



Jeff Youtz
Director

Legislative Services Office Idaho State Legislature

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MEMORANDUM

TO: Senators PEARCE, Bair, Werk, and
Representatives STEVENSON, Shepherd, Pence

FROM: Katharine Gerrity - Principal Legislative Research Analyst

DATE: July 13, 2011

SUBJECT: Temporary Rule - Department of Lands

20.07.02 - Rules Governing Oil & Gas Conservation in the state of Idaho - Temporary Rule - Docket
No. 20-0702-1101

We are forwarding this temporary rule to you for your information only. No analysis was done by LSO. This rule is posted on our web site. Please call with any questions - 334-4845. Thank you.

Attachment: Temporary rule

Mike Nugent Manager
Research & Legislation

Cathy Holland-Smith, Manager
Budget & Policy Analysis

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Glenn Harris, Manager
Information Technology

IDAPA 20 - DEPARTMENT OF LANDS

20.07.02 - RULES GOVERNING OIL AND GAS CONSERVATION IN THE STATE OF IDAHO

DOCKET NO. 20-0702-1101

NOTICE OF RULEMAKING - ADOPTION OF TEMPORARY RULE

EFFECTIVE DATE: The effective date of the temporary rule is April 19, 2011.

AUTHORITY: In compliance with Section 67-5224 Idaho Code and IDAPA 20.01.01, Rules of Practice and Procedure Before the State Board of Land Commissioners (Board), Section 840, notice is hereby given that this agency has adopted a temporary rule. This action is authorized pursuant to Section 58-104(6), Idaho Code.

DESCRIPTIVE SUMMARY: No standards currently exist for well treatments and hydraulic fracturing performed in the initial development of oil and gas resources. Some well treatments do have the potential to harm ground water supplies if they are not designed and performed properly. The gas field currently being developed near New Plymouth, Idaho, does have wells adjacent to that town's domestic water supply wells. Officials in Payette County and New Plymouth have expressed concerns in regards to the potential for ground water issues associated with the gas wells and well treatments. The Oil and Gas Conservation Commission is charged with ensuring both the efficient extraction of oil and gas resources, and the protection of groundwater by Section 47-319(d)(3), Idaho Code.

TEMPORARY RULE JUSTIFICATION: Pursuant to Section(s) 67-5226(1)(a), Idaho Code, the Governor has found that temporary adoption of the rule is appropriate for the following reasons:

This rule is needed to ensure the protection of the public health, safety, and welfare.

FEE SUMMARY: No fee is being imposed by this rule.

ASSISTANCE ON TECHNICAL QUESTIONS: For assistance on technical questions concerning this temporary rule, contact Eric Wilson, (208) 334-0261 or ewilson@idl.idaho.gov.

DATED this 22nd day of April, 2011.

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THE FOLLOWING IS THE TEMPORARY RULE TEXT OF DOCKET NO. 20-0702-1101

051. -- ~~0594.~~ (RESERVED).

055. WELL TREATMENTS.

01. Well Treatment Defined. A well treatment, for the purposes of these rules, is when actions are performed on a well to acidize, fracture, or stimulate a well or the surrounding earth materials. (4-19-11)T

02. Application Required. An Application for Permit to Drill required by Section 050 must include

any plans for well treatment if they are known before the well is drilled. If well treatments are not covered in the original drilling permit, then application to amend the permit must be made to the Commission. Approval by the Commission is required prior to the well treatments being implemented. The Commission may deny applications that do not include the permit number, well name, well location, as-built description, and the following: (4-19-11)T

