

Department of State
Division of Publications
 312 Rosa L. Parks, 8th Floor Snodgrass/TN Tower
 Nashville, TN 37243
 Phone: 615.741.2650
 Fax: 615.741.5133
 Email: register.information@tn.gov

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Sequence Number: 05-05-12
 Notice ID(s): 1792-1851
 File Date: 5/3/2012

Notice of Rulemaking Hearing

Hearings will be conducted in the manner prescribed by the Uniform Administrative Procedures Act, T.C.A. § 4-5-204. For questions and copies of the notice, contact the person listed below.

Agency/Board/Commission:	Environment and Conservation
Division:	Water Pollution Control
Contact Person:	Michael Burton
Address:	6 th Floor, L & C Annex 401 Church Street Nashville, Tennessee 37243-1534
Phone:	(615) 532-0166 or (615) 532-0455
Email:	Michael.K.Burton@tn.gov

Any Individuals with disabilities who wish to participate in these proceedings (to review these filings) and may require aid to facilitate such participation should contact the following at least 10 days prior to the hearing:

ADA Contact:	ADA Coordinator
Address:	12 th Floor, L & C Tower 401 Church Street Nashville, Tennessee 37243
Phone:	1-866-253-5827 (toll free) or (615) 532-0200 Hearing impaired callers may use the TN Relay Service at 1-800-848-0298
Email:	Beverly.Evans@tn.gov

Hearing Location(s) (for additional locations, copy and paste table)

Address 1:	Knoxville Environmental Field Office Large Conference Room		
Address 2:	3711 Middlebrook Pike		
City:	Knoxville, Tennessee		
Zip:	37921-6538		
Hearing Date :	07/10/12		
Hearing Time:	2:00 p.m. to 4:00 p.m.	<input type="checkbox"/> CST/CDT	<input checked="" type="checkbox"/> EST/EDT

Address 1:	Knoxville Environmental Field Office Large Conference Room		
Address 2:	3711 Middlebrook Pike		
City:	Knoxville, Tennessee		
Zip:	37921-6538		
Hearing Date :	07/10/12		
Hearing Time:	6:00 p.m. to 8:00 p.m.	<input type="checkbox"/> CST/CDT	<input checked="" type="checkbox"/> EST/EDT

Additional Hearing Information:

Summary of the Proposed Rulemaking

Various environmental groups have made a number of requests for amendments to the existing oil and gas rules. Most, not all, of these items involve concerns over fracturing practices. The Division proposes to address the most commonly mentioned issues, as follows:

Public Participation – Interest groups requested a Public Notice and comment period for each new oil or gas well, with the option to request a Public Hearing, similar to the system the Department employs with NPDES and ARAP Individual Permits.

Staff has estimated the cost to the department of implementing such a system at over \$400,000/year, which did not include staff time/overtime. We have proposed to post on our website a list of all new wells permitted. Basic information on each well would be included, such as name, well #, county, lat/long, horizontal or vertical, intent to fracture, etc. This would involve some data entry time for staff, but no rule changes would be required.

We have proposed to amend Rule 0400-52-02-.01 to require a 15-day public notice and comment period for each new well that proposes to fracture using >200,000 gallons of water – this will require that staff prepare a Notice of Determination/response to comments if any are received. An e-mail or mail Notice would be sent out to any party who requests to be put on an Oil and Gas Notice list (this would involve some mailing/staff cost). A Public Hearing option is not proposed. The Public Notice and the Notice of Determination could be posted on the TDEC website at minimal cost/effort.

Notification of Intent to Fracture - Interest groups requested that drilling applications include a fracturing plan indicating the intent to conduct fracturing and proposed method of fracturing.

We have proposed to amend Rule 0400-52-02-.02(1) to require that the drilling plan submitted with all well applications include a statement of the intent to fracture the well or not and if so, an estimate of the volume of fluids to be used to fracture. If >200,000 gallons of water are proposed to fracture a well, we would put the application on Public Notice as noted above, request info on the source of this water, and rule on whether an ARAP permit for withdrawal would be required. Specific details on how the well was fractured, exact volumes of water used, chemical additives, etc., would be required later as part of the well history information.

We will specify that the operator must notify the Oil and Gas inspector at least 24 hours prior to conducting the fracturing activity. We would also specify that the operator must have personnel on-site during the fracturing activity, including the back flow period following the fracture.

This amendment will also require that we add a definition of 'Fracturing' to the definitions in Rule 0400-51-01-.01. These amendments will solidify the Board's authority to regulate fracturing activities – while we can most likely regulate these activities under the existing rules, currently the rules make no mention specifically of fracturing.

Disclosure of Fracturing additives/chemicals – Interest groups requested that operators be required to fully disclose all chemicals to be used in fracturing, and that this information be easily accessible to the public. We have proposed to amend Rule 0400-53-01-.03 to require that post-drilling well reports include actual volumes used to frack, amounts/concentrations of all additives used in fracturing, amount of wastewater generated and method of disposal.

We will require this fracturing data from each well to be entered on a public website by the operator, either one set up by the state or one set up by industry. Any interested party can access this data from their home computer at no cost - there would be no cost to the Department and only minimal entry-time cost to the industry.

Well Siting Restrictions - Interest groups requested more stringent siting requirements for wells, with respect to karst geology, flood plains, streams, other features.

We have proposed to add paragraph (12) to Rule 0400-53-03-.01 that would prohibit wells, pits, or storage facilities in floodplains or wetlands. This requirement would probably have little or no negative impact on the industry and the department does not believe that these activities are currently taking place in floodplains or wetlands.

We have also proposed to amend paragraph (11) of Rule 0400-53-03-.01 to require additional setback distance

from waterbodies classed as Outstanding National Resource Waters. We currently require a 100 foot setback from the nearest stream; for ONRWs the setback would be propose at 330 feet, the same buffer distance we require from the nearest property line.

More stringent/better codified casing requirements – Interest groups requested that the department require American Petroleum Institute (API) standards for all casing pipe and cement, along with periodic pressure testing of casings for integrity.

We have proposed to incorporate the existing casing policy into the rules under Rule 0400-52-07-.03. At this time we will also propose improvements to our casing policies suggested by staff, including:

Amending Rule 1040-02-07-.01 to state that conductor pipe cannot be pulled if >40 feet of pipe was used;

Requiring surface casing to be cemented at least 100 feet below all fresh water strata (we currently require 50 feet). See paragraph (1) of Rule 0400-52-07-.02. Neighboring states also use 100 feet;

Amending Rule 0040-52-07-.03 to state that applicants may request deviations from our casing requirements; and

Amending Rule 0400-52-07-.04 to require cement bond logs on all wells to be fractured using >200,000 gallons, and on all wells older than a specific date (drilled before 2000, or >10 years old, for example).

We do not propose to adopt API standards in to our rules at this time. API has generic standards for use world-wide, and they do not take into consideration local conditions. Probably for this reason, no other states have adopted API standards. We require on-site pressure testing for well integrity, which we feel to be a better practical indication of environmental protection and safety than manufacturer's materials testing.

Standards for Control of Leakage (structures, pipelines, and transport) - Interest groups requested specific minimum standards for pits, pit liners, and tanks, as well as pipelines and transport. They point out that, for example, we currently require that certain pits be lined, but we do not specify the thickness or material of the liner.

We have proposed to amend subparagraph (2)(g) of Rule 1040-03-03-.02 to set some minimum specifications for pits, liners, and tanks. We would not propose any changes to address transport or pipelines. For example, surrounding states require either 10 ml or 20 ml liners for pits.

Air Pollution issues – Interest groups requested additional rules to protect air quality for site workers, adjacent land owners, and the public, in addition to green-house gas concerns in general.

EPA is developing updated/revised air emission regulations for the oil and gas industry, including the first federal air standards for wells that are hydro-fractured and the department will wait upon EPA's new regulations for air emissions rather than spend resources on developing our own emissions program.

NORM and TENORM issues – The Chattanooga Shale is known to contain low levels of Naturally Occurring Radioactive Materials (NORMs). Groups requested sampling for NORMs and TENORMs (Technically Enhanced NORMs) at well sites, and regulations that would control exposure to and discharge of such materials.

The proper disposal of NORM and TENORM from any site, a drill site included, can be handled under existing Radiological Health regulations. We do not propose to add anything to Oil and Gas rules other than a reference to the existing Radiological Health regulations.

Baseline and Follow-up Monitoring of Wells, Surface Waters, and Groundwater – Interest groups requested that operators be required to sample surrounding wells, streams, and groundwater aquifers before drilling and continuing throughout the lifetime of an oil/gas well, not only for petroleum contamination but for all chemical additives used in fracturing.

The whole concept of monitoring is problematic. There are no known instances of a surface waterbody or groundwater aquifer being contaminated by a well leaking underground in this state from oil or fracturing chemicals (though oil spills at the surface sometimes occur that require clean-up of a stream), and the cost of such a monitoring program at each well would be ruinous to the industry.

In addition, our review of high water volume fracturing data from other states shows the chemical additiives used are usually present in the fracturing solution at such low concentrations that detection of them in a water sample

from a well or stream would be unlikely even if an underground leak was occurring.

We have proposed to amend Rule 0400-52-02-.02 to require the applicant to identify all drinking water wells within a ½ mile radius of a proposed well in their application. We would also require the applicant to notify the owners of any such wells prior to drilling, and to collect a sample of these wells for petroleum contamination (if the landowner wishes) for baseline documentation.

With this rulemaking the Department is also changing the Chapter numbers of these rules from Chapters 1040-01-01 through 1040-08-01 to Chapters 0400-51-01 through 0400-58-01. There also adjustments made in how rules are referenced within these chapters.

An initial set of draft rules has been prepared for public review and comment. Copies of these initial draft rules are available for review at the Tennessee Department of Environment and Conservation's (TDEC's) Environmental Field Offices located as follows:

Nashville Environmental Field Office
711 R. S. Gass Blvd
Nashville, TN 37243-1550
(615) 687-7000/ 1-888-891-8332

Cookeville Environmental Field Office
1221 South Willow Avenue
Cookeville, TN 38506
(931) 432-4015/ 1-888-891-8332

Chattanooga Environmental Field Office
Suite 550- State Office Building
540 McCallie Avenue
Chattanooga, TN 37402-2013
(423) 634-5745/ 1-888-891-8332

Knoxville Environmental Field Office
3711 Middlebrook Pike
Knoxville, TN 37921-5602
(865) 594-6035/ 1-888-891-8332

Johnson City Environmental Field Office
2305 Silverdale Road
Johnson City, TN 37601-2162
(423) 854-5400/ 1-888-891-8332

Copies of these initial draft rules are also available for review at:

Huntsville Public Library
151 Bank Street
Huntsville, TN 37756

The "Draft" rules may also be accessed for review using <http://tn.gov/environment/wpc/ppo>.

Draft copies are also available for review at the Nashville Central Office (see address below).

Tennessee Department of Environment and Conservation
Division of Water Pollution Control / Tennessee Oil & Gas Board
6th Floor, L & C Annex
401 Church Street
Nashville, Tennessee 37243-1534
(615) 532-0166

Office hours for the Division's offices are from 8:00 a.m. to 4:30 p.m., Monday through Friday (excluding holidays).

Oral or written comments are invited at the hearing. In addition, written comments may be submitted prior to or after the public hearing to: Division of Water Pollution Control, Tennessee Department of Environment and Conservation, Attention: Michael Burton, 6th Floor, L & C Annex, 401 Church Street, Nashville, Tennessee 37243-1534; telephone (615) 532-0645 or FAX (615) 532-0686. However, such written comments must be received by the Division by 4:30 p.m. CST, July 20, 2012, in order to assure consideration. For further information, contact Michael Burton at the above address or telephone number.

Revision Type (check all that apply):

Amendment

New

Repeal

Rule(s) (ALL chapters and rules contained in filing must be listed. If needed, copy and paste additional tables to accommodate more than one chapter. Please enter only **ONE** Rule Number/Rule Title per row.)

Chapter Number	Chapter Title
0400-51-01	Definitions
Rule Number	Rule Title
0400-51-01-.01	Definitions of Terms

Chapter Number	Chapter Title
0400-52-01	Bond
Rule Number	Rule Title
0400-52-01-.01	Amount of Plugging Bond
0400-52-01-.02	Blanket Plugging Bond
0400-52-01-.03	Reclamation Bond
0400-52-01-.04	Relief of Responsibility
0400-52-01-.05	Execution
0400-52-01-.06	Forfeiture
0400-52-01-.07	Notice of Compliance

Chapter Number	Chapter Title
0400-52-02	Permits
Rule Number	Rule Title
0400-52-02-.01	Permit Required
0400-52-02-.02	Drilling Permit
0400-52-02-.03	Reserved
0400-52-02-.04	Notification to Plug and Abandon
0400-52-02-.05	Reserved

Chapter Number	Chapter Title
0400-52-03	Well Location Plats
Rule Number	Rule Title
0400-52-03-.01	Preparing Plats

Chapter Number	Chapter Title
0400-52-04	Vertical Well Spacing
Rule Number	Rule Title
0400-52-04-.01	Vertical Well Spacing

Chapter Number	Chapter Title
0400-52-05	Well Identification
Rule Number	Rule Title
0400-52-05-.01	Posting a Sign

Chapter Number	Chapter Title
0400-52-06	Drilling Wells
Rule Number	Rule Title
0400-52-06-.01	Drilling Equipment
0400-52-06-.02	Blowout Prevention
0400-52-06-.03	Casingheads
0400-52-06-.04	Environmental Protection

Chapter Number	Chapter Title
0400-52-07	Casing Program

Rule Number	Rule Title
0400-52-07-.01	Casing Requirements
0400-52-07-.02	Conductor Pipe
0400-52-07-.02	Surface Casing
0400-52-07-.03	Production Casing
0400-52-07-.04	Isolation of Oil, Gas and Fresh-Water-Bearing Strata, and Potential Minable Coal and Other Mineral Deposits

Chapter Number	Chapter Title
0400-52-08	Directional Drilling
Rule Number	Rule Title
0400-52-08-.01	Lateral Deviation
0400-52-08-.02	Inclination Surveys
1040-20-08-.03	Directional Survey
0400-52-08-.04	Horizontal Drilling

Chapter Number	Chapter Title
0400-52-09	Well Plugging and Abandonment
Rule Number	Rule Title
0400-52-09-.01	Plugging Wells
0400-52-09-.02	Inspection
0400-52-09-.03	Deliverability Test
0400-52-09-.04	Time Limit for Plugging Wells
0400-52-09-.05	Surface Reclamation
0400-52-09-.06	Temporary Abandonment

Chapter Number	Chapter Title
0400-52-10	Filing of Well Data, Reports and Maps
Rule Number	Rule Title
0400-52-10-.01	Information Due Date
0400-52-10-.02	Information Required
0400-52-10-.03	Reserved
0400-52-10-.04	Field Map
0400-52-10-.05	Information Confidential
0400-52-10-.06	Annual Well Report

Chapter Number	Chapter Title
0400-52-11	Exceptions and Hearings
Rule Number	Rule Title
0400-52-11-.01	Prevention of Waste

Chapter Number	Chapter Title
0400-52-12	Violations – Penalties – Notice – Hearing
Rule Number	Rule Title
0400-52-12-.01	Violations, Penalties, Notice, Hearing
0400-52-12-.02	Red Tagging of Wells

Chapter Number	Chapter Title
0400-53-01	Completion, Recompletion, and Related Downhole Work
Rule Number	Rule Title
0400-53-01-.01	Time Limit for Well Completion
0400-53-01-.02	Notification for Re-entry
0400-53-01-.03	Report Filing
0400-53-01-.04	Gas/Oil Ratio Tests
0400-53-01-.05	Periodic GPM Tests
0400-53-01-.06	Gas Composition Analysis for Permit Tests
0400-53-01-.07	Bottomhole Pressure Tests
0400-53-01-.08	Reserved
0400-53-01-.09	Reserved

Chapter Number	Chapter Title
0400-53-02	Tubing and Well Equipment
Rule Number	Rule Title
0400-53-02-.01	Reserved
0400-53-02-.02	Connections
0400-53-02-.03	Separators
0400-53-02-.04	Safety Valves

Chapter Number	Chapter Title
0400-53-03	Prevention of Hazards and Pollution
Rule Number	Rule Title
0400-53-03-.01	Safety
0400-53-03-.02	Pollution and Safety Controls

Chapter Number	Chapter Title
0400-54-01	Pollution and Safety Controls
Rule Number	Rule Title
0400-54-01-.01	Operator's Responsibility
0400-54-01-.02	Proper Handling of Drilling Foam
0400-54-01-.03	Proper Disposal of Waste
0400-54-01-.04	Removal of Debris
0400-54-01-.05	Pollution Avoidance
0400-54-01-.06	Cleaning Pit or Tank
0400-54-01-.07	Containment Pit and Tank Batteries
0400-54-01-.08	Vents Required
0400-54-01-.09	Improper Loading
0400-54-01-.10	Gathering Lines
0400-54-01-.11	Improper Casing
0400-54-01-.12	Disposal of Salt Water

Chapter Number	Chapter Title
0400-54-02	Procedures and Equipment for Metering, Measuring and Producing Oil Condensate and Gas
Rule Number	Rule Title
0400-54-02-.01	Gas/Oil Ratios Equipment
0400-54-02-.02	Gauging
0400-54-02-.03	Testing
0400-54-02-.04	Improper Transfer
0400-54-02-.05	Lease Tank Outlets
0400-54-02-.06	Bleed-off Lines
0400-54-02-.07	Commingling Prohibited
0400-54-02-.08	Required Test Lines
0400-54-02-.09	Reserved
0400-54-02-.10	Reserved
0400-54-02-.11	Reserved
0400-54-02-.12	Reserved
0400-54-02-.13	Basic Orifice Coefficients
0400-54-02-.14	Pilot Tubes
0400-54-02-.15	Gas Measurements

Chapter Number	Chapter Title
0400-54-03	Requirements for Reporting the Volume and Disposition of Oil and Gas Produced
Rule Number	Rule Title
0400-54-03-.01	Time Reports
0400-54-03-.02	Month Defined
0400-54-03-.03	Reserved
0400-54-03-.04	Reserved
0400-54-03-.05	Reporting-Producers

0400-54-03-06	Monthly Reporting-Transporters
0400-54-03-07	Reserved
0400-54-03-08	Report Filing
0400-54-03-09	Computing Method
0400-54-03-10	Report Verification
0400-54-03-11	Monthly Report-Gas
0400-54-03-12	Monthly Report-Plant
0400-54-03-13	Report-Gas Gatherers

Chapter Number	Chapter Title
0400-54-04	Ratable Take
Rule Number	Rule Title
0400-54-04-01	Taking Oil and Gas Ratably

Chapter Number	Chapter Title
0400-54-05	Commingling and Automatic Custody Transfer of Hydrocarbons
Rule Number	Rule Title
0400-54-05-01	Permission to Commingle
0400-54-05-02	Notice Publication
0400-54-05-03	Granting Permission
0400-54-05-04	Meter Calibrations
0400-54-05-05	Operational Limitations
0400-54-05-06	By-Pass Lines
0400-54-05-07	Test for GPM
0400-54-05-08	Retention of Reports

Chapter Number	Chapter Title
0400-54-06	Limiting Production
Rule Number	Rule Title
0400-54-06-01	Prorating a Pool

Chapter Number	Chapter Title
0400-54-07	Regulating High Gas/Oil Ratio Wells and Preventing Waste of Gas
Rule Number	Rule Title
0400-54-07-01	Classification
0400-54-07-02	Escaping Gas
0400-54-07-03	Unitization
0400-54-07-04	Wells Regulated
0400-54-07-05	Gas-Lifted Wells
0400-54-07-06	Application of Rules

Chapter Number	Chapter Title
0400-54-08	Subterranean Gas Storage
Rule Number	Rule Title
0400-54-08-01	Conditioned Usage

Chapter Number	Chapter Title
0400-54-09	Pressure Maintenance Projects and Secondary Recovery
Rule Number	Rule Title
0400-54-09-01	Application
0400-54-09-02	Administrative Approval
0400-54-09-03	Approval by Special Order
0400-54-09-04	Poolwide Unit-Formation
0400-54-09-05	Casing and Sealing Wells
0400-54-09-06	Input Well Procedure
0400-54-09-07	Pro-rata Payment
0400-54-09-08	Application for Hearing

Chapter Number	Chapter Title
0400-55-01	Unit Operations
Rule Number	Rule Title
0400-55-01-.01	Unit Operation
0400-55-01-.02	Drilling and Production Units
0400-55-01-.03	Poolwide Units

Chapter Number	Chapter Title
0400-56-01	Hearings and Administrative Approval
Rule Number	Rule Title
0400-56-01-.01	Hearings
0400-56-01-.02	Administrative Approval

Chapter Number	Chapter Title
0400-56-02	Rules of Procedure for Hearing Contested Cases

Chapter Number	Chapter Title
0400-57-01	List of Forms
Rule Number	Rule Title
0400-57-01-.01	Report and Permit Forms

Chapter Number	Chapter Title
0400-58-01	Determinations Under Federal Natural Gas Policy Act of 1978
Rule Number	Rule Title
0400-58-01-.01	Definitions
0400-58-01-.02	Applicability of Other Rules
0400-58-01-.03	Application and Filing Procedure
0400-58-01-.04	Evidence by Affidavit
0400-58-01-.05	Intervention
0400-58-01-.06	Attesting of Written Orders
0400-58-01-.07	List of Participants
0400-58-01-.08	Forms
0400-58-01-.09	Notice of Determination
0400-58-01-.10	Method of Determinations

Chapter Number	Chapter Title
1040-01-01	Definitions
Rule Number	Rule Title
1040-01-01-.01	Definitions of Terms

Chapter Number	Chapter Title
1040-02-01	Bond
Rule Number	Rule Title
1040-02-01-.01	Amount of Plugging Bond
1040-02-01-.02	Blanket Plugging Bond
1040-02-01-.03	Reclamation Bond
1040-02-01-.04	Relief of Responsibility
1040-02-01-.05	Execution
1040-02-01-.06	Forfeiture
1040-02-01-.07	Notice of Compliance

Chapter Number	Chapter Title
1040-02-02	Permits
Rule Number	Rule Title
1040-02-02-.01	Permit Required
1040-02-02-.02	Drilling Permit
1040-02-02-.03	Repealed
1040-02-02-.04	Notification to Plug and Abandon
1040-02-02-.05	Repealed

