

CHAPTER 51
OIL, GAS, AND METALLIC MINERALS

[Transferred from Natural Resources[580] Ch 12]

[Prior to 3/11/87, see Soil Conservation Department[780] Ch 29]

565—51.1(458A) Definitions. Unless the context otherwise requires, the words defined in this rule shall have the indicated meaning when found elsewhere in these rules.

51.1(1) “*Allowable period*” shall mean the period as designated in which an allowable may be produced.

51.1(2) “*Artesian water*” shall mean underground water that is confined by impervious material under pressure sufficient to raise it above the upper level of the saturated material in which it lies if this is penetrated by wells or natural fissures.

51.1(3) “*Barrel*” shall mean 42 United States gallons measured at 60 degrees Fahrenheit and atmospheric pressure at sea level.

51.1(4) “*Barrel of oil*” shall mean 42 United States gallons of oil after deductions for the full amount of basic sediment, water, and other impurities present, ascertained by centrifugal or other recognized and customary test.

51.1(5) “*Blowout*” shall mean a sudden or violent escape of oil or natural gas, as from a drilling well when high formational pressure is encountered.

51.1(6) “*Blowout preventer*” shall mean a heavy casinghead control fitted with special gates or rams which can be closed around the drill pipe, or which completely closes the top of the casing.

51.1(7) “*Casing pressure*” shall mean the pressure built up between the casing and tubing when the casing and tubing are packed off at the top of the well.

51.1(8) “*Casinghead gas*” shall mean any gas or vapor, or both gas and vapor, indigenous to an oil stratum and produced from such stratum with oil.

51.1(9) “*Certificate of compliance and authorization to transport oil or gas from lease*” shall mean a form prescribed by the department, which, when executed by an operator or producer, certifies that the operation of the wells involved and the production of oil or gas therefrom has been in compliance with the orders and rules of the department. This certificate also authorizes a purchaser of oil or gas to transport same from the lease. Thereby, the department is informed of the purchaser, and the purchaser is informed that the oil or gas purchased has been produced legally. The certificate of clearance by the department is included on the bottom of the producers compliance form.

51.1(10) “*Common source of supply*” is synonymous with pool.

51.1(11) “*Completed well*” shall mean a well that has (a) produced or is ready to produce formation hydrocarbons through the permanent wellhead facilities, or (b) been declared a dry hole and temporarily abandoned or plugged and abandoned, or (c) been otherwise readied for operations as in the case of injection and service wells.

51.1(12) “*Condensate*” shall mean liquid hydrocarbons that were originally in the gaseous phase in the reservoir.

51.1(13) “*Cubic foot of gas*” shall mean the volume of gas contained in one cubic foot of space at a standard pressure base and a standard temperature base. The standard pressure base shall be 14.65 pounds per square inch absolute and the standard temperature base shall be 60° F.

51.1(14) “*Day*” shall mean a period of 24 consecutive hours from 7 a.m. one day to 7 a.m. the following day.

51.1(15) “*Development*” shall mean any work which actively looks toward bringing in production.

51.1(16) “*Developed area*” shall mean a spacing unit on which a well has been completed that is capable of producing oil or gas, or the acreage that is otherwise attributed to a well by the department for allowable purposes.

51.1(17) “*Gas allowable*” shall mean the amount of natural gas authorized to be produced by order of the department.

51.1(18) “*Gas-oil ratio*” shall mean the ratio of the gas produced in cubic feet to the number of barrels of oil concurrently produced during any stated period.

51.1(19) “*Just and equitable share of the production*” means, as to each person, that part of the authorized production from the pool that is substantially in the proportion that the amount of recoverable oil or gas or both in the developed area of the person’s tract or tracts in the pool bears to the recoverable oil or gas or both in the total developed area in the pool.

51.1(20) “*Lease*” shall mean a tract or tracts of land which, by virtue of an oil, gas, or metallic minerals lease, fee or mineral ownership, a drilling, pooling, or other agreement, a rule, or order of governmental authority, or otherwise, constitutes a single tract or leasehold estate for the purpose of the development or operation thereof for oil or gas or both, or for the exploration for or production of metallic minerals.