- a. Depth to perforations or the openhole interval. (4-19-11)T
 - b. The source of water. (4-19-11)T
 - c. Trade name and content of fluids. (4-19-11)T
 - d. Type of proppants. (4-19-11)T
 - e. Estimated pump pressures. (4-19-11)T
 - f. Method for the storage and disposal of well treatment fluids. (4-19-11)T
 - g. Size and design of storage pits, if proposed. (4-19-11)T
 - h. Expected fracture length in both the horizontal and vertical directions. (4-19-11)T
 - i. Information specific to hydraulic fracturing as described in Subsection 055.07. (4-19-11)T
 - j. Groundwater protection plan demonstrating how groundwater resources will be protected from contamination. (4-19-11)T
 - k. Geologic well logs identifying all potable water aquifers currently being used from the surface down to the bottom of the surface casing or eight hundred (800) feet below the surface, whichever is greater, and their vertical distance from proposed treatment zones. (4-19-11)T
 - l. Certification by a registered professional engineer that all aspects of the well construction, including the suitability and integrity of the cement used to seal the well, are designed to meet the requirements of proposed well treatments. (4-19-11)T
 - m. Additional information as required by the Commission. (4-19-11)T
- 03. Master Drilling/Treatment Plans.** Where multiple stimulation activities will be undertaken for several wells proposed to be drilled to the same zone(s) within an area of geologic similarity, approval may be sought from the Commission for a comprehensive master drilling/treatment plan containing the information required. The approved master drilling/treatment plan must then be referenced on each individual well's Application for Permit to Drill. (4-19-11)T
- 04. Time Limit.** If a treatment approved in a drilling permit is not completed within one (1) year, the permit will be considered expired and reapplication will be required prior to conducting the well treatment. (4-19-11)T
- 05. Routine Activities Exempt.** Routine activities that do not affect the integrity of the wellbore or the reservoir, such as pump replacements, do not require an application. (4-19-11)T
- 06. Inspections and Reporting Requirements.** The Commission may conduct inspections prior, during and after well treatments. Similar to the requirements of Section 090 of this rule, a report on the well treatment must be submitted within thirty (30) days of the treatment. The report shall present a detailed account of the work done and the manner in which such work was performed, including: (4-19-11)T
- a. The daily production of oil, gas, and water both prior to and after the operation. (4-19-11)T
 - b. The size and depth of perforations. (4-19-11)T

- c. The quantity of sand, chemicals, or other materials employed in the operation. (4-19-11)T
- d. Information specific to hydraulic fracturing, as described in Subsection 055.07. (4-19-11)T
- e. Static pressure testing results before and after the well treatment. (4-19-11)T
- f. Any other information related to operations which alter the performance or characteristics of the well. (4-19-11)T

07. Hydraulic Fracturing (Fracing). (4-19-11)T

a. Hydraulic Fracturing, or Fracing. Defined. A method of stimulating or increasing the recovery of hydrocarbons by perforating the production casing and injecting fluids or gels into the surrounding rocks at extremely high pressures (up to ten thousand (10,000) psi and higher). Sand or other materials may be in the fluids to prop open the resulting fractures, and these materials are called proppant. (4-19-11)T

b. Well Integrity. Prior to the well stimulation, the operator will perform a suitable mechanical integrity test of the casing or of the casing-tubing annulus or other mechanical integrity test methods and submit an affidavit certifying that the well can withstand the anticipated treatment pressures. (4-19-11)T

c. The operator shall provide geological names, geological descriptions, and depth of the formation into which well stimulation fluids are to be injected. (4-19-11)T

d. The operator shall provide detailed information to the Commission as to the base stimulation fluid source. The operator or his agent shall provide to the Commission, for each stage of the well stimulation program, the chemical additives, compounds and concentrations or rates proposed to be mixed and injected, including: (4-19-11)T

i. Stimulation fluid identified by additive type (such as but not limited to acid, biocide, breaker, brine, corrosion inhibitor, crosslinker, demulsifier, friction reducer, gel, iron control, oxygen scavenger, pH adjusting agent, proppant, scale inhibitor, surfactant); (4-19-11)T

ii. The chemical compound name and Chemical Abstracts Service (CAS) number shall be identified (such as the additive biocide is glutaraldehyde, or the additive breaker is ammonium persulfate, or the proppant is silica or quartz sand, and so on for each additive used); (4-19-11)T

iii. The proposed rate or concentration for each additive shall be provided (such as gel as pounds per thousand gallons, or biocide at gallons per thousand gallons, or proppant at pounds per gallon, or expressed as percent by weight or percent by volume, or parts per million, or parts per billion); (4-19-11)T

iv. The Commission retains discretion to request the formulary disclosure for the chemical compounds used in the well stimulation(s). (4-19-11)T

e. The operator shall provide a detailed description of the proposed well stimulation design, which shall include: (4-19-11)T

i. The anticipated surface treating pressure range; (4-19-11)T

ii. The maximum injection treating pressure shall be within accepted safety limits as approved by a registered professional engineer. Accepted safety limits are generally eighty percent (80%) of the maximum pressure rating of the pressurized system; (4-19-11)T

