

RULE B-42 - SEISMIC RULES AND REGULATIONS

(a) Definitions:

1. “Field Seismic Operations” shall mean any geophysical method performed on the surface of the land utilizing certain instruments operating under the laws of physics respecting vibration or sound to determine conditions below the surface of the earth which may contain oil or gas and is inclusive of but not limited to the preliminary line survey, the acquisition of necessary permits, the selection and marking of shot-hole locations,

necessary clearing of vegetation, shot-hole drilling, implantation of charge, placement of geophones, detonation and backfill of shot-holes.

2. “Seismic Shoot” shall mean a specific project during which field seismic operations shall be conducted with due diligence, not to exceed or substantially vary from those seismic operations indicated in the original permit application.
- (b) Any person desiring to perform field seismic operations within the State of Arkansas shall obtain a permit for each seismic shoot from the Commission prior to commencing field seismic operations. A copy of the approved permit shall be maintained in the central recording unit used for the seismic shoot. Such permit shall be valid for a period of one year from the date of issuance.
 - (c) The applicant shall make application on a form prescribed by the Director.
 - (d) Each application as filed shall be accompanied by an application fee of Five Hundred Dollars (\$500.00).
 - (e) Each application for a 2D seismic shoot shall include information and maps, (i) to identify the seismic shoot area, (ii) to indicate the proposed location of all 2D seismic lines, and (iii) to designate an area (each, a “2D Seismic Line Corridor” within which a 2D seismic line may be located or relocated by permittee). No 2D Seismic Line Corridor shall extend farther than one-half (1/2) mile in either direction from the proposed location of the relevant 2D seismic line. Applicants may omit areas within the outer boundaries of any 2D Seismic Line Corridor from the 2D Seismic Line Corridor. Each application for a 3D seismic shoot shall include information and maps to identify the seismic shoot area including the 3D project outline for such seismic shoot. Any relocations of a 2D seismic line or any portion thereof outside the 2D Seismic Line Corridor designated therefore or any increase in a 3D survey outline shall be immediately reported to the Director. The applicant shall also be required to file an amended application showing the revised location of such relocated 2D seismic lines, if applicable. The applicant may also file a request, in writing, that the application with all information and maps, be kept confidential for a period not to exceed twelve (12) months from the date of the filing of the original application. Subject to any applicable exceptions, including without limitation the trade secret exception to the general requirements of Ark. Code Ann. (1987) § 25-19-101 et. seq., said application and any information and maps submitted may be released to the extent required by a court of law or by applicable state law, regardless of the request that such be kept confidential. Said application and any information and maps may also be introduced by the Commission as evidence in any public hearing before the Commission or in any judicial action, regardless of such request; provided, however, that permit holder shall retain the right to object to their admissibility and to seek a closed hearing or a protective order with respect thereto.
 - (f) The application shall be accompanied with evidence of the appropriate type(s) of financial assurance, as described in General Rule B-2 (d)(1), (2), (3) and (4), and subject to those conditions listed therein.
 1. The financial assurance shall be at least fifty thousand dollars (\$50,000), but not more than two hundred fifty thousand dollars (\$250,000), provided that the aggregate amount of financial assurance required for any applicant for all permits and expired permits issued pursuant to this Rule shall not exceed two hundred fifty thousand dollars (\$250,000).
 2. The amount of the financial assurance shall be determined by the Director based on, but not limited to, the proximity of the seismic shoot to populated areas, cultural features,

sensitive environmental areas, and past Commission enforcement history against the applicant.