Chapter Number	Chapter Title
1040-02-03	Well Location Plats
Rule Number	Rule Title
1040-02-03-.01	Preparing Plats

Chapter Number	Chapter Title
1040-02-04	Vertical Well Spacing
Rule Number	Rule Title
1040-02-04-.01	Vertical Well Spacing

Chapter Number	Chapter Title
1040-02-05	Well Identification
Rule Number	Rule Title
1040-02-05-.01	Posting a Sign

Chapter Number	Chapter Title
1040-02-06	Drilling Wells
Rule Number	Rule Title
1040-02-06-.01	Drilling Equipment
1040-02-06-.02	Blowout Prevention
1040-02-06-.03	Casingheads
1040-02-06-.04	Environmental Protection

Chapter Number	Chapter Title
1040-02-07	Casing Program
Rule Number	Rule Title
1040-02-07-.01	Conductor Pipe
1040-02-07-.02	Surface Casing
1040-02-07-.03	Production Casing
1040-02-07-.04	Isolation of Oil, Gas and Fresh-Water-Bearing Strata, and Potential Minable Coal and Other Mineral Deposits

Chapter Number	Chapter Title
1040-02-08	Directional Drilling
Rule Number	Rule Title
1040-02-08-.01	Lateral Deviation
1040-02-08-.02	Inclination Surveys
1040-20-08-.03	Directional Survey
1040-02-08-.04	Horizontal Drilling

Chapter Number	Chapter Title
1040-02-09	Well Plugging and Abandonment
Rule Number	Rule Title
1040-02-09-.01	Plugging Wells
1040-02-09-.02	Inspection
1040-02-09-.03	Deliverability Test
1040-02-09-.04	Time Limit for Plugging Wells
1040-02-09-.05	Surface Reclamation
1040-02-09-.06	Temporary Abandonment

Chapter Number	Chapter Title
1040-02-10	Filing of Well Data, Reports and Maps
Rule Number	Rule Title
1040-02-10-.01	Information Due Date
1040-02-10-.02	Information Required
1040-02-10-.03	Reserved
1040-02-10-.04	Field Map
1040-02-10-.05	Information Confidential

1040-02-10-06	Annual Well Report
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Chapter Number	Chapter Title
1040-02-11	Exceptions and Hearings
Rule Number	Rule Title
1040-02-11-.01	Prevention of Waste

Chapter Number	Chapter Title
1040-02-12	Violations – Penalties – Notice – Hearing
Rule Number	Rule Title
1040-02-12-.01	Violations, Penalties, Notice, Hearing
1040-02-12-.02	Red Tagging of Wells

Chapter Number	Chapter Title
1040-03-01	Completion, Recompletion, and Related Downhole Work
Rule Number	Rule Title
1040-03-01-.01	Time Limit for Well Completion
1040-03-01-.02	Notification for Re-entry
1040-03-01-.03	Report Filing
1040-03-01-.04	Gas/Oil Ratio Tests
1040-03-01-.05	Periodic GPM Tests
1040-03-01-.06	Gas Composition Analysis for Permit Tests
1040-03-01-.07	Bottomhole Pressure Tests
1040-03-01-.08	Repealed
1040-03-01-.09	Repealed

Chapter Number	Chapter Title
1040-03-02	Tubing and Well Equipment
Rule Number	Rule Title
1040-03-02-.01	Repealed
1040-03-02-.02	Connections
1040-03-02-.03	Separators
1040-03-02-.04	Safety Valves

Chapter Number	Chapter Title
1040-03-03	Prevention of Hazards and Pollution
Rule Number	Rule Title
1040-03-03-.01	Safety
1040-03-03-.02	Pollution and Safety Controls

Chapter Number	Chapter Title
1040-04-01	Pollution and Safety Controls
Rule Number	Rule Title
1040-04-01-.01	Operator's Responsibility
1040-04-01-.02	Proper Handling of Drilling Foam
1040-04-01-.03	Proper Disposal of Waste
1040-04-01-.04	Removal of Debris
1040-04-01-.05	Pollution Avoidance
1040-04-01-.06	Cleaning Pit or Tank
1040-04-01-.07	Containment Pit and Tank Batteries
1040-04-01-.08	Vents Required
1040-04-01-.09	Improper Loading
1040-04-01-.10	Gathering Lines
1040-04-01-.11	Improper Casing
1040-04-01-.12	Disposal of Salt Water

Chapter Number	Chapter Title
1040-04-02	Procedures and Equipment for Metering, Measuring and Producing Oil Condensate and Gas

Rule Number	Rule Title
1040-04-02-.01	Gas/Oil Ratios Equipment
1040-04-02-.02	Gauging
1040-04-02-.03	Testing
1040-04-02-.04	Improper Transfer
1040-04-02-.05	Lease Tank Outlets
1040-04-02-.06	Bleed-off Lines
1040-04-02-.07	Commingling Prohibited
1040-04-02-.08	Required Test Lines
1040-04-02-.09	Repealed
1040-04-02-.10	Repealed
1040-04-02-.11	Repealed
1040-04-02-.12	Repealed
1040-04-02-.13	Basic Orifice Coefficients
1040-04-02-.14	Pilot Tubes
1040-04-02-.15	Gas Measurements

Chapter Number	Chapter Title
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(Place substance of rules and other info here. Statutory authority must be given for each rule change. For information on formatting rules go to <http://state.tn.us/sos/rules/1360/1360.htm>)

Repeals

Chapter 1040-01-01 through 1040-08-01 Rules of the Tennessee Oil and Gas Board

Chapters 1040-01-01 Definitions, 1040-02-01 Bond, 1040-02-02 Permits, 1040-02-03 Well Location Plats, 1040-02-04 Vertical Well Spacing, 1040-02-05 Well Identification, 1040-02-06 Drilling Wells, 1040-02-07 Casting Program, 1040-02-08 Directional Drilling, 1040-02-09 Well Plugging and Abandonment, 1040-02-10 Filing of Well Date, Reports and Maps, 1040-02-11 Exceptions and Hearings, 1040-02-12 Violations – Penalties – Notice – Hearing, 1040-03-01 Completion, Recompletion, and Related Downhole Work, 1040-03-02 Tubing and Well Equipment, 1040-03-03 Prevention of Hazards and Pollution, 1040-04-01 Pollution and Safety Controls, 1040-04-02 Procedures and Equipment for Metering, Measuring and Producing Oil Condensate and Gas, 1040-04-03 Requirements for Reporting the Volume and Disposition of Oil and Gas Produced, 1040-04-04 Ratable Take, 1040-04-05 Commingling and Automatic Custody Transfer of Hydrocarbons, 1040-04-06 Limiting Production, 1040-04-07 Regulating High Gas/Oil Ratio Wells and Preventing Waste of Gas, 1040-04-08 Subterranean Gas Storage, 1040-04-09 Pressure Maintenance Projects and Secondary Recovery, 1040-05-01 Unit Operations, 1040-06-01 Hearings and Administrative Approval, 1040-06-02 Rules of Procedure for Hearing Contested Cases, 1040-07-01 List of Forms, and 1040-08-01 Determining Under Federal Natural Gas Policy Act of 1978 are repealed.

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

New Rules

Chapter 0400-51-01 Definitions

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0400-51-01-.01 Definitions of Terms

0400-51-01-.01 Definitions of Terms

For the purpose of rules contained in divisions 0400-51 through 0400-58 the terms set out herein shall have the meaning indicated.

- (1) "Abandoned well" shall mean either of the following:
 - (a) A well that was not adequately plugged or closed at conclusion of operations such that it constitutes or may constitute a threat to public health or the environment; or
 - (b) A well that has no owner, operator or other responsible person (hereinafter called "responsible party") who can be located, or such responsible party has failed or refused to undertake actions, where required by law, to abate the threat.
- (2) "Access Road" shall mean any road built and used exclusively by the operator (except public roads) which provides access to and/or ends at a wellhead, tank, pit or other facility related to oil and gas exploration and/or production.
- (3) "Active Work Area" as it pertains to a well site, shall mean that portion of the initially disturbed area necessary for production-related equipment, materials, and facilities, as determined by the supervisor.
- (4) "Automatic Custody Transfer" shall mean that the liquid hydrocarbons is automatically measured as it is transferred from the producer to the carrier.
- (5) "Barrel (or, Barrel of Oil or Condensate)" shall mean the amount of 42 standard United States liquid measure gallons of 231 cubic inches per gallon, computed at a temperature of 60 degrees Fahrenheit.

- (6) "Blow-Out" shall mean an uncontrolled escape of oil, gas and/or water from the well.
- (7) "Blow-Out Preventer" shall mean a properly selected casinghead control fitted with special gates or discs which may be closed around the drill pipe, or which completely closes the top of the casing if the pipe or tools are withdrawn.
- (8) "Board" shall mean the State Oil and Gas Board as authorized and created by Title 60, Tennessee Code Annotated. It is composed of the following:
- (a) The Commissioner of Environment and Conservation, or his or her designee who shall act as chairperson,
 - (b) The head of the Division of Energy of the Department of Economic and Community Development,
 - (c) The chairperson of the Conservation Commission,
 - (d) A member from the oil or gas industry appointed by the Governor.
 - (e) An owner of oil and gas property appointed by the Governor, and
 - (f) A member from the mineral industry appointed by the Governor.

The Commissioner of Environment and Conservation shall be ex officio the State Oil and Gas Supervisor, and shall also serve as Supervisor of the Mineral Test Hole Regulatory Act, Part 5 of Title 60, Chapter 1.

- (9) "Bonding Agent" shall mean any entity that issues a bond for an operator to submit to the state to assure the plugging of a well or reclamation of a well site.
- (10) "Bottomhole Pressure" shall mean the pressure in pounds per square inch of an oil and/or gas well determined at the face of the producing horizon by means of a pressure-recording instrument, adopted and recognized by the oil and gas industry.
- (11) "Brush and Rock Plug" shall mean an obstruction, made of wood and stone, and placed in the well bore to form an effective base for plugging material.
- (12) "Casing Pressure" shall mean the pressure built up between the casing and the tubing when the casing and tubing are packed off at the top of the well.
- (13) "Casinghead Gas" shall mean any gas or vapor, or both, indigenous to an oil stratum and produced from such stratum with oil. It shall be treated as gas, if sold, for the purpose of paying privilege tax.
- (14) "Christmas Tree" shall mean an assembly of valves and fittings at the head of the casing of a well to control the flow. Also spoken of as "wellhead connections".
- (15) "Circulation" shall mean the passing of approved fluid down through the drill stem and up to the surface, in the process or rotary drillings or in setting casing.
- (16) "Common Source of Supply" shall comprise and include the area, which is underlain or that, from geological or other scientific data or from drilling operations or other evidence, appears to be underlain by a common accumulation of oil or gas or both; provided, that if any such area is underlain or appears from geologic or other scientific data or from drilling operations or other evidence to be underlain by more than one common accumulation of oil or gas, or both, separated from each other by strata of earth and not connected with each other, then such area, as to each said common accumulation of oil or gas, or both, shall be deemed a separate common source of supply.
- (17) "Condensate" shall mean liquid hydrocarbons that were in the gaseous phase in the reservoir at initial reservoir condition. It shall be treated as oil for the purpose of paying privilege tax.
- (18) "Conductor Pipe" or "Conductor Casing" shall mean the short string of casing that is not cemented in place and serves primarily to keep the top of the well bore open in unconsolidated material.

- (19) "Conservation" shall mean conserving, preserving, guarding, or protecting the oil and gas resources of the State by obtaining the maximum efficiency with minimum waste in the production, transportation, processing, refining, treating, and marketing of the un-renewable oil and gas resources of the State.
- (20) "Correlative Rights or Equally" shall mean that action or regulation by the Board, which affords a reasonable opportunity to each person entitled thereto to recover or receive the oil and/or gas under his tract or tracts without being required to drill unnecessary wells or incur other unnecessary expense to recover or receive such oil or gas or its equivalent.
- (21) "Cubic Foot of Gas" shall mean the volume of gas contained in one cubic foot of space at a standard pressure base of 14.73 psi and a temperature base of 60 degrees Fahrenheit.
- (22) "Developed Area" shall mean acreage assigned by the Board to a drilling or production unit on which a well has been completed that is capable of producing oil or gas.
- (23) "Directional Drilling" shall mean the drilling of a well that deviated from the vertical by more than 5 degrees.
- (24) "Disposal Well" shall mean a well drilled or converted for subsurface disposal of waste products or brine, and its related surface facilities.
- (25) "Drilling Mud" shall mean any approved mixture of water and clay or other material as the term is commonly used in the industry.
- (26) "Dry Hole or Dry Well" shall mean a well found incapable of producing either oil or gas in sufficient quantities to justify completion or continued production.
- (27) "Equitable Share of the Production" shall mean, as to each person, that part of the authorized production from the pool that is substantial in the proportion that the amount of recoverable oil and gas, or both, in the developed area of his tracts in the pool bears to the recoverable oil or gas, or both, in the total of the developed area in the pool.
- (28) "Exploitation Well" shall mean a well drilled or to be drilled to one or more pools of oil and/or gas with reasonable assurance of obtaining commercial production.
- (29) "Exploration Well" shall mean a well drilled in unproven or semi proven territory for the purpose of ascertaining the presence of commercial oil and/or gas accumulations.
- (30) "Field" shall mean the general area which is underlain or appears to be underlain by at least one (~~4~~) pool and including the pool or pools beneath the area.
- (31) "Forced-change of operator" shall mean any oil or gas well being taken over by a new operator without the signatures from the original permittee or previous operator of record.
- (32) "Fracturing" or "to fracture" shall mean the process of pumping fluids, gas or other substances down a well under pressure to create fractures in the producing formation to facilitate oil or gas extraction.
- (33) "Gas" shall mean all natural gas and all other fluid hydrocarbons not defined as oil, including condensate because it originally was in a gaseous phase in the reservoir, but excluding helium and other rare gases.
- (34) "Gas/Oil Ratio (GOR)" shall mean the portion of a wellbore drilled laterally into a common source of supply for production or injection purposes.
- (35) "Gathering Line" means a pipeline that transports gas or oil from a well or current production facility to a transmission line, main meter, compressor station, or tank battery.
- (36) "Horizontal Drainhole" shall mean the portion of a wellbore drilled laterally into a common source of supply for production or injection purposes.
- (37) "Horizontal Drainhole End Point" shall mean the terminus of a horizontal drainhole.

- (38) "Horizontal (Lateral) Drilling" shall mean controlled directional drilling of wells with lateral penetration through productive reservoirs.
- (39) "Illegal Gas" shall mean gas that has been produced, transported, or sold in violations of any rule, regulation, or order of the Board.
- (40) "Illegal Oil" shall mean oil that has produced, transported, or sold in violation of any rule, regulation, or order of the Board.
- (41) "Illegal Product" shall mean any product derived in whole or in part from illegal oil or illegal gas.
- (42) "Interested Party" shall mean any person who owns an interest within the area of, or proximate to, the tracts directly affected by the application.
- (43) "Intermediate Casing" shall mean the string of casing set in a well with cement after the surface casing but before the production casing is set.
- (44) "Lease Tank" shall mean the tank or other receptacle into which the oil is produced either directly from a well or from a well through gas separator, gun barrel, or similar equipment.
- (45) "Market Demand" shall mean the amount of oil reasonably needed for current consumption, use, storage, or working stocks, within and without the State, or the amount of gas of any type reasonably needed for current consumption, use, or storage, within and without the State.
- (46) "Mechanical Plug" shall mean a manufactured device to seal the well bore or inside diameter of casing.
- (47) "Multiple Completion" shall mean the completion of any well so as to permit simultaneous production from two or more common sources of supply with such common sources of supply completely segregated.
- (48) "Neet Cement" shall mean a complex, finely ground, kiln-fired calcium carbonate silicate which, when mixed with water, forms a slurry that will harden in the well bore and casing and effectively seal formations penetrated by the well bore.
- (49) "Nomination" shall mean the amount of oil or gas for which a purchaser has a definite and bona fide need during a given period.
- (50) "Non-producing well" shall mean any well shown on the annual well report that indicates production of 12 barrels or less of oil per year or 25 mcf or less of gas per month.
- (51) "Oil" shall mean crude petroleum that was originally in an oil phase in the reservoir.
- (52) "Operator" shall mean the person to whom the drilling permit has been issued, whether owner or not, supervising or responsible for drilling, operating, repairing, abandoning or plugging of wells subject to this act.
- (53) "Organization Report" shall mean the form required by Rule 0400-52-02-.01 to be submitted with a permit application that names the responsible parties for the well.
- (54) "Owner" shall mean the person who has the right to drill into and to produce from any pool, and to appropriate the production for himself or others.
- (55) "Person" shall mean any natural person, corporation, association, partnership, receiver, trustee, guardian, executor, administrator, fiduciary, or representative of any kind, and includes any government or political subdivision or any agency thereof.
- (56) "Pool" shall mean an underground reservoir containing a common accumulation of crude petroleum oil or natural gas or both. Each zone of the general structure which is completely separated from any other zone in the structure is covered by the term "pool" as used therein.
- (57) "Pooled Unit" shall mean two or more tracts of land, of which their ownership may be different, that are consolidated and operated as a single tract for production of oil and/or gas, either by voluntary agreement

between the owners thereof, or by exercising of the authority of the Board under the statute. When such tracts are consolidated by Board authority, the size of the consolidation tract shall not exceed the size, with permitted tolerance, of a "Drilling Unit" as herein defined. In no such case is there any actual change in the title or ownership of the original tracts.

- (58) "Pollution" shall mean damage or injury from the loss, escape or unapproved disposal of any substance at any well or structure installation subject to these rules.
- (59) "Pollution Control Structures" shall mean structures designed to prevent pollution, including but not limited to, berms, dikes, diversion drainage ditches, hay bales, pits, or tanks.
- (60) "Producer" shall mean the owner or operator of a well or wells capable of producing oil or gas, or both, in paying quantities.
- (61) "Producing Formation" shall mean a formation from which oil or gas is being or has been produced. In the context of plugging operations, producing formation shall mean a formation from which oil or gas has been produced in the general vicinity of a well to be plugged.
- (62) "Producing Well" shall mean any well that produces quantities greater than 12 barrels of oil per year or 25 mcf of gas per month.
- (63) "Product" shall mean any commodity made from oil or gas.
- (64) "Production Casing" shall mean the string of casing that is set through the producing formation and within which the primary completion components are installed for production.
- (65) "Production Unit or Proration Unit" shall mean a drilling unit on which a well producing oil and/or gas has been completed, and which is recognized as such for the purpose of production by the Board.
- (66) "Property Line" as used herein shall mean the boundary dividing tracts on which mineral rights, royalty, or leases are separately owned except that where conventional units shall have been created for the drilling of the well, the boundaries of the unit shall be considered the "property line".
- (67) "Purchaser" shall mean any person who directly or indirectly purchases, transports, takes, or otherwise removes production to his account from a well, lease, or common source of supply.
- (68) "Reclamation" shall mean the regrading of all surface disturbed areas associated with oil and gas operations except water areas, replacement of the topsoil or substitution with suitable topsoil material, application of suitable mulch and soil nutrients where necessary, and the establishment of a vegetative cover that is in accordance with acceptable standards as set forth in the rules and regulations of the Board.
- (69) "Represented Party" shall mean any person who is known to the applicant, after diligent search, to own an interest within the area of, or proximate to, the tracts directly affected by the application and who is also known to have either a consultant or attorney representing him in conservation matters.
- (70) "Salt Water" shall mean water, commonly referred to as oil field brine, which is produced in association with oil and/or gas and which is generally considered unsuitable for human consumption or for irrigation because of its high content of dissolved solids.
- (71) "Separator" shall mean an apparatus for separating oil, gas, water, etc., with relative efficiency, as it is produced.
- (72) "Shut-In Pressure" shall mean the pressure noted at the wellhead when the well is completely shut-in. Not to be confused with bottomhole pressure.
- (73) "Stripper Well" shall have the ordinary meaning as that term is generally understood in the oil and gas industry (well capable of producing 10 barrels or less per day).
- (74) "Substitute Unit Well" shall mean any well already drilled to, or to be drilled to, completed or recompleted in the unitized reservoir which in the interest of good conservation practices should be designed to take

the place of and become the unit well as determined by special order.

- (75) "Supervisor" shall mean the State Oil and Gas Supervisor or his subordinates. The Commissioner of Environment and Conservation or his designee.
- (76) "Surface Casing" shall mean the string of casing set and cemented from the surface to a point below the deepest encountered fresh groundwater zone.
- (77) "Transmission Line" means a pipeline, other than a gathering line, that transports gas from a gathering line or storage facility to a gas distribution center or storage facility.
- (78) "Transporter" shall mean every person engaged in the transportation of oil or gas from tanks or other receptacles located at the place of production in this State.
- (79) "Tubingless Completion" shall mean the completion of any well so as to permit the passage of production from one separate underground source through one production casing set in the well.
- (80) "Waste" in addition to its ordinary meaning, shall mean "physical waste" as that term is generally understood in the oil and gas industry. It shall include: (1) underground waste and inefficient, excessive, or improper use or dissipation of reservoir energy, including gas energy and water drive, of any pool; and the locating, spacing, drilling, equipping, operating, or producing of any oil well or gas well in a manner which results, or tends to result, in reducing the quantity of oil or gas ultimately recoverable from any pool; and (2) surface waste and the inefficient storing of oil and the locating, spacing, drilling, equipping, operating, or producing of oil wells or gas wells in a manner causing or tending to cause unnecessary or excessive surface loss or destruction of oil or gas.
- (81) "Well Cuttings" shall mean rock samples obtained from rotary or cable tool drilling operations. The Supervisor at his discretion, may determine the required frequency for collecting well cuttings.
- (82) "Well Site Equipment" means the equipment, including but not limited to an associated tank battery, production and hydrocarbon equipment at an oil and gas lease or location.

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-52-01
Bond

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0400-52-01-.01 Amount of Plugging Bond

- (1) A Plugging Bond is required to be in force for a well from the time a drilling or re-entry well permit is granted until the well is plugged and abandoned. The bond shall be for the sum of \$2000 for wells from 0 to 2500 feet in depth; \$3000 for wells from more than 2501 to 5000 feet in depth; for all wells deeper than 5000 feet the bond shall increase over \$3000 at the rate of \$1.00 for every foot deeper than 5000 feet. The bonds shall be written in such a manner that the Principal and Bonding Agent hereto are firmly bound to the Tennessee Department of Environment and Conservation (hereinafter called Department), jointly and severally, for the payment of the full penal sum of the bond so that the well shall be plugged and abandoned in accordance with the rules and regulations of the Board. An individual well bond shall be released upon the proper plugging of the well and the filing with the Supervisor of a Plug and Abandon Report (Form R-P&A-1), driller's log, downhole surveys, well cuttings and cores, and other data as required, or if the permit has been canceled because of lack of proper activity.