iii. The estimated or calculated fracture length and fracture height. (4-19-11)T

f. Upon request in the application or by written letter to the Commission, confidentiality protection shall be provided for trade secrets consistent with Section 9-340D(1), Idaho Code, and for “[a]rchaological and

geologic records concerning exploratory drilling, logging, mining and other excavation” consistent with Section 9-340E(2), Idaho Code. (4-19-11)T

g. The injection of volatile organic compounds, such as benzene, toluene, ethyl benzene and xylene, also known as BTEX compounds, or any petroleum distillates into groundwater is prohibited. Water that is produced with oil and gas, and which may contain small amounts of naturally occurring petroleum distillates, may be used as well stimulation fluid in hydrocarbon bearing zones. (4-19-11)T

h. During the well stimulation operation, the operator shall monitor and record the annulus pressure at the bradenhead. If intermediate casing has been set on the well being stimulated, the pressure in the annulus between the intermediate casing and the production casing shall also be monitored and recorded. If the annulus pressure increases by more than five hundred (500) pounds per square inch gauge (psig) as compared to the pressure immediately preceding the stimulation, the operator shall verbally notify the Commission as soon as practicable but no later than twenty-four (24) hours following the incident. (4-19-11)T

i. The operator shall provide the Commission the following post well stimulation detail: (4-19-11)T

i. The actual total well stimulation treatment volume pumped; (4-19-11)T

ii. Detail as to each fluid stage pumped, including actual volume by fluid stage, proppant rate or concentration, actual chemical additive name, type, concentration or rate, and amounts; (4-19-11)T

iii. The actual surface pressure and rate at the end of each fluid stage and the actual flush volume, rate and final pump pressure; (4-19-11)T

iv. The instantaneous shut-in pressure, and the actual fifteen (15) -minute and thirty (30) -minute shut-in pressures when these pressure measurements are available; (4-19-11)T

v. A continuous record of the annulus pressure during the well stimulation; (4-19-11)T

vi. In lieu of Subparagraphs 055.07.i.(i) through 055.07.i.(v) of this rule, the operator may submit the actual well stimulation service contractor’s job log, without any cost/pricing data from the field ticket. If information on the actual field ticket describes a proprietary completion design and/or well stimulation design, confidentiality may be afforded per Paragraph 055.07.f. of this rule. (4-19-11)T

j. If the pressure did increase by more than five hundred (500) pounds per square inch gauge (psig) as described in Paragraph 055.07.h. of this rule, the operator shall include a report containing all details pertaining to the incident, including corrective actions taken, as an attachment to the information provided in Paragraph 055.07.i. of this rule. (4-19-11)T

k. The operator shall provide information to the Commission as to the amounts, handling, and if necessary, disposal at an identified appropriate disposal facility, or reuse of the well stimulation fluid load recovered during flow back, swabbing, and/or recovery from production facility vessels. Storage of such fluid shall be protective of groundwater as demonstrated by the use of either tanks or authorized lined pits. If lined pits are authorized to store fluid for use in well stimulation, or for reconditioning, for reuse, or to hold for appropriate disposal, then appropriate steps shall be taken to protect wildlife and migratory birds. (4-19-11)T

l. The Commission shall require all well treatment to be at least five hundred (500) vertical feet below potable water aquifers currently being used within one thousand (1,000) feet of the treated well. (4-19-11)T

08. Well Treatments Within Public Drinking Water System Delineated Well Capture Zones. (4-19-11)T

a. The Commission will not authorize pits or other methods of subsurface storage for associated fracturing fluids for well treatments within Idaho Department of Environmental Quality (DEQ) public drinking water system delineated well capture zones. Operators will be required to store and transport fracturing fluids using above ground storage facilities and tanker trucks for well treatments in these locations. (4-19-11)T

b. The Commission may require the operator to complete groundwater monitoring before and after well treatment using existing water wells or installed groundwater monitoring wells (installed at the cost of the operator) for well treatments conducted within DEO public drinking water system delineated well capture zones. The Commission shall approve the number, location, spacing and depth of any installed groundwater monitoring wells. If groundwater monitoring is required, the operator will provide the Commission with the results of the reports.

(4-19-11)T

056. -- 059. **(RESERVED).**