3. The financial assurance required to be filed shall remain in effect for one year following the conclusion of all field seismic operations by the permit holder in the State of Arkansas.
- (g) Upon review of a completed permit application, the Director shall either issue the permit or deny the permit application. If the permit application is denied, the applicant may file an application for a hearing to appeal the Director's decision in accordance with General Rule A-2, A-3, and other applicable hearing procedures.
- (h) No entry shall be made by any person to conduct field seismic operations, upon the lands where such field seismic operations are to be conducted, without the permit holder having first given notice at least ten (10) calendar days prior to commencement of field seismic operations.
1. The notice shall be in writing and given either personally or by certified United States mail to the surface owners reflected in the tax records of the counties where the lands are located, at the mailing addresses identified for such surface owners in such records
 2. In instances where it can be reasonably ascertained that there are occupants residing on the lands who are not the surface owners, such notice shall also be given such occupants, unless there is no known mailing address and personal notice cannot reasonably be given. Any such notice to an occupant shall be deemed delivered if delivered personally or deposited in the United States mail postage prepaid to said occupants at the mailing address of the lands.
 3. Written notice shall also be given either personally or by certified United States mail to operators, as reflected in the records of the AOGC, of producing wells within the seismic shoot area, at the mailing addresses identified for such operators in said records.
 4. The notice shall contain the:
 - A. Name of the person or entity that is conducting the field seismic operations;
 - B. Proposed location of the field seismic operations; and
 - C. Approximate date the person or entity proposes to commence field seismic operations;
- (i) The permit holder shall also notify the Commission within five (5) business days of the commencement and completion of each seismic shoot.
- (j) All vehicles utilized by the permit holder, or its agents or contractors, shall be clearly identified by signs or markings, utilizing letters and /or numbers a minimum of three (3) inches in height and one-half (1/2) inch wide, indicating the name of such agent.
- (k) No shot-hole shall be drilled nor charge detonated within two hundred feet (200') of any residence, water well, oil well, gas well, brine well, injection well or other structure without having first secured the express written authority of the owner(s) thereof and the permit holder shall be responsible for any resulting damages in accordance with this rule. Written authority must also be obtained from the owner(s) if any charge exceeds the maximum allowable charge within the scaled distance below:

DISTANCE TO STRUCTURE (FT)*	MAXIMUM ALLOWABLE CHARGE WEIGHTS (LBS)*
50	0.5
100	2.0
150	4.5
200	8.0
250	12.0
300	18.0
350	25.0

* Based upon a charge weight of seventy (70) FT/LB ½

- (l) The maximum allowable charge weight (lbs.) is 25.0, unless the permit holder requests and secures the prior written authorization from the Director.
- (m) All holes drilled for field seismic activity shall be properly back filled with soils and/or other suitable material and tamped. A mound may be left over the hole for settling allowance.
- (n) All seismic sources placed for detonation for use in field seismic operations shall contain additives to accelerate the biodegradation thereof and shall be handled with due care in accordance with industry standards. The cap leads for any seismic sources that fail to detonate shall be buried at least three (3) feet deep.
- (o) All vegetation cleared to the ground for the purposes of field seismic activity shall be cleared in a competent and workmanlike manner in the exercise of due care.
- (p) Unless otherwise consented to by the surface owner in writing, permit holder shall not cut down any tree measuring six (6) inches or more in diameter, as measured at a height of three (3) feet from the ground surface unless there are no reasonable alternatives to the removal of such tree(s) available to permit holder. Permit holder shall compensate surface owner the value of all such trees as determined by a forester licensed by the State of Arkansas.
- (q) All excessive rutting or soil disturbances resulting from seismic activity shall be repaired or restored to the original condition and contour to the extent reasonable, unless otherwise agreed to by the permit holder and the surface owner in writing.
- (r) All fences removed for the purposes of field seismic activity shall be replaced, unless otherwise agreed to by the permit holder and the surface owner in writing.
- (s) All debris associated with the seismic activity shall be removed and properly disposed.
- (t) Any person who conducts any field seismic operations for a seismic shoot in the state without having obtained a permit therefore shall be subject to a civil penalty of one thousand dollars (\$1,000) for each day such field seismic operations continue. Any person who does not fully comply with any other provision of this rule shall be subject to a civil penalty of one thousand dollars (\$1,000) for each violation.
- (u) Failure to comply with the provisions of this rule or Ark. Code Ann. (1987) § 15-71-114 as amended or any other applicable orders, rules, or regulations of the Commission may result in the

forfeiture of the financial assurance to remediate damages or recover civil penalties assessed in accordance with subparagraph (t) above.