- (2) The bonding agent may notify the Supervisor in writing of its desire to terminate its liability under the bond by giving written notice to the Supervisor. The Supervisor shall thereupon require the principal in the bond to file a new bond, or to effect a change of operators on the well within 60 days. If the principal can no longer be contacted, then any interested party may seek a change of operators on the well in accordance with subparagraph (2)(a) of Rule 0400-52-02-.02. If a new bond is filed by the principal, or a change of operators is approved by the Supervisor, liability under the original bond shall cease and terminate as to acts and operations occurring after the effective date of the new bond or approval of the change of operators, and the original bond shall be released upon written request by the bonding agent. If a new bond is not filed within the 60 days, or a change of operators has not been approved, the Supervisor shall revoke the permit secured by the bond and require the principal to plug the well in accordance with the rules and regulations of the Board. In the event of the failure of the principal to plug the well, the supervisor may issue a notice of non-compliance to the principal and the bonding agent requiring the bonding agent either to cause the well to be plugged, or forfeit the amount of the bond to the Department. The bonding agent shall then have 60 days in which to plug the well. If the well has not been plugged within that time limit, then a notice of forfeiture shall be issued, as provided for under Rule 0400-52-01-.06. The bonding agent shall then have 21 days in which to petition the State Oil and Gas Board for a hearing relative to the bond forfeiture, pursuant to the Administrative Procedures Act, T.C.A. § 4-5-101 et seq. If a hearing is requested, no further action shall be taken against the bond until such hearing has taken place and a final order given by the Board. If the well is plugged in the interim, then the notice of forfeiture shall be canceled and the bond released.

0400-52-01-.02 Blanket Plugging Bond

- (1) In lieu of an individual bond per well, any well operator may file with the Supervisor a blanket bond in the sum of \$20,000 covering a maximum of 10 wells from 0 to 5000 feet in depth; \$30,000 covering a maximum of 10 wells from 5001 to 10,000 feet in depth; and no blanket bonds for wells deeper than 10,000 feet either drilled or to be drilled by the principal in the bond at any one time. Additional wells may be covered by the bond only if wells originally covered by the bond are plugged or transferred to another operator, on a one-for-one basis with the wells to be added to the bond. Otherwise, an additional bond shall be filed for each additional group of 10 wells. The terms of such blanket bonds shall be in full compliance with the requirements for an individual well bond. A blanket bond shall be released upon the proper plugging of all wells of the operator (principal) covered by the bond, and the filing with the Supervisor of the Plug and Abandon Reports, driller's logs, downhole surveys, well cuttings and cores, and other data as required for such wells. A blanket bond may be canceled by the bonding agent, notifying the Supervisor in writing, delivered personally or by registered mail, that the operator is no longer authorized by the bonding agent to obtain permits under said bond. If or when all wells permitted under said bond have been plugged and abandoned according to the rules and regulations of the Board, or existing permits have been canceled because of lack of proper activity, the Supervisor shall release the bond.
- (2) The bonding agent may notify the Supervisor in writing of its desire to terminate its liability under the bond by giving written notice to the Supervisor. The Supervisor shall thereupon require the principal in the bond to file a new bond, or to effect a change of operators on the well(s) within 60 days. If the principal can no longer be contacted, then any interested party may seek a change of operators on the well(s) in accordance with subparagraph (2)(a) of Rule 0400-52-02-.02. If a new bond is filed by the principal, or a change of operators is approved by the Supervisor on all wells covered by the bond, liability under the original bond shall cease and terminate as to acts and operations occurring after the effective date of the new bond, or approval of the changes of operators, and the original bond shall be released upon written request by the bonding agent. If a new bond is not filed within the 60 days, or a change of operators has not been approved on all wells covered by the bond, the Supervisor shall revoke the permit(s) secured by the bond and require the principal to plug the well(s) in accordance with the rules and regulations of the Board. In the event of the failure of the principal to plug the well(s), the bonding agent may either cause the well(s) to be plugged, or forfeit the amount of the bond to the Department. This action shall be initiated by the issuance of a notice of noncompliance, as provided for under Rule 0400-52-01-.07. The bonding agent shall then have 60 days in which to plug the well(s). If the well(s) have not been plugged within that time limit, then a notice of forfeiture shall be issued, as provided for under Rule 0400-52-01-.06. The bonding agent shall then have 21 days in which to petition the State Oil and Gas Board for a hearing relative to the bond forfeiture, pursuant to the Administrative Procedures Act, T.C.A. § 4-5-101 et seq. If a hearing is requested, no further action shall be taken against the bond until such hearing has taken place and a final order given by the Board. If the well(s) are plugged in the interim, then the notice

of forfeiture shall be canceled and the bond released.

0400-52-01-.03 Reclamation Bond

- (1) A reclamation bond is required to be filed with the Supervisor at the time an operator's permit application is submitted, and shall be effective from the time the initial surface disturbances begin until the well is plugged and the site and access roads are reclaimed. The bond shall be for the sum of \$1,500 per well site. The bond shall be in favor of the Department, and shall be a performance bond, conditioned that the well site and access roads shall be reclaimed in accordance with the rules and regulations of the Board. Upon satisfactory completion of regrading and revegetation of all disturbed areas except active work areas and access roads needed for oil or gas production, the Supervisor shall release one-third of the reclamation bond, or reduce the amount of the reclamation bond by one-third. Access roads that will continue to be used by the landowner for other legitimate purposes and maintained in usable condition, which condition reduces erosion to a practical minimum, shall not have to be revegetated by the operator. Such usage shall be established by the landowner by sworn affidavit. After plugging of the well and final reclamation of the well site, and after plantings have survived two growing seasons with an established ground cover of at least 90% herbaceous and/or woody species of which at least 80% are perennial species, the supervisor shall release the remainder of the reclamation bond.
- (2) This paragraph shall be applicable only when the same bonding agent is responsible for both the plugging and reclamation bonds on a well. The bonding agent may notify the Supervisor in writing of its desire to terminate its liability under the reclamation bond by giving written notice to the Supervisor. The Supervisor shall thereupon require the principal in the reclamation bond to file a new bond, or to effect a change of operators on the well within 60 days. If the principal can no longer be contacted, then any interested party may seek a change of operations on the well in accordance with subparagraph (2)(a) of Rule 0400-52-02-.02. If a new reclamation bond is filed by the principal, or a change of operators is approved by the Supervisor, liability under the original bond shall cease and terminate as to acts and operations occurring after the effective date of the new bond, or approval of the change of operators, and the original bond shall be released upon written request by the bonding agent. If a new reclamation bond is not filed, or a change of operators has not been approved within 60 days, the Supervisor shall revoke the permit secured by the plugging and reclamation bonds and require the principal to plug the well and reclaim the well site and access roads in accordance with the rules and regulations of the Board. In the event of the failure of the principal to plug the well and reclaim the well site and access roads, the bonding agent may either cause the well to be plugged and the well site and access roads to be reclaimed, or forfeit the amount of the bonds to the Department. This action shall be initiated by the issuance of notices on noncompliance as provided for under Rule 0400-52-01-.07. The bonding agent shall then have 30 days in which to plug the well and reclaim the well site and access roads. If the well has not been plugged and the well site and access roads have not been reclaimed within that time limit then notices of forfeiture shall be issued as provided for under Rule 0400-52-01-.06. The bonding agent shall then have 21 days in which to petition the State Oil and Gas Board for a hearing relative to the bond forfeitures, pursuant to the Administrative Procedures Act T.C.A. § 4-5-101 et seq. If a hearing is requested, no further action shall be taken against the plugging and reclamation bonds until such hearing has taken place and a final order has been given by the Board. In the event the bonding agent causes the well to be plugged and the well site and access roads to be reclaimed the plugging bond shall be released, and the amount of the reclamation bond shall be reduced by one-third, to \$1,000, unless such reduction has previously taken place. The remainder of the reclamation bond shall be released only after plantings have survived two growing seasons with an established ground cover of at least 90% herbaceous and/or woody species provided that at least 80% are perennial species.

0400-52-01-.04 Relief of Responsibility

A permittee's bonds and other responsibilities to a well or wells shall be relieved upon approval by the Supervisor of a successor's application for a Change of Operator or Owner's Permit (Form P-AD-3), furnishing bonds, and the tendering of authority on Form P-AD-3 by the permittee requesting the Supervisor to approve the successor's application.

0400-52-01-.05 Execution

Any of the following shall serve as bonds:

- (1) A surety bond executed by the well operator as principal and by a corporate surety authorized to do

business in Tennessee; or

- (2) Cash; or
- (3) A certified check; or
- (4) A Certificate of Deposit, if it is made out exactly as follows: "Operator Name and Tennessee Department of Environment and Conservation or Tennessee Department of Environment and Conservation"; and does not contain any terms or conditions that provide that the issuing bank may charge against the deposit any debt of the depositor(s) owing to it (set-off terms); or any terms or conditions that provide that anyone whose signature appears on the signature card may withdraw funds from the account. The operator shall be entitled to any interest earned on a certificate of deposit as the same becomes due and payable. The treasurer of the State of Tennessee shall receive and hold the originals of such certificates in the name of the State of Tennessee, in trust, for the purpose for which such deposit is made, and shall at all times be responsible for the custody and safekeeping of such deposits; provided, however, that the certificate may be returned to the issuing financial institution as may be necessary for renewal from time to time; or
- (5) An irrevocable letter of credit issued by any federally insured bank or savings and loan association. The letter of credit shall comply with the format shown on Form ILC (Irrevocable Standby Letter of Credit format).

0400-52-01-.06 Forfeiture

- (1) The Supervisor shall cause a notice of noncompliance to be served upon the operator by certified mail, addressed to the permanent address shown on the application for a permit:
 - (a) If the requirements with respect to proper plugging upon abandonment of a well or wells and submission of all required records and data have not been complied with within the time limits set by the Board or Department, and/or,
 - (b) If the requirements with respect to proper reclamation of the well, site(s) and access roads have not been complied with within the time limits set by the Board or Department.
- (2) The notice shall specify in what respects the operator has failed to comply with this chapter or the regulations or orders of the Board or Department.
- (3) If the operator has not reached an agreement with the Supervisor, or has not complied with the requirements set forth within 30 days after mailing the notice, the plugging bond shall then be forfeited to the Department, and the money used by the Department to properly plug the well(s), and/or the reclamation bond used to reclaim the well site(s) and access roads.
- (4) In the case of the plugging bonds, such bonds are penal in nature, and the full amount of the bond shall be forfeited.
- (5) In the case of reclamation bonds, such bonds are considered to be performance bonds, and any portion of a reclamation bond not expended to perform the reclamation work shall be refunded to the operator or his bonding agent if the conditions of the bond are fully satisfied.

0400-52-01-.07 Notice of Noncompliance

At any time the Supervisor causes a notice of noncompliance to be served upon an operator (principal), copies of such notice shall be mailed to the resident agent writing such bond (where the address is known) and to the bonding agent at the address provided to the Tennessee Department of Commerce and Insurance for receipt of notices. The bonding agent shall be afforded the opportunity to act in behalf of the operator (principal) within the time set forth in regard to the proper plugging of the well or wells and submission of required well records, down hole data, and plugging reports and/or reclamation of the well site and access roads. Should the operator (principal) and bonding agent fail to comply within the time provided, then and only in that event, the plugging bond shall be forfeited, and/or the reclamation bond used to reclaim the well site and access roads.

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-52-02
Permits

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1040-02-02-.01 Permit Required

- (1) A permit is required from the Supervisor before any person shall conduct operations described in Chapter 0400-52-01 through Chapter 0400-52-12. Each permit, when granted, shall expire 365 days after issuance unless the applicant has commenced operations and reasonably continues said operations pursuant to the permitted objective. Any permit now in force shall expire 365 days from the date of this rule unless permittee complies with this requirement. If a permitted location is to be abandoned without the commencement of any drilling activity, then the operator shall notify the Supervisor in writing within 30 days after expiration of the permit.
- (2) No work shall begin on a well pursuant to this chapter before a permit for such work on the well has been issued by the Supervisor. Furthermore, any work the operator may do, or may have done, shall be at his own risk and with the full understanding that the Supervisor may find it necessary to require changing the well location or operation plans, or otherwise deny the permit because of noncompliance with applicable rules and regulations and require that the well be plugged. No requests for exceptions shall be considered for a well that was started before a permit was issued.
 - (a) A legible copy of this permit shall be displayed on location upon commencement of drilling operations and remain on display at said location until completion of the well.
- (3) Fifteen day progress on drill reports, upon request of the Supervisor, shall be mailed to the Supervisor describing well activities for the previous week. Said reports shall be made on the Fifteen Day Progress Drill Report (Form R-PD-l).
- (4) Organization Report (Form R-O-1) shall be made to the Supervisor prior to the issuance of a permit. The applicant shall name all parties responsible for the well and give contact information for them on the Organization Report consistently with the record submitted to the Secretary of States for any corporation or limited liability company. If such persons have previously filed an R-O-1 report with the Supervisor, it shall not be necessary to submit another report, unless there has been a change in the information originally submitted.
- (5) The operator shall indicate on the permit application, on a space provided, if the operator has the legal right to drill and produce the well.
- (6) A notice to surface owners of oil and gas estates is required as follows:
 - (a) No later than the filing of the application with the Department for a permit to drill and prior to initiating any site preparation, the applicant shall give notice by certified mail, return receipt requested, of his intent to drill to the property owner or owners of the surface of the land to be drilled or to be affected by the surface disturbances listed in subparagraph (c) of this paragraph.
 - (b) The property owners to be notified under this paragraph shall be the property owners of record in the property tax assessor's office in the county where the property is located.
 - (c) The notice shall include a well location plat which shows the proposed location of the oil and gas well site, the proposed location of all new ingress and egress, the location of all diversions, drilling pits, dikes, and related structures and facilities, the location of proposed storage tanks and all other surface disturbances. Said plat shall comply with Chapter 0400-52-03.

- (d) The notice shall state that the property owner and applicant have 15 working days from the date of mailing to discuss the location of surface disturbances in connection with the drilling operation. It shall also state that if the property owner and applicant are unable to resolve differences regarding the location of surface disturbances, either or both may request in writing a hearing before the Supervisor or his designee. The notice shall provide the name and address of the Supervisor.
- (e) The applicant shall file with the Supervisor, as a part of the application, written certification that the notice required by subparagraph (a) of this paragraph has been given, including the name and address of each property owner given notice and the date on which each notice was mailed.
- (f) The applicant and the property owners given notice under subparagraph (a) of this paragraph shall attempt to resolve any differences between them regarding surface disturbances related to the proposed drilling operation. If those differences cannot be resolved, then a hearing and order may be obtained as follows:
 - 1. Any property owners entitled to notice (or the applicant) may request, within 15 working days of the mailing of the notice required in subparagraph (a) of this paragraph, that the Supervisor or his designee conduct a hearing. A request for hearing under this paragraph shall be in writing to the Supervisor, and shall be mailed by certified mail, return receipt requested within 15 working days of the mailing of the notice required in subparagraph (a) of this paragraph. The purpose of the hearing shall be to minimize the impact of the proposed drilling operation on the surface of the land.
 - 2. The hearing shall be conducted as a contested case under Title 4, Chapter 5, Part 3 and shall be held before a hearing officer sitting alone. For purposes of the hearing, the Supervisor or his designee shall be the hearing officer. The hearing shall be held within 10 working days of receipt of a request for hearing by the Supervisor or his designee, and shall be held in the county of the proposed oil and gas well. Notice of the hearing shall be given to all persons entitled to notice under subparagraph (a) of this paragraph and the applicant.
 - 3. The hearing officer shall render a decision within 10 calendar days of the hearing. The decision shall be considered a final order not subject to further agency review pursuant to T.C.A. 4-5-315(a)(1).
 - 4. For purposes of this subparagraph, "working day" means all calendar days excluding Saturdays, Sundays, and legal holidays as designated in T.C.A. § 15-1-101.
- (g) Notwithstanding any other requirement for a permit to drill, such a permit may only be issued:
 - 1. If the applicant submits to the Supervisor statements of no objection signed by all property owners entitled to notice under subparagraph (a) of this paragraph; or
 - 2. If a hearing is not requested as provided in part (f)1 of this paragraph; or
 - 3. Upon the issuing of a final order pursuant to part (f)3 of this paragraph.
- (h) For purposes of satisfying the requirements of subparagraph (g) of this paragraph for issuing a permit:
 - 1. The Supervisor may treat the persons named in the applicant's certification of property owners, under subparagraph (e) of this paragraph, as being all of the property owners entitled to notice under subparagraph (a) of this paragraph, unless the Supervisor has actual notice to the contrary.
 - 2. If a request for hearing as provided in part (f)1 of this paragraph is not delivered to the office of the Supervisor within 15 working days plus 3 additional days after the date notice-of-intent to drill was mailed to each property owner, as stated in the applicant's certification of notice, under subparagraph (e) of this paragraph, the Supervisor may

assume that no hearing was requested, unless he has actual notice to the contrary.

- (7) Inspection and approval of all access roads, surface disturbances, and pollution control structures at a proposed well site by the designated gas and oil field inspector is required prior to the issuance of any permit under this chapter.
- (8) Permits shall not in any way be construed as a certification by the State of Tennessee that any property interest in the premises covered by a permit is vested in the permit; they are issued solely under the regulatory powers vested in the State Oil and Gas Board and the Department under the provision of Title 60 of the T C A for the purposes recited in said Code Section and the rules and regulations promulgated by the Board pursuant to said Code Section.
- (9) In the event of litigation over a particular tract of land, or in the event a tract of land is contested as to the ownership of oil and gas rights, the policy of the Board shall be to issue permits in order to preserve the physical integrity of that particular tract without prejudicing any claimants to the title of that land.
- (10) In the case of any well that is proposed to be fractured using a cumulative total of >200,000 gallons of liquids:
 - (a) The Supervisor shall give notice to the public by e-mail and posting on the department web site, and the public shall be allowed to submit comments for 15 days from the date of notification. Any comments received shall be considered by the Supervisor, and the Supervisor shall provide written responses to those comments. Prior to Public Notice, the Supervisor may require additional information from the applicant in these cases, including but not limited to information on water sources, fracturing methodologies, and methods of wastewater disposal.
 - (b) The applicant shall provide the Department's public notice of the proposed well to the owners of any residence that have any active domestic water wells within a ½ mile radius of the proposed wellhead at least 2 weeks prior to the beginning of drilling operations. In the case of a horizontal well, the ½ mile radius shall be measured from the terminus of the horizontal well bore. The determination of the presence of any such domestic wells shall include at a minimum the information available on the Division of Water Supply's Water Log Tracking System. The applicant shall collect a sample of any such well at the request of the owner and have the sample analyzed for Total Petroleum Hydrocarbons (TPH), BTEX (benzene/toluene/xylene) and Total Dissolved Solids, to demonstrate the condition of the water well prior to the drilling of the well to be fractured. Sampling results shall be provided to the Supervisor and domestic well owner as soon as results are obtained. Sample analyses shall be conducted by a certified laboratory utilizing standard methods and minimum detection levels consistent with Tennessee Department of Health laboratories.

0400-52-02-.02 Drilling Permit.

- (1) Applications for a permit to drill a well for oil and gas shall be made on Application for Permit to Drill (Form P-AD-1) and submitted to the Supervisor's office for approval. The application shall be accompanied by a copy of a location plat, bond, organization report and a fee of five hundred dollars (\$500). The application shall give the name and address of the drilling contractor, if known; otherwise notification shall be made by letter to the Supervisor as soon as determined. Information submitted with the application shall include the intent to fracture the well, as well as an estimate of the volume of fluids to be used to fracture. The application shall also include a plan for erosion control, prevention of pollution of surface waters, and reclamation of all areas disturbed by the operations, including access roads. The plan shall conform to the requirements of Rule 0400-52-09-.05. The plan shall be sufficiently detailed to allow a gas and oil field inspector to locate the site of the facilities to be constructed and estimate the expected environmental impact, but does not have to include detailed engineering design drawings. The plan shall also include identification of all drinking water wells within a ½ mile radius of the proposed wellhead, as specified in paragraph (10) of Rule 0400-52-02-.01. The Supervisor may require modifications in the operator's plan if such modifications are necessary to prevent pollution or to promote reclamation. Upon approval, the operator's plan shall be a condition of the permit. Failure to comply with the plan shall be grounds for revocation of the permit and forfeiture of the bond.
- (2) A drilling permit shall be amended by filing an Application to Amend Well Permits (Form P-AD-2) with the Supervisor and paying a fee of \$100 if the well name, number, elevation, location, or proposed total depth

is changed. If the well location is changed, 1 copy of a revised survey plat shall be filed with the application. The amended permit is subject to the same terms and conditions as a well permit, including erosion control requirements. A person who is granted a drilling permit can only transfer the permit and attendant rights to another person after submitting an Application to Change Operators (Form P-AD-3) and receiving approval of the application from the Supervisor. The person to whom the permit is being transferred shall file an Organization Report (Form R-0-1), post a well plugging bond and a reclamation bond, if needed, and pay a fee of \$100. The transfer of a permit from the original permittee to another operator, with or without the approval of the Supervisor, does not relieve the original permittee of obligations occurring before the transfer, and the bond shall not be released until all material at the time of transfer has been submitted. Unless change of operator forms have been processed or approved by the office of the Supervisor, any operation conducted on the well in question is the responsibility of the original permittee, and his bond shall not be released until all State requirements have been met.

