

Division of Oil and Gas

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MEMORANDUM 2009-1

To: All Indiana Oil and Gas Operators
From: Herschel McDivitt, Director
Date: July 9, 2009
Subject: Coal Seam Protection – Clarification of Requirements for New Wells and FAQ's

Recently it has become apparent that some clarification may be important in order that oil and gas operators, and coal owners or operators, fully understand the requirements under the Indiana oil and gas program for the protection of coal seams when permitting and drilling new wells. The purpose of this memorandum is to provide an explanation of the coal seam protection provisions as they currently exist in the Oil and Gas Act (IC 14-37) and our regulations (312 IAC 16).

The requirements for protection of coal seams depend on the proximity of a proposed well to active or planned underground mining operations. Basically there are three (3) differing standards of protection that might apply to the construction requirements for new oil and gas wells. These requirements are as follows, starting with the most protective level:

- A.) **Wells located within the permit boundary of either an active or an inactive underground mine permitted under IC 14-34.** Wells to be drilled within the permit boundary of any underground coal mine must be constructed with an intermediate string of casing as required by [IC 14-37-7-3\(a\)](#). The intermediate casing (or coal string) shall be set at least fifty (50) feet below the base of the commercially mineable coal resource or the mine floor, and extend to the surface. This casing shall be cemented from the base of the casing to a point at least inside the cemented surface casing.

A variance to the requirement for installing a coal string may be granted by the Director of the Division of Oil and Gas (Director) if written consent to the variance is given by:

1. in the case of an inactive mine, the permittee of the mine under IC 14-34 or the person with the right to develop the coal resource; or
2. in the case of an active mine, the permittee of the mine under IC 14-34.

If a variance is granted by the Director, the well must be constructed as required under C) below unless the coal mine permittee requests that a sonic cement bond-variable density log be run on the well as required under B) below.

B.) Wells located outside the permit boundary of an active or inactive underground mine, but within an area for which a coal owner or operator has filed a mine plan. If a well is to be drilled within the boundaries of an area for which a person engaged in the production of commercially mineable coal resources has filed a mine plan under [312 IAC 16-5-4\(b\)](#), the well is not required to be constructed with an intermediate string of casing as described in A) above. However, the oil and gas operator shall set production casing with sufficient centralizers to ensure that the casing is properly centralized in that portion of the well through the commercially mineable coal resource. This string of casing shall be circulated with cement to a point at least inside the cemented surface casing.

The adequacy of cement bonding shall be documented by a sonic cement-bond density log. At least a forty-eight (48) hour notice shall be provided by the oil and gas operator to both the Division and the coal owner or operator who filed the mine plan prior to commencing logging operations. The coal owner or operator is entitled to be present during the logging operations and to examine the log. A copy of the log shall be submitted to the Division within thirty (30) days.

C.) All other wells drilled through commercially mineable coal resources. All other wells not described in A) or B) above shall be constructed with the use of sufficient centralizers to ensure that the production casing is properly centralized in that portion of the well through the commercially mineable coal resource. The production casing shall be circulated with cement to a point at least inside the cemented surface casing.

Frequently Asked Questions

Q. What is the purpose of the requirement to protect coal seams?

A. Indiana's coal, oil and natural gas are important resources not only to help support Indiana's economy but also a vital component of our nation's overall energy plan. Current underground coal mining safety regulations prohibit mining operations within three hundred feet (300') of any oil or gas well unless a written waiver is approved by the U.S. Mine Safety and Health Administration. An important factor in determining whether to grant a waiver is whether the coal seam is protected with adequate casing and cement. Properly constructed oil and gas wells are important to ensure that valuable coal resources are not wasted and that the health and safety of underground coal miners is not compromised because of the improperly constructed oil or gas wells.

Q. How do you find out whether a proposed oil or gas well location is within the boundary of an inactive or active underground coal mine as indicated in A) above?