- (v) In addition, any surface owner may seek to recover damages from the financial assurance, as follows:
1. Any surface owner seeking to recover under such financial assurance for damages caused by the performance of such field seismic operations must file written notice of claim, on a form prescribed by the Director, within one (1) year of the date of expiration of the permit; provided however, that such claim shall be subordinate to the rights of the Commission.
 2. Any claim received from a surface owner shall be investigated by the Director and a decision shall be rendered by the Director. If the Director's decision is not satisfactory to either the surface owner or the permit holder, either party may file an application for a hearing to appeal the Director's decision in accordance with General Rule A-2, A-3, and other applicable hearing procedures. At a hearing, the surface owner must prove that (a) actual damages occurred, (b) such damages were caused by (i) the negligence of the permit holder, (ii) a violation of this rule by permit holder or (iii) an unreasonable or excessive use of the surface owner's land by the permit holder under the applicable oil and gas lease or other agreement under which the surface owner and/or mineral owner consents to the use of the surface for seismic operations, and (c) the amount of such damages.
 3. If the Commission finds that the permit holder is liable to the surface owner for any such damages, the permit holder shall have 30 days from the effective date of the order to pay the surface owner the amount specified by the Commission. If the permit holder fails to pay the amount specified by the Commission to the surface owner, the Director may initiate bond forfeiture proceedings as described in General Rule B-2 (k) to pay damages specified by the Commission, provided however, that such amount shall be subordinate to the rights of the Commission.
 4. If the permit holder's financial assurance is forfeited, the permit holder shall cease all field seismic operations until another bond in the same amount of the original bond is filed with the Commission for the same purposes as the original bond.

(Source: 1991 rule book; amended July 3, 2003; amended June 15, 2008)

**GENERAL RULE B-43 - ESTABLISHMENT OF DRILLING UNITS FOR GAS
PRODUCTION FROM CONVENTIONAL AND UNCONVENTIONAL SOURCES OF
SUPPLY OCCURRING IN CERTAIN PROSPECTIVE AREAS NOT COVERED BY
FIELD RULES**

- (a) For purposes of this rule, unconventional sources of supply shall mean those common sources of supply that are identified as the Fayetteville Shale, the Moorefield Shale, and the Chattanooga Shale Formations, or their stratigraphic shale equivalents, as described in published stratigraphic nomenclature recognized by the Arkansas Geological Survey or the United States Geological Survey.
- (b) For purposes of this rule, conventional sources of supply shall mean all common sources of supply that are not defined as unconventional sources of supply in section (a) above.

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- (c) This rule is applicable to all occurrences of conventional and unconventional sources of supply in Arkansas, Cleburne, Conway, Cross, Faulkner, Independence, Jackson, Lee, Lonoke, Monroe, Phillips, Prairie, St. Francis, Van Buren, White and Woodruff Counties, Arkansas and shall be called the “section (c) lands”. The development of the conventional and unconventional sources of supply within the section (c) lands shall be subject to the provisions of this rule.
- (d) This rule is further applicable to all occurrences of unconventional sources of supply in Crawford, Franklin, Johnson, and Pope Counties, Arkansas and shall be called the “section (d) lands”. The development of the unconventional sources of supply within the section (d) lands shall be subject to the provisions of this rule. For purposes of this rule, the section (d) lands and the section (c) lands may collectively be referred to as the “covered lands”.
- (e) All Commission approved Fayetteville Shale and non-Fayetteville Shale fields that are situated within the section (c) lands and that are in existence on the date this rule is adopted (collectively, the “existing fields”), are abolished and the lands heretofore included within the existing fields are included within the section (c) lands governed by this rule. Further, all amendments that added the Fayetteville Shale Formation to previously established fields for conventional sources of supply occurring in the section (d) lands are abolished and continuing development of the Fayetteville Shale and other unconventional sources of supply in these lands shall be governed by the provisions of this rule. All existing individual drilling units however, contained within the abolished fields shall remain intact.
- (f) All drilling units established for conventional and unconventional sources of supply within the section (c) lands and all drilling units established for unconventional sources of supply within the section (d) lands shall be comprised of regular governmental sections with an area of approximately 640 acres in size. Each drilling unit shall be characterized as either an “exploratory drilling unit” or an “established drilling unit”. An “exploratory drilling unit” shall be defined as any drilling unit that is not an established drilling unit. An “established drilling unit” shall be defined as any drilling unit that contains a well that has been drilled and completed in a conventional or unconventional source of supply (a “subject well”), and for which the operator or other person responsible for the conduct of the drilling operation has filed, with the Commission, all appropriate documents in accordance with General Rule B-5, and been issued a certificate of compliance. Upon the filing of the required well and completion reports for a subject well and the issuance of a certificate of compliance with respect thereto, the exploratory drilling unit upon which the subject well is located and all contiguous governmental sections shall be automatically reclassified as established drilling units.
- (g) The filing of an application to integrate separately owned tracts within an exploratory drilling unit, as defined in Section (f) above and as contemplated by A.C.A. § 15-72-302(e), is permissible, provided that one or more persons who collectively own at least an undivided fifty percent (50%) interest in the right to drill and produce oil or gas, or both, from the total acreage assigned to such exploratory drilling unit support the filing of the application. In determining who shall be designated as the operator of the exploratory drilling unit that is being integrated, the Commission shall apply the following criteria:
- 1) Each integration application shall contain a statement that the applicant has sent written notice of its application to integrate the drilling unit to all working interest owners of record within such drilling unit. This notice shall contain a well proposal and AFE for the initial well and may be sent at the same time the integration application is filed.
 - 2) If any non-applicant working interest owner in the drilling unit owns, or has the written support of one or more working interest owners that own, separately or together, at least a fifty percent (50%) working interest in the drilling unit, such non-applicant working