51.1(21) “*Nomination*” shall mean the statement made by a purchaser indicating the amount of oil or gas the purchaser has a definite and bona fide need to purchase during a given period.

51.1(22) “*Oil allowable*” shall mean the amount of oil authorized to be produced by order of the department.

51.1(23) “*Oil and gas*” shall mean oil or gas or both.

51.1(24) “*Oil well*” shall mean any well capable of producing oil in paying quantities.

51.1(25) “*Operator*” shall mean any person who, duly authorized, is in charge of the development of a lease, or the operation of a producing well.

51.1(26) “*Overage*” or “*over production*” shall mean the oil or gas produced in excess of the allowable fixed by the department.

51.1(27) “*Pipeline oil*” shall mean oil free from water and basic sediment to the degree that is acceptable for pipeline transportation and refinery use.

51.1(28) “*Potential*” shall mean the actual or properly computed daily ability of a well to produce oil as determined by a test made in conformity with rules prescribed by the department.

51.1(29) “*Pressure maintenance*” shall mean the injection of gas, water or other fluids into oil or gas reservoirs to maintain pressure or retard pressure decline in the reservoir for the purpose of increasing the recovery of oil or other hydrocarbons therefrom.

51.1(30) “*Protect correlative rights*” shall mean that the action or regulation by the department should afford a reasonable opportunity to each person entitled therein to recover or receive the oil or gas in the person’s tract, or tracts, or the equivalent thereof, without being required to drill unnecessary wells or to incur other unnecessary expense to recover or receive such oil or gas or its equivalent.

51.1(31) “*Proven oil or gas land*” shall mean that area which has been shown by development or geological information to be such that additional wells drilled thereon are reasonably certain to be commercially productive of oil or gas or both.

51.1(32) “*Purchaser*” shall mean any person who directly, or indirectly purchases, transports, takes, or otherwise removes production to the person’s account from a well, wells, or pool.

51.1(33) “*Run*” shall mean oil or gas, measured at standard conditions, moved off the lease or unit for sale.

51.1(34) “*Storer*” shall mean every person as herein defined who stores, terminals, retains in custody under warehouse or storage agreements or contracts, oil which comes to rest in the person’s tank or other receptacle under control of said storer, but excluding the ordinary lease stocks of producers.

51.1(35) “*Transporter*” shall mean and include any common carrier by pipeline, barge, boat, or other water conveyance or truck or other conveyance except railroads, and any other person transporting oil by pipeline, barge, boat or other water conveyance, or truck and other conveyance.

51.1(36) “*Water flooding*” shall mean the injection into a reservoir through one or several wells of volumes of water, either currently or cumulatively in excess of the volumes of oil and water produced, for the purpose of increasing the recovery of oil therefrom.

51.1(37) “*Well log*” shall mean the written record progressively describing the strata, water, oil, gas or metallic minerals encountered in drilling a well with such additional information as to give volumes, pressures, rate of fill-up, water depths, caving strata, casing record, etc., as is usually recorded in normal procedure of drilling. The well log shall include any electrical or other geophysical logging,

detail of all cores, and all drill-stem tests, including depth tested, cushion used, time pool open, flowing and shut-in pressures and recoveries.

51.1(38) “*Wildcat well*” shall mean a well drilled to discover a previously unknown pool.

565—51.2(458A) Application and permit.

51.2(1) *Production of oil, gas or metallic minerals.* Prior to commencement of operations, an application on a form prescribed by the department shall be delivered to the office of the state geologist for a permit to drill, deepen, or plug back any well for oil, or gas or metallic mineral production. The application for each well shall be accompanied by a fee of \$50, and an organization report and bond must be on file in the department, or must accompany the application.

An accurate plat, map, or sketch prepared by a competent surveyor or engineer must accompany the application. The plat shall be drawn neatly and to scale, and shall show the distance from the two nearest lease lines and from the two nearest section lines and from the nearest completed or drilling wells on the same lease.