- (a) If an Application to Change operators (Form P-AD-3) is to be submitted without the signature of the current permittee, it shall be considered a forced change of operator, then the following items shall also be submitted:
1. Copy of the lease and assignments, if any, under which the permit was originally issued, or subsequently transferred, if those documents are available, or an affidavit from the landowner that no prior oil and gas leases are still active. An affidavit from the original landowner that there are no other unexpired oil and gas leases, if the title to the land has changed hands since the Department issued the permit on the land in question, or, if the original landowner cannot be located, an affidavit by the new operator or his agent that he has checked the grantor index in the register's office and found no unexplained conveyance of the oil and gas rights by the original landowner.
 2. Copy of the lease and assignments, if any, under which the permit shall be transferred to the new operator.
 3. Copy of a certified letter to the current permittee requesting that an Application to Change Operators (Form P-AD-3) be signed, and also stating that if the application is not signed, and no written objection to a change of operator without that signature is submitted to the Department in writing within 10 working days of receipt of said letter, the new operator shall seek approval from the Department of that Approval to Change Operators without said signature. In addition, the applicant shall send the certified mail notice to the current address that is registered with the Tennessee Oil and Gas Board or the Department as shown on the Organizational Report.
 4. A copy of a Court Order relative to the inactive or expired status of any prior oil and gas leases may be submitted in lieu of the items mentioned in parts 2 and 3 of this subparagraph.
 5. If a written objection to approving the application to Change Operators is properly submitted to the Department, the staff shall administratively deny the application. If the applicant seeks to have the application considered further, he may then apply for a hearing before the Oil and Gas Board. The Board shall then consider approval of the application only when there is no doubt as to the ownership of the oil and gas rights of the applicant. If a cloud or a question as to the title is determined to exist by the Board, then the Board shall deny the application, and refer the applicant to the court for a ruling on the question of ownership.
- (b) If a well or wells revert back to a landowner, whether by court action, or by lease expiration or other provisions, and the well shall remain in operation, then the landowner shall submit an Application to Change Operators (Form P-AD-3), file an Organization Report (Form R-0-1), post a well plugging bond, post a reclamation bond if required, pay a fee of \$100, and otherwise comply with well spacing regulations. If the well will be used for domestic gas only, then a plugging bond in the amount of \$500 shall be required.
- (c) Before a well can be turned over to a landowner for use as a fresh water well, the operator shall set a 100 foot plug within 300 feet of the surface, or a cement plug at 50 feet above the casing shoe, whichever is the deeper, and the well shall be completed as a water well, and approved by

the Department of Environment and Conservation, Division of Water Supply. No Organization Report (Form R-0-1) is required, and in lieu of a plugging bond the landowner shall submit a notarized letter agreeing to assume liability for any subsequent plugging which might be required.

- (3) If drilling operations cease for a period of 30 days, the operator shall notify the Supervisor in writing of the reason for the shutdown and the date on which operations shall be resumed.
- (4) All wells shall be either properly plugged or completed within a period of 6 months following cessation of drilling. Upon written request to the Supervisor by the operator, showing valid cause for requiring additional time, a reasonable extension of as much as 90 days additional may be granted.
- (5) An applicant who requests a permit to drill on site which is closer than normal statewide spacing to the boundary of an offsetting oil and gas lease, or mineral or surface property, or on a tract of land which is contested as to the ownership of oil and gas rights, shall comply with the following procedures:
 - (a) Notify by certified mail all affected offset and/or separate owners of oil and gas leases and mineral and surface property, as can reasonably be determined, that he is applying for a permit to drill a well; and submit a copy of the drill-site location plat with the notice.
 - (b) Publish the operator's name, lease name, well number and description of the drill-site location in a newspaper of general circulation in the county where the well is to be drilled, with a statement that if any interested owner objects to the drilling of said well, they should make their objections known to the Supervisor of the State Oil and Gas Board.
 - (c) If, within 10 days after the notice, there are no objections to issuing the permit, then the Supervisor shall issue the permit, provided all other requirements have been complied with.
 - (d) If there is an objection or objections to issuing the permit, the objector or objectors shall furnish the applicant and the Supervisor the basis of the objection and support his contentions with documents, etc., within 10 days after the date of the notice.
 - (e) If the applicant, after receiving an objection, still wants the permit he shall then apply for a hearing before the Oil and Gas Board. The Board shall then decide whether or not to issue the permit or refer the applicant to the court for relief.
- (6) If more than one applicant applies for a permit to drill the same or a conflicting location on a tract of land at a permissible distance from an offset or offsetting well, the first application received in the Supervisors office shall be issued the permit, provided the applicant complies with all other rules and regulations governing permits to drill a well. If the first applicant fails to exercise his permit privilege, then the next applicant of record, based on time submittal, shall receive the permit, provided he complies with all other requirements.
- (7) If the ownership of the drillsite tract of land is contested, all claimants shall be identified by an accompanying letter.
- (8) Requests for permits for a voluntary pooled drilling unit, or for two or more leases or tracts that have been pooled for exploration or development shall be accompanied by a notarized affidavit signed by the operator that has the right to pool these leases to form a drilling unit.
- (9) The Supervisor has the right to withhold the issuance of a permit to any operator in violation of any rule or regulation of this order until such violation has been removed.

0400-52-02-.03 Reserved

0400-52-02-.04 Notification To Plug and Abandon.

Prior to plugging, notice shall be given the Supervisor in order that the Supervisor or his representative may witness the work. Work performed shall be reported to the Supervisor on the Plug and Abandon Report (Form R-P&A-1) within 30 days after completing the work. Form R-P&A-1 shall be accompanied by a copy of the drilling contractor's or the service company's ticket for work done unless the work was observed by the Supervisor or his representative.

Chapter 0400-52-03

Well Location Plats

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0040-52-03-.01 Preparing Plats

0400-52-03-.01 Preparing Plats

- (1) Well location plats shall be constructed and certified as accurate by a surveyor registered by the State of Tennessee. The following procedures and instructions shall be strictly complied with in preparing plats:
 - (a) Two legible copies of a well location plat shall be submitted for each proposed well and drawn on a sheet 8½" x 14" or larger, using bond paper.
 - (b) The plat shall be prepared to a scale of one inch equals one hundred, two hundred, three hundred, four hundred, five hundred or six hundred feet (1" = 100, 200, 300, 400, 500 or 600'). The scale set forth on the plat should be of a graphic type rather than so many inches equaling so many feet.
 - (c) The top or upper edge of the plat shall be oriented to the north, and a vector depicting magnetic north shall be placed on the edge or margin of the plat.
 - (d) The surface elevation of the proposed drill site, referenced to mean sea level, shall be determined and a reference benchmark established within 200 feet of each location and its elevation and description noted on the plat. If the surface elevation or drill site location is altered during location preparation, it shall be re-determined by the operator, and this information submitted to the Supervisor within 10 days.
 - (e) A description or diagram of the proposed drill site location shall be made with reference to a specific 7½-minute topographic quadrangle map (1 inch equals 2,000 feet) by the use of the Carter Coordinate System, and Latitude and Longitude and by bearing and distance in feet to two permanent landmarks or monuments that are readily identifiable on a 7½-minute topographic map.
 - (f) The location plat, in addition to other requirements, shall identify surface ownership on the tract of land where the permitted well is to be located and surface ownership on offsetting tracts of land, if within 3,000 feet.
 - (g) The plat shall show the amount of acreage in the drill site tract.
 - (h) The distance in feet between the proposed drill site and the two nearest property and lease lines, and the nearest dry, abandoned, drilling or producing well, if such exists within 3,000 feet, shall be shown on the plat.
 - (i) In cases where the tract to be drilled is composed of separately owned interests which have been pooled or unitized the property lines and the amount of acreage in each separately owned interest shall be shown. In addition, the unit lines, and the distance to the two nearest unit lines shall also be shown.
 - (j) The plat shall also show the location of all existing or proposed access roads, the location of all dwellings, diversions, drilling pits, dikes, tanks, and all other surface disturbances, and the location of all streams, lakes, or other bodies of water within 200 feet of the well site and visible from the access roads, or apparent on a USGS topographic map. This information may be shown on more than one sheet if necessary, provided that on each sheet the name of the operator, well

name and number, scale (of graphic type), a vector depicting magnetic north, and the location of the proposed drill site are shown along with the surveyor's certification and seal, and date on which the well location plat was constructed.

- (k) All plats shall be submitted with a latitude and longitude for each well site location.
- (l) Any well site submitted for a horizontal well shall show the locations for the well collar; entry point of the horizontal leg and the termination point. Each of these locations shall be shown on the plat with latitude, longitude and Carter Coordinate System.

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-52-04
Vertical Well Spacing

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0400-52-04-.01 Vertical Well Spacing

0400-52-04-.01 Vertical Well Spacing

- (1) No permits shall be issued for the drilling of wells in search of oil and gas and no well shall be drilled in search of oil or gas nor shall a well be abandoned in one pool and recompleted in another pool in which no spacing rules are prescribed by special fieldwide orders, unless the location of such well shall comply with the following requirements:
 - (a) Wells drilled in search of oil or gas to a depth of less than 1,000 feet shall be drilled on 10-acre spacing, and shall not be located closer than 660 feet from any other well completed in, drilling to, or for which a permit shall have been granted to drill to the same pool; and not closer than 330 feet from any property or unit line.
 - (b) Wells drilled in search of oil or gas to a depth of 1,000 to 2,000 feet or to the base of the Chattanooga Shale, whichever is deeper, shall be drilled on 20-acre spacing, and shall not be located closer than 660 feet from any other well completed in, drilling to, or for which a permit shall have been granted to drill to the same pool; and not closer than 330 feet from any property or unit line.
 - (c) Wells drilled in search of oil to a depth of more than 2,000 feet shall be drilled on 40-acre spacing, and shall not be located closer than 660 feet from any other well completed in, drilling to, or for which a permit shall have been granted to drill to the same pool; and not closer than 330 feet from any property or unit line.
 - (d) Wells drilled in search of gas from a depth of 2,000 feet to 5,000 feet or to the top of the Conasauga Formation shall be drilled on 40-acre spacing, and shall not be located closer than 660 feet from any other well completed in, drilling to, or for which a permit shall have been granted to drill to the same pool; and not closer than 330 feet from any property or unit line.
 - (e) Wells drilled in search of gas to a depth of more than 5,000 feet or below the top of the Conasauga Formation shall be drilled on 160-acre spacing, and shall not be located closer than 1,320 feet from any other well completed in, drilling to, or for which a permit shall have been granted to drill to the same pool; and not closer than 660 feet from any property or unit line.
 - (f) Any existing well may be deepened and produced for oil or gas from whatever zone(s) production may be obtained on the presently permitted unit size, provided, however, that any exceptions to offsetting property lines or wells under current spacing rules shall comply with the provision of subparagraph (1)(k) of Rule 0400-52-04-.01.
 - (g) Where a permit is requested for a wildcat well to be drilled in an area in which the surface or mineral ownership is so divided that the well cannot be located in compliance with the requirement of a distance from property lines and well spacing and a drilling unit cannot be

formed in advance of drilling because it is not known whether the well shall be completed as an oil well or a gas well, a permit may nevertheless be granted for the drilling of the well when the applicant presents evidence satisfactory to the Supervisor that the applicant has available for assignment to said well leases or acreage of area and size to constitute, in the judgment of the Supervisor, a reasonable producing unit for such well and such applicant agrees to create or to apply to the Board for creation of a reasonable producing unit within 45 days after completion of the well.

- (h) Upon the completion of a confirmation well to a discovery well, the operator of the discovery well shall apply for a public hearing before the State Oil and Gas Board for the purpose of establishing temporary drilling and production units. When a pool has had 5 wells drilled to and completed therein or after 1 year has elapsed from the completion of the confirmation well in the field, whichever occurs first, the operator or operators of well in the field shall petition the Board for a public hearing for the purposes of establishing field rules and regulations and the creation of drilling and production units for the pools in the field. The right is reserved, however, to any interested party to apply for a public hearing at an earlier date and if the Board finds from an examination of the information furnished that temporary or permanent drilling and production units should be formed, it shall be so ordered.
- (i) Where prior to the issuance of this order, a pool has already been partially developed with a greater density of wells than that prescribed herein, the Supervisor may, without additional public hearing, exempt such pools from the provisions of this order. The exemptions for these pools shall be granted only after application has been made to the Supervisor in writing accompanied by a map delineating the locations of all existing wells completed and producing from the pool for which exception is being asked.
- (j) A poolwide unit is exempt, within its internal boundary, from well spacing rules as to the particular unitized pool, but all wells shall be located interior of the unit outline in compliance with the rules for distance from property lines.
- (k) The Supervisor may grant administrative approval of exceptions to this chapter, or any order of the Supervisor establishing well spacing for a pool upon submission of an application showing all pertinent information and data and after due notice is given to all operators of interest.
 - 1. The application shall be made to the Supervisor with a copy to each known offset operator of interest and such application shall include:
 - (i) Statement of reason and justification for requested relief.
 - (ii) Map or plat as described in Chapter 0400-52-03, which additionally shows:
 - (I) The location at which an oil or gas well could be drilled in compliance with this chapter, or applicable order;
 - (II) The location at which the applicant requests permission to drill;
 - (III) The outline of the drilling unit to be assigned to the proposed well site with a notation as to the amount of acreage contained therein;
 - (IV) The outline of all other drilling or production units currently assigned to the tract or lease upon which the proposed drilling unit is located, with a notation of the amount of acreage assigned to each unit.
 - (iii) Sufficient geological evidence that the proposed drilling unit shall be reasonably productive of oil and/or gas.
 - (iv) List of names and addresses of all interested persons notified of the application.
 - 2. Each drilling unit should comply with the well density as described in this chapter, or the applicable order.

3. The acreage assigned to the proposed drilling unit should be reasonably expected to be productive of oil and/or gas from the common source of supply.
 4. If the application meets with the approval of the Supervisor and no written protest is received by the Supervisor within 10 days following prescribed notice of application, the Board may grant the requested relief without the necessity of a public hearing.
 5. If the application is accompanied by a written waiver from all known offset lease owners, the 10 day delay shall be unnecessary.
 6. If the Supervisor does not elect to approve the application administratively, or if written protest is received within the 10 day period, the application may be set for public hearing.
- (l) Any drilling being conducted in Overton, Clay, Pickett or Fentress Counties (this is portions of Fentress County that are west of Hwy 127 and North and West of State Hwy 154) is based on 400 feet to another well and 200 feet to the unit or property line down to a depth of 2500 feet. This is an exception to the current state wide drilling requirements.
- (m) Exception not to exceed 10% in spacing distances on locations interior to property boundaries shall be allowed administratively by the Supervisor. Any exception adjacent to offset operators shall comply with subparagraph (k) of this paragraph.
- (2) If it is necessary to drill a well below the depth bracket for the anticipated productive zone for stratigraphic information only, the Application for Permit to Drill (Form P-AD-1), shall indicate the proposed total depth and anticipated depth bracket for productive zone and unit. Following drilling, logging and testing, the well shall be plugged back, or casing set to the legal total depth appropriate for the anticipated productive zone. The plug back depth shall be indicated on the Plug and Abandon Report (Form R-PA-I), which shall be accompanied by a work ticket which indicates in detail how the work was done. If production is established below the depth bracket for the anticipated productive zone, appropriate spacing shall be established by the Supervisor or Board.

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-52-05
Well Identification

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0400-52-05-.01 Posting a Sign

0400-52-05-.01 Posting a Sign.

No well shall be placed in production, shut-in, or left unplugged until a sign has been posted on the well location. All wells shall display a sign showing the operator name and telephone number, well name and number, and permit number. The mailing address and telephone number of the Department shall also appear on the sign. The sign shall be at a minimum 8½ inches in height by 11 inches in width, made of durable material and be legible. If the tank battery serving a particular well is not within sight of that particular well, then a sign shall also be posted at a good conspicuous location at the tank battery for each well for which production is gauged individually. Where a number of wells on the same lease produce into a common tank battery, only one sign is required, and should show the name of the lease and well numbers, rather than individual permit numbers. The obligation to maintain legible signs remains until plugged and abandonment.

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-52-06
Drilling Wells

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0400-52-06-.01 Drilling Equipment

All drilling equipment shall be designed, constructed, and operated in such a manner so as to prevent accidents and insure safe operating practices. It is recommended that each operator require the drilling contractor to comply with the general rules and safety procedures of the industry.

0400-52-06-.02 Blowout Prevention

- (1) All wells shall be equipped and operated in such a manner as to prevent the uncontrolled emission of oil, gas, and water from the well.
- (2) Blowout prevention for regular state spacing requirements for all wells shall be equipped with a minimum of the following equipment:
 - (a) A blowout prevention system with 2 separate units capable of closing with the drill pipe in the hole or other equivalent control system as approved by the supervisor or authorized representative of the supervisor. A minimum of 3000 psi working pressure is required;
 - (b) Accessible controls both in the rig and at a safe remote location of at least 50 feet from wellhead;
 - (c) An annular choke valve;
 - (d) A drill pipe or power head valve capable of pump truck connection;
 - (e) A flow line of the proper size and working pressure shall be installed in a straight line to pit and shall be anchored securely; and
 - (f) Blowout prevention equipment that has a rated minimum working pressure of 3000 psi. In unknown or expected higher pressures a 5000 psi working pressure shall be required.
 1. The blowout preventers shall be installed above ground level if possible but if a cellar is dug, the equipment shall be accessible during drilling operations. The entire control equipment shall be in good working condition at all times. All outlets, fittings, and connections on the casing, blowout preventers, choke manifold, and auxiliary wellhead equipment that may be subjected to wellhead pressure shall be of a material and construction that shall withstand the anticipated pressure and shall be resistant to fire. The lines from outlets on or below the blowout preventers shall be securely installed, anchored, and protected from damage.
 2. Blowout preventers, accumulators, and pumps shall be used in accordance with the product manufacturer's rating and minimum operational specifications. The permittee is responsible for seeing that the blowout prevention equipment is in proper working order. This includes the proper operation of the closing unit valving, proper operation of the pressure gauges, and the presence of the manufacturer's recommended accumulator fluids. A combination of any 2 of the following secondary closing systems is acceptable:
 - (i) Electric-operated pump.
 - (ii) Air-operated pump.
 - (iii) Hand-operated pump.
 - (iv) Nitrogen-operated pump.

Blowout preventer rams shall be of a proper size for the drill pipe being used or production casing being run in the well or shall be variable-type rams that are of the

proper size range. Blowout Prevention shall be installed before passing through any known production or high pressure zone in the well boring path.

3. Blowout prevention equipment and intermediate casing shall be tested to a pressure of 1,500 psi at surface for not less than 30 minutes. This shall be done prior to drilling the plug on the intermediate casing or at other intervals as approved or requested by the supervisor. If, at the end of 30 minutes, the pressure shows a drop of 10% or more from the original test pressure, the casing shall be condemned until the leak is corrected. A pressure test demonstrating less than a 10% pressure drop after 30 minutes is proof that the condition has been corrected. A record of each test, including test pressures, times, failures, and each mechanical test of the casings, blowout preventers, surface connections, surface fittings, and auxiliary wellhead equipment shall be entered in the logbook, signed by the driller, and kept available for inspection by the supervisor or authorized representative of the supervisor.
 4. With the understanding that all permitting procedures have been followed, a well may be deepened to 200' below the bottom of the Chattanooga Shale without initiating other than the usual well control procedures. The casing shall withstand at least 1,500 psi with no more than 10% loss of pressure in 30 minutes.
- (3) Blowout prevention for wells in accordance with special well spacing requirements as per subparagraph (1)(l) of Rule 0400-52-04-.01. All wells shall be equipped with a minimum of the following equipment:
- (a) An annular-type blowout preventer or other equivalent control system as approved by the supervisor or authorized representative of the supervisor;
 - (b) Accessible controls both on the rig floor and at a safe remote location at least 50 feet from wellhead;
 - (c) An Annular choke valve;
 - (d) A drill pipe or power head valve capable of pump truck connection;
 - (e) A flow line of the proper size and working pressure; and
 - (f) Blowout prevention equipment that has a rated minimum working pressure of 1500 psi.
 1. The Blowout preventers shall be installed above ground level if possible but if a cellar is dug, the equipment shall be accessible during drilling operations. The entire control equipment shall be in good working condition at all times. All outlets, fittings, and connections on the casing, blowout preventers, choke manifold, and auxiliary wellhead equipment that may be subjected to wellhead pressure shall be of a material and construction that shall withstand the anticipated pressure and shall be resistant to fire. The lines from outlets on or below the blowout preventers shall be securely installed, anchored, and protected from damage.
 2. Blowout preventers, accumulators, and pumps shall be used in accordance with the product manufacturer's rating and minimum operational specifications. The permittee is responsible for seeing that the blowout prevention equipment is in proper working order. This includes the proper operation of the closing unit valving, proper operation of the pressure gauges, and the presence of the manufacturer's recommended accumulator fluids. Any of the following closing systems is acceptable:
 - (i) Electric-operated pump.
 - (ii) Air-operated pump.
 - (iii) Hand-operated pump.
 - (iv) Nitrogen-operated pump.

Blowout preventer shall be of a proper size for the drill pipe being used or production casing being run.

3. Blowout prevention equipment and Surface casing shall be tested to a pressure of 400 psi at surface for not less than 30 minutes before drilling the plug on the surface casing and at other intervals as approved or requested by the supervisor. If at the end of 30 minutes the pressure shows a drop of 10% or more from the original test pressure, the casing shall be condemned until the leak is corrected. A pressure test demonstrating less than a 10% pressure drop after 30 minutes is proof that the condition has been corrected. A record of each test, including test pressures, times, failures, and each mechanical test of the casings, blowout preventers, surface connections, surface fittings, and auxiliary wellhead equipment shall be entered in the logbook, signed by the driller, and kept available for inspection by the supervisor or authorized representative of the supervisor. If the casing is to be tested at the time of surface casing, cementing 150 psi for a period of ten minutes may be used. The annulus shall be filled with fluid and the plug shall have been landed prior to the test beginning. If a drop of over 10% or more from the original test pressure is found the casing shall be condemned until the leak is corrected. The previous criteria concerning recording of the test shall be followed.
4. The casing shall withstand at least 400 psi with no more than 10% loss of pressure in 30 minutes.

0400-52-06-.03 Casingheads.

All wells shall be equipped with casingheads with a test pressure in conformance with conditions to be anticipated in wells in which they are used. Casinghead body shall be equipped with proper connections and valves accessible to the surface as soon as installed. Reconditioning shall be required on any well leaking gas or oil.

0400-52-06-.04 Environmental Protection.

