

DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES

PUBLIC SERVICE COMMISSION

PRODUCTION AND TRANSMISSION OF NATURAL GAS

R 460.851 Scope and application.

Rule 1. These rules apply to the conduct of the business of all natural gas producers, gathering companies and transmitters which are or may hereafter be subject to the jurisdiction of the Michigan public service commission under the laws of the state of Michigan: provided, that when the production of natural gas is incidental to, and unavoidable to connection with, the production of oil or mineral water, R 460.860, R 460.861, R 460.862, R 460.864, R 460.865, R 460.866, R 460.867, R 460.869, R 460.870, and R 460.871 shall not apply, but special rules and regulations pertaining in each such case will be issued by the Michigan public service commission whenever necessary. The grouping of rules under the headings of production and transmission is for convenience only and the application of any rule is not restricted because of this fact.

History: 1979 AC.

R 460.852 Definitions.

Rule 2. For the purposes of these rules the following definitions apply:

(a) The word "commission" shall be defined to mean the Michigan public service commission.

(b) The words "producer" or "operator" shall be defined to mean any corporation, association or person now or hereafter controlling or being responsible for the control of any well, or of the production of gas therefrom.

(c) The term "well owner" shall mean any owner of a full working interest in any well, and the term "fractional well owner" shall mean any owner of a fractional working interest in any well.

(d) The word "transmitter" shall be defined to mean any corporation, association or person, now or hereafter engaging in the carrying or transporting of natural gas by pipe line or lines.

(e) The term "common purchaser" shall be defined to mean any transmitter engaging in the business of purchasing and transporting natural gas for hire, compensation or otherwise: provided, that factories or industries in this state may transport or transmit natural gas through pipe lines for their own use in plants located wholly within this state without constituting themselves common purchasers. (See sections 3 and 4 of Act No. 9 of the Public Acts of 1929.)

(f) The term "common carrier" shall be defined to mean any corporation, association or person purchasing or collecting natural gas and conveying or transmitting the same for hire, compensation or otherwise by pipe line or lines as a common carrier. (See section 6 of Act No. 9.)

(g) The words "gas" or "natural gas" as used in these rules shall, unless otherwise specifically provided, be defined to mean dry, merchantable, natural gas, either dry gas as produced from a dry gas well or so-called casinghead gas after removal of gasoline vapors, or either such gas after dilution with other gas or gases, as distinguished from so-called casinghead gas before treatment for removal of gasoline vapors.

(h) The term "cubic foot" of gas as used in these rules shall have the following meanings:

(i) In cases where gas is supplied and metered to the ultimate consumer at the standard delivery pressure which may vary from 3 inches to 10 inches water column, a cubic foot of gas shall be defined to be that volume of gas which, at the temperature and pressure existing in the meter, occupies 1 cubic foot.

(ii) In cases where gas is supplied to purchasers through orifice or positive meters at other than standard delivery pressure as defined above, a cubic foot of gas shall be defined to be that volume of gas which, at 60 degrees Fahrenheit and at absolute pressure of 14.65 pounds per square inch, occupies 1 cubic foot; except that in cases where a different pressure base that is considered by the commission to be fair and reasonable is provided for in gas sales contracts or in rules or practices of a distributor such different pressure base shall be effective. (Corrections for temperature and pressure shall be made in accordance with

Charles' law and Boyle's law respectively, except that, when the meter pressure is 125 pounds per square inch gauge or greater, correction shall be made for deviation from such laws (supercompressibility) in accordance with American gas association gas measurement committee report no. 3, "Orifice Metering of Natural Gas" dated April, 1955, or other procedures which may be approved by the commission.)

(iii) The cubic foot of gas for the purposes of measuring gas produced and purchased at wells shall be defined to be that volume of gas which, at an assumed temperature of 60 degrees Fahrenheit and an absolute pressure of 15.025 pounds per square inch, occupies 1 cubic foot: provided, that contracting parties may agree to any special method or procedure in measuring or determining temperatures that is considered by the commission to be reasonable. (Corrections for temperature and pressure shall be made in accordance with Charles' law and Boyle's law respectively, except that, when the meter pressure is 125 pounds per square inch gauge or greater, correction shall be made for deviation from such laws (supercompressibility) in accordance with American gas association gas measurement committee report no. 3, "Orifice Metering of Natural Gas" dated April, 1955, or other procedures which may be approved by the commission.)

(iv) The standard cubic foot of gas for testing the gas itself for heating value, etc., shall be that volume of gas which, when saturated with water vapor and at a temperature of 60 degrees Fahrenheit and under a pressure equivalent to that of 30 inches of mercury (mercury at 32 degrees Fahrenheit and under standard gravity) occupies 1 cubic foot. (Corrections for temperature and pressure shall be made in accordance with Charles' law and Boyle's law respectively, except that, when the meter pressure is 125 pounds per square inch gauge or greater, correction shall be made for deviation from such laws (supercompressibility) in accordance with American

gas association gas measurement committee report no. 3, "Orifice Metering of Natural Gas" dated April, 1955, or other procedures which may be approved by the commission.)

(i) "Absolute open flow" is defined as the number of cubic feet of gas per 24 hours that would be produced by a well if the only pressure against the face of the producing sand in the well bore were atmospheric pressure.

(j) "Modified open flow" is defined as the absolute open flow of a well multiplied by the acreage factor applied to such well. (See R 460.865(2).)

History: 1979 AC.

R 460.853 Qualifying clause.

Rule 3. The adoption of these rules shall in no way prevent the commission from altering or amending the same in due legal form, in whole or in part, or from requiring any other or additional services, appliances or standards, either upon its own motion or upon the application of any consumer, producer, transmitter or distributor.

History: 1979 AC.

R 460.854 Reference to commission.

Rule 4. In any case where the parties concerned shall fail to agree upon the application or the interpretation of any of these rules, or in case of disagreement regarding regulations promulgated by any producer, common carrier, common purchaser or distributor concerning service, the matter may be referred by either party to the commission for settlement.

History: 1979 AC.

R 460.855 Jurisdiction.

Rule 5. (1) The jurisdiction of this commission, according to Act No. 9 of the Public Acts of 1929, over all gas wells and over the production of gas from such wells shall begin at the time the production or preparation for production is started and shall continue and remain with the

commission until production is abandoned. The operations of drilling, deepening, plugging and abandoning, and in fact all underground work on gas wells, is under the jurisdiction of the supervisors of wells of the department of conservation. (Refer to the rules of the department of conservation covering the drilling, deepening and plugging of wells for natural dry gas.)