The department shall not issue a permit to drill if the application is not properly completed, or if a well drilled at the location applied for would cause or tend to cause waste or violate correlative rights. The applicant may appeal the decision of the department to the environmental protection commission in accordance with 567—Chapter 7.

Unless extended in writing by the department, the permit shall expire six months from the date of issue if the work for which the permit was issued is not being actively pursued.

51.2(2) *Stratigraphic test wells.* Before commencing exploratory drilling for geological information relating to oil, gas or metallic mineral production, or the underground storage of natural gas, an application for a drilling permit shall be filed with the state geologist. One application may be filed for a group or series of exploratory wells within a designated area. The application shall be accompanied by a plat of the general area to be covered by township and range listing the approximate number and depth of the holes, and outlining the parcels where drilling is contemplated. The plat shall indicate the nature of the applicant’s property interest in each parcel where drilling is contemplated. The application shall be accompanied by a fee of \$200. The applicant shall comply with the requirements in 51.4(458A) and 51.5(458A) of these rules concerning organization reports and bonding.

565—51.3(458A) Transfer of drilling permits. No person to whom a permit has been issued shall transfer the permit to any other location or to any other person until the following requirements have been complied with and the transfer has been approved by the department.

51.3(1) *Transfer to another location.* If, prior to the drilling of a well, the person to whom the permit was originally issued desires to change the location, the person shall submit a letter so stating and another application properly filled out showing the new location. No additional fee is necessary, but drilling shall not be started until the transfer has been approved and the new permit posted at the new location.

51.3(2) *Transfer to another person.* If, while a well is drilling, or after it has been completed, the person to whom the permit was originally issued disposes of the person’s interest in the well, the person shall submit a written statement to the department setting forth the facts and requesting that the permit be transferred to the person who has acquired the well.

51.3(3) *Statement of responsibility and bond.* Before the transfer of a drilling permit shall be approved, the person who has acquired the well must submit a written statement setting forth that the person has acquired such well and assumes the full responsibility for its operation and abandonment in conformity with the laws of Iowa and the rules and orders of the department. The bond required to guarantee compliance therewith shall be furnished by the person acquiring such well.

565—51.4(458A) Organization reports. Unless accepted by an order of the department, every person acting as a principal or agent for another or independently engaged in the production, storage,

transportation (except railroad), refining, reclaiming, treating, marketing, or processing of oil or gas, or engaged in the exploration for or production of metallic minerals shall file with the department on a form prescribed by the department: the name under which the business is being operated or conducted; the name and post-office address of the person, the business or businesses in which engaged; the plan of organization, and in case of a corporation the law under which it is chartered; and the names and post-office addresses of any persons acting as trustees together with the names of the manager, agent or executive thereof, and the names and post-office addresses of officers thereof. In the event that business is conducted under an assumed name, the report shall show the names and post-office addresses of all owners in addition to the other information required.

Immediately after any change occurs as to facts stated in the report filed, a supplementary report shall be filed with the department with respect to the change.

565—51.5(458A) Bond. The department shall, except as hereinafter provided, require from the owner or operator a good and sufficient bond in the sum of \$15,000 in favor of the state of Iowa, conditioned that the well shall be operated and repaired and, upon abandonment, shall be plugged in accordance with the laws of the state of Iowa and the rules and orders of the department. Said bond shall remain in force and effect until the plugging of said well is approved and the bond is released by the department. In lieu of the bond relating to individual wells, any owner or operator may file with the department a good and sufficient blanket bond in the sum of \$30,000 covering all wells drilled or to be drilled in the state of Iowa by the principal in said bond, and the acceptance and approval by the department of the blanket bond shall be in full compliance with the above provisions requiring an individual well bond. Bond or bonds shall be by a corporate surety authorized to do business in the state of Iowa or in cash.

565—51.6(458A) Drilling. Unless altered, modified, or changed for particular common sources of supply, upon notice and hearing before the department, the following rules shall apply to all wells drilled.

51.6(1) Sealing off strata. During the drilling of any well for production of or exploration for oil, gas or metallic minerals, all oil, gas, and water strata above and below the producing horizon shall be sealed or separated where necessary in order to prevent their contents from passing into other strata.