interest owner may (i) object to the applicant being named operator (a “section (g) operator challenge”) or (ii) file a competing integration application (a “section (g) competing application”) that challenges any aspect of the original integration application for such drilling unit. Any contested matter that is limited to a section (g) operator challenge shall be heard at the Commission hearing that was originally scheduled for such integration application. Any contested matter that involves the filing of a section (g) competing application shall be postponed until the next month’s regularly scheduled Commission hearing if postponement is requested by either competing applicant.

- 3) If a party desiring to be named operator of a drilling unit is supported by a majority-in-interest of the total working interest ownership in the drilling unit (the “majority owner”), the majority owner shall be designated unit operator.
 - 4) In the event two parties desiring to be named operator own, or have the written support of one or more working interest owners that own, exactly, an undivided 50% share of the drilling unit and either a section (g) operator challenge is submitted or a section (g) competing application is filed, operatorship shall be determined by the Commission, based on the factors it deems relevant and the evidence submitted by the parties or as otherwise provided by subsequent rule.
 - 5) If the person designated as operator by the Commission in the adjudication of a section (g) operator challenge or a section (g) competing application does not commence actual drilling operations on the drilling unit within the twelve (12) month period set out in the integration order, such operator shall not be entitled to be designated as operator under the subsequent integration of such drilling unit unless (i) the operator’s failure to commence such drilling operations was due to force majeure, or (ii) a majority-in-interest of the total working interest ownership in the drilling unit (excluding such designated operator) support such operator.
- (h) The filing of an application to integrate separately owned tracts within an established drilling unit, as defined in Section (f) above and as contemplated by A.C.A. § 15-72-303 is permissible, without a minimum acreage requirement, provided that one or more persons owning an interest in the right to drill and produce oil or gas, or both, from the total acreage assigned to such established drilling unit requests such integration. In determining who shall be designated as the operator of the established drilling unit that is being integrated, the Commission shall apply the following criteria:
- 1) Each integration application shall contain a statement that the applicant has sent written notice of its application to integrate the drilling unit to all working interest owners of record within such drilling unit. This notice shall contain a well proposal and AFE for the initial well and may be sent at the same time the integration application is filed.
 - 2) Any non-applicant working interest owner in the drilling unit may object to the applicant being named operator (a “section (h) operator challenge”). In addition, if an objecting party owns, or has the written support of one or more working interest owners that own, separately or together, a larger percentage working interest in the drilling unit than the applicant, such objecting party may file a competing integration application (a “section (h) competing application”) that challenges any aspect of the original integration application for such drilling unit. Any contested matter that is limited to a section (h) operator challenge shall be heard at the Commission hearing that was originally scheduled for such integration application. Any contested matter that involves the filing of a section (h) competing application shall be postponed until the next month’s regularly

scheduled Commission hearing if postponement is requested by either competing applicant.