(2) Any gas well shall be considered as producing or preparing for production at such time as an application for a well connection permit has been filed with the commission, but in case connection with a line to take gas from any well for any purpose is made before an application for a well connection permit is filed, the commission's jurisdiction over such well shall begin when work of installing connections is started.

(3) During the period that gas wells are under the supervision of the commission it shall be the duty of the chief engineer, directly or through his authorized representatives:

(a) To enforce such rules as the commission may adopt to carry out the requirements of said act.

(b) To inspect the maintenance and operations of all gas wells with a view to preventing waste of gas, damage to gas producing strata or formation, or injury to life or property, and to issue in accordance with the natural gas acts, necessary instructions to guard against and prevent such waste, damage or injury.

(c) To determine the percentage of the open flow capacity of any gas well which may be utilized when in his opinion such action is necessary to protect the gas producing formation; and to specify the time and method for determining the open flow capacities of wells.

(d) To regularly gather data and compile statistics showing production of gas from all wells, fields or pools, and the value of the gas produced.

History: 1979 AC.

R 460.856 Availability of records.

Rule 6. All records required by these rules shall be kept in files within the boundaries of the state, at the offices of the producer or transmitter responsible for such records, and shall be available at all

reasonable times for examination by authorized representatives of the commission: provided, that temporary absence of records from the state that are necessary or convenient in the record system of a producer or transmitter are approved, and that in specific cases the commission may at its own discretion or upon proper showing, authorize other modifications of this provision. All such records shall be preserved for at least 3 years after they are made, except as otherwise provided.

History: 1979 AC.

R 460.857 Waste prohibited and defined.

Rule 7. (1) Natural gas shall not be produced, transmitted or distributed in the state of Michigan in such manner and under such conditions as to constitute waste.

(2) The term "waste" as used in these rules in addition to its ordinary meaning shall include (a) the permitting of any gas to wastefully burn, (b) the wasteful use of gas including the use of gas in its natural state in engines or pumps where its pressure is the main or direct operating force, unless such gas can be consumed after discharge from such engines or

pumps for normal use for fuel purposes, (c) surface waste, which shall include the unnecessary blowing, release or escape of natural gas into the open air, and any unnecessary or excessive surface loss, including leakage, fire loss and loss or destruction incident to the manner of equipping, operating or producing of such well or wells, or by inefficient handling thereof, (d) underground waste, which shall

include inefficient, excessive, or improper use or dissipation of the reservoir energy, including gas energy and water drive, of any pool; and the equipping, operating, or producing of any well or wells in such a manner as to reduce or tend to reduce the total quantity of gas ultimately recoverable from such pool, and the unreasonable damage to underground deposits from the operation, maintenance or production of gas; and (e) the intentional drowning with water of a gas stratum capable of producing gas (except that temporary drowning may become necessary as an exigency of drilling or repairing wells).

History: 1979 AC.

R 460.858 Fire prevention and control.

Rule 8. The commission recognizes that practically all gas well fires occurring after wells have been placed on production are due to improper wellhead design or carelessness and the attention of well owners and operators is particularly directed to the following R 460.859 and R 460.860 in order to eliminate this hazard.

History: 1979 AC.

PRODUCTION

R 460.859 Wellhead heaters.

Rule 9. Heaters for preventing freezing in wellhead connections shall be installed or reinstalled for service at the beginning of each winter, only after wellhead connections are checked for leakage, and after any leakages have been repaired and stopped. The products of combustion, or the burned fumes from gas or any other fuel, shall not be used in such heaters or in any other way to apply heat directly to wellheads or to thaw out connections. The points of air mixture for any flame at any wellhead heater shall be located at least 10 feet from the wellhead, and any burned exhaust gases shall be discharged from flue or chimney at least 8 feet from wellhead or wellhead connections and at least 4 feet higher than the top of wellhead connections. All heaters installed at or near wellheads shall be inspected at least once daily while in operation.

History: 1979 AC.

R 460.860 Wellhead fittings.

Rule 10. (1) Wellhead connections shall be designed and installed in accordance with principles of design and installation illustrated on plate 1A, appendix A, unless specific approval is secured in writing from the chief engineer.

(2) Master or control valve shall be installed with valve stem not less than 2, nor more than 4 feet above the ground level, provided that whenever tubing or siphon is installed in any well, the valve and wellhead fitting construction and spacing will necessarily be governed by special conditions in each separate case.

(3) Wheels on valves shall be left and secured in place to facilitate emergency opening or closing of valves with an emergency long stemmed wrench or key.

(4) A space free from surface obstructions shall be kept clear on the stem or wheel side of each control gate or valve, so that workmen can approach wells and use long stemmed wrenches or keys in opening or closing valves in case of fire.

History: 1979 AC.

R 460.861 Determination of well capacity.

Rule 11. (1) The producing or open flow capacities of wells to be used as a basis for proration shall be determined by the commission at its discretion, when necessary for the practical, equitable and economical operation of wells, pools or fields. The method of determining said capacity where practicable shall avoid the waste of gas encountered in the "open flow" test method, and shall make use of the United States bureau of mines production capacity test method that is based on observations of shut-in well pressure and the measurement of volumes of gas production at varying wellhead pressures, or of any improvements that may be approved by the commission.

(2) Capacity tests may also be made by producers, purchasers or transmitters with the approval of the commission. The commission may require that any applicant for such test shall make a sufficient showing of necessity for a test. All information obtained from such tests shall be promptly compiled and filed with the commission.

(3) When a producer is dissatisfied with a capacity test he may require the commission to redetermine the open flow capacity of the well by notifying it to that effect and depositing the sum of \$10.00 with it. If the retest shows the original test to be materially in error, the deposit will be refunded, otherwise it will be retained as nominal compensation for the costs incurred in making the test.

(4) Records of tests of meters, well capacity tests or tests of specific gravity, chemical composition or heating value of gas made by or on the order of any producer, transmitter, purchaser, distributor, or consumer shall be available for information of the commission, and reports shall be filed with the commission when requested.

History: 1979 AC.

R 460.862 Well meters.

Rule 12. (1) No gas shall be withdrawn from wells for transportation or sale, nor for any other regular and extended uses, except for fuel for drilling on the same lease, or for use for domestic purposes by lessors (as usually specified in oil and gas leases), without being metered, provided, however, that the commission may approve in advance an estimate of the amount that will be required for a specific drilling operation off the lease. The commission's representatives shall have access to all meter houses and meters at all times.