All fresh waters and waters of present or probable value for domestic, public, commercial or live-stock purposes shall be confined to their respective strata and shall be adequately protected by methods approved by the department. Special precautions shall be taken in drilling and abandoning wells to guard against any loss of artesian water from the strata in which it occurs, and the contamination of artesian water by objectionable water, oil, or gas.

All water shall be shut off and excluded from the various oil and gas bearing strata which are penetrated. Water shutoffs shall ordinarily be made by cementing casing with or without the use of mud-laden fluid.

51.6(2) Casing and tubing requirements. All wells drilled for oil, gas or production of metallic minerals shall be completed with strings of casing which shall be properly cemented at sufficient depths to protect all water, oil, or gas bearing strata.

Sufficient cement shall be used on surface to fill the annular space back of the casing to the bottom of the cellar or to the surface of the ground. All strings of casing shall stand cemented under pressure for at least 12 hours before drilling plug or initiating tests. The term "under pressure" as used herein will be complied with if one float valve is used or if pressure is otherwise held. Cementing shall be by the pump and plug method, or other method approved by the state geologist.

All flowing wells shall be tubed, the tubing shall be set as near the bottom as practicable, but tubing perforations shall not be above the top of pay unless authorized by the department.

51.6(3) Defective casing or cementing. In any well that appears to have defective, faultily cemented, or corroded casing which will permit or may create underground waste, the operator shall proceed

with diligence to use the appropriate method and means to eliminate such hazard of underground waste. If such hazard of waste cannot be eliminated, the well shall be properly plugged and abandoned.

51.6(4) *Blow-out prevention.* In all drilling operations proper and necessary precautions shall be taken for keeping the well under control, including the use of a blow-out preventer and high pressure fittings attached to properly cemented casing strings, where indicated by geologic conditions.

51.6(5) *Pulling outside string of casing.* In pulling outside strings of casing from any oil or gas well, the space outside the casing left in the hole shall be kept and left full of mud-laden fluid or cement of adequate specific gravity to seal off all fresh and salt water strata and any strata bearing oil or gas not producing. No casing shall be removed without the prior approval of the department.

51.6(6) *Safety rules.* All oil wells shall be cleaned into a pit or tank, not less than 40 feet from the derrick floor and 150 feet from any fire hazard. All flowing oil wells must be produced through an approved oil and gas separator or emulsion treater of ample capacity and in good working order. No boiler or portable electric lighting generator shall be placed or remain nearer than 150 feet from any producing well or oil tank. Any rubbish or debris that might constitute a fire hazard shall be removed to a distance of at least 150 feet from the vicinity of wells and tanks. All waste shall be disposed of in such manner as to avoid creating a fire hazard and to comply with the rules of the environmental protection commission. The drilling fluid level shall be maintained continuously at a height sufficient to control subsurface pressures. During the course of drilling, blow-out preventers shall be tested at least once each 24-hour period, and results of the test shall be noted in the driller's record.

51.6(7) *Preservation of cores and samples.* Sample cuttings shall be taken at 5-foot intervals and at each change of formation, if less than 5 feet thick, in all wells drilled for oil, gas or metallic mineral exploration or production, for the storage of dry natural gas, or casinghead gas, and for the development of reservoirs for the storage of liquid petroleum gas in the state of Iowa, unless a geophysical log is to be taken for the entire depth of the well. Where a geophysical log is to be taken for the entire depth of the well, sample cuttings shall be taken at 10-foot intervals and at each formation change if less than 10 feet thick. The state geologist may grant a variance from the 10-foot sample interval under special conditions. Each sample shall be carefully identified as to well name and depth of sample, and all samples shall be shipped at the operator's expense to the office of the state geologist.

The operator of any well drilled as provided in the foregoing paragraph shall, during the drilling of, or immediately following the completion of any given well, advise the state geologist, of all intervals that are to be cored, or have been cored, and such cores as are taken shall be preserved and forwarded to the office of the state geologist at the operator's expense.