- 3) If a party desiring to be named operator of a drilling unit is a majority owner (as defined in subsection (g)(3) above), the majority owner shall be designated unit operator.
 - 4) If a party desiring to be named operator of a drilling unit is not a majority owner, but is supported by the largest percentage interest of the total working interest ownership in the drilling unit (the “plurality owner”), there shall be a rebuttable presumption that the plurality owner shall be designated unit operator. If a section (h) operator challenge to a plurality owner being designated unit operator is submitted by a party that owns, or has the written support of one or more owners that own, separately or together, the next largest percentage share of the working interest ownership in the drilling unit (the “minority owner”), the Commission may designate the minority owner operator if the minority owner is able to show that, based on the factors the Commission deems relevant and the evidence submitted by the parties, the Commission should designate the minority owner as unit operator.
 - 5) If two or more parties that desire to be named operator own, or have the support of one or more working interest owners that own, separately or together, the same working interest ownership in the drilling unit, operatorship shall be determined by the Commission, based on the factors it deems relevant and the evidence submitted by the parties or as otherwise provided by subsequent rule.
 - 6) If the person designated as operator by the Commission in the adjudication of a section (h) operator challenge or a section (h) competing application does not commence actual drilling operations on the drilling unit within the twelve (12) month period set out in the integration order, such operator shall not be entitled to be designated operator under the subsequent integration of such drilling unit unless (i) the original operator’s failure to commence drilling operations on the initial well was due to force majeure, or (ii) a majority-in-interest of the total working interest ownership in the drilling unit (excluding the original operator) support the original operator.
- (i) The well spacing for wells drilled in drilling units for unconventional sources of supply within the covered lands are as follows:
- 1) Each well location (as defined in Section (a)(2) of General Rule B-3) shall be at least 560 feet from any drilling unit boundary line;
 - 2) Each well location (as defined in Section (a)(2) of General Rule B-3) shall be at least 560 feet from any other well that extends across drilling unit boundaries unless all owners, as defined in Ark. Code Ann. (1987) § 15-72-102(9), in all units consent in writing to the drilling of a well closer than 560 feet.
 - 3) Each well location (as defined in Section (a)(2) of General Rule B-3) shall be at least 448 feet, an allowed 20% variance, from all other well locations within an established drilling unit, unless all owners, as defined in Ark. Code Ann. (1987) § 15-72-102(9), in the unit consent in writing to the drilling of a well closer than 448 feet.
 - 4) No more than 16 wells may be drilled per 640 acres for each separate unconventional source of supply within an established drilling unit; and

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- 5) Applications for exceptions to these well location provisions, relative to a drilling unit boundary or other location in a common source of supply, may be brought before the Commission.
- (j) The well spacing for wells drilled in drilling units for conventional sources of supply within the section (c) lands are as follows:
- 1) Only a single well completion will be permitted to produce from each separate conventional source of supply within each established drilling unit, unless additional completions are approved in accordance with General Rule D-19;
 - 2) Each well location (as defined in Section (a) 2) of General Rule B-3) shall be at least 1120 feet from any drilling unit boundary line;
 - 3) Well completions located closer than 1120 feet from all established drilling unit boundaries, shall be subject to approval in accordance with General Rule B-40; and
 - 4) Applications for exceptions to these well location provisions, relative to a drilling unit boundary or other location in a common source of supply, may be brought before the Commission.
- (k) The casing programs for all wells drilled in exploratory and established drilling units established by this rule and occurring in the covered lands specified by this rule shall be in accordance with General Rule B-15.
- (l) Wells completed in and producing from only conventional sources of supply, as defined in Section (b), shall be subject to the testing and production allowable provisions of General Rule D-16. Wells completed in and producing from only unconventional sources of supply, as defined in Section (a), shall be subject to the initial and annual testing and test reporting provisions of General Rule D-16, except that the initial test shall be witnessed at the discretion of the Director, the annual tests may be performed without the presence of a Commission representative and there shall be no production allowable established for wells producing from unconventional sources of supply located within the covered lands.
- (m) The commingling of completions for unconventional and/or conventional sources of supply within each well situated on an established drilling unit, shall be subject to the provisions and approval process outlined in General Rule D-18. If an unconventional source of supply is approved to be commingled with a conventional source of supply within a well situated on an established drilling unit, the well shall be subject to the production allowable provisions of General Rule D-16.
- (n) The reporting requirements of General Rule B-5 shall apply to all wells subject to the provisions of this rule. In addition, the operator of each such well shall be required to file monthly gas production reports, on a Form approved by the Director, no later than 45 days after the last day of each month.
- (o) The Commission specifically retains jurisdiction to consider applications brought before the Commission from a majority in interest of working interest owners in two or more adjoining drilling units seeking the authority to drill, produce and share the costs of and the proceeds of production from one or more separately metered wells that extend across or encroach upon drilling unit boundaries and that are drilled and completed in one or more unconventional sources of supply within the covered lands. All such applications shall contain a proposed agreement on the formula for the sharing of costs, production and royalty from the affected drilling units.