(2) Each gas well completed after the effective date of this order shall be equipped with its own separate meter, except that:

(a) The commission may, in cases of small wells, permit the measurement of the gas from more than 1 well through a single meter.

(b) The commission, the interested well operator and the gas purchaser jointly may, in cases of large wells of identical operator control, agree to the measurement of the gas from more than 1 well through a single meter; provided that:

(c) In either case (a) or (b) of this subrule, the gas from only 1 well at a time shall be measured by a single meter, and that through the use of check-valves, "blind" discs or other device or means, lines from all wells except the one from which gas is being measured shall be completely closed so that the gas from any 2 or more wells shall not be in any way intermixed prior to measurement.

(3) Meters shall be located as close to wells as is reasonably practicable, considering accessibility and the possible desirability in some cases of grouping not more than 4 well meters in 1 meter house. Flow lines from wells to meters shall be constructed, maintained and operated in such manner that leakage losses and waste may be avoided, and these lines shall be patrolled regularly to check for leaks or breakage that may develop through unforeseeable and unavoidable accidents.

(4) In view of the latitude allowed in the location of meters and the probability that the "point of delivery" of gas at the wellhead will be some distance from the point of measurement, the gathering company or purchaser is charged with a high degree of care in preventing all gas loss between these 2 points and shall therefore arrange its operating procedure to that end.

(5) The commission shall have authority, upon notice to any purchaser or transmitter, to cause to be made such tests as it may deem necessary to determine the accuracy or other conditions of any meter or if its appurtenances, (see R 460.907 and R 460.909 in "standards of gas service") and any such purchaser or transmitter shall be entitled to be present at any such test if he so elects.

(6) Upon written request by an interested well operator, well owner or fractional well owner, the commission shall cause to be made special tests of meter through which gas from a well is being measured for any purpose, and the applicant, the gas purchaser or transmitter, and other interested parties shall be entitled to be present when any such test is made. One such special test of a meter shall be made during any calendar year for a fee of \$5.00; further special tests of the same meter during a calendar year may be made at the discretion of the commission upon written application of an interested well owner or operator presenting evidence of the necessity for such special test, for a fee of \$15.00; but for any test after the first one during any calendar year, the commission may at its discretion add to the fixed fee of \$15.00 a charge for all traveling and subsistence expenses incurred by its representatives in making such tests.

(7) Any application by an interested well owner or operator for a special meter test shall be accompanied by a deposit of the fixed fee for such test. If the test shows that the calculated measurements of gas are or have been in error more than 2% in favor of the gas purchaser, the deposit made by the well owner or operator shall be refunded to him, and the amount of such refund shall be paid to the commission by the gas purchaser.

(8) In cases where gas measurements are shown by meter tests to have been in error more than 2%, adjustments of accounts shall be made in favor of the party in interest who has been injured by reason of such errors, the measurement error indicated by the meter test being applied to all recorded gas measurements during the time such error has existed if such time is ascertainable, and if not ascertainable then said correction shall be made for 1/2 of the period since the meter was last tested and adjusted in a manner satisfactory to the commission; except that in cases where a different basis of adjustment considered by the commission to be fair and reasonable is provided for in gas purchase contract such different basis shall be effective.

(9) No adjustments in accounts need be made if such adjustments amount to less than \$2.00 per month.

History: 1979 AC.

R 460.863 Unmetered gas.

Rule 13. Lessors of lands who are using unmetered gas from wells located on their lands for domestic fuel in their principal houses or dwellings, and well operators or owners who are using unmetered gas from their wells for fuel for drilling on the same lease, shall so construct and maintain their lines and the fittings thereon that there shall be no leakage losses. No wasteful gas burners or other wasteful gas consuming appurtenances shall be used by these consumers of unmetered gas. The representatives of the commission shall require the immediate correction of any wasteful use of gas by these classes of consumers, and may prohibit the continued use of gas if such corrections are not made immediately.

History: 1979 AC.

R 460.864 Permit for well connection.

Rule 14. (1) The operator of each well shall, before gas is produced from such well, make application to the commission on form provided therefor, (form 15A, appendix A) for permission to sell gas from such well: provided, that application and permit shall not be required for making connection to pipe lines used exclusively for transporting or transmitting gas for fuel for drilling wells, or gas used in homes of lessors of lands on which wells are located.

(2) Any application for a standard well connection permit should be submitted to the commission not less than 15 days before the first day of the month during which it is expected that receiving, transmitting or purchasing of gas shall commence. Upon receipt from a well operator of a properly executed application for a well connection permit, the commission will issue well connection permit order (form 16A, appendix A) and will furnish a copy thereof to the purchaser or transmitter designated by the applicant operator, such copy to be furnished to the purchaser or transmitter at least 10 days before the first day of the monthly period used in accounting for gas. The commission will cause a well capacity test to be made, and following such test will issue an allowable withdrawal order (form 17A, appendix A)

to the well operator, and will furnish a copy thereof to the purchaser or transmitter on or before the first day of the monthly period used in accounting for gas.

(3) The purchaser or transmitter shall connect such well to its gathering system and prepare to receive, transmit or purchase gas during the next succeeding monthly period used in accounting for gas, provided that it has received the copy of the well connection permit from the commission at least 10 days before such date; that the operator has prepared and placed the well in condition to make such connection conveniently possible, and that obstacles or conditions beyond its reasonable control do not prevent such connection.

(4) In case of emergency a temporary well connection permit may be issued by wire upon receipt of an application by telegraph from well operator, giving the full name of the applicant, the full name of the well, the conservation department permit number, the date of well completion, and the open flow capacity of the well; and also a telegraphic statement from the prospective transmitter or common purchaser of gas that it will accept said well for connection. Such telegraphic application must be followed within 10 days by the regular application required in subrule (1) of this rule.

(5) The commission and a transmitter or purchaser may at their option and discretion cooperate, if it is reasonably practicable, to issue orders, make well capacity tests, connect to wells and make provisions for receiving, transmitting or purchasing gas from a well if the application for temporary or standard well connection permit has not been filed with the commission as much as 15 days before the beginning of the monthly period used by the transmitter or purchaser in accounting for gas, but there shall be no obligation in such cases on the part of either the commission or the transmitter or purchaser to either commence or complete such orders, tests, connections or preparations to receive, transmit or purchase gas during the next succeeding monthly period.