This rule shall not be construed as prohibiting the operator from taking samples of the core for identification and tests pertaining to oil and gas or metallic minerals. In the event that it is necessary for the operator to utilize all or any portion of the core to the extent that representative samples, sufficiently large to analyze, are not available for the state, the operator shall furnish the state geologist with the results of identification or testing procedures.

51.6(8) *Well completion or recompletion report and well log.* Within ten days after completion of a well drilled for oil or gas or production of metallic minerals or for the storage of dry natural gas, or casinghead gas, or for the development of reservoirs for the storage of liquid petroleum gas, the operator or the operator's agent shall file with the state geologist a complete log or record of the well, duly signed, on forms prescribed by the department. This record shall be filed even though samples of the drill cuttings have been taken and preserved for subsequent delivery to the department. The logs on the wells shall be forwarded to the department and shall be confidential for a period of six months when so requested by the operator in writing.

A proper log on any well shall include all normally recorded information on the following:

- a. Depth to and thickness of water-bearing beds, including, where measured, the static water level and volume of such water.
- b. Lithology of formations penetrated, including color, hardness, and character of the rock, and particularly showing the position and thickness of coal beds and deposits of mineral materials of economic value.

- c. Any caverns, large voids, losses of circulation, and sudden appreciable changes in water level.
- d. A record of all oil, gas, and highly mineralized water encountered, including fill-up, volumes, and pressures.
- e. A record of all casing and liner used, including the size, weight, amount, and depth set, the amount of cement used on each casing string, and the amount of casing stripped from the hole on completion or abandonment of the well.
- f. Data on drill stem tests.
- g. Generalized description of any core taken during drilling.
- h. Data on perforating acidizing, fracturing, shooting, and testing.
- i. Data on bridge plugs set, make and type of plug, depth set, whether left in place or removed, and details of plug back operation below the bridge.
- j. Electrical or other geophysical logging.

51.6(9) *Stratigraphic test wells.* All stratigraphic test wells shall be plugged in accordance with the provisions of 51.15(458A).

Any mechanical logs taken must be filed with the state geologist within the time limits set forth below. Lithologic samples must be collected during the drilling of all stratigraphic test wells in accordance with the provisions of 51.6(7).

All records, samples, and logs required under this rule must be filed with the state geologist six months after completion of the program set forth in the original application. If the company so requests in writing, these records, samples, and logs shall be kept confidential for an additional period of one year after filing.

51.6(10) *Wells for storage of liquid petroleum gas.* Only one fee shall be required for the drilling of wells for the development of each reservoir for the storage of liquid petroleum gas but an application for a permit to drill shall be filed with the department and a permit issued prior to the drilling of each well. The application for a permit to drill a single well or the first in a series of wells for this purpose shall be accompanied by a complete set of plans for the development of the reservoir and by a plat of the reservoir area with all contemplated wells and the reservoir limits indicated thereon.

A blanket bond of \$30,000 must be filed with the department on a form prescribed by the department conditioned on compliance with the laws of the state of Iowa and the rules and orders of the department. Each bond shall be executed by an acceptable corporate surety authorized to do business in the state of Iowa. Compliance with the blanket bond requirement of 51.5(458A) shall satisfy the blanket bond requirement herein.

All records, samples and logs required under this rule must be filed with the state geologist in accordance with the provisions of 51.6(8).

When any well is no longer used for the purpose for which it was drilled, the well shall be plugged in accordance with the provisions of 51.15(458A).

51.6(11) *Wells for storage of dry natural gas.* No application, fee, organization report, bond nor permit shall be required for the drilling of wells for the storage of dry natural gas in underground basins or watercourses for which a permit is required and has been obtained under the provisions of Iowa Code chapter 455B. In lieu of a formal application and permit for wells otherwise required under the provisions of Iowa Code chapter 458A, and these rules adopted pursuant thereto, the owner or operator thereof shall give notice to the state geologist of intent to drill at least 5 days prior to initiation of drilling of each well. The owner or operator of the wells shall submit monthly to the state geologist a report of activities during the preceding 30 days as well as contemplated action during the following 30-day period, providing thereby at least 5 days' prior notice of any contemplated action. Wells may not be drilled at points more than one-quarter mile from the points indicated in the forecasts without at least 5 days' prior notice to the state geologist or its specific approval thereof. The owner or operator shall drill, operate, maintain, abandon and plug the wells and shall file reports, records, samples, cores, and logs, in accordance with these rules and the orders and requirements of the department and the state geologist.