- (1) All oil and gas operations shall be conducted in a manner that shall prevent or mitigate adverse environmental impacts such as soil erosion and water pollution. All areas disturbed by the operations, including access roads, shall be reclaimed as prescribed in Rule 0400-52-09-.05. Access roads shall be constructed in such a manner as to reduce erosion to a practical minimum. Sediment ponds, berms, diversion ditches, hay bales, and other measures designed to prevent erosion and discharge from well sites shall be taken to prevent or minimize soil erosion and pollution of surface waters.
- (2) Erosion prevention and sediment controls.
 - (a) The erosion prevention controls shall be designed to minimize the dislodging and suspension of soil in water. Sediment controls shall be designed to retain mobilized sediment on site.
 - (b) All control measures shall be properly selected, installed, and maintained in accordance with the manufacturer's specifications (where applicable) and standard engineering practices. All control measures selected shall be able to slow runoff so that rill and gully formation is prevented. When steep slopes and/or fine particle soils are present at the site, additional physical or chemical treatment of storm water runoff may be required. If periodic inspections or other information indicates a control has been used inappropriately, or incorrectly, the operator shall replace or modify the control for relevant site situations.
 - (c) If sediment escapes the drilling, production, and or roadway areas, off-site accumulations of sediment that have not reached a stream shall be removed at a frequency sufficient to minimize offsite impacts. Fugitive sediment that has escaped the drill area and has collected in a drainage ditches or roadways shall be removed so that it is not subsequently washed into culverts and streams by the next rain and/or so that it does not pose a safety hazard. Permittees shall not initiate remediation/restoration of a stream without consulting the Department first.
 - (d) Sediment shall be removed from sediment traps, silt fences, sedimentation ponds, and other sediment controls as necessary.
 - (e) Upon attainment of stability, materials used for erosion prevention and sediment control should

be removed or otherwise prevented from becoming a pollutant source for storm water discharges.

- (f) Pre-construction vegetative ground cover shall not be destroyed, removed or disturbed more than 30 days prior to grading or earth moving unless the area is seeded and/or mulched or other temporary cover is installed.
 - (g) Clearing and grubbing shall be held to the minimum necessary for drilling and or production activities.
 - (h) Construction shall be sequenced to minimize the exposure time of graded or denuded areas.
 - (i) Erosion prevention and sediment control measures shall be in place and functional before drilling activities begin, and shall be properly maintained throughout the drilling and production phase.
 - (j) Permanent stabilization with perennial vegetation (using native herbaceous and woody plants where practicable) or other permanently stable, non-eroding surface shall replace any temporary measures as soon as practicable.
- (3) The operator shall notify the oil and gas inspector at least 24 hours prior to beginning fracturing activities. The operator shall maintain personnel on-site during the fracturing activity and during the back flow period.

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-52-07
Casing Program

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0400-52-07-.01 Casing Requirements

- (1) Surface Casing - surface casing shall be set at 100 feet below the lowest known fresh water aquifer with class A cement only. The casing used shall have an external collapse pressure rating great enough to handle the hydrostatic pressure of a class A cement from the casing shoe to surface and Internal pressure rating to handle any anticipated down hole pressures. Cement shall have a minimum 500 psi compressive strength and have a minimum 8 hour wait prior to drilling the shoe out. A blowout preventer shall be installed at all times for emergencies, but casing shall not be used as pressure control. Surface casing shall be used to protect fresh water aquifers. No casing shoe shall be drilled until a cement seal has been brought back to the surface and secured between the surface casing and the well bore, preventing any ground water contamination.
- (2) Intermediate Casing - an intermediate string of casing shall be set prior to the drilling into any known oil and gas producing zone. Casing shall have a minimum internal pressure rating of 3000 psi. Casing shall be cemented at a minimum of 100 feet into the surface casing. Casing string shall be deep enough to prevent underground blowout from anticipated bottomhole pressures. Casing shall have an external collapse pressure rating to handle cement design from casing shoe to surface. Cement shall have 500 psi compressive strength and have a minimum 12 hour wait prior to drilling the shoe out. All cement and casing designs shall be presented on a specifications sheet with Permit Application for approval. A copy of Cement Tickets shall be kept on location to be viewed by inspector until drill rig is removed. In unknown or over pressured conditions a 5000 psi rating on casing shall apply. A copy of all Cement Tickets shall be attached to the well history tickets and shall include all volumes and pressures of job from start to finish. To insure adequate annular space for cementing, the annular space outside the casing shall be at least as large as follows for the applicable casing size:

Up to 7" Outside Diameter (O.D.) Casing O.D. + 1 1/2"

More than 7" and less than 10 3/4" O.D. Casing O.D. + 2"

More than 10 3/4 "O.D. Casing O.D + 3"

- (3) In wells with special well spacing requirements (off-Plateau) as per subparagraph (1)(l) of Rule 0400-52-04-.01, all surface casing shall be set 100 feet below the fresh water and use class A cement only. Casing shall have an external collapse pressure rating great enough to handle the hydrostatic pressure of a class A cement from the casing shoe to surface. A Float shoe or Baffle or Guide shoe with Wiper Plug along with annular cement volume plus 35% excess shall be required on all surface casing cement jobs. Cement shall have a minimum 500 psi compressive strength and have a minimum 8 hour wait prior to drilling the shoe out. No casing shoe shall be drilled until a cement seal has been brought back to the surface and secured between the surface casing and the well bore, preventing any ground water contamination. All cement and casing designs shall be presented on a specifications sheet with Permit Application for approval.
- (4) Any wells on the Cumberland Plateau drilled to depths above the Chattanooga Shale may be eligible for variances on the previous casing requirements by making a specific request to the Supervisor.

0400-52-07-.02 Conductor Pipe

That pipe ordinarily used for the purpose of supporting unconsolidated surface deposits, is termed conductor pipe. The use and removal of conductor pipe during the drilling of any oil or gas well shall be at the option of the operator. If the conductor pipe is to be pulled it shall be pulled prior to the cementing of the surface casing. All conductor casing shall have a cement seal at the surface preventing the possibility of any groundwater contamination and shall remain in the well if not pulled prior to the surface casing cement job. If more than 40 feet of conductor pipe was installed, the conductor pipe may not be pulled.

0400-52-07-.03 Surface Casing.

- (1) The operator's proposed casing program shall be submitted, for approval by the Supervisor, on Application for Permit to Drill (Form P-AD-1). If the Supervisor deems the casing program inadequate to protect fresh water zones and potential minable coal and other minerals, etc., he shall prescribe the casing program with which the operator shall comply. Unless an exception is granted by the Supervisor, suitable and sufficient surface casing shall be run and cemented to a depth not less than 100 feet below all fresh water strata encountered in the well and in a manner that shall protect such fresh water from contamination resulting from drilling operations. The cement shall fill the annular space behind the surface casing from the base thereof to the surface of the ground. If cement returns are not received to the surface, then the annulus shall be cemented from the top.
- (2) The Supervisor or his representative shall be given notice of cementing of surface casing at least 12 hours prior to conducting such operation. The Supervisor or his representative may witness the cementing operation. Form R-WH1 shall be accompanied by a copy of the drilling contractor's or service company's ticket for the work performed.
- (3) A cement basket and centralizer are to be run on the surface casing between the first and second joints of surface casing or as directed by the supervisor.

0400-52-07-.04 Production Casing.

The production, oil, or flow string, is that casing used for the purpose of segregating the zone from which production is obtained and affording a means of communication between such zone and the surface. A description of the work done under this rule shall be reported to the Supervisor on Well History, Work Summary, and Completion or Recompletion Report (Form R-WH-1) within 60 days after completion.

0400-52-07-.05 Isolation of Oil, Gas and Fresh-Water-Bearing Strata, and Potential Minable Coal and Other Mineral Deposits.

Notwithstanding compliance with the foregoing requirements, all potential minable coal and other minerals shall

be isolated from any possible communication through the annulus with oil-, gas- or water-bearing strata or deposits of other potential minable coal or other minable minerals. Cement bond logs or other integrity tests shall be required on all wells proposed to be fractured and on any wells to be placed into Temporary Abandonment as per Rule 0400-52-09-.06. In order to ascertain whether or not such work has been reasonably performed, the operator may elect to either run a cement bond log, or block squeeze each stratum or zone which is required to be isolated. If the cement bond log indicates a minimum of 25 feet of cement bond above the top and 25 feet of bond below the base of each stratum or zone to be isolated, then the provision of this rule shall have been complied with. If such bonding is not shown by the bond log, the Supervisor may require the operator to perform the necessary work to assure the isolation of such above described strata zones.

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-52-08 Directional Drilling

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0400-52-08-.01 Lateral Deviation

- (1) No operator shall drill a well in which the well bore deviates laterally a resultant distance greater than that determined by a 5 degree angle from a vertical line passing through the center of the surface location of the well bore, without running a directional survey. If the operator desires to directionally control and thereby intentionally deflect a hole from the vertical (whether more or less than 5 degrees and unless done to straighten the hole or to side-track junk in the hole or because of other mechanical difficulties) a permit, Application for Re-Entry and Work Permit (Form P-RAW-I), shall first be obtained from the Supervisor. Nothing herein shall be construed to permit the drilling of any well in such a manner that it crosses property lines.
- (2) Whenever a well is deviated from vertical, the point at which the well bore intersects the producing formation (pool) shall be protected to the surface and become the location of the well in determining if it complied with the spacing rules.

0400-52-08-.02 Inclination Surveys.

An inclination survey shall be made at the discretion of the Supervisor on all wells drilled with the first shot-point at a depth not greater than that of the surface casing seat and succeeding shot-points not more than 1,000 feet apart. Inclination surveys conforming to the requirements may be made either during the normal course of drilling or after the well has reached total depth. Such survey data shall be certified by the operator's representative and/or drilling contractor and shall indicate the resultant lateral deviation as the sum of the calculated lateral displacement determined between each inclination survey point, assuming that all such displacement occurs in the direction of the nearest property line. If a directional survey determining the bottom of the hole is filed with the Supervisor upon completion of the well, it shall not be necessary to furnish the inclination survey data. Except as otherwise specified herein, all inclination and/or directional survey data shall be filed along with Form R-WH-1 (Well History).

0400-52-08-.03 Directional Survey

- (1) A directional survey shall be run by a qualified contractor approved by the Supervisor and 2 certified copies thereof filed with the Supervisor on any well, if:
 - (a) The well is directionally controlled and is thereby intentionally deflected from the vertical; or
 - (b) The resultant level deviation as calculated from inclination survey data is a distance greater than the distance from the center of the surface location of the well bore to the nearest property or unit line and might violate the distance from property lines rule; or

- (c) The well bore deviates a resultant distance greater than that determined by a 5 degree angle from a vertical line passing through the center of the surface location of the well bore.
- (2) The Supervisor, on his own initiative or at the request of an offset operator, shall have the right to require the operator to run a directional survey on any well if there is reasonable cause therefore. Whenever a survey is so required, and the operator of the well and the offset operator are unable to agree as to the terms and conditions for running such survey, the Supervisor, upon request of either, shall determine such terms and conditions, after notice to all interested parties and a public hearing.
- (3) Unless required by the Supervisor, a directional survey shall not be required for any well which is not directionally controlled and thereby intentionally deflected from the vertical and which has a surface location, maximum angle of deviation and total depth, in compliance with the provisions of chapters 0400-52-01 through 0400-52-12.
- (4) The provisions hereof shall not alter or affect the minimum spacing provisions of chapters 0400-52-01 through 0400-52-12.

0400-52-08-.04 Horizontal Drilling.

- (1) Wells drilled by horizontal methods shall comply with the following spacing requirements:
 - (a) For all oil wells, and for gas wells drilled to the top of the Conasauga Group, the surface trace of that portion of the wellbore or any portion of the horizontal drainhole that penetrates the producing formation, including the horizontal drainhole end point, shall not be located closer than 330 feet from any property or unit line.
 - (b) For gas wells drilled below the top of the Conasauga Group, the surface trace of that portion of the wellbore or any portion of the horizontal drainhole that penetrates the producing formation, including the horizontal drainhole end point, shall not be located closer than 660 feet from any property or unit line.
 - (c) Any number of producing formations may be penetrated by lateral drainholes from a single vertical wellbore.
 - (d) All of the producing portion of the well shall be in compliance with the spacing requirements of this paragraph. The horizontal portion of the well is the formation of record for production.

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-52-09
Well Plugging and Abandonment

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0400-52-09-.01 Plugging Wells

- (1) All wells which are to be plugged and abandoned may be filled with a mud fluid of sufficient weight to offset the hydrostatic pressure of any formation penetrated. Sufficient cement plugs shall be efficiently placed in number and properly located as to prevent the commingling of oil, gas, salt water, and fresh water from one zone to another, and to isolate potentially minable coal beds and seams and other potentially extractable minerals. All downhole plugs may be "felt for" to insure that they have been properly placed.

- (2) The specific method and procedure for plugging a well shall be as follows:
- (a) A mechanical plug, or a brush and stone plug, and a neat cement plug of not less than 25 feet in length shall be placed between each geologic group or formation.
 - (b) A mechanical plug, or a brush and stone plug, and a neat cement plug of not less than 50 feet in length shall be placed below the base of the surface casing. The plug shall be placed so that at least 25 feet of cement is below the base of the surface casing and extends up into the casing 25 feet.
 - (c) A mechanical plug, or a brush and stone plug, and a neat cement plug of not less than 25 feet shall be placed at the surface of the well. The surface casing shall be cut off below plow depth at the request of the landowner or when determined appropriate by the supervisor or his representative.
 - (d) In a well with casing that does not seal off the ground water, a mechanical plug, or a brush and stone plug, and a neat cement plug shall be set 100 feet below the deepest known ground water strata. The cement plug shall be adequate in length to reach at least 10 feet in to the casing.
 - (e) In an uncased well, a mechanical plug, or a brush and stone plug, and a neat cement plug shall be set at least 50 feet below the deepest ground water strata and extend up to the surface or just below plow depth if appropriate.
 - (f) The mechanical or brush and stone plug method maybe replaced by filling the well from total depth to the surface with cement, provided, however, that such method shall be either prescribed or approved by the Supervisor.
 - (g) If there is fluid in the well, a dump bailer or tubing may be used to place the cement in the well.
 - (h) If drill water or mud is present it may be used as filler between the plugs.
 - (i) If any casing has been installed in the well and has not been cemented to the surface the casing shall be pulled prior to the plugging of the well. If the casing cannot be readily removed the casing shall be shot and then pulled.
- (3) Any other methods not defined above, but approved by the Supervisor, may be used.

0400-52-09-.02 Inspection.

The Supervisor or his representative shall be given notice of intent to plug a well at least 12 hours prior to conducting such operation. The Supervisor or his representative may inspect the work of plugging and abandonment as it progresses, check the location and quality of plugs, check the amount of casing pulled, and check the demonstration of movement, if any, of oil, gas, or water. The operator shall submit a Plug and Abandon Report (Form R-P & A-1) covering the work performed to the Supervisor within 30 days after plugging and abandoning the well. This work may be observed by the Supervisor or his representative and that observance verified by his signature on the Plug and Abandon Report (Form R-P & A-1).

0400-52-09-.03 Deliverability Test.

Before any well shall be classified as a shut-in gas well, the operator shall furnish the results of a deliverability test. Such deliverability test shall be performed after the well has achieved a stabilized flow rate. If stabilization cannot be achieved, the maximum test period required is 24 hours. The results of the deliverability test shall be submitted on Gas Well Deliverability Tests (Form R-DT- 1), and in the initial Production section of the Well History, Work Summary, and Completion or Recompletion Report (Form R-WH-1), and shall be complete as to stabilized flow rate, hours tested, choke size, and pressure in order to demonstrate that a stabilized flow rate was achieved. A copy of the chart on which the deliverability is based shall also be submitted. All deliverability tests shall be conducted once every 3 years. The well shall remain shut-in in accordance with the requirements of Rule 0400-52-09-.06. In addition, a gas well may be considered shut-in if the well has been cemented with 4½ inch casing and submitted with a report signed by a petroleum engineer or geologist.

0400-52-09-.04 Time Limit For Plugging Wells.

Except as provided in Rule 0400-52-09-.06, all wells drilled for oil and gas and found to be dry holes shall be plugged within 1 year from cessation of drilling. All wells that are non-producing or abandoned shall be plugged within 1 year from the date they cease producing 12 barrels of oil per year or 25 mcf of gas per month or are abandoned. Upon written request to the Supervisor showing good cause, an extension of up to 90 days additional may be granted. No operator or owner shall permit any well drilled for oil, gas, salt water disposal or any other purpose in connection with the production of oil and gas, to remain unplugged after such well is no longer used for the purpose for which it was drilled or converted. Nothing herein shall prevent utilizing a well for the purpose of introducing air, gas, fresh water or other liquid pressure into or upon the producing strata for the purpose of recovering oil and gas. All wells which are neither producing nor plugged shall comply with shut-in standards of oil and gas wells and shall be cased and capped in such a manner so as to protect all potential oil and/or gas zones, and fresh water in accordance with the requirements of Rule 0400-52-09-.06.

0400-52-09-.05 Surface Reclamation.

- (1) Reclamation of well sites, oil or gas pipeline right-of-way, storage facility sites, and access roads.
 - (a) Except for active work areas, the operator shall drain and fill all surface pits that are not needed for production purposes, and shall grade and stabilize the well location and location road within 30 days of the initial disturbance, in order to minimize surface run-off and prevent excessive erosion and sedimentation. All drilling supplies and equipment, trash, discarded materials and other refuse not contained and covered in the reclaimed pits shall be removed from the site. Temporary vegetative cover shall then be established on all graded areas.
 - (b) Within 90 days of the plugging and abandonment of any well, the operator shall remove all production and storage structure, supplies and equipment, any oil, salt water and debris, fill any remaining excavations, and grade any remaining disturbed areas, including access roads. Permanent vegetative cover shall then be established on all disturbed areas, excluding approved permanent, non-erosive facilities, and access roads which are to be turned over to the landowner. Any access roads necessary for the operator to gain access to the well site in order to determine the adequacy of the vegetative cover or to perform additional re-vegetation may continue to be used by the operator until all of the Board's reclamation requirements have been met.
 - (c) Upon written request to the Supervisor showing good cause, an extension of up to 90 days additional may be granted to an operator to complete grading and/or vegetation of a well site or access roads.
- (2) Re-vegetation - General Requirements.
 - (a) The operator shall establish, in accordance with paragraph (1) of this rule, on all surface disturbed areas except water areas and surface areas of access roads approved by the Supervisor as permanent roads, a vegetative cover that is in accordance with the approved permit and reclamation plan and that is as follows:
 1. Diverse, effective, and permanent;
 2. Comprised of species approved by the Supervisor that shall not impede natural vegetative cover; and
 3. Capable of long term stabilization of the soil surface from erosion.
 - (b) The reclamation plant species shall have the following:
 1. The same seasonal characteristics of growth as the original vegetation;
 2. Be capable of self-regeneration;
 3. Be compatible with existing plant and animal species existing in the areas; and
 4. Meet the requirements of applicable State and Federal seed, poisonous and noxious

plant, and introduced species laws or regulations.

- (c) Establishment of permanent vegetative cover shall conform with the standards set forth in the most recent version of the Tennessee Erosion and Sediment Control Handbook.
 - (d) The Supervisor may grant exceptions to the requirements of parts (b)1 and 2 of this paragraph when the species are necessary to establish a quick-growing, temporary, stabilizing cover, and measures to establish permanent vegetation are included in the approved reclamation plan. All items under subparagraph (c) of this paragraph are suggested guideline measures.
- (3) Re-vegetation - Top soiling, Mulching and Soil Amendments.
- (a) Prior to the establishment of a permanent vegetative cover on disturbed areas where excavation activities have occurred, the operator shall replace the excavated topsoil or provide an approved topsoil substitute material suitable for supporting the long range re-vegetation goals.
 - (b) Suitable mulch and/or other soil stabilizing practice shall be used on all areas that have been regraded and covered by topsoil or topsoil substitutes unless the Supervisor waives this requirement based on a determination that seasonal, soil, or slope factors result in a condition whereby mulch or other stabilizing practices are not necessary to control erosion and to promptly establish an effective vegetation cover.
 - (c) Nutrients and soil amendments shall be applied to the redistributed growth medium prior to re-vegetation when necessary to establish and maintain the vegetative cover.
- (4) Diverse vegetation cover - Standards for Success.
- (a) All previously disturbed and reclaimed areas shall be inspected by the Supervisor or his designee prior to final reclamation bond release in order to determine the level of success of permanent re-vegetation.
 - (b) Re-vegetation success shall not be determined until after at least two successfully completed spring or summer growing seasons have occurred.
 - (c) Standards for success shall be based on a ground cover of at least 90% consisting of herbaceous and/or woody species with a minimum of 80% being of perennial varieties.

0400-52-09-.06 Temporary Abandonment.

- (1) An operator has the opportunity to place any non-producing well into Temporary Abandonment for 5 years if all of the following requirements are fulfilled:
 - (a) The operator shall submit a Temporary Abandonment form for each well to be placed in temporary abandonment. This form can be obtained from Water Pollution Control/Oil and Gas Program.
 - (b) The operator shall submit a \$100 fee for each well per year to be placed in temporary abandonment.
 - (c) Each well shall be capped in such a manner as to have no open casing exposed to the environment (i.e., swedge with locked ball-valve or any other viable protection).
 - (d) Any well shown on the Annual Well Report that indicates no production shall be placed in temporary abandonment status or plugged.
 - (e) All fees received for temporary abandonment shall be placed in an account that shall be set aside to be used only for funding the plugging of abandoned oil and gas wells.
- (2) At the end of the five year Temporary Abandonment period, each well submitted by the operator shall be reviewed by the Department. A determination shall be made on the validity of keeping the well(s) open. This determination for validity shall be based on whether the operator has a deliverability test for each

gas well or if the well is producing oil. If the staff finds there is no valid reason to keep the wells open, the operator shall then have two years to plug the non-producing well(s).

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-52-10
Filing of Well Data, Reports and Maps

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0400-52-10-.01 Information Due Date
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0400-52-10-.01 Information Due Date

The required well data and reports shall be tendered to the Supervisor within 60 days from the date of drilling to total depth of the well. This date is defined as the termination of continuous drilling operations. The due date for information submitted may not be postponed by the expressed intent to resume operations at some future date.

0400-52-10-.02 Information Required.