(6) With each standard well connection permit there will be issued a metal plate bearing the permit number. This plate must be affixed to the wellhead substantially as shown on plate 1A, appendix A, and in case of loss or destruction must be immediately replaced. The original plate will be furnished without charge, but a nominal charge of 50 cents will be made for each replacement plate.

(7) When processed casinghead gas is to be transmitted for public use, application shall be made to the commission for a special connection permit before transmission by pipe line is begun. (See R 460.851.)

History: 1979 AC.

R 460.865 Taking of gas.

Rule 15. (1) Maximum withdrawal:

(a) General. The maximum withdrawal during any 12 months' period from any gas well shall average on a daily basis not more than 17 1/2% of the current approved absolute daily open flow capacity of such well, such withdrawal being the allowable maximum annual withdrawal. Whenever a new open flow capacity test is made and approved by the commission, such new test will, upon notice to the producer and transmitter, become immediately effective in determining the maximum withdrawal. In

order to provide for a variable seasonable demand, the following percentages of the last determined allowable maximum annual withdrawal may be taken, but not exceeded: In any 6 consecutive months, 66%; in any 1 month, 12 1/2%; and in any 1 day, .6 of 1%.

(b) Special. The maximum withdrawal from Monroe gas wells located in the Walker-Talmadge oil field shall not exceed 50% of the last officially measured open flow of each such well.

(c) Special. The maximum withdrawal during any 12 months' period from any gas well in the Howell field shall average on a daily basis not more than 25% of the current approved absolute daily open flow capacity of such well, such withdrawal being the allowable maximum annual withdrawal. The allowance for seasonable variation in the rate of take as set forth in subrule (1)(a) shall continue to be based on the annual maximum allowable withdrawal determined as 17 1/2% of the open flow, unless the allowance so determined shall be less than 25% in which case the 25% allowance shall prevail.

(d) Special. When a dry natural gas field has been depleted to such an extent that production has become merely a stripper operation, the commission may approve different maximum withdrawals than required by subrule (1)(a) if it finds that such different withdrawals will conserve gas and, in its opinion, support commercial production for a longer period than would otherwise be the case.

(2) Acreage factor. The acreage or area from which any well is considered to produce or draw gas shall enter into the determination of the take of gas from such well, a well in the center of a square 40-acre tract of land being considered as unity, with an acreage factor of 1. The factor for a well producing from a square or rectangular tract of any area other than 40 acres shall be the area in acres allotted to such well divided by 40, and the factor for a well in the center of a base drilling or producing unit of 160 acres of land shall be 4; provided that:

(a) No side of the area allotted a well shall be farther from the well than the distance from the center point of the production area to the most distant side thereof, excepting that:

(i) In the case of a discovery well, this distance may be increased by as much as 330 feet for a well located on a 40-acre tract of land, and 990 feet for a well located on a 160-acre tract of land.

(ii) In the case of a well drilled off center of a production area because of topographical or other physical conditions, this distance may be increased by not to exceed 25% upon presentation to the commission of satisfactory proof, supported by a map and a written statement showing that a center location was prohibited. Every reasonable effort shall be made to drill wells at center locations.

(iii) The 16 gas wells drilled, or in the process of drilling, in the Cannon Creek gas field in the counties of Missaukee and Kalkaska prior to September 15, 1950, shall each be entitled to an acreage factor of 4, as long as the producing unit assigned to each is 160 acres, notwithstanding any other provisions of this rule.

(b) In addition to the above provisions, acreage factors shall be subject to the following limitations:

(i) The length of a production area shall not be greater than twice its width.

(ii) Production areas shall not overlap.

(iii) Any production area shall be entirely within the leasehold (or leaseholds in case 2 or more are pooled) on which the well to which it refers is drilled.

(iv) No acreage factor shall exceed 4 except in the Kawkawlin-Salina gas field, as it is now or may be hereafter defined by the supervisor of wells, wherein it may be increased to 16.

(v) The acreage factors for wells located on tracts that are neither square nor rectangular shall be determined by the commission in each individual case, following, insofar as they are applicable, the general principles applied herein.

(vi) In the following fields which have been developed with 40-acre drilling units, there shall be no acreage factor greater than 1, unless the operator or leaseholder shall secure and file with the commission written consent from all direct and diagonal offset 40-acre leaseholders upon whose holdings there are producing or productive gas wells.

Austin Crystal Six Lakes Broomfield New Haven-Sumner Clare (McKay)
West Vernon Vernon

(vii) No well drilled on a 40-acre location in any of the above fields shall each be entitled to an acreage factor greater than 1 if such well is directly offset by more than 2 producing or productive wells with acreage factors of 1 or less.

(c) Traverse oil wells drilled in the Walker-Talmadge field prior to February 25, 1942, shall, when either deepened to produce gas from the Monroe formation or plugged back to produce gas from the Berea formation, receive acreage factors as provided by the attached map entitled plate 2a, but any Monroe or Berea gas wells drilled from the surface of the ground in the Walker-Talmadge oil field subsequent to February 25, 1942, shall receive acreage factors based on the usual provisions as stated in subrule (2)(a) and (b) of this rule.

(3) Minimum take:

(a) The minimum allowable take of gas from any well shall be 500,000 cubic feet per month, except under the following conditions:

(i) In no case shall the total gas taken from a well be larger than provided for in subrule (1).

(ii) The average minimum volume of gas production monthly per well shall be in conformity with the market demand when such market demand is not high enough to permit the taking of the full minimum allowable from all wells. Each operating month as used by the gas purchasers in a field shall be considered separately in administering the minimum take provisions herein, and, if the total sale or take of gas from any field or pool during any such monthly period is not sufficient to permit the taking of the full minimum allowable from each well, there shall be no carryover or balance of gas to be taken from such well, field, or pool under these minimum take provisions because of such deficiency in total market demand.

(iii) The minimum take of gas from any well having an acreage factor other than 1, as provided for in subrule (2), shall be modified or adjusted by multiplying the minimum allowable take of 500,000 cubic feet by such acreage factor, the resulting minimum take to be subject to the restrictions in subrule (3)(a)(i) and (ii) of this rule.

(b) The allowable take from any well that is not capable of producing as much gas as its allowable minimum under the operating conditions of the field in which it is located shall be the total amount of gas that such well is capable of producing under such conditions.

(c) For fields or pools wherein reservoir conditions and gas withdrawal operations do not permit the practical application of subrule (3)(a), special procedures applicable to such special conditions may be authorized by the commission, provided that any such special procedure shall accomplish the intents and purposes of the rule as closely as is practicably possible.