565—51.7(458A) Identification of wells. Every producible well shall be identified by a sign, posted on the derrick or not more than 20 feet from the well. Such signs shall be of durable construction and the lettering thereon shall be kept in a legible condition and shall be large enough to be legible under normal conditions at a distance of 50 feet. The wells on each lease or property shall be numbered in nonrepetitive, logical, and distinctive sequence, unless some other system of numbering was adopted by the owner prior to the adoption of these rules. Each sign shall show the number of the well, the name of the lease (which shall be different or distinctive for each lease), the name of the lessee, owner, or operator, the permit number, and the location by quarter, section, township, and range. The signs shall be displayed for each drilling well when so required by the department.

565—51.8(458A) Surface equipment.

51.8(1) Meter fittings. Meter fittings of adequate size to measure the gas efficiently for the purpose of obtaining gas-oil ratios shall be installed on the gas vent line of every separator or proper connections made for orifice well tester. Wellhead equipment shall be installed and maintained in first-class condition so that static bottom hole pressures may be obtained at any time by the duly authorized agents of the department after notification of the operator. Valves shall be installed so that pressures can be readily obtained on both casing and tubing.

51.8(2) Chokes or beans. All flowing wells shall be equipped with adequate chokes or beans, to properly control the flow thereof.

51.8(3) Oil and gas separators. All flowing oil wells must be produced through an approved oil and gas separator.

51.8(4) Dikes. When it is deemed necessary by the state geologist to protect life, health, or property, the department may require any lease or oil storage tanks to be surrounded by an earthen dike which shall have a capacity of one and one-half times the capacity of the tank or tanks it surrounds, which dike shall be continually maintained; and the reservoir within shall be kept free from vegetation, water, or oil.

565—51.9(458A) Deviation. No well may be intentionally directionally deviated from the vertical without the written approval of the department. Deviation is permitted without special permission for short distances, to straighten the hole, sidetrack junk, or correct other mechanical difficulties. The maximum point at which a well penetrates the producing formation shall not vary unreasonably from the vertical drawn from the center of the hole at the surface. Directional surveys may be required by the department whenever the location of the bottom of the well is in doubt. When necessary to protect correlative rights, the department shall require that the well be straightened.

565—51.10(458A) Vacuum pumps prohibited. The use of vacuum pumps or other devices for the purpose of putting a vacuum on any gas or oil-bearing stratum is prohibited unless authorized by an order of the department upon notice and hearing.

565—51.11(458A) Notification of fire, breaks, leaks, or blowouts. All persons controlling or operating any oil and gas wells or pipelines, or receiving tanks, storage tanks, or receiving and storage receptacles into which crude oil is produced, received, or stored, or through which oil or gas is piped or transported, shall notify the department of fire, breaks, leaks or blowouts as soon as possible but not later than six hours after the incident occurs or is discovered, in accordance with Iowa Code section 455B.386 (telephone: 515-281-8694). A written report, giving full details concerning all fires which occur at such oil or gas wells or tanks or receptacles on their property, all tanks or receptacles struck by lightning and any other fire which destroys oil or gas, and any breaks or leaks in or from tanks or receptacles and pipelines from which oil or gas is escaping or has escaped shall be submitted to the department within 30 days. In all reports of fires, breaks, leaks, or escapes, or other accidents of this nature, the location of the well, tank, receptacle, or line break shall be given by section, township, range, and

property so that the exact location thereof can be readily located on the ground. The report shall likewise specify what steps have been taken or are in progress to remedy the situation reported, and shall detail the quantity of oil or gas lost, destroyed, or permitted to escape. In case any tank or receptacle is permitted to run over, the escape thus occurring shall be reported as in the case of a leak.

