓ Abandoned Well Enforcement leaders review proposed plugging schedules –
 - Assist in drafting Plugging Orders.
- ✓ Abandoned Well Enforcement leaders track actions & orders taken and report updates to Section Manager.
- ✓ Operators who fail to respond within the required thirty (30) days are subject to Enforcement Actions.
- ✓ PROACTIVE OPERATOR - SCHEDULE AN APPOINTMENT

David J. Belcher

Office of Oil and Gas
Department of Environmental Protection
601 57th Street, SE
Charleston, WV 25304
304-926-0450

david.j.belcher@wv.gov

www.dep.wv.gov



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