(4) Ratable taking or gas proration: All gas produced from a field or pool in excess of the minimum allowable provided for in subrule (3) shall be taken ratably from all wells that are capable of producing more than their minimum allowable take. Such excess shall be divided among such wells in proportion to their modified open flow capacities or any other method determined by the commission to be equitable or less wasteful, except that in no case shall the total gas taken from a well be larger than provided for in subrule (1).

(5) Proration schedules:

(a) Proration schedules and orders shall be prepared and issued by the commission. Such orders shall be revised not to exceed once each month, the effective date of any revision being the first day of the monthly period used by the gathering company, transmitter, or purchaser in accounting for gas.

(b) No proration schedule or production order affecting any well shall be made until after well connection permit has been issued.

(6) Well conditioning requirements:

(a) A well to go on proration or production shall have complied with the following requirements: The well and wellhead connections shall be installed in accordance with standards prescribed in R 460.860 of this order. The wellhead connections shall be tight and free from leakage. If there is evidence of underground leakage of gas or of water intrusion, the well shall be repaired to the satisfaction of the commission.

(b) In cases of wells where leaks, other defective well conditions, or water intrusion develop after a well has been placed on proration, the operator shall make repairs promptly and to the satisfaction of the commission, and, if repairs have not been made within a reasonable time as determined by the commission, then such a well shall be taken off proration and shall not be returned to proration until the commission has been notified that repairs have been made and has approved a return to proration.

(c) After any gas well has been placed on proration, no deepening or plugging back work shall be started until the operator has notified the commission and the gas transmitter or purchaser, in writing, and until that operator has secured the approval, in writing, of the supervisor of wells of the department of conservation, of the deepening or plugging back plan, in conformity with the rules and regulations of such supervisor of wells.

(d) A well that is being either deepened or plugged back may be removed from proration:

(i) If, in the judgment of the commission, the showing indicates that the operation may affect the open flow capacity of the well.

(ii) If the operation is to consume a period of 10 days or more.

(iii) If the wellhead fittings remain altered in such a manner that reconnection with a pipe line cannot be made within 10 days after such fittings are removed.

(e) A well that has been removed from proration because of deepening or plugging back operations shall not be returned to proration until it has been placed in condition to resume production in a manner satisfactory to the supervisor of wells of the department of conservation and to the commission, and the gas transmitter or purchaser have been so advised in writing.

History: 1979 AC.

R 460.866 Production reports.

Rule 16. (1) Every operator of 1 or more gas wells shall file with the commission, on or before the twenty-fifth day of each month, producer's monthly report (form no. 18A or 18B, appendix A) giving full information as to production of gas from each well separately and such other data as is requested. This report shall be signed by the producer or by a responsible employee, whose capacity or title shall be indicated, and who is in position to know that the data or information given is correct. The commission may permit, upon application and satisfactory showing, a reporting interval of more than 1 month. If this gas production information is regularly furnished to the commission by the purchaser or transmitter of gas, based on information or data gathered by such purchaser or transmitter, the producer may be relieved of obligation to furnish data.

(2) Any gas used, whether metered or unmetered, for drilling or lease operating or other field fuel purposes on a lease other than the one from which it is produced shall be reported to the commission monthly by the gas producer on form 18B appendix A. Either the price per M. cubic feet of gas or the flat rate charge that is made shall be stated, and in the case of gas that is not metered the estimated approximate volume of gas used shall be stated.

History: 1979 AC.

R 460.867 Pumps or compressors.

Rule 17. No gas well, pool or field shall be placed under vacuum by the use of compressors, pumps or other devices except with the approval of the commission. If and when the placing of a vacuum in any well, pool or field is planned, application for approval shall be made to the commission, and the adjoining lease owners and operators of a pool or field who may be affected shall be given notice. The commission may call a hearing on the subject, or may take such action as it deems advisable.

History: 1979 AC.

TRANSMISSION

R 460.868 Approval for pipe line project.

Rule 18. (1) Every transmitter shall file with the commission an application (see form 19A, appendix A), setting forth the necessity and practicability of such proposed transmission line or lines; and the commission shall, if its study of the proposed project shows that such line or lines will, when constructed and in operation, serve the convenience and necessities of the public, grant said application; and no construction shall begin prior to the granting of the application and the approval of the map, route and type of construction by the said commission; provided that this rule shall not apply to the laying of pipe lines used exclusively for transporting or transmitting gas for drilling purposes.

(2) The transmitter shall, as a part of the application, submit to the commission a map or plat of the proposed line or lines, showing the dimensions and character of such line or lines, its compressor stations, control valves and connections; an estimate of the cost of the project; an estimate of the proven reserves of gas available for transportation through the proposed line; and an estimate of the anticipated revenue, operating expenses and earnings of the project for a 5-year period.

(3) The transmitter's application shall, among other things, state (a) when said transmitter is a common purchaser the price to be paid producers for the gas and the price at which gas will be sold to distributors; (b) when said transmitter is a common carrier, the rates and fee which it will charge for the service to be performed by it. Certified copies of all executed or proposed contracts with producers or distributors shall be filed with the application, together with such additional information as the commission may require.

History: 1979 AC.

R 460.869 Requirements before transmitter may connect to gas wells.

Rule 19. Transmitters shall not connect with any gas well until a temporary or standard well connection permit has been issued by the commission. (This permit is not required for connecting lines exclusively for carrying gas for drilling purposes.)

History: 1979 AC.

R 460.870 Maximum taking of gas.

Rule 20. The transmitters in any field shall not at any time take gas from such field in greater total amounts than the sum of the withdrawal allowances of all connected individual wells as determined by R 460.865(1).

History: 1979 AC.

R 460.871 Proration among pipe lines and fields.

Rule 21. The allowable rates of withdrawal of gas for purposes of proration among producers and among several purchasers, transmitters or pipe lines from the same field, and the prorating of withdrawals among several fields shall be subject to

approval by the commission. It shall be the duty of the commission to determine that production from any pool or field is not abandoned or unreasonably curtailed until recovery of all economically recoverable gas has been assured.

History: 1979 AC.

R 460.872 Discrimination.

Rule 22. (1) Common purchasers and common carriers are expressly prohibited from discrimination in amount of gas taken, price paid for or rates charged for like grades of natural gas or facilities as between producers or persons; and if a common purchaser or common carrier is likewise a producer, it shall not discriminate in favor of its own production or of production in which it may be interested directly or indirectly. The commission shall have authority to relieve any such common purchaser or common carrier, after due application, notice and hearing, from the obligation of purchasing or receiving gas from wells which due to variation in quality and pressure, or for economic reasons, are not at the time a practicable source of supply.

