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RAILROAD COMMISSION OF TEXAS
OIL AND GAS DIVISION

OIL AND GAS DOCKET NO. 126

#3 - 29,645

IN RE: CONSERVATION AND PREVENTION
OF WASTE OF CRUDE PETROLEUM
AND NATURAL GAS IN THE BRONCO
(SILURO-DEVONIAN) FIELD,
YOAKUM COUNTY, T E X A S.

Austin, Texas
June 8, 1954

SPECIAL ORDER
ADOPTING RULES AND REGULATIONS FOR THE BRONCO (SILURO-DEVONIAN) FIELD,
YOAKUM COUNTY, TEXAS.

WHEREAS, After due notice, the Railroad Commission of Texas and the New Mexico Conservation Commission held a joint hearing in Santa Fe, New Mexico, on February 26, 1954, to consider the adoption of rules and regulations to govern the drilling, completion and operation of wells in the Bronco (Siluro-Devonian) Field, Lea County, New Mexico, and Yoakum County, Texas; and

WHEREAS, After due notice, the Railroad Commission of Texas and the New Mexico Conservation Commission held a joint hearing in Austin, Texas, on April 2, 1954, to consider the adoption of rules and regulations to govern the drilling, completion and operation of wells in the Bronco (Siluro-Devonian) Field, Lea County, New Mexico, and Yoakum County, Texas; and

WHEREAS, From evidence adduced at said hearings, the Railroad Commission of Texas is of the opinion and finds that the subject field was discovered in November, 1952, and is currently developed with 12 wells producing from a Siluro-Devonian dolomite encountered at an approximate depth of 11,500 feet; that the structure is that of a north-south trending anticline with no gas cap present and a water-oil contact established at 8105 feet subsea; that the average gross thickness of the pay zone is 266 feet with an average net effective oil pay thickness of 186 feet or 70 per cent of the gross; that from core analyses the average porosity and permeability have been determined to be 5.8 per cent and 148 millidarcies, respectively; and

WHEREAS, From evidence submitted at said hearings, the Commission is of the opinion and finds that waste, as the term is defined in the applicable statutes, will take place in said field unless rules are adopted by the Commission for the prevention thereof, and that the following field rules are necessary to prevent such waste and to provide for a more orderly development and operation of said field.

Now, Therefore, IT IS ORDERED By the Railroad Commission of Texas that effective April 7, 1954, the following rules, in addition to such of the Commission's general rules and regulations as are not in conflict herewith, be and the same are hereby adopted to govern the drilling, completion and operation of wells in the Bronco (Siluro-Devonian) Field, Yoakum County, Texas.

RULE 1. The permitted gas-oil ratio for all wells shall be two thousand (2,000) cubic feet of gas per barrel of oil produced. Any oil well producing with a gas-oil ratio in excess of two thousand (2,000) cubic feet of gas per barrel of oil shall be allowed to produce daily only that volume of gas obtained by multiplying the daily oil allowable of such well as determined by the applicable rules of the Commission by two thousand (2,000) cubic feet. The gas volume thus obtained shall be known as the daily gas limit of such well. The daily oil allowable therefor shall then be determined and assigned by dividing the daily gas limit by its producing gas-oil ratio.

RULE 2. The acreage assigned to the individual oil well for the purpose of allocating allowable oil production thereto shall be known as a proration unit. No proration unit shall consist of more than forty (40) acres except as hereinafter provided, and the two farthestmost points in any proration unit shall not be in excess of twenty-one hundred (2100) feet removed from each other; provided, however, that in the case of long and narrow leases or in cases where because of the shape of the lease such is necessary to permit the

utilization of tolerance acreage the Commission may after proper showing grant exceptions to the limitations as to the shape of proration units as herein contained. All proration units, however, shall consist of continuous and contiguous acreage which can reasonably be considered to be productive of oil.

If after the drilling of the last well on any lease and the assignment of acreage to each well thereon in accordance with the regulations of the Commission there remains an additional unassigned lease acreage of less than forty (40) acres then and in such event the remaining unassigned lease acreage up to and including a total of twenty (20) acres may be assigned to the last well drilled on such lease or may be distributed among any group of wells located thereon so long as the proration units resulting from the inclusion of such additional acreage meets the limitations prescribed by the Commission.

Operators shall file certified plats of their properties in the field, which plats show all those things pertinent to the determination of the acreage claimed for each well hereunder.