The following information is required within 60 days after drilling to total depth:

- (1) Two final and unmarked prints of all electrical logs and other downhole surveys, if any. If no logs are run, then "NONE" should be entered in the "TYPE(S) OF GEOPHYSICAL LOGS RUN" section of the Well History Form (Form R-WH-1).
- (2) Driller's log - a driller's log shall be submitted in one of the following forms:
 - (a) On reverse side of Well History Form (R-WH -1); or
 - (b) On a separate typed sheet (one copy).
- (3) Drilling-time log - One copy for all wells drilled with rotary tools.
- (4) Drill-stem test - One final copy of any.
- (5) Core analysis - One copy if available.
- (6) Completion Report - one copy of Well History, Work Summary, and Completion or Recompletion Report (Form R-WH-1) shall be completed, notarized and submitted for each well. All shows of oil and/or gas, water zones, and coal seams penetrated shall be reported on the reverse side of this form. If all the required information is not available at the end of the 60 day period the additional information shall be filed on a supplemental Form R-WH-1 within 10 days after completion of the well.
- (7) Samples and Cores-well cuttings are required at 10 foot intervals from the top of bedrock to total depth of each well, and shall be submitted to the Tennessee Division of Geology office in Nashville according to the following guidelines if requested by the Supervisor:
 - (a) Well cuttings should arrive in sturdy containers, such as heavy cardboard boxes with sturdy bottoms. Burlap bags are acceptable, but plastic garbage bags are not.
 - (b) Well cuttings shall be completely dry when received.
 - (c) Each set of cuttings shall be in its own container. No two sets should be in the same box or

burlap bag. If more than 1 container is required for a particular set of cuttings, this should be noted on all containers.

- (d) Individual bags should be clearly marked and identified as to operator name, well name and number, permit number and interval. Each container shall be clearly marked with operator name, well name and number, permit number, and county.
- (e) Bags should be marked with waterproof ink.
- (f) Sets of well cuttings not meeting the requirements of subparagraphs (a) through (e) of this paragraph shall not be accepted by the Tennessee Division of Geology until those requirements are met. Cores which may be required by the Supervisor shall be submitted in adequate boxes clearly marked as to the name of the well and depth intervals.

0400-52-10-.03 Reserved

0400-52-10-.04 Field Map.

Persons or companies operating in a producing area shall furnish the Supervisor with a field map showing lease lines and well locations on request.

0400-52-10-.05 Information Confidential.

Upon request by the permittee to the Supervisor, the aforementioned well information shall be kept CONFIDENTIAL by the Supervisor for a period not to exceed 6 months from the date of drilling to total depth of the well, as defined in Rule 0400-52-10-.01.

0400-52-10-.06 Annual Well Report.

Operators shall file an annual report on each bonded well(s). The report shall include the well(s) name and number, permit number, location, current status of the well(s), any production for the past year, and future plans for the well(s). The annual report shall be due on the 15th of April each year. If the report is not received before May 1st, the well(s) shall be determined abandoned.

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-52-11 Exceptions and Hearings

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0400-52-11-.01 Prevention of Waste

0400-52-11-.01 Prevention of Waste

If any operator can show to the Supervisor or Oil and Gas Board that the work procedures herein prescribed result in waste, or such operations are unreasonable, the Supervisor may enter such an order, as a special exception to the aforesaid rules and regulations, as shall prevent such waste or eliminate such unreasonable restraint as may result from the application of the aforesaid rules and regulations to the well or wells of such operators; provided, however, that before any operator shall be allowed the benefit of any order granting an exception as authorized by this chapter, such operator shall establish that such exception, if granted, shall not result in waste in the field as a whole or give him an inequitable and unfair advantage over another operator or operators in the field. No special exception shall be granted except upon written application, fully stating the alleged facts, which shall be the subject of a hearing to be held no earlier than 10 days after filing the application. Prior to the hearing upon such application, at least 10 days notice thereof shall be given by publication to all operators in the Field. In addition to said notice by publication, the applicant shall give adjacent operators, where appropriate, at least 10 days notice of said hearing by personal service or by Registered Mail.

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-52-12
Violations – Penalties – Notice – Hearing

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0400-52-12-.01 Violations, Penalties, Notice, Hearing
0400-52-12-.02 Red Tagging of Wells

0400-52-12-.01 Violations, Penalties, Notice, Hearing

- (1) The Supervisor shall have the authority to assess monetary penalties as provided in paragraphs (3), (4), and (5) of this rule for any violation of this chapter, rules and regulations, or any order adopted by the Board. In making such assessment, the Supervisor shall give due consideration to the appropriateness of the penalty with respect to the size of the business of the operator charged, the gravity of the violation, the good faith of the operator, and the operator's history of previous violations.
- (2) If, upon an inspection or investigation, the Supervisor or any of his authorized personnel shall determine that any operator is not in compliance with any standard or regulation or rule of the Board promulgated by the Board pursuant to this chapter, he shall with reasonable promptness and in no event later than 6 months following the inspection, issue to the operator by certified mail a written citation that states the nature and, if appropriate, the location of the violation, including a reference to the provision of the chapter and the regulation alleged to have been violated. In addition, the citation shall fix a reasonable time for abatement of the violation. If the issuing Supervisor has reason to believe that such violation, or the failure to abate such violation, should result in the assessment of a penalty under paragraphs (3), (4), and (5) of this rule the citation may so state.
- (3) Any operator who has received a citation of this chapter, rules and regulations or order of the Board, promulgated pursuant to this chapter, and has failed to correct such violation within the period of correction of this citation, shall be assessed a penalty of up to \$1,000 for each day the violation exists. The period of correction may be suspended or lengthened by the assessing party upon a showing by the operator of a good faith effort to comply with the correction requirements, and that failure to comply with the correction requirements is due to factors beyond his reasonable control.
- (4) Any operator who has received a citation for a violation of this chapter, or rules and regulations, or order of the Board and such violation is specifically determined not to be of a serious nature, may be assessed a penalty of up to \$1,000 for each such violation.
- (5) Any operator who willfully or repeatedly violates the requirements of this chapter, or rules and regulations, or order of the Board promulgated pursuant to this chapter may be assessed a penalty of up to \$10,000 for each violation.
- (6) Penalties provided for by paragraphs (3), (4), and (5) of this rule shall be imposed in the manner hereinafter provided. Whenever the Supervisor, has determined that such a penalty should be assessed against an operator, a written notice and assessment of a penalty shall be issued to the operator by certified mail, return receipt requested, stating the amount of the penalty to be assessed and the reason therefore (which may be done by reference to citations issued prior to or simultaneously with such notification).
- (7) Any citation or notice and assessment of a penalty issued pursuant to this rule shall inform the operator of his rights to appeal such citation or assessment of a penalty and shall become final 20 days after the receipt of such citation or notice and assessment of penalty by the operator unless the operator, within the period of 20 days, shall file a written notice of appeal with the Supervisor.
- (8) If the operator files an appeal of such citation or assessment of a penalty as provided by paragraph (7) of this rule, the proceedings on such appeal shall be conducted in accordance with the provisions of the Uniform Administrative Procedures Act, as amended, compiled in Title 4, Chapter 5, and the rules of procedure of the Oil and Gas Board governing the conduct of contested cases. The Board shall afford the operator an opportunity for a hearing, after reasonable notice, The Board shall thereafter render a final order, in accordance with the provisions of § 4-5-314, affirming, modifying or vacating the Supervisor's citation or assessment of a penalty. A final order rendered pursuant to this rule shall be

effective upon its entry unless a later effective date shall be stated therein. A petition to stay the effective date of a final order may be filed under the provisions of § 4-5-316. A petition for reconsideration of a final order may be filed under the provision of § 4-5-317. Judicial review of a final order may be sought by filing a petition for review under the provisions of § 4-5-322.

- (9) All penalties owed under this chapter shall be paid to the assessing Supervisor for deposit into the Treasury of the State of Tennessee and shall accrue to the State of Tennessee and may be recovered in a civil action in the name of the State of Tennessee in any Court of Record in the county where the violation is alleged to have occurred or where the operator has its principal office. (Acts 1978 (Adj. S), ch. 791, § 1; T.C.A. § 60-113; Acts 1984, ch. 700, §§ 1,2.)

0400-52-12-.02 Red Tagging of Wells.

If, upon an inspection or investigation, the Supervisor or any of his authorized personnel shall determine that a well or tank battery is not in compliance with any standard or regulation or rule or order of the Board promulgated by the Board pursuant to this chapter, he shall with reasonable promptness and in no event later than 5 working days following the inspection, place a "red tag" (Form WC-NOTICE THIS WELL CLOSED) on the well or tank battery, which notice shall state that drilling or plugging of the well or any further production of oil and gas from the well or tank battery is hereby ordered to be terminated until approval to proceed has been granted by the Supervisor. The notice shall further indicate the nature of the violation or threatened violation, including a reference to the provision of the chapter and the regulation which has been violated.

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-53-01 Completion, Recompletion, and Related Downhole Work

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0400-53-01-.07 Bottomhole Pressure Tests
0400-53-01-.08 Reserved
0400-53-00-.09 Reserved

0400-53-01-.01 Time Limit for Well Completion

All wells drilled in connection with the production of oil and gas, unless plugged in accordance with well abandonment procedures as stated in chapter 0400-52-09, shall be completed within 1 year from cessation of drilling unless the procedures outlined in Rule 0400-52-09-.06 Temporary Abandonment.

0400-53-01-.02 Notification for Re-entry.

Notification to the supervisor is required prior to conducting work for the purpose of deepening a well pursuant to producing oil and/or gas.

The operator shall notify the Supervisor 24 hours in advance of conducting this proposed operation.

This rule shall not deter an operator from taking immediate action in an emergency to prevent damage when a service company, other than the drilling contractor, performs any work germane to this rule. The service company shall furnish the operator, and the operator upon request shall furnish the Supervisor with legible and exact copies of reports furnished the owner or operator of the well.

0400-53-01-.03 Report Filing.

The operator shall file a Well History, Work Summary and Completion or Recompletion Report (Form R-WH-1)

with the Supervisor within 60 days after completing, recompleting or working over a well pursuant to producing oil and/or gas. Wells shall be considered completed when they are capable of being turned into the tanks and/or gas transmission or gathering lines. Well History information shall include the actual materials and volumes used to fracture, the amounts and concentrations of any additives used, the amount of wastewater generated, and the method of disposal of wastewater, for the purpose of making this information easily available to the public.

0400-53-01-.04 Gas/Oil Ratio Tests.

- (1) All oil wells drilled shall be equipped so that gas/oil ratios can be taken at any time. Production and gas/oil ratio tests shall be made when requested by the Supervisor, and shall be witnessed by the Supervisor or his representative.
 - (a) Gas production potential tests shall be made on the Gas Well Deliverability Tests (Form R-DT-1) and submitted as prescribed above to the Supervisor, and conducted every three years until the well is plugged and abandoned when requested by the supervisor.
 - (b) Gas wells shall not be tested by the "open-flow" method. The back-pressure method of determining the open-flow, as outlined by the Bureau of Mines in their Monograph 1, "Back-Pressure Data on Natural Gas Wells", shall be used. When for any reasons, the completed back-pressure method is not feasible, an acceptable method, not entailing excessive physical waste of gas may be used upon recommendation of the Department.
 - (c) Gas/Oil (c: Gas/Condensate) ratios shall be reported on Form R-PT-1 and Form R-WH-1.
 - (d) In the event any operator considers that, for the purpose of determining field allowable, his well has not had a fair determination of its gas/oil ratio, or that its gas/oil ratio has changed because of natural causes or corrective work on his well, he may make application in writing to the Supervisor for a re-test or a special test of the gas/oil ration of his well, and for an adjustment of his well if applicable. If, upon re-testing a well, the Supervisor finds that the new gas/oil ratio justifies a change in the allowable, he is authorized to make such change.

0400-53-01-.05 Periodic GPM Tests.

Gallons of liquid per thousand cubic feet of gas shall be reported on Periodic GPM Tests Report (Form R-GPM-1) to the Supervisor on the 30th day after the Supervisor requests such data.

0400-53-01-.06 Gas Composition Analysis.

Gas Composition Analysis shall be completed and submitted to the Supervisor within 60 days after the Supervisor requests such data.

0400-53-01-.07 Bottomhole Pressure Tests.

Bottomhole Pressure Tests shall be conducted and submitted to the Supervisor within 60 days after the Supervisor requests such data.

0400-53-01-.08 Reserved.

0400-53-01-.09 Reserved.

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-53-02 Tubing and Well Equipment

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0400-53-02-.04 Safety Valves

0400-53-02-.01 Repealed.

0400-53-02-.02 Connections.

- (1) When requested by the supervisor or his representative, wellhead connections shall be tested prior to installation at a pressure indicated by the Supervisor in conformance with conditions existing in areas in which they are used.
- (2) Whenever such tests are made in the field, they shall be witnessed by the Supervisor.
- (3) Tubing and tubingheads shall be free from obstructions in wells used for bottomhole pressure test purposes.

0400-53-02-.03 Separators.

All flowing and gas-lift oil wells are to be produced through efficient operating separators, except in the case of low-pressure headings or gas-lift wells with low-gas output (less than 100 lbs. surface pressure).

0400-53-02-.04 Safety Valves.

- (1) A safety valve is required on all flowing wells, with a surface pressure in excess of 1,000 pounds in the following categories.
 - (a) Any location inaccessible during period of storm or floods.
 - (b) Location within any wildlife refuges, parks or game preserves, or bodies of water used for recreation or navigation.
 - (c) Location within 600 feet of public roads or waterways, railroads, inhabited dwellings, or closer than 1,000 feet to any school or church.
- (2) Where the use of safety valves would unduly interfere with normal operations of a well, the Supervisor may, upon submission of pertinent data in writing, waive the requirements of this rule.

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-53-03
Prevention of Hazards and Pollution

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0400-53-03-.01 Safety

0400-53-03-.02 Pollution and Safety Controls

0400-53-03-.01 Safety

- (1) Each operator shall so conduct his operations and maintain his equipment as to reduce to a minimum the danger of explosion, fire, or waste.
- (2) All tests for production should be started and completed during daylight hours unless approval is obtained by the Supervisor.
- (3) No boiler, open fire, or electric generator shall be operated within 100 feet of any producing oil or gas well or oil tank.
- (4) Any rubbish, debris, or vegetation that might constitute a fire hazard shall be removed to a distance of at least 100 feet from the vicinity of wells to be tested.

- (5) All waste shall be disposed of in such a manner as to avoid creating a fire hazard or polluting streams and fresh water strata.
- (6) No test oil, condensate, salt water, or any other fluid substance shall be discharged to or disposed of in any way into any stream, lake, or other body of water, or into any ditch or surface drainage depression leading to any stream, lake, or other body of water, except in compliance with the Water Quality Control Act T.C.A. § 69-3-101 and the regulations of the Water Quality Control Board 1200-04-03.
- (7) All wells shall have the equipment and containers or lined pits necessary to prevent the spillage of oil, condensate, water, or any other fluids or substances produced or used during any production test. The equipment shall be in place prior to the start of the production test, and shall be large enough to contain any plausible spill.
- (8) All wells shall be cleaned into a pit or tank, located at a distance of at least 100 feet from any fire hazard or dwellings.
 - (a) If pits are to be used, the sides and bottoms of the pits shall be lined with heavy gauge seamless plastic sheets, or other artificial liner approved by the Supervisor.
 - (b) If it seems likely that a pit will overflow, additional pits shall be constructed, or else tanks shall be brought in to contain the surplus fluids.
- (9) No oil or gas well shall be drilled closer than 200 feet from a dwelling or closer than 100 feet from a public road.
 - (a) That portion of this regulation concerning distance from a dwelling may be waived by the supervisor upon submission of a notarized statement by the dwelling owner agreeing to the well location.
- (10) No oil or gas well shall be drilled within 200 feet of any water well that is in active use. This requirement may be waived by the Supervisor upon submission of a notarized statement from the well owner agreeing to the location of the oil or gas well and a plan identifying the additional measures to be taken to prevent pollution of the water well.
- (11) No oil or gas well shall be drilled within 100 feet of any stream, lake, or other body of water, so that an undisturbed riparian zone can be maintained, except that this requirement may be waived upon submission of a plan identifying additional measures acceptable to the Supervisor to be taken to prevent pollution of the waters of the State. No oil or gas well shall be drilled within 330 feet of any water body designated as an Outstanding National Resource Water (ONRW).
- (12) The siting of wells, pits, or storage facilities in wetlands or in flood-prone areas (as indicated by the observed high water mark) of a stream is prohibited.

0400-53-03-.02 Pollution and Safety Controls.

- (1) All personnel, including operators and service personnel shall be trained in the prevention of spills and made aware of the consequences of spillage. There shall be a Site Coordinator designated for each well site who shall be the principle contact for all activities on the location and the responsible party for submitting an action and safety plan for each well site. Site Coordinators shall be certified by completing the Tennessee Site Coordinator Training Course. Equivalent training credentials may be temporarily accepted at the Supervisor's discretion until such time as the course certification can be obtained.
- (2) Implement necessary procedures and safeguards during drilling and completion operations to prevent the uncontrolled flow of oil from wells, including, but not limited to:
 - (a) Follow reasonable procedures such as cleaning and lubricating pipe threads so that pipe can be made up to proper tightness.
 - (b) Lay flow and test lines on ground or install adequate supports for crossing streams and drainways with the lines.

- (c) At truck loading terminals, provide containers to catch unrecoverable oil at the hose connections, and provide proper maintenance of valves and other equipment. Train personnel to take necessary procedures to prevent spillage.
 - (d) During completion operations, produce and clean wells into tanks instead of pits if at all possible.
 - (e) At the same time that any pits or other diversion, transport, or storage facilities are constructed at ground level, dikes, diversion ditches, or other structures shall also be constructed to prevent any surface water from entering the pits or other facilities.
 - (f) Remove oil, salt water, or other fluids from pits as soon as practical after it has accumulated in them, and dispose of it in such a way that none can enter surface water or ground water, or otherwise adversely affect the environment or threaten public health and safety.
 - (g) All pits or other diversion, transport, or storage facilities shall be constructed so that waste fluids do not discharge from them. There shall be no discharge pipe, overflow weir, trickle tube, or any other device allowing any discharge. The operator is responsible for maintaining adequate storage capacity at all times. No pit shall be located so that any part of it, including a dike or diversion structure, is within a horizontal distance of 100 feet of the normal high-water line of any stream or lake. All pits shall be lined using a synthetic liner of at least 10 ml thickness. As an alternative, compacted clay liners or other equivalent measures may be used at the discretion of the Supervisor.
 - (h) Containment at tanks shall equal at a minimum the storage capacity of 1½ times the capacity of the largest tank in the tank battery.
 - (i) All tanks shall be maintained to prevent corrosion which can lead to both fluid loss from the vessel and accelerated reduction in its useful life span.
 - (j) To prevent fire hazard, all tank batteries and tanks shall be kept free of brush or overgrowth within the berm surrounding the tank or tanks.
 - (k) Dikes and ditches designated in subparagraphs (e) and (g) of this paragraph should be constructed in a manner to accommodate permanent facilities such as pumping units and flow lines.
 - (l) Provide dikes and/or containment pits at storage tanks upon initial installation where such tanks are so located as to be deemed hazardous. If containment pits are to be used, they should be constructed according to the guidelines set forth in Rule 0400-54-01-.07.
- (3) All surface pits shall be drained of water and back filled with dirt as soon as they are no longer needed for drilling or testing.
- (4) Implement prudent production operations to prevent potential oil spills, including, but not limited to:
- (a) Connect fill lines to storage tanks so that oil and gas shall not spray into the atmosphere.
 - (b) Install "equalizer" lines between adjacent tanks as a safeguard against overflow.
 - (c) Install oil and gas separators where gas is produced in sufficient quantities to be hazardous.
 - (d) Pump contaminated unsalable residual oil from storage tanks into an accumulator tank instead of open pits.
 - (e) Place locks, remove handles, or otherwise secure all valves, so vandals cannot open them to cause spills.
- (5) The Supervisor should notify all oil industry related companies, including operators, service companies, drilling contractors, and crude oil gatherers and purchasers of their responsibility and liability in regard to oil spills.

Chapter 0400-54-01
Pollution and Safety Controls

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- 0400-54-01-.07 Containment Pit at Tank Batteries
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- 0400-54-01-.09 Improper Loading
- 0400-54-01-.10 Gathering Lines
- 0400-54-01-.11 Improper Casing
- 0400-54-01-.12 Disposal of Salt Water

0400-54-01-.01 Operator's Responsibility

Each operator shall so conduct his operations and maintain his equipment as to reduce to a minimum the danger of explosion, fire, or waste.

0400-54-01-.02 Proper Handling of Drilling Foam.

When it becomes necessary to use detergents during air-rotary drilling operations, the foam generated by such activity shall be directed into a containment pit and retained there until it has been degraded to a harmless form.

0400-54-01-.03 Proper Disposal of Waste.

No waste oil, oil field waste, or any other fluid substance shall be discharged to or disposed of in any way into any stream, lake, or other body of water, or into any ditch or surface drainage depression leading to any stream, lake, or other body of water, except in accordance with a discharge permit obtained from the Department of Environment and Conservation. No solid waste shall be disposed of except as allowed by the Solid Waste Disposal Control Act T.C.A. §§ 68-211-101 et seq.

Any Naturally Occurring Radioactive Material (NORM) or Technically Enhanced Naturally Occurring Radioactive Material (TENORM) produced at a well site shall be disposed of in accordance with the Tennessee State Regulations for Protection Against Radiation, Division 0400-20.

0400-54-01-.04 Removal of Debris.

Any rubbish or debris that might constitute a fire hazard shall be removed to a distance of at least 100 feet from the vicinity of wells, tanks and pump stations.

0400-54-01-.05 Pollution Avoidance.

All waste shall be burned or disposed of in such a manner as to avoid creating a fire hazard or polluting streams and ground water.

0400-54-01-.06 Cleaning Pit or Tank.