(2) Except in cases where exigency of service requires emergency measures, common purchasers or common carriers shall not abandon nor curtail withdrawals or purchases of gas from any pool or section of pool in favor of another pool or section thereof, because of temporary or permanent decline in reservoir or producing pressure without having first received the approval of the commission.

History: 1979 AC.

R 460.873 Patrolling and supervision.

Rule 23. It shall be the duty of all transmitters to closely supervise the operation of all their lines to the end that leakage may be kept at the lowest practical minimum. This shall include regular patrolling by competent employees and prompt attention to leaks discovered or to other conditions affecting the safe and efficient operation of pipe line systems.

History: 1979 AC.

R 460.874 Transmitter's or purchaser's reports and records.

Rule 24. (1) Every common purchaser, common carrier or transmitter of natural gas shall file with the commission on or before the twenty-fifth day of each month, for the last preceding month, gas transmitters monthly report (form 20A, appendix A), giving full information as to gas purchased from each producer and as to sales or deliveries. Said report shall be signed by the transmitter or by a responsible employee, whose capacity or title shall be indicated, and who is in a position to know that the data or information is correct.

(2) Meter charts shall be kept on file at the office of the transmitter, and the commission shall have access to all such records at any reasonable time. Also refer to R 460.902 in "standards of gas service."

History: 1979 AC.

R 460.875 Filing of rates, contracts, and regulations.

Rule 25. (1) Complete rate schedules, and rules and regulations governing each common purchaser's or common carrier's relations with its producers and distributors, shall be filed in compliance with commission order D-3096, or in pertinent superseding or modifying orders. In case all purchase contracts in a single field are identical, the filing of such contracts as provided in section 25(2) hereof, shall be considered as fulfillment by the common purchaser of this requirement.

(2) Every common purchaser or common carrier shall file with the commission a true and verified copy of any contracts for purchasing, receiving or supplying of gas within 30 days after the making thereof.

(3) No change shall be made in any filed rates, charges, rules or regulations without approval of the commission.

Distributors

Utilities distributing natural gas should also refer to and be governed by "standards of gas service," commission order no. 1982.

3. That attached hereto and made a part hereof is a map or plat of proposed line or lines, showing the dimensions and characters of such line or lines, compression stations, control valves and connections.

4. That attached hereto and made a part here of is an exhibit showing the gas reserves served by the proposed main or mains.

5. That attached hereto and made a part hereof is a schedule of the rates and prices at which the applicant herein will receive gas at delivery stations and a schedule of rates or charges at which it will deliver gas to connecting carriers or distributing lines or customers, and, in case it is proposed to operate as a carrier for hire, a schedule of the rates and charges to be made for the services to be performed by the applicant.

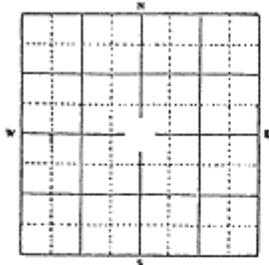
6. That attached hereto and made a part hereof are certified copies of all contracts now signed for the purchase or sale of natural gas.

7. That attached hereto and made a part hereof is a carefully compiled estimate by expert engineers setting forth the total cost of the completed project.

8. That attached hereto and made a part hereof is a carefully prepared estimate by competent engineers showing the anticipated revenue, operating expenses and earnings for a five-year period. And said petitioner, therefore, prays that the Michigan Public Service Commission, under the authority of Act No. 9, of the Public Acts of Michigan for the year 1929, may grant to said petitioner its approval of the said map or plat and of the construction of said line or lines and may determine that such line or lines, when constructed and in operation, will serve the convenience and necessity of the public.

Figure for 460.875 (Part 1 of 8)

APPENDIX A
STATE OF MICHIGAN
 Michigan Public Service Commission
APPLICATION FOR A STANDARD WELL CONNECTION PERMIT



Plat well location and lease boundary lines.
 Note: If property is irregular in form attach legal description by metes and bounds together with large sketch giving dimensions and distances in ft.

Date _____, 19____

1. PRODUCER _____
 Address _____
2. Name of lease _____
 _____ Well No. _____
3. Drilling permit No. _____
4. Legal description of drilling and producing unit assigned this well on which gas rights are common or pooled by community agreement for pro-rata purposes.

 _____ township, _____ county and containing _____ acres.

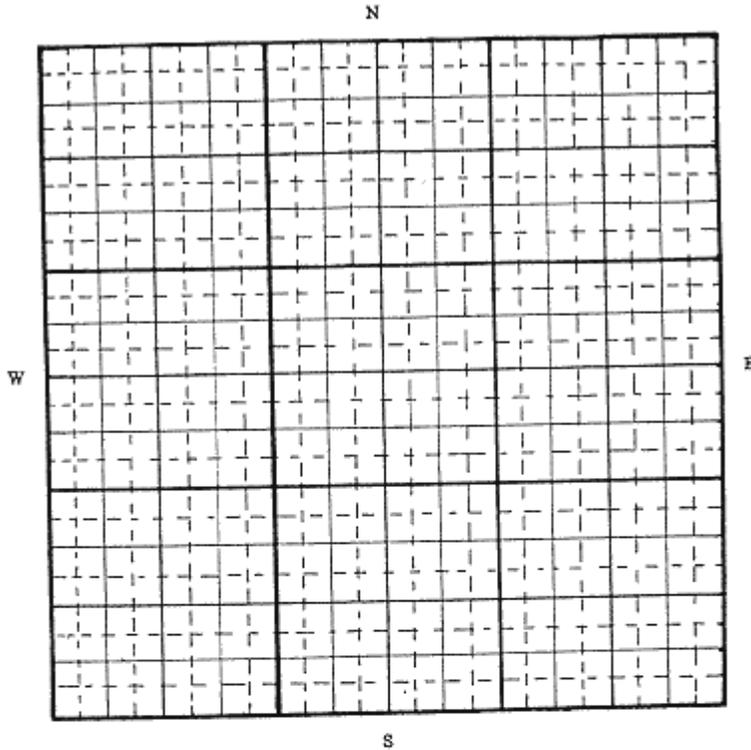
5. Well is located: _____ ft. _____ N. or S. and _____ ft. _____ E. or W. of nearest section lines.
6. Date well completed _____, 19____
7. Date well gauged _____, 19____
8. By whom gauged _____
9. Method of gauging _____
10. Open flow capacity _____ cu. ft./24 hrs.
11. Shut in pressure _____
12. Depth to top of pay _____ ft.
13. Depth to bottom of pay _____ ft.
14. Total depth of well _____ ft.
15. Specific gravity of gas _____
16. Gas to be purchased by _____
17. Attach copy of signed contact for purchase of gas.