565—51.12(458A) Producing from different pools through the same casing string or multiple completion of wells. No well shall be permitted to produce either oil or gas from different pools through the same string of casing. The multiple zone completion of any well may be authorized only by special order of the department upon notice and hearing.

565—51.13(458A) Commingling of production prohibited. The production from one pool shall not be commingled with that from another pool in the same field before delivery to a purchaser, unless otherwise ordered by the department.

565—51.14(458A) Reports by producers, transporters or storers.

51.14(1) Producers. The producer or operator of each and every lease shall on or before the fifteenth day of each month succeeding the month in which the production occurs, submit to the department on a form prescribed by the department, a statement showing the amount of production made by each such lease during the preceding month.

51.14(2) Transporters or storers. Each transporter or storer of any oil or gas from any well, lease, pool, or developed unit shall on or before the fifteenth day of each month succeeding the month in which the purchasing or taking occurs, file with the department on forms prescribed by the department, a statement of oil or gas purchased or taken from any such well, lease, pool, or developed unit during the preceding month.

565—51.15(458A) Abandonment and plugging of wells. Any well drilled in connection with oil or gas operations or metallic mineral exploration or production shall be properly plugged when the well is no longer used for the purpose for which it was drilled. In instances where no completion or recompletion reports are filed, the well(s) in question must be properly abandoned and plugged within 30 days after the permit authorizing the drilling expires.

51.15(1) Notice of intent to abandon and plug. Notice of the proposed method of abandoning and plugging any well drilled in connection with oil or gas operations or metallic mineral exploration or production must be filed on a form prescribed by the council, and approval obtained from the office of the state geologist prior to commencing operations. Time must be allowed for a department representative to be present at the plugging operations, if so desired by the state geologist. Where the time required to file notice and obtain approval in writing would constitute an undue hardship, verbal permission to proceed may be granted, but in any case the form must be filed.

51.15(2) Method of plugging. Before any well is abandoned, it shall be plugged in a manner which will confine permanently all oil, gas, and water in the separate strata in which they occur. This operation shall be accomplished by the use of mud-laden fluid, cement, and plugs, used singly or in combination as may be approved by the state geologist. In the event that no log or an unsatisfactory log of the well is supplied, the well shall be completely plugged with cement from bottom to top. Casing shall be cut off below plow depth. Seismic, core, or other exploratory holes drilled to or below strata containing fresh water shall be plugged and abandoned in accordance with the applicable provisions recited above.

51.15(3) Extension of time to plug well. Upon written application to defer the abandonment and plugging of any unplugged well, the department may grant an extension for a reasonable period of time when good cause therefor is shown and providing all of the casing is left in the well and is in sound condition. The bond covering such well shall remain in full force and effect until the well is plugged and the other requirements of final abandonment have been completed.

565—51.16(458A) Well spacing. In the absence of an order by the department setting spacing units for a pool, the following shall apply.

51.16(1) Oil wells. No more than one well drilled for oil shall be drilled upon any tract of land other than a governmental quarter quarter section or governmental lot corresponding thereto, or, in areas not covered by U.S. public land surveys, an arbitrarily designated 40-acre tract. The well shall not be located closer than 330 feet to any boundary line of the governmental quarter quarter section, governmental lot corresponding thereto, or arbitrarily designated 40-acre tract, nor closer than 660 feet to the nearest well drilling to or capable of producing from the same pool on the same lease or unit. Should governmental quarter quarter section, governmental lot, or arbitrarily designated tract contain less than 36 acres, no well shall be drilled thereon except by special order of the department.

51.16(2) Gas wells. Not more than one well shall be drilled for gas upon any tract of land other than a governmental section, or, in areas not covered by U.S. public land surveys, an arbitrarily designated 640-acre tract. The wells shall not be located closer than 1,320 feet to any boundary line of the governmental section or arbitrarily designated 640-acre tract, nor closer than 3,750 feet to the nearest well drilling to or capable of producing from the same pool on the same lease or unit. Should the governmental section or arbitrarily designated tract contain less than 600 acres, no well shall be drilled thereon except by special order of the department.

This rule is intended to implement Iowa Code chapter 458A.

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