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- 1) However, if the majority in interest of working interest owners agree to share a proposed well between two or more adjoining drilling units, which have been previously integrated, utilizing the below methodology for sharing of costs, production and royalty among the affected drilling units, the Director or his designee is authorized to approve the application administratively. The method for sharing the costs of and the proceeds of production from one or more separately metered wells shall be based on acreage allocation as follows:
 - A. An area measured 560 feet along and on both sides of the entire length of the horizontal perforated section of the well, and including an area formed by a 560 feet radius from the beginning point of the perforated interval, and a 560 feet radius from the ending point of the perforated interval shall be calculated for each such separately metered well (the “calculated area”).
 - B. Each calculated area shall be allocated and assigned to each drilling unit according to that portion of the calculated area occurring within each drilling unit.
 - 2) Each such application for utilizing the above methodology shall be submitted on a form prescribed by the Director of Production and Conservation, accompanied by an application fee of \$500.00 and include the name and address of each owner, as defined in A.C.A. § 15-72-102(9), within each of the drilling units in which the proposed well is to be drilled and/or completed.
 - 3) Concurrently with the filing of an application utilizing the above methodology, the applicant shall send to each owner specified in subsection (o)(2) above a notice of the application filing and verify such mailing by affidavit, setting out the names and addresses of all owners and the date(s) of mailing.
 - 4) Any owner noticed in accordance with subsection (o)(3) above shall have the right to object to the granting of such application within fifteen (15) days after the receipt of the application by the Commission. Each objection must be made in writing and filed with the Director. If a timely written objection is filed as herein provided, then the applicant shall be promptly furnished a copy and such application and the objection shall be referred to the Commission for determination at the next regular hearing.
 - 5) An application may be referred to the Commission for determination when the Director deems it necessary that the Commission make such determination for the purpose of protecting correlative rights of all parties. Promptly upon such determination, and not later than fifteen (15) days after receipt of the application, the Director shall give the applicant written notice, citing the reason(s) for denial of the application under this rule and the referral to the full Commission for determination.
 - 6) If the Director has not notified the applicant of the determination to refer the application to the Commission within the fifteen (15) day period in accordance with the foregoing provisions, and if no objection is received at the office of the Commission within the fifteen (15) days as provided for in subsection (o)(4), the application shall be approved and a drilling permit issued.
 - 7) Upon receipt of the drilling permit, the applicant shall give the other working interest parties written notice that the drilling permit has been issued. The working interest parties, who have not previously made an election, shall have 15 days after receipt of said

notice within which to make an election to participate in the well or be deemed as electing non-consent and subject to the non-consent penalty set out in the existing Joint Operating Agreement(s) covering their respective drilling unit or units.

- 8) Following completion of the well and prior to the issuance by the Commission of the Certificate of Compliance to commence production, the final location of the perforated interval shall be submitted to the Commission to verify the proposed portion of the calculated area occurring within each drilling unit as specified in subsection (o)(1) above.
- (p) The Commission shall retain jurisdiction to consider applications, brought before the Commission, from a majority in interest of working interest owners in two or more adjoining governmental sections seeking the authority to combine such adjoining governmental sections into one drilling unit for the purpose of developing one or more unconventional sources of supply. In any such multi-section drilling unit, production shall be allocated to each tract therein in the same proportion that each tract bears to the total acreage within such drilling unit.
- (q) The Commission shall retain jurisdiction to consider applications, brought before the Commission, from a majority in interest of working interest owners in a drilling unit seeking the authority to omit any lands from such drilling unit that are owned by a governmental entity and for which it can be demonstrated that such governmental entity has failed or refused to make such lands available for leasing.

(Source: new rule October 16, 2006; amended December 16, 2007, amended June 15, 2008)