§ 270.305 Determination of tight formation areas.

(a) General requirement. A jurisdictional agency determination designating a portion of a formation as a tight formation must be made in the form and manner prescribed in this subpart.

(b) Guidelines for designating tight formations. A jurisdictional agency determination designating a portion of a formation as a tight formation must be made in accordance with the following guidelines:

(1) Within the geographic boundaries of the portion of the formation being recommended for tight formation designation, the estimated in situ gas permeability, throughout the pay section, is expected to be 0.1 millidarcy (md) or less. The expected in situ permeability is to be determined through an arithmetic mean averaging of the known permeabilities obtained from the wells that penetrate, and have a pay section in, such portion of such formation.

(2) Within the geographic boundaries of the portion of the formation being recommended for tight formation designation, the stabilized production rate of natural gas, against atmospheric pressure, of wells completed for production in such portion of such formation, without stimulation, is not expected to exceed the production rate determined in accordance with the table in this paragraph (b)(2). Such expected stabilized, pre-stimulation production rate is to be determined through an arithmetic mean averaging of the known stabilized, pre-stimulation production rates obtained from the wells that penetrate, and have a pay section in, such portion of such formation.

(c) Notice to the Commission. Any jurisdictional agency making a determination that a formation, or portion thereof, qualifies as a tight formation will provide timely notice, in writing.
of such determination, to the Commission. Such notice shall include the following to substantiate the jurisdictional agency’s findings:

(1) Geological and geographical descriptions of the formation, or portion thereof, which is determined to qualify as a tight formation; and

(2) Geological and engineering data to support the determination, including (but not limited to):

(i) A map of the area for which a tight formation determination is being sought that clearly locates and identifies all data wells and all dry holes that penetrate the subject formation and all wells that are currently producing from the subject formation.

(ii) A well-by-well table of each in situ permeability value (in millidarcies), pre-stimulation stabilized production rate (in Mcf per day), and depth to the top of the formation (in feet) for each well, and the arithmetic mean of each set of data.

(iii) For any data that the jurisdictional agency excludes from the above calculations, a statement explaining why the data was excluded.

(iv) The underlying well test, well logs, cross-sections, or other data sources, and all calculations performed to derive the formation tops, permeability values, and pre-stimulation stabilized production rates shown in the well-by-well table.

(v) Any other information that the jurisdictional agency deems relevant and/or that the jurisdictional agency relied upon in making its determination.

§ 270.306 Devonian shale wells in Michigan.

A person seeking a determination that natural gas is being produced from the Devonian Age Antrim shale in Michigan shall file an application that contains the following items:

(a) FERC Form No. 121;
(b) All well completion reports;
(c) A gamma ray log from the closest available well bore (producing or dry hole) that is within a one mile radius of the well for which a determination is sought, with superimposed indications of:

(1) The shale base line and the gamma ray index of 0.7 over the Devonian age stratigraphic section penetrated by the well bore; and

(2) The boundary between the Antrim shale and the overlying formation (Berea Sandstone, Ellsworth, Bedford, or Sunbury shales, or their equivalents);

(d) A location plat showing the well for which the determination is sought and the well for which a gamma ray log has been filed;

(e) A mud log from the well for which the determination is sought, with a detailed description of samples taken from 10-foot, or less, intervals throughout the Devonian age stratigraphic section penetrated by the well bore;

(f) A driller’s log, or similar report, from the well for which the determination is sought, indicating the general characteristics of the strata penetrated and the corresponding depths at which they are encountered throughout the Devonian age stratigraphic section penetrated by the well bore;

(g) A reference to a standard stratigraphic chart or text establishing that the producing interval is a shale of Devonian age; and

(h) A sworn statement:

(1) Calculating the percentage of footage of the producing interval (or the Antrim Shale in the event the well is a dry hole) in the well for which a gamma ray log was submitted which is not Devonian shall as indicated by a gamma ray index of less than 0.7;

(2) Demonstrating that the percentage of potentially disqualifying non-shale footage for the Devonian age stratigraphic section penetrated by the well bore for which the submitted gamma ray log is equal to or less than 5 percent;

(3) Attesting that the natural gas is being produced from the Devonian Age Antrim shale through:

(i) A well the surface drilling of which began after December 31, 1979, but before January 1, 1993;

(ii) A recompletion commenced after January 1, 1993, in a well the surface drilling of which began after December 31, 1979, but before January 1, 1993; or

(iii) A recompletion that was commenced after December 31, 1979 but before January 1, 1993, where such gas could not have been produced from any