RULE 3: The casing program of all wells hereafter drilled in said field shall include at least three (3) strings of pipe set in accordance with the following program:

(a) The surface casing shall consist of new or reconditioned pipe with an original mill test of not less than one thousand (1000) pounds per square inch, and shall be set and cemented below the top of the red beds; provided, however, that not less than three hundred (300) feet of surface string shall be set. Cement shall be by the pump and plug method, and sufficient cement shall be used to fill the annular space back of the pipe to the surface of the ground or the bottom of the cellar. Cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug. The casing shall be tested by pump pressure of at least five hundred (500) pounds per square inch applied at the well head. If at the end of thirty (30) minutes the pressure shows a drop of one hundred and fifty (150) pounds per square inch, or more, the casing shall be condemned. After the corrective operations, the casing shall again be tested in the same manner.

(b) The intermediate string shall consist of new or reconditioned pipe that has been tested to two thousand (2000) pounds per square inch, and shall be set no higher than the top of the San Andres formation at an approximate depth of forty-five hundred (4500) feet. Sufficient cement shall be used to fill the calculated annular space back of the pipe to at least as high as the bottom of the surface pipe. Cement shall be by the pump and plug method, and the cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before initiating tests or drilling the plug. The casing shall be tested by pump pressure of at least one thousand (1000) pounds per square inch applied at the well head. If at the end of thirty (30) minutes the pressure shows a drop of one hundred and fifty (150) pounds per square inch, or more, the casing shall be condemned. After the corrective operations, the casing shall again be tested in the same manner.

(c) The producing or oil string shall be new or reconditioned pipe that has been tested to three thousand (3000) pounds per square inch, and shall be set no higher than the top of the producing formation. Cement shall be by the pump and plug method, and sufficient cement shall be used to fill the calculated annular space behind the pipe to a point at least thirty-three hundred (3300) feet above the shoe. Cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests. The casing shall be tested by pump pressure of at least fifteen hundred (1500) pounds per square inch applied at the well head. If at the end of thirty (30) minutes the pressure shows a drop of two hundred (200) pounds per square inch, or more, the casing shall be condemned. After the corrective operations, the casing shall again be tested in the same manner.

At the operator's option, a stub string of casing may be employed for the production or oil string; provided, however, that the top of the liner extends

at least two hundred (200) feet into the next larger string of casing. If this program is followed, the pipe shall be new or reconditioned casing which shall be tested, set and cemented in accordance with all provisions herein prescribed. In addition, the stub string shall be attached to the inside of the next larger string of casing previously run, either by cementing or by using a liner hanger of accepted design and manufacture.

RULE 4: The daily oil allowable for the field as fixed by the Commission after deductions have been made for marginal wells, high gas-oil ratio wells, and wells incapable of producing their allowables shall be distributed among the remaining producing wells in the field on the following basis:


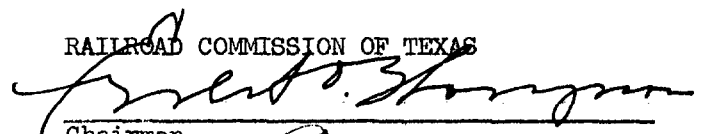
The daily acreage allowable for each remaining well shall be that proportion of one hundred (100) percent of such remaining daily field allowable that the acreage assigned to such well bears to the total acreage assigned to all of such remaining wells in the field.

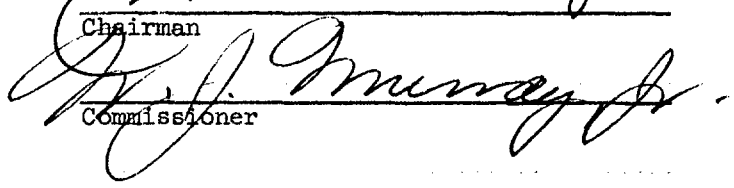
RULE 5: The datum reservoir pressure of all wells in the field shall be determined annually and the testing period shall be during the months of October and November; the results thereof to be reported to the Commission on or before the fifteenth (15th) of December of each year. All pressure determinations shall be reported at a datum of eight thousand (8000) feet below sea level. Prior to testing, all wells shall be shut in for a period of not less than forty-eight (48) hours or more than seventy-two (72) hours. All offset operators shall be notified at least forty-eight (48) hours before such test is made on any well, and any operator in the field shall have the privilege of witnessing such pressure determinations. Said pressures shall be taken on all flowing wells with subsurface pressure gauge or other method of equal accuracy and may be taken on pumping wells with sonic devices or other method of equal accuracy.

RULE 6: Gas-oil ratio tests shall be conducted annually on all wells during the months of April and May; the results thereof to be reported to the Commission on Form GO-2 on or before the fifteenth (15th) of June of each year.

IT IS FURTHER ORDERED That this cause be held open on the docket for such other and further orders as may be necessary.

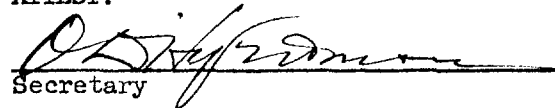
RAILROAD COMMISSION OF TEXAS



Chairman


Commissioner

Commissioner

ATTEST:


Secretary

HLMcC:ms