STATE OF MICHIGAN }
 County of _____ } ss. By _____
 _____, being duly sworn says that he is _____ Officer

of the petitioner; that he executed the foregoing petition with full authority; that he knows all the facts therein set forth, and they are true of his own knowledge, except as to those stated upon information and belief, which he believes to be true.

Subscribed and sworn to before me this _____ day of _____ A.D. 19____
 _____ Notary public _____ county, Michigan.

Figure for 460.875 (Part 2 of 8)



Use this plat as a part of the connection permit application

APPENDIX A
STATE OF MICHIGAN
 Before the Michigan Public Service Commission

Standard Well Connection Permit No. _____

In re application of _____
 for permission to connect gas well designated as _____
 _____ Drilling permit No. _____ to gathering lines of _____

(Name of Transmitter)

Location of well: _____ township _____ county
 _____ ft. _____ and _____ ft. _____ of nearest section lines in the
 _____ ^{N or S} ¼ of the _____ ^{E or W} ¼ of the _____ ¼ of Sec. _____
 T _____, R _____

Figure for 460.875 (Part 3 of 8)

Said application having been made pursuant to commission order No. D-2883 (revised), issued by authority of Act No. 9 of Public Acts of 1929, and Act No. 326, Public Acts of 1937, and a contract having been entered into with the operator of said pipe line for the taking of gas from the above well.

THEREFORE, IT IS ORDERED that applicant be permitted to construct the wellhead connections at the well as described, that _____

(Name of Transmitter)

be permitted to connect its gathering lines thereto, and that production of gas shall be permitted in accordance with allowable withdrawal orders to be issued.

That the wellhead connections shall be substantially as shown on plate 1.A, appendix A, of Michigan Public Service Commission order No. D-2883.

That the allowable withdrawal of gas from the well shall be as set forth in allowable withdrawal orders as issued by the commission at such intervals as it may deem necessary.

Given under our hands and the official seal of this commission at the city of Lansing, state of Michigan, this _____ day of _____ A.D. 19____

MICHIGAN PUBLIC SERVICE COMMISSION

By _____
Chairman

Commissioner

Commissioner

Commissioner

Commissioner

Countersigned

Secretary

STATE OF MICHIGAN
Michigan Public Service Commission
ALLOWABLE WITHDRAWAL ORDER

M. P. S. C. WELL CONNECTION PERMIT NO. _____

Drilling permit No. _____

Revision No. _____

Date issued _____, 19____

Date effective _____, 19____

Revising sheet No. _____

Name and number of well _____

Revision due to _____

Location _____ township _____ County

_____ % of the _____ % of the _____ % of Sec. _____

T _____, R _____

Production area assigned well _____

Date well completed _____, 19____

Original test by commission: Date _____, 19____

Wellhead pressure _____ Absolute open flow _____

Acreege factor _____ Modified open flow _____

Present revised data:

Date of test _____, 19____

Wellhead pressure _____ Absolute open flow _____

Acreege factor _____ Modified open flow _____

Production of gas from this well shall conform with "minimum take" and proration rules of the commission, as specifically provided for in proration schedules to be issued.

Minimum allowable _____ M. Cu. Ft. per month.

Maximum allowable withdrawal

In 12 months M. Cu. Ft.

In 6 months M. Cu. Ft.

In 1 month M. Cu. Ft.

In 1 day M. Cu. Ft.

MICHIGAN PUBLIC SERVICE COMMISSION

By _____

Figure for 460.875 (Part 5 of 8)

TRANSMISSION LINE CONSTRUCTION APPLICATION
(Natural Gas)
State of Michigan
MICHIGAN PUBLIC SERVICE COMMISSION

To the Michigan Public Service Commission:

Your Petitioner, _____

respectfully represents:

1. That petitioner is a _____
Person, co-partnership or corporation
whose residence or place of business is at _____
_____ county, state of Michigan.

2. That it is the purpose of the applicant to construct transmission mains for the transportation or conveying of natural gas from sources of supply to the locality or localities where the said natural gas is to be utilized, the said sources and locality or localities being described as follows:

3. That attached hereto and made a part hereof is a map or plat of proposed line or lines, showing the dimensions and characters of such line or lines, compression stations, control valves and connections.

4. That attached hereto and made a part hereof is an exhibit showing the gas reserves served by the proposed main or mains.

5. That attached hereto and made a part hereof is a schedule of the rates and prices at which the applicant herein will receive gas at delivery stations and a schedule of rates or charges at which it will deliver gas to connecting carriers or distributing lines or customers, and, in case it is proposed to operate as a carrier for hire, a schedule of the rates and charges to be made for the services to be performed by the applicant.

6. That attached hereto and made a part hereof are certified copies of all contracts now signed for the purchase or sale of natural gas.

7. That attached hereto and made a part hereof is a carefully compiled estimate by expert engineers setting forth the total cost of the completed project.

8. That attached hereto and made a part hereof is a carefully prepared estimate by competent engineers showing the anticipated revenue, operating expenses and earnings for a five-year period.

And said petitioner, therefore, prays that the Michigan Public Service Commission, under the authority of Act No. 9, of the Public Acts of Michigan for the year 1929, may grant to said petitioner its approval of the said map or plat and of the construction of said line or lines and may determine that such line or lines, when constructed and in operation, will serve the convenience and necessity of the public.

By _____
Title

STATE OF MICHIGAN, }
County of _____ } ss.

Being duly sworn, deposes and says that he is _____
Officer
of the above named petitioner; that he has executed the foregoing petition with full authority so to do; that he has actual knowledge of all the facts therein set forth, and the same is true of his own knowledge, except as to the matters therein stated to be upon his information and belief, and as to those matters, he believes it to be true.

Subscribed and sworn before me this _____ day of _____
A.D. 19____.