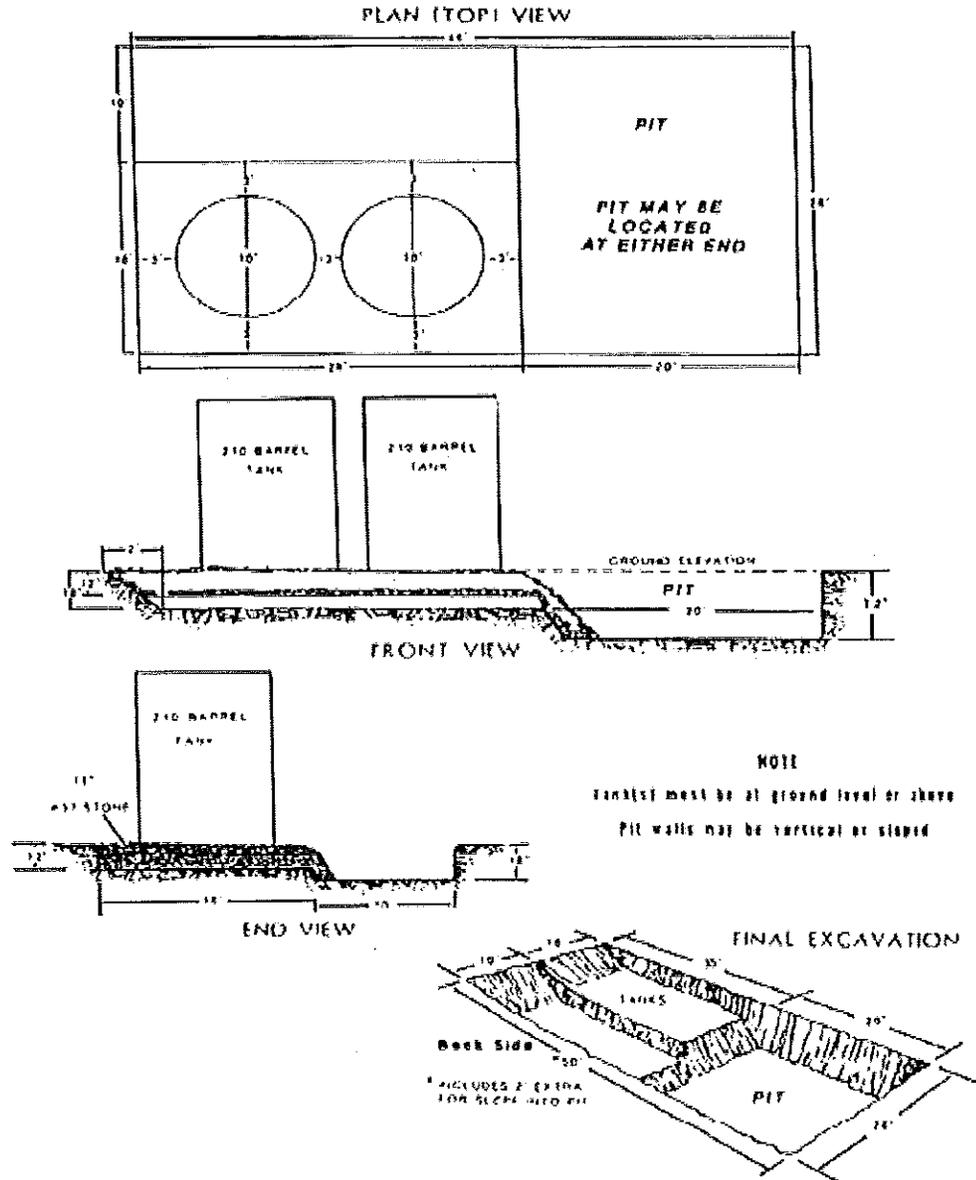
All wells shall be cleaned into a lined pit or tank located at a distance of at least 100 feet from any fire hazards or dwellings.

0400-54-01-.06 Containment Pit at Tank Batteries.

A containment pit is required at each permanent oil tank or battery of tanks located within corporate limits or

where such tanks are less than 600 feet from any highway or inhabited dwelling, or less than 1,000 feet from any school or church or within 100 feet of a stream or where such tanks are so located as to be deemed hazardous by the Supervisor. Tanks not falling in the aforementioned categories shall be surrounded by a retaining wall or suitably ditched to a collecting sump, each of sufficient capacity and construction to contain potential spillage. Tank batteries shall not be located closer than 100 feet from any state highway or county road.

CONSTRUCTION DETAILS FOR TANK PAD AND PIT



0400-54-01-.08 Vents Required.

All storage facilities shall be vented.

0400-54-01-.09 Improper Loading.

Oil transporters and producers shall not load oil from oil storage facilities into vehicles parked on public roads.

0400-54-01-.10 Gathering Lines.

All gathering lines shall be buried beneath the surface wherever no blasting is required, and shall be steel or weather resistant black plastic wherever outcropping, resistant rock makes it necessary to lay the pipe on top of the ground. Lines crossing streams, rivers, intermittent streams or other drainways shall be constructed in such a fashion as to bridge the drainage features and protect the gathering lines from damage due to lack of adequate support. Failure of support may result in rupture of or discharge from the line. If the line is to be installed below the stream bed or below ground level and shall cross state waters an Aquatic Resources Alteration Permit shall be obtained prior to the activity occurring. Burial is not required, however, in those instances where this would

conflict with the Natural Gas Pipeline Safety Act (published in the Federal Register, Volume 35, No 161, Part II, August 19, 1970).

0400-54-01-.11 Improper Casing.

All producing wells that are not properly cased and/or cemented shall cease production. The operator is required to perform corrective work before production can be resumed.

0400-54-01-.12 Disposal of Salt Water.

- (1) Underground injection is the preferred form of disposal of salt water, provided, however, that such injection is permitted by appropriate State and Federal agencies.
- (2) Produced salt water may either be injected into a subsurface formation(s) productive of hydrocarbons, if part of an approved secondary recovery project, into a subsurface formation(s) not productive of hydrocarbons, if through an approved salt water disposal well, or else may be transported off-lease to an authorized salt water disposal facility if prior approval has been granted by the Department.
- (3) Produced salt water shall not be put in any unlined pit, pond, lake or depression, or in any other place in a manner that shall constitute a pollution hazard to the waters of the State including ground water.
- (4) No salt water shall be discharged to or disposed of at the land surface where it can enter surface water or ground water. Salt water discharged to and temporarily stored in lined pits shall be removed before it can leak into underground water.
- (5) All pits or ditches used for temporary storage or transport of salt water shall be lined with an impermeable man-made liner.

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-54-02 Procedures and Equipment for Metering, Measuring and Producing Oil Condensate and Gas

Table of Contents

0400-54-02-.01 Gas/Oil Ratios Equipment
0400-54-02-.02 Gauging
0400-54-02-.03 Testing
0400-54-02-.04 Improper Transfer
0400-54-02-.05 Lease Tank Outlets
0400-54-02-.06 Bleed-off Lines
0400-54-02-.07 Commingling Prohibited
0400-54-02-.08 Required Test Lines
0400-54-02-.09 Reserved
0400-54-02-.10 Reserved
0400-54-02-.11 Reserved
0400-54-02-.12 Reserved
0400-54-02-.13 Basic Orifice Coefficients
0400-54-02-.14 Pilot Tubes
0400-54-02-.15 Gas Measurements

0400-54-02-.01 Gas/Oil Ratios Equipment

All leases are to be so equipped as to permit the determination of gas/oil ratios on individual flowing and gas-lift wells. Gas/oil ratio data on all wells shall be available to the Supervisor at all times.

0400-54-02-.02 Gauging.

Each lease shall be provided with sufficient tankage and/or meters to permit proper gauging of the oil/condensate

and gas produced. The tanks or meters shall be identified by a sign showing the ownership of the tanks or meters and the name of the lease from which the oil/condensate or gas is being produced. In no case shall meters be the sole means of measuring oil runs from any field. There shall be used at least one gauge tank to check the readings of oil and condensate meters.

0400-54-02-.03 Testing.

All oil tendered to any transportation system shall be gauged and tested for Basic S. & W. and temperature. For each and every transfer of oil from the lease tanks the number of the "on-seal" observed temperature and the percent of Basic S. & W. shall be recorded on each and every run ticket, and the producer and purchaser of any transfer of oil from lease tanks shall receive a copy of the run or delivery ticket or tickets.

0400-54-02-.04 Improper Transfer.

There shall not be any simultaneous movement of oil into and out of any tank that is being used for delivering oil to a gatherer or transporter. Transfer of oil or gas from the possession of one lease to the possession of another lease, except when properly accounted for, is hereby prohibited. The possession of improper mechanical means for transferring oil from one lease tank or well to the lease tank or well of another lease is hereby prohibited.

0400-54-02-.05 Lease Tank Outlets.

All pipeline outlets from lease tanks shall be kept sealed at all times except when a pipeline is being made from the tank, and the number of the "on-seal" and "off-seal" shall be recorded on each and every run ticket. Additionally, all pipeline outlets from lease tanks shall be made secure to prevent the unauthorized discharge or transfer of oil.

0400-54-02-.06 Bleed-Off Lines.

Basic S. & W. bleed-off lines of lease tanks shall be sealed or locked at the time any pipeline run is being made.

0400-54-02-.07 Commingling Prohibited.

Oil produced from separately owned leases, not pooled, unitized, or consolidated shall not be commingled in lease tanks except as hereinafter provided for in this order.

0400-54-02-.08 Required Test Lines.

Reserved.

0400-54-02-.09 Reserved

0400-54-02-.10 Reserved.

0400-54-02-.11 Reserved.

0400-54-02-.12 Reserved.

0400-54-02-.13 Basic Orifice Coefficients.

Basic orifice coefficients used in the calculation of gas flow shall be those contained in the American Gas Association's Gas Measurement Committee Report No. 3 or some other basic orifice coefficients generally accepted in the industry and approved by the Supervisor, such as those published by the Foxboro Company, American Meter Company, and Pittsburg Equitable Meter Company. Corrections for base pressure and base temperature shall be made. Corrections for supercompressibility are recommended when available. Corrections for Reynolds number and expansion factor are recommended only in cases where their combined correction is equal to or exceeds 1%.

0400-54-02-.14 Pilot Tubes.

Gas measurements with Pilot Tubes shall be based on Reid's formula and shall follow recommendations similar to those set forth in Appendix 4 of the Bureau of Mines Monograph 7. Corrections for base pressure and base

temperature shall be made as in orifice measurements.

0400-54-02-.15 Gas Measurements.

Gas measurements with orifice well tests shall follow recommendations similar to those set forth in Bulletin No. E-7 of the American Meter Company. Corrections for base pressure and base temperature and gravity shall be made as in orifice measurements.

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-54-03 Requirements for Reporting the Volume and Disposition of Oil and Gas Produced

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- 0400-54-03-.01 Time Reports
- 0400-54-03-.02 Month Defined
- 0400-54-03-.03 Reserved
- 0400-54-03-.04 Reserved
- 0400-54-03-.05 Reporting-Producers
- 0400-54-03-.06 Monthly Reporting-Transporters
- 0400-54-03-.07 Reserved
- 0400-54-03-.08 Report Filing
- 0400-54-03-.09 Computing Method
- 0400-54-03-.10 Report Verification
- 0400-54-03-.11 Monthly Report-Gas
- 0400-54-03-.12 Monthly Report-Plant
- 0400-54-03-.13 Report-Gas Gatherers

0400-54-03-.01 Time Reports

The length of time reports and other pertinent data, covered by this chapter, shall be kept on file by the operators and available for inspection by the Supervisor or members of his staff, for not less than a period of 3 years.

0400-54-03-.02 Month Defined.

A "month" and "calendar month" shall mean the interval of time from 7:00 a.m. on the first day of any month of the calendar to 7:00 a.m. of the first day of the next succeeding month of the calendar.

0400-54-03-.03 Reserved.

0400-54-03-.04 Reserved.

0400-54-03-.05 Reporting-Producers.

Each producer of oil and such producer of condensate from a gas well, where produced in liquid form at the wellhead by ordinary production methods or as Calculated Theoretical Condensate, defined as the amount of condensate (allocated back to lease) that normally would be separated by conventional methods from natural gas well volumes flowing full stream directly to a plant without any condensate separation having been made at lease or a plant, shall furnish for each year an Annual Well Report pursuant to Rule 0400-52-10-.06 setting forth complete information and data indicated by such reports respecting oil produced from every lease operated by said producer and respecting condensate produced from gas wells at the wellhead in liquid form by ordinary production methods from each lease operated by said producer.

0400-54-03-.06 Monthly Reporting-Transporters.

Each transporter of oil and condensate shall furnish for such calendar month a Transporter's and Storer's Monthly Report for Crude Oil and/or Condensate (Form R-MP-2) containing complete information and data indicated by such form including the quantity of oil removed from each lease and permit numbers of producing wells on each

lease.

0400-54-03-.07 Reserved.

0400-54-03-.08 Report Filing.

The transporter's and storer's reports for each month shall be prepared and filed according to instructions on the form, on or before the 25th day of the next succeeding month.

0400-54-03-.09 Computing Method.

All quantities included in the reports provided for in this chapter shall be reported in barrels computed from 100% tank tables and based upon actual physical gauges.

0400-54-03-.10 Report Verification.

All reports provided for in this chapter shall be verified by affidavit in the form or forms indicated; any reports not so verified shall not be taken as filed in compliance with this chapter.

0400-54-03-.11 Monthly Report-Gas.

All gas produced within the State of Tennessee, excepting gas vented from stripper wells, shall be reported on the Annual Well Report and Monthly Gatherer's and/or Transporters Natural Gas Report (Form R-MP-5). Every producer shall complete the Annual Well Report pursuant to Rule 0400-52-10-.06. Every transporter shall complete Form R-MP-5. The transporter thus required to report, shall execute under oath and file in the manner hereafter directed on or before the last day of each month, Form R-MP-5, setting forth fully the data and information indicated by such form, which shall be completed as to data covering the calendar month next preceding the date of filing.

0400-54-03-.12 Monthly Report-Plant.

Each operator of a gasoline plant, cycling plant, or any other plant at which gasoline, butane, propane, condensate, kerosene, oil or other liquid products are extracted from natural gas, shall furnish for each calendar month a Monthly Gasoline and/or Cycling Plant Report (Form R-MP-6) containing the information indicated by such form respecting natural gas and products involved in the operation of each plant during each month. Such report for each month shall be prepared and filed according to instructions on the form on or before the last day of each month.

0400-54-03-.13 Report-Gas Gatherers.

Gas gatherers shall report the amounts of gas handled and disposed of on Monthly Producers Natural Gas Report (Form R-MP-4). The gas which he has produced in the field shall be reported on Form R-MP-4, under the section of the report entitled "Production." The gas gathered in the same field along with gas which he has gathered in nearby fields and transported to that field shall be reported on the same form, under the section entitled "Acquisitions." He shall indicate in this section the company from whom the gas was received, the field from which this gas was produced, and the amount of gas received. In the event the gatherer has produced no gas in the field from which he is gathering, then he shall indicate in the Production Section of Form R-MP-4 that he has no gas production. His acquisition in that field shall be listed in the Acquisitions section.

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-54-04
Ratable Take

Table of Contents

0400-54-04-.01 Taking Oil and Gas Ratably

0400-54-04-.01 Taking Oil and Gas Ratably

(1) It is required that oil and gas be taken ratably from wells producing from a common pool. The application

of vacuum at the wellhead of a well, or upon any gas or oil-bearing reservoir is prohibited, except on application, notice and hearing. A copy of the application and notice of hearing shall be mailed by certified mail to each offset operator within 5 days after the application is filed. Wherever authority is granted to impose a vacuum, a continuous record thereof shall be kept by the operator as required by the order authorizing same. The record shall be made available to the Board on request. Should any operator, or a person with financial interest feel that oil and gas is not being taken ratably from well or wells in which he participates, then he may make that fact known through application for a public hearing and present and exhibit appropriate technical data to demonstrate such positions to the Oil and Gas Board. A decision shall be made by the Board provided the applicant complies with the rule governing said hearings.

- (2) At a minimum, consideration of approval for use of a vacuum pump shall include the following:
 - (a) A comprehensive presentation of the information pertinent to the request;
 - (b) Well histories of the well in question and surrounding wells;
 - (c) Electronic logs, if available, for each well;
 - (d) 7½ minute topographic quadrangle maps indicating the location of each well within one mile of the well site;
 - (e) A property map of the same area showing the surface owners, and mineral lease holders on surrounding properties; and
 - (f) A copy of a signed document, from each interested party, i.e., surrounding landowners and lease holders, stating that they have no objection to the well in question being pulled on a vacuum.
- (3) Subparagraph (2)(f) of this rule may be waived if the gas that is pulled from the well is re-injected back into the same reservoir(s) as it is pulled from as a secondary recovery operation.
- (4) All requests made to the Oil and Gas Board shall include the requirements of paragraph (2) of this rule.

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-54-05
Commingling and Automatic Custody Transfer of Hydrocarbons

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0400-54-05-.01 Permission to Commingle
0400-54-05-.02 Notice Publication
0400-54-05-.03 Granting Permission
0400-54-05-.04 Meter Calibrations
0400-54-05-.05 Operational Limitations
0400-54-05-.06 By-Pass Lines
0400-54-05-.07 Test for GPM
0400-54-05-.08 Retention of Reports

0400-54-05-.01 Permission to Commingle.

Permission to commingle gas and/or liquid hydrocarbons and to measure and transfer custody of liquid hydrocarbons by use of methods other than customary gauge tanks may be obtained without the necessity of a public hearing, in the absence of protest, as hereinafter provided, and upon strict compliance with the procedure set forth herein.

- (1) Detailed schematic diagram of the mechanical installation to be used with adequate explanation of the flow of gas and/or liquid hydrocarbons and indicating locations of locking devices and seals to provide assurance against, or evidence of, tampering.
- (2) Statement by the producer that in his opinion the use of the proposed method shall provide reasonably

accurate measurement and shall not create inequities.

- (3) A list of all known interested parties, including operators and royalty owners, affected by the application.

0400-54-05-.02 Notice Publication.

Notice of the filing of an application for projects applicable to this chapter shall be published in a newspaper of general circulation in the county wherein the field is located.

0400-54-05-.03 Granting Permission.

Upon the basis of application as herein provided, no permission for projects applicable to this chapter shall be granted if, in the judgment of the Supervisor, the data and information submitted does not warrant the approval of the application or if any party protests the application by filing written protest with the Supervisor within 15 days following the first publications of the notice of the application; however, in either of the foregoing events, the application may be set for public hearing at the election of the applicant or the Supervisor.

0400-54-05-.04 Meter Calibrations.

The applicant shall provide a suitable means of calibrating each meter used for measurement of hydrocarbons in order that its accuracy in operation can be proven, such calibration to be done before or at the time the meter is initially installed and at such intervals or other times as the Supervisor or his agent shall, after consideration of the inherent characteristics of the particular equipment, deem proper. The results of all meter calibrations required by this order shall be certified as being true and correct by the party performing the calibration. These results shall be available upon request to the Supervisor or his duly authorized representative.

0400-54-05-.05 Operational Limitations.

The approved custody transfer or commingling installation shall be permitted to operate so as to transfer or commingle, as produced, the hydrocarbons produced from the well or wells served by such installation. The limitations on the operation of such installation are as follows:

- (1) The daily production rate from any well or wells shall not cause waste.
- (2) Unless otherwise permitted, no production from a well in a prorated pool in excess of the total monthly allowable may be transferred during a calendar month.
- (3) The production from any given well in any one day shall not be increased more than 25% of the legally permissible hydrocarbon production from such well or wells.

0400-54-05-.06 By-Pass Lines.

Permission, in writing, from the Supervisor shall be obtained for all by-pass lines or other lines that shall permit flow around the regular meter, and each such line shall have a meter that shall permit individual well measurement.

0400-54-05-.07 Test for GPM.

Should the application be for the approval of the use of well tests, split stream tests, full stream tests, or other methods of determining GPM of the full well stream test or other method of determining GPM of the full well stream in lieu of gauge tanks and should the application for same be approved, such testing shall be done at least monthly. Applications of this nature shall only be approved when the applicant files with the supervisor an executed copy of an agreement in which all royalty and working interest owners in the leases affected have voluntarily agreed to the proposal.

0400-54-05-.08 Retention of Reports.

Should approval be given, the applicant shall indicate in the "Remarks" column on current R-MP-1 and R-MP-4 forms that appropriate well tests have been conducted. The applicant shall retain the actual reports of such tests and such reports shall be kept on file, and available for inspection by the Supervisor or any party at interest for a period of not less than 3 years.

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-54-06
Limiting Production

Table of Contents

0400-54-06-.01 Prorating a Pool

0400-54-06-.01 Prorating a Pool

The Oil and Gas Board, after public hearing, may prorate a pool for the purpose of protecting correlative rights and to minimize the waste of oil and/or gas. Prior to prorating a pool, its wells may be shut-in until subparagraph (h) of Rule 0400-52-04-.01 is complied with, or in lieu thereof, a poolwide unit is established.

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-54-07
Regulating High Gas/Oil Ratio Wells and Preventing Waste of Gas

Table of Contents

0400-54-07-.01 Classification

0400-54-07-.02 Escaping Gas

0400-54-07-.03 Unitization

0400-54-07-.04 Wells Regulated

0400-54-07-.05 Gas-Lifted Wells

0400-54-07-.06 Application of Rules

0400-54-07-.01 Classification.

An oil well with a gas/oil ratio in excess of 2,000 cubic feet of gas per barrel of oil (2,000:1) shall be considered a high gas/oil ratio well and may be limited by the Supervisor in the amount of gas permissible to produce.

0400-54-07-.02 Escaping Gas.

No gas shall be flared or permitted to escape into the atmosphere, but shall not be utilized without waste, except upon approval of the Supervisor or where special orders are operative. If necessary to prevent undue waste of gas or dissipation of reservoir energy, the Oil and Gas Board may limit venting of gas.

0400-54-07-.03 Unitization.

An attempt shall be made to unitize all pools, or reservoir, with high gas/oil ratios.

0400-54-07-.04 Wells Regulated.

Production from wells in pools or reservoirs that have both oil and gas production shall be regulated by the rules of this chapter.

0400-54-07-.05 Gas-Lifted Wells.

Wells that are gas-lifted with gas from gas wells shall be prorated in the same manner as are high-ratio naturally flowing oil wells after subtracting the input gas from the output gas. The uneconomical or unreasonable use of gas for gas-lifting shall not be permitted.

0400-54-07-.06 Application of Rules.

If gas is produced from an oil reservoir or common source of supply and is returned to the same source, only gas

not returned or utilized for lease or unit operations shall be considered in applying the rules of this chapter.

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-54-08 Subterranean Gas Storage

Table of Contents

0400-54-08-.01 Conditioned Usage

0400-54-08-.01 Conditioned Usage.

Application for usage of subterranean reservoirs for gas storage shall be submitted to the Oil and Gas Board. The Board may, after public hearing, grant the applicant's request conditioned as follows:

- (1) That the underground reservoir sought to be used for the injection, storage and withdrawal of natural gas is suitable and feasible for such use, provided no reservoir, any part of which is producing or is capable of producing oil and gas in paying quantities, shall be subject to such use, unless all owners in such underground reservoir shall have agreed thereto in writing; or
- (2) Unless such reservoir has a greater value or utility as an underground reservoir for gas storage than for the production of the remaining volumes of original reservoir natural gas and condensate, and all owners, in interest shall have consented to such use in writing; and
- (3) That the use of the underground reservoir for the storage of natural gas shall not contaminate other formations containing fresh water, oil, gas, or other commercial mineral deposits;
- (4) That the proposed storage shall not endanger lives or property; and
- (5) That the storage reservoir may be drilled through, in a prudent manner, for the purpose of exploration for, or producing, underlying oil and/or gas pools.