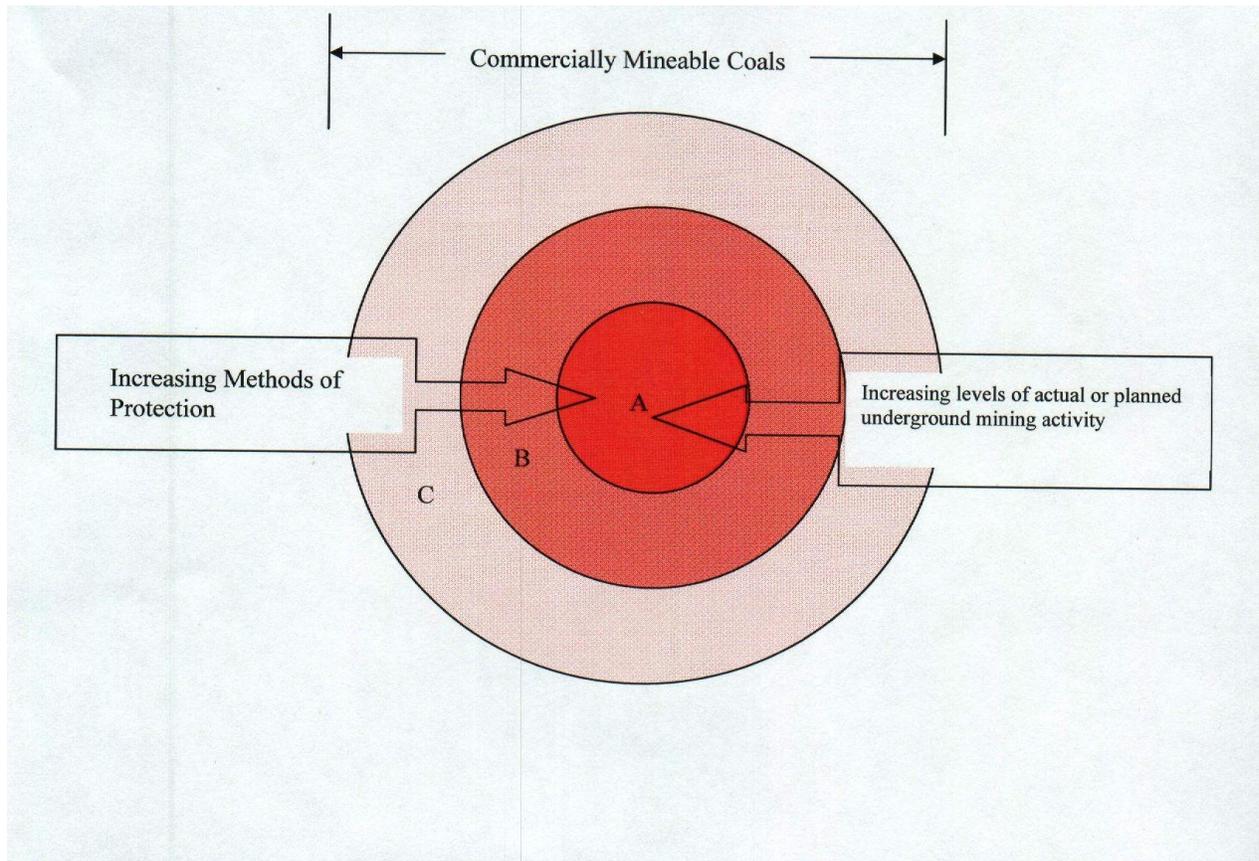
A. A new interactive map feature has been added to the Division of Oil and Gas website which shows the location of all pending, active and inactive underground coal mining operations permitted by the Division of Reclamation. To access this map, select "For Oil and Gas Operators" from the menu on the left side of our home page at <http://www.in.gov/dnr/dnroil>. Then click on the "Check Out Where in Indiana the Coal Mining Permits are Active" icon. This will take you to an interactive map which shows the location and boundary of every permitted underground coal mining operation in Indiana. Follow the instructions provided for navigating the map. Contact information for the coal mine operator is also available from the website or may be obtained from the Division of Reclamation at 812-665-2207.

Q. How do you find out whether a proposed oil or gas well location is within the boundary of an area for which a coal owner or operator has filed a mine plan as indicated in B) above?

A. Under [312 IAC 16-5-4\(b\)](#), a coal owner or operator may file a map with the Division of Oil and Gas showing the workable limits of a proposed underground coal mine. An oil or gas well operator should contact [Beth Hernly](#) (317-232-0044) with the Division of Oil and Gas to determine whether a proposed well location is within an area for which a valid mine plan map has been filed.

Q. What are my options if a proposed oil or gas well is located within an area that requires special protection?

A. That depends on where the proposed well is located. Use the following graphic to help determine



what protective measures are required. The letters on the graphic (A, B, and C) correspond to the 3 levels of protective measures described earlier in this memo.

If the well is to be located **within the permit boundary of an underground coal mine [A]**, a separate intermediate string of casing is **required** unless a waiver is granted by the Director. A waiver will not be granted unless the mine owner or operator consents to an alternate well construction. The oil and gas permittee is responsible for contacting the coal mine owner or operator to determine whether a waiver will be granted. Unless written waiver is obtained from the Director, the permit will not be approved unless the proposed well construction reflects the installation of a separate intermediate string of casing.

If the well is to be located **outside the permit boundary of an underground coal mine, but within the boundary of an area for which a coal owner or operator has filed a valid mine plan map [B]**, a separate intermediate string of casing is not required. However, the oil and gas operator is required to run centralizers when installing the production casing through a commercially mineable coal resource so that the casing is properly centered in the drilled hole prior to circulating cement. A sonic cement bond-variable density log shall be run on the well to verify the adequacy of cement bonding behind the casing. The oil and gas permittee is responsible for providing at least a forty-eight (48) hour advanced notice to

the coal owner or operator and the Division of Oil and Gas Inspector prior to running the log. A copy of the log shall be submitted to the Division of Oil and Gas within thirty (30) days.

If a well is not located within an area described under [A] or [B] above, but through **other commercially mineable coal resources** which are known to be at least thirty six (36) inches thick and located no more than eight hundred (800) feet below the surface [C], the oil and gas operator is required to run centralizers when installing the production casing through the commercially mineable coal resource so that the casing is properly centered in the drilled hole prior to circulating cement. There is no requirement for running a sonic cement bond-variable density log.

Questions regarding this document can be directed to me by e-mail to me at hmcdivitt@dnr.in.gov, or by phone at (317) 232-4058, or to Mona Nemecek at mnemecek@dnr.in.gov or by phone at (317) 232-0045.



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Cc: Indiana Coal Owners and Operators
Indiana Coal Council