Notary public _____ county, Mich.
My commission expires _____

PLATE 1A

GENERAL SPECIFICATIONS

ALL WELL HEAD FITTINGS AND MATERIALS UP TO WELL REGULATOR SHALL HAVE TEST PRESSURES AT LEAST TWICE THE SHUT IN WELL PRESSURE.
 SIZE AND EXACT DESIGN OF FITTINGS MAY BE VARIED TO FIT DIFFERING CONDITIONS OF PRESSURE, OPEN FLOW CAPACITY AND RATE OF WITHDRAWAL OF GAS.
 A CAPACITY TEST CONNECTION AND A PRESSURE CONNECTION SHALL BE PROVIDED IN ALL CASES. THE CAPACITY TEST CONNECTION SHALL BE OF 4" PIPE IF WELL IS LARGER THAN 2500000 CU. FT. CAPACITY.
 EVERY WELL HEAD MUST BE PROVIDED WITH A SEPARATE "FARMER" CONNECTION.
 ALL GATE OR VALVE WHEELS SHALL BE LEFT ON VALVE STEMS AND SECURELY FASTENED TO SAME.
 MEASUREMENT FROM VERTICAL LINE THROUGH CENTER OF CASING TO STEMS ON FLOW LINE, TEST LINE, AND FARMER LINE GATES OR VALVES, SHALL BE GREATER THAN RADIUS OF WHEEL ON MASTER GATE, TO AVOID INTERFERENCE WITH TOOLS IN EMERGENCY OPENING OR CLOSING OF MASTER GATE.

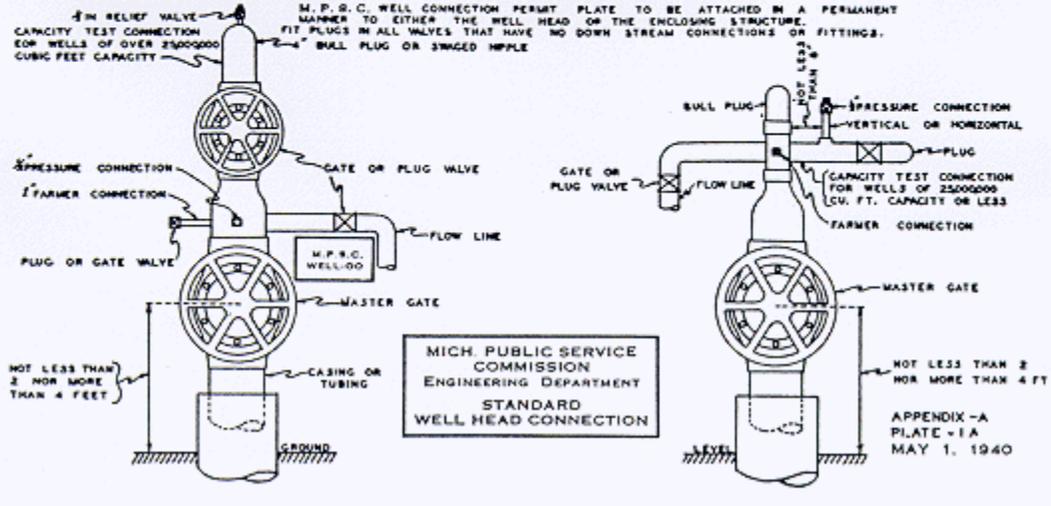
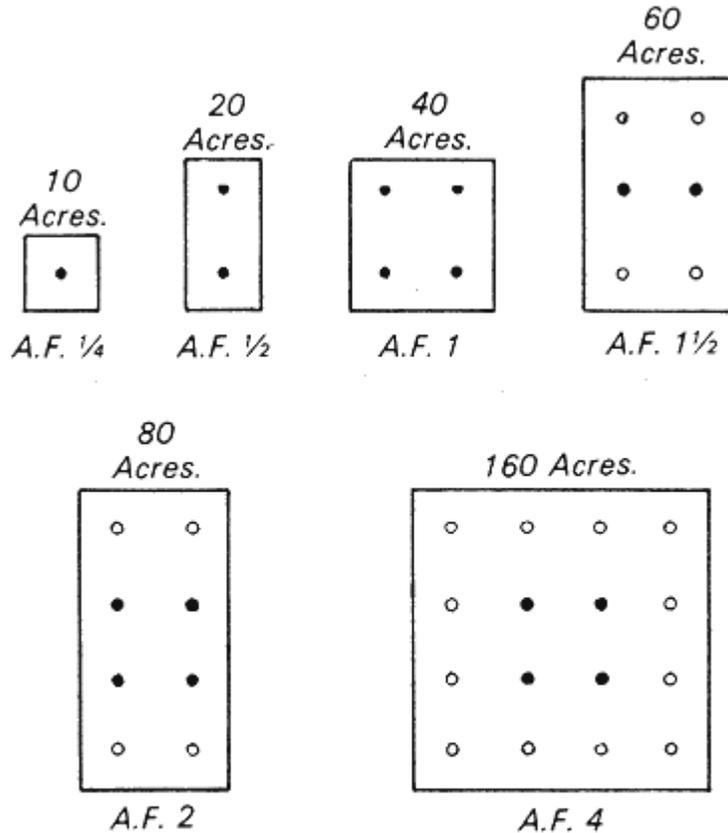


Figure for 460.875 (Part 8 of 8)

PLATE 2A

Acreage Factors for Various Sized Tracts in the Walker-Talmadge Oil Field.



Above well locations are on the normal 10-acre pattern used in Walker-Talmadge oil field.

Those well locations shown in solid black represent Traverse oil wells that may be deepened or plugged back to obtain gas production with acreage factors as stated. On tracts of 20 acres or more, operator may deepen or plug back only 1 of the wells shown in black in order to secure maximum allowable for the tract. The deepening or plugging back of a second well on the same tract, regardless of size of tract, shall not increase the allowable. If, at the option of the producer, any of the above Traverse wells, other than those in solid black, are deepened or plugged back, they shall receive the usual acreage factor prescribed by commission's order D-2883, effective May 1, 1940.

Above well locations are on the normal 10-acre pattern used in Walker-Talmadge oil field.

Those well locations shown in solid black represent Traverse oil wells that may be deepened or plugged back to obtain gas production with acreage factors as stated. On tracts of 20 acres or more, operator may deepen or plug back only 1 of the wells shown in black in order to secure maximum allowable for the tract. The deepening or plugging back of a second well on the same tract, regardless of size of tract, shall not increase the allowable. If, at the option of the producer, any of the above Traverse wells, other than those in solid black, are deepened or plugged back, they shall receive

the usual acreage factor prescribed by commission's order D-2883, effective May 1, 1940.

History: 1979 AC.