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-54-09 Pressure Maintenance Projects and Secondary Recovery

Table of Contents

0400-54-09-.01 Application
0400-54-09-.02 Administrative Approval
0400-54-09-.03 Approval by Special Order
0400-54-09-.04 Poolwide Unit-Formation
0400-54-09-.05 Casing and Sealing Wells
0400-54-09-.06 Input Well Procedure
0400-54-09-.07 Pro-rata Payment
0400-54-09-.08 Application for Hearing

0400-54-09-.01 Application.

Any person desiring to institute secondary recovery or pressure maintenance projects shall apply to the Supervisor by letter setting forth the request, and submit a Pressure Maintenance and Secondary Recovery Questionnaire (Form Q-PMSR).

0400-54-09-.02 Administrative Approval.

If the common source of supply, for which such operations are to be instituted, lies within a single lease, or all interested parties voluntarily agree, the project may administratively be approved by the Supervisor.

0400-54-09-.03 Approval by Special Order.

All other categories of secondary recovery and pressure maintenance projects shall be approved by special order, after a public hearing and by determination of the Oil and Gas Board that waste shall be prevented and the unit operation shall increase ultimate recovery; that the unit operation is feasible; that each owner shall receive his just and equitable share; and that 50% or more of the owners have approved the unit operation.

0400-54-09-.04 Poolwide Unit-Formation.

When the common source of supply is not restricted to a single lease, a poolwide unit shall be formed prior to the Oil and Gas Board granting approval for secondary recovery and pressure maintenance projects.

0400-54-09-.05 Casing and Sealing Wells.

Wells drilled or reworked for use in the injection of fluids or gases shall be adequately cased and sealed to prevent injection or migration of injected substances into any strata or stratum other than the objective.

0400-54-09-.06 Input Well Procedure.

The drilling and plugging of any input well shall follow the same procedure that is employed in drilling or plugging oil and gas wells.

0400-54-09-.07 Pro-rata Payment.

The owners of working interest in secondary recovery and pressure projects are required to pay their pro-rata share of the cost of equipping and operating said project. If any working interest owner fails to tender this just and reasonable share of costs, the Board may provide that the operator shall withhold all proceeds and be reimbursed for the non-participating owner's share of the proceeds to the extent of 150% to 200% of the amount advanced.

0400-54-09-.08 Application for Hearing.

Any owner may apply for a hearing before the Oil and Gas Board to obtain relief from unjust and unreasonable costs assessed by the project operation, provided he shows that he has either conferred or attempted to confer with the operator for the purpose of settling the dispute prior to making application to the Board.

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-55-01
Unit Operations

Table of Contents

0400-55-01-.01 Unit Operation
0400-55-01-.02 Drilling and Production Units
0400-55-01-.03 Poolwide Units

0400-55-01-.01 Unit Operation.

- (1) Unit operations shall be ordered only after notice and hearing and shall be based on findings that:
 - (a) The order is reasonably necessary to conserve the natural resources of the State; shall prevent waste of oil and gas, and the drilling of an unnecessary well or wells; shall appreciably increase the ultimate recovery of oil and gas from the affected pool; is economically feasible; and shall protect correlative rights of both landowners and owners of mineral rights.
 - (b) The order shall provide for the allocation to each separate tract within the unit a proportionate share of the unit production, thereby insuring the recovery by the owners of that tract their just and equitable share of recoverable oil or gas in the unit.

- (c) The order shall provide the designation of a unit operator, but only with the consent of the designated person, and approve the terms and plans of the unit operating agreement in the absence of a voluntary agreement among the owners.
- (d) The order shall make provision for the proportionate allocation of cost to the producers, which allocation shall be in the same proportion that the separately owned tracts share in unit production. The cost of capital investment in wells and physical equipment and intangible drilling cost shall be shared in like proportion, provided that no such producer or owner who has not consented to the unitization shall be required to contribute to the cost or expenses of the unit operation, or to the cost of capital investment in wells and physical equipment and intangible drilling cost, except out of proceeds of production accruing to the interest of such owners out of production from such unit operation. However, no well costs credit allowable shall be adjusted on the basis of less than the average well costs within the unitized area. If any producer or owner fails to tender his just and reasonable share of cost, the Board may provide that the operator shall withhold and be reimbursed for the non-participant's share of cost of the proceeds to the extent of 350% of the amount advanced.
- (e) It is provided, however, that the order requiring unit operation shall not vary nor alter any of the terms of the required written contract or contracts evidencing approval nor impose any terms or operations upon the nonsigners of said contract or contracts more onerous than the terms and operations set out in said contract or contracts.
- (f) The order shall provide for the forced integration of separately owned tracts and other property ownership into drilling, production, or pool units. Continuous operations incident to the drilling of a well upon any portion of a unit shall be deemed, for all purposes, the conduct of such operations upon each separately owned tract in the unit. That portion of the production allocated to each separately owned tract included in a unit shall, when produced, be deemed for all purposes to have been actually produced from such tract by a well drilled thereon.

0400-55-01-.02 Drilling and Production Units.

- (1) Any owner with interest in a tract of land offsetting production and who cannot comply with the spacing rules for drilling a well on said tract may make application for a hearing before the Oil and Gas Board for the purpose of having the tract, or a portion thereof, included in a production unit.
- (2) Drilling and production unit wells shall comply with the rules on spacing between wells and distance from property lines as prescribed in chapters 0400-52-01 through 0400-52-12.
- (3) The shape and pattern of production and drilling units should be designed to permit the attendant unit well to economically, efficiently and equitably drain the unit's pro-rata share of the pool's oil and/or gas, and shall be based on available geologic and engineering parameters. Length of any drilling unit shall not exceed twice its width.

0400-55-01-.03 Poolwide Units

- (1) Poolwide units may be formed on a volumetric or surface area basis provided that sufficient data are available to determine the geometry and to define the physical characteristics of the reservoir.
- (2) Drilling, production, or poolwide units can only be revised by the Oil and Gas Board if new pertinent geological or engineering evidence becomes available which was not in existence at the time a unit was formed.

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-56-01 Hearings and Administrative Approval

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0400-56-01-.01 Hearings

0400-56-01-.02 Administrative Approval

0400-56-01-.01 Hearings.

- (1) Public hearings, after legal notice, shall be held by the Board as needed by the Board to implement its responsibility and upon applications made for such hearings. A notice of public hearing as provided by T.C.A. § 60-1-204 shall be given by publishing 1 notice of the time and place thereof in at least 3 newspapers of general circulation in at least 3 major cities in Tennessee, and such notice shall be published at least 10 days prior to the date of such hearing. Applicant shall pay the cost incurred in publishing legal notices. The time and place for each public hearing shall be fixed by the Board as soon as reasonably possible and each public hearing shall be conducted by the Board. If more than one hearing is to be held on a particular date, the Board conducting the hearings shall determine the order in which they shall be held.
- (2) The applicant shall open the hearing and present the testimony and exhibits offered in support of the application. The applicant's witnesses shall then be subject to cross-examination by the Board and by any person with an interest in the subject matter of the application. The Board shall determine the order of appearance of the other participants in the hearing.
- (3) Each person having an interest in the subject matter of the application and who has complied with the rules and procedures may present testimony and exhibits in support of or in opposition to the applicant. All witnesses shall be subject to cross-examination as set forth in paragraph (2) of this rule.
- (4) The applicant may offer rebuttal testimony and exhibits, but the witness shall again be subject to cross-examination. Surrebuttal testimony and exhibits and subsequent testimony and exhibits may be permitted at the discretion of the person conducting the hearing.
- (5) All witnesses shall testify under oath.
- (6) Closing statements and statements of position may be made by the participants and all other interested parties before the hearing is closed or at such time as designated by the Board.
- (7) The Supervisor shall record each hearing showing appearances, testimony and exhibits, statements, and all other records submitted at the hearing.

0400-56-01-.02 Administrative Approval.

- (1) Administrative approval of certain matters of a routine nature may be granted by the Supervisor upon submission of an application showing all pertinent information and data and after due notice is given to all operators of interest.
 - (a) The application shall be made to the Supervisor with a copy to each known offset lease owner and such application shall include:
 1. statement of reason and justification for requested relief,
 2. map or sketch illustrating the information pertinent to the request relief,
 3. list of names and addresses of all interested persons notified of the application.
 - (b) If the application meets with the approval of the Supervisor and no written protest is received by the Supervisor within 15 days following prescribed notice of the application, the Supervisor may grant the requested relief without the necessity of a public hearing.
 - (c) If the application is accompanied by a written waiver from all known offset lease owners, the 15 day delay shall be unnecessary.
 - (d) If the Supervisor does not elect to approve the application administratively or if written protest is received within the 15 day period, the application may be set for public hearing.

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-56-02
Rules of Procedure for Hearing Contested Cases

For Rules of Procedure for Hearing Contested Cases see Rules of the Secretary of State, Chapter 1360-04-01.

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-57-01
List of Forms

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0400-57-01-.01 Report and Permit Forms

0400-57-01-.01 Report and Permit Forms.

- (1) The report and permit forms designated below may be obtained from the State Oil and Gas Board, 401 Church St., Nashville, TN 37243-1534, and are hereby adopted and made a part of the rules set out in chapters 0400-51-01 through 0400-57-01:
 - (a) Application to Amend Well Permit (Form P-AD-2)
 - (b) Application to Change Operators (Form P-AD-3)
 - (c) Application for Permit to Drill (Form P-AD-1)
 - (d) Authority to Drill, Deepen, or Reopen a Well (Form P)
 - (e) Gas Well Deliverability Tests (Form R-DT-1)
 - (f) Monthly Gatherer's and/or Transporter's Natural Gas Report (Form R-MP-5)
 - (g) Organization Report (Form R-O-1)
 - (h) Periodic GPM Test Report (Form R-GPM-1)
 - (i) Plug and Abandon Report (Form R-P&A-1)
 - (j) Pooling Affidavit (Form PA)
 - (k) Pressure Maintenance and Secondary Recovery Questionnaire (Form Q-PMSR)
 - (l) Statement of No Objection to Proposed Surface Disturbance (Form NO)
 - (m) Surface Owners Notification Certification (Form NC)
 - (n) Transporter's and Storer's Monthly Report for Crude Oil and/or Condensate (Form R-MP-2)
 - (o) Well History, Work Summary, And Completion or Recompletion Report (Form R-WH-1)
 - (p) Irrevocable Standby Letter of Credit Format (Form ILC)

Authority: T.C.A §§ 60-1-201 et seq., and 4-5-201 et seq.

Chapter 0400-58-01
Determinations Under Federal Natural Gas Policy Act of 1978

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- 0400-58-01-.10 Method of Determinations

0400-58-01-.01 Definitions.

- (1) "F.E.R.C." means the Federal Energy Regulatory Commission.
- (2) "F.E.R.C. Rules" means rules or regulations adopted by F.E.R.C. implementing the NGPA.
- (3) "NGPA" means the Natural Gas Policy Act of 1978 enacted by the United States Congress on November 9, 1978, and as that Act may subsequently be amended, supplemented, or superseded by subsequent legislation by Congress.
- (4) "Application" shall mean a written request for status determination in accordance with Rule 0400-58-01-.03 herein and shall also mean "petition" within the meaning of other rules, regulations, and orders by the Board, when applied to NGPA status determination proceedings by the Board.
- (5) "Sections 102, 103, 107, and 108" or reference to any one or more of those sections shall mean and be in reference to those sections of the NGPA.

0400-58-01-.02 Applicability of Other Rules.

Except where the same conflict with these rules pertaining to NGPA Determinations, F.E.R.C. rules, or the NGPA, all other rules, regulations, and orders of the Board are applicable thereto.

0400-58-01-.03 Application and Filing Procedure.

Any interested person requesting the classification of a gas well under Sections 102, 103, 107 or 108 by the Board pursuant to the authority granted to the Board by Section 503 of the NGPA, in order to determine the applicable status for such wells, shall initiate such determination by:

- (1) Filing with the Board NGPA Form No 121.
- (2) Filing with the Board Forms TGP 102, TGP 103, TGP 107 or TGP 108, whichever is appropriate.
- (3) Filing with the Board all forms, information, plats, exhibits, affidavits, documents, and evidence required by Part 274 of the F.E.R.C. rules, and other applicable F.F.R.C. rules, and required by these rules herein, and by Oil and Gas Board Forms TGP 102, 103, 107 and 108.
- (4) Attesting to the application in the manner required by Section 274 and other applicable rules of the F.E.R.C. rules for such filings.
- (5) Paying a fee of twenty-five dollars (\$25) to the State of Tennessee through the Supervisor for each application filed. Checks should be made payable to the Tennessee Oil and Gas Board.

0400-58-01-.04 Evidence by Affidavit.

Applications may be considered and determined by the Board on the basis of information contained in the application provided such application complies with all other rules herein. If there are no objections to the applications by any interested parties, the Board may consider and act on sworn affidavits, as well as exhibits, forms and other matters filed with the Board and constituting a part of the record of the hearing of the application.

If confidentiality applies (Rule 0400-52-10-.05) to any items submitted as evidence, a separate letter identifying the items and giving the period of confidentiality should be included with the application.

0400-58-01-.05 Intervention.

Any person may intervene in an application and become a proponent or opponent of any application.

0400-58-01-.06 Attesting to Written Orders.

Written orders of the Board concerning applications may be signed by the Chairman of the Board and such orders certified by the Chairman as an order duly promulgated by the Board shall have full force and effect as orders signed by the Board members.

0400-58-01-.07 List of Participants.

A list of participants in the proceedings, as well as any persons who submitted or sought an opportunity to submit written comment (whether or not such persons participated in the proceedings) shall be made for each hearing.

0400-58-01-.08 Forms.

- (1) Applications shall be made upon Forms TGP 102 (Application for New Natural Gas Determination), TGP 103 (Application for New Production Well Determination), TGP 107 (Application for High Cost Natural Gas Determination), and/or TGP 108 (Application for Stripper Well Natural Gas Determination), and any form required by F.E.R.C. The original and two copies of such application shall be filed with the Board, along with a self-addressed stamped envelope for return of one of the copies after the filing date and docket number have been noted by the Board. The F.E.R.C. 121 Form and Form TGP 102, 103, 107 and 108 may be submitted in lieu of the second complete copy of the application. All applications shall be fully completed as appropriate in conformance with Board rules as well as with F.E.R.C. rules, and the well for which a determination is being sought shall have been classified by the Tennessee Division of Geology before such applications may be heard by the Board. Upon receipt of an application, the Board shall notify the applicant of the receipt of such application and, should the application be incomplete in any respect, indicate the nature of the incompleteness. Upon the receipt of application, such application shall be considered filed with the Board, assigned a docket number, and notice duly published, provided all other rules referred to herein have been complied with.
- (2) The date the application is received by the Board shall be considered the filing date or record, unless after a determination has become final it is determined that the application did not, in fact, qualify for the request status in the first place, in which case the Board shall consider the filing date of record of a new application to be the date the disqualified application for a price determination for a particular reservoir was received by the Board. This exception shall be allowed between categories as well as within a particular category, but shall only apply to those wells for which commercial sale of natural gas has occurred after the original determination was filed. Written notice shall be given to the F.E.R.C. and to the applicant for any determination for which this exception shall apply.

0400-58-01-.09 Notice or Determination.

After making a determination that an application does or does not qualify for the requested status under the NGPA, the Board shall give written notice of such determination to F.E.R.C. in accordance with F.E.R.C. rules.

0400-58-01-.10 Method of Determinations.

- (1) The State Oil and Gas Board of Tennessee, hereinafter referred to as the "Board" hereby certifies that it shall take such steps as are reasonably necessary or appropriate to perform its function in accordance with Part 214 of the proposed implementing rules of F.E.R.C.
- (2) The method by which the Board shall make determination is as follows:
 - (a) Applicants for determination shall file on forms required by the F.E.R.C. and by the Board in order to receive a hearing. Forms required by the Board are:
 1. Form No. P (Authority to Drill Deepen, or Reopen a well)

2. Form No. P-AD-1 (Application for Permit to Drill)
 3. Form No. P-AD-2 (Application to Amend Well Permit)
 4. Form No. P-AD-3 (Application to Change Operators) if applicable
 5. Form No. R-O-1 (Organization Report)
 6. Form No. R-WH-1 (Well History, Work Summary, and Completion or Recompletion Report)
 7. Form No. R-DT-1 (Gas Well Deliverability Tests)
 8. Form No. R-MP-5 (Monthly Gatherer's and/or Transporter's Natural Gas Report)
 9. Form No. R-MP-6 (Monthly Gasoline and/or Cycling Plant Report)
 10. Form No. TGP 102 (Application for New Natural Gas Determination), TGP 103 (Application for New Production Well Determination), TGP 107 (Application for High Cost Natural Gas Determination), or TGP 108 (Application for Stripper Well Natural Gas Determination), whichever is appropriate.
- (b) Notice of filing by applicants is required by the rules of the Board to be given by applicants to identified purchases, as required by Section 274.201(e) of the said proposed Regulations of F.E.R.C. (paragraph (3) of Rule 0400-58-01-.03).
- (c) Public notice of the filing, pending hearing, and pending determination of applications for determinations shall be given by the Board at least ten (10) days prior to such hearing, giving the date, time, and place of such hearing. Such public notice shall be given by publication at least once in a newspaper of general circulation published in Nashville, Knoxville, and Chattanooga.
- (d) All rules, regulations, and orders of the Board require at least three affirmative votes by the five members of the Board. All such rules and regulations and orders of the Board are required to be in writing, T.C.A. § 60-1-204(d). Petitions shall be filed at least fifteen days prior to the hearing thereon. When a proceeding is instituted, the Board assigns a docket number to the application and records the fact and the dates of the filing of the application in a docket book provided for such purpose (subparagraph (g) of this paragraph). Testimony is recorded, transcribed, and preserved as a part of the permanent record of the hearing. Any person testifying is required to do so under oath; however, relevant unsworn statements, comments, and observations by any interested person may be heard and considered by the Board and included in the record. In matters where there are no objections of record, sworn affidavits of witnesses may be received in evidence (Rule 0400-58-01-.04). The relevancy of any testimony or other evidence is subject to challenge by any party to the hearing or any member of the Board. When so interposed, such objections are acted upon by the Chairman, his ruling being subject to challenge and overturning by a majority vote of the Board.
- (e) Full opportunity is afforded all interested parties at a hearing to present evidence and to cross-examine witness.
- (f) The Board maintains data files which contain the records on each individual well in the State. Such well records consist of the following:
1. Application to Amend Well Permit (Form P-AD-2).
 2. Application to Change Operators (Form P-AD-3).
 3. Application for Permit to Drill (Form P-AD-1).
 4. Authority to Drill, Deepen, or Reopen a Well (Form P).

5. Gas Well Deliverability Tests (Form R-DT-1).
6. Monthly Gatherer's and/or Transporter's Natural Gas Report (Form R-MP-5).
7. Organization Report (Form R-O-1).
8. Periodic GPM Test Report (Form R-GPM-1).
9. Plug and Abandon Report (Form R-P&A-1).
10. Pressure Maintenance and Secondary Recovery Questionnaire (Form Q-PMSR).
11. Production Test and Gas-Oil Ratio Report (Form R-PT-1).
12. Transporter's and Storer's Monthly Report for Crude Oil and/or Condensate (Form R-MP-2).
13. Well History, Work Summary, and Completion or Recompletion Report (Form RWH-1).
14. Application for New Natural Gas Determination (Form TGP-102).
15. Application for New Production Well Determination (Form TGP-103)
16. Application for High Cost Natural Gas Well Determination (Form TGP-107).
17. Application for Stripper Well Natural Gas Determination (Form TGP-108).

Further, the Board maintains a library of drill cuttings, cores and logs from wells in the state. Records of the Board include extensive geologic and engineering data, such as geologic structure, isopach, and cross-section maps, production data, well potential test results, bottom hole pressure surveys, fluid analyses, gas analyses, and other similar data.

The Board maintains field or reservoir base maps and all wells completed in or penetrating a reservoir are identified.

A monthly activity report is published by the Board for all wells being drilled or completed in the state and a monthly production report is available giving monthly production from all producing wells in the state.

- (g) Applications for determinations shall be filed and assigned a docket number upon receipt. The professional staff of the Board shall then study the application and data submitted in conjunction with records of the Board as identified in subparagraph (f) of this paragraph. Information contained in the application shall be verified to the extent possible with information on file with the Board. The staff of the Board includes professional engineers, geologists, and attorneys, as well as other support staff. The application and relevant data shall be considered and discussed in a joint meeting of the professional staff, prior to the public hearing of the application before the Board. Requests for clarification of data or for additional data may be made, where deemed necessary by the staff. Unresolved questions may be asked of the applicant at the hearing.
- (h) The initial authority of the Board for making determination in accordance with the N.G.P.A. was established by an emergency order of the Board, which was made at a scheduled hearing under the Uniform Administrative Procedures Act. This action was properly advertised in accordance with the state law and Board rules.

After studying the application, all data submitted by the applicant, all data available in the files of the Board, and hearing any additional evidence submitted at the hearing, the staff of the Board shall make a recommendation to the Board. Where there is no objection, evidence may be submitted by affidavit without oral testimony. Regarding uncontested applications, the Board shall hear them en masse and, where appropriate, grant the same by one order. A list of applications recommended for approval shall be made available prior to the hearing so that comments or objections may be expressed when the applications are considered by the Board.

- (i) The Board shall give written notice to the F.E.R.C. of any change in the procedures described in these rules.

Authority: T.C.A §§ 60-1-105, 60-1-201 et seq., and 4-5-201 et seq.; Natural Gas Policy Act of 1978, Public Law No. 95-621, 92 Stat. 3350 (November 9, 1978).

I certify that the information included in this filing is an accurate and complete representation of the intent and scope of rulemaking proposed by the agency.

Date: May 3 2012

Signature: Garland P. Wiggins

Name of Officer: Garland P. Wiggins

Title of Officer: Deputy Director, Water Pollution Control



Subscribed and sworn to before me on: 5-3-2012

Notary Public Signature: Glenda Sue Stile

My commission expires on: 12-22-2013

Department of State Use Only

Filed with the Department of State on: May 3, 2012

Tre Hargett

Tre Hargett
Secretary of State

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