

Mr. R.R. Spurr ✓  
Oil Conservation Commission  
Santa Fe New Mexico

STATEMENT ON BEHALF  
OF  
SKELLY OIL COMPANY  
BLANCO MESAVERDE FIELD,  
SAN JUAN, RIO ARriba COUNTIES, NEW MEXICO

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Skelly Oil Company at the beginning of the hearing made its position clear. It stated that it felt the Oil Conservation Commission should continue its time honored practice of prorating oil and gas, or both, on the basis of unit allowances; however, if the Commission desired to deviate from such a historical and satisfactory practice, then it favored an allocation formula of Acreage times Pressure, which apparently had not been considered and analyzed by any other interested party. This formula, which Skelly has proposed, has been in operation in various pools a number of years, and in conjunction with an over and under provision has accomplished these three things:

1. Prevents or minimizes drainage between tracts.
2. Allocation between tracts on a fair and reasonable basis in relation to the respective reserves.
3. Assures the fulfillment of a market demand.

The formula, as proposed by Skelly Oil Company, is the only formula that accomplishes all three objectives, the first two objectives being statutory; that is, drainage Sec. 12-c, and fair and reasonable proration on reserve basis Sec. 13-a, and the latter being one within the realm of discretion on the part of the Oil Conservation Commission Sec. 12-d.

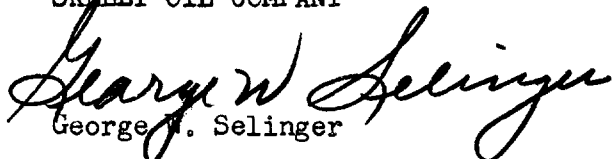
It is well to point out that of all the formulas presented the Acreage times Pressure had less criticism, and whatever objections were made were to a greater degree objections to deliverability itself. The use of pressure is a superior, well recognized method of computing reserves. The record undoubtedly shows that the vast majority of technicians have stated to the Commission that deliverability has no relationship to reserves - this was so stated even by those recommending some factor of deliverability.

It is our concluding thought that for a permanent, fair and reasonable allocation formula which will prevent or minimize drainage with a relationship to reserves, the formula of Acreage times Pressure is the best formula deviating from the present historical policy of unit allocation.

Attached hereto are our proposed rules which have heretofore been made part of the record. One comment may be made as to the balancing dates being February 1, -August 1, instead of March 1, -September 1. We offer no objections to this.

Respectfully submitted,

SKELLY OIL COMPANY

  
George W. Selinger

GWS:dd

cc: Southern Union Gas Company  
Attn: Mr. A. S. Grenier  
Dallas, Texas

Stanolind Oil & Gas Company  
Attn: Mr. J. K. Smith  
Fort Worth, Texas

Phillips Petroleum Company  
Attn: Mr. E. H. Foster  
Amarillo, Texas

Pubco, Inc.  
Attn: Mr. J. Glenn Turner  
Mercantile Bank Building  
Dallas, Texas

El Paso Natural Gas Company  
Attn: Mr. Ben Howell  
Bassett Tower  
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PROPOSED RULES  
BLANCO MESAVERDE POOL  
SAN JUAN AND RIO ARriba COUNTIES, NEW MEXICO

Section 1. No well shall be drilled or completed or recompleted and no Notice of Intention to drill or Drilling Permit shall be approved, unless,

(a) Such well be located on a designated drilling unit of not less than three hundred twenty (320) acres of land, more or less, according to legal subdivision of the United States Land Surveys, in which unit all the interests are consolidated by pooling agreement or otherwise and on which no other well is completed, or approved for completion, in the pool;

(b) Such drilling unit be in the shape of a rectangle except for normal variations in legal subdivisions of the United States Land Surveys, the north half, south half, east half or west half of each section of land constituting a drilling unit;

(c) Such well shall be located 330 feet from the center of either the northeast or southwest quarter of the section, subject to variation of 200 feet for topographic conditions. Further tolerance shall be allowed by the Commission only in cases of extremely rough terrain where compliance would necessarily increase drilling costs.

Section 2. The special rules and regulations for the Blanco Mesaverde Pool contained herein shall be limited in their application to the present 4200-5100 foot productive horizon where the productive sands are contained between the top of the Cliff House Sand and the base of the Point Lookout Sand of the Mesaverde.

Section 3. Proration Units: The proration unit shall consist of 320 acres or (a) a legal United States General Land Office Survey half-section and (b) the approximate 320 acre unit shall follow the usual legal subdivision of the General Land Office Section Surveys and (c) where proration units lie along the edge of field boundaries described in Section 1 above, exceptions shall be permissible in that contiguous tracts of approximately 320 acres, following regular United States General Land Office subdivisions may be classed as proration units.

(a) The pooling of properties or parts thereof shall be permitted, and if not agreed upon may be required in any case when and to the extent that the smallness or shape of a separately owned tract would, under the enforcement of the uniform spacing plan of proration units, otherwise deprive or tend to deprive the owner of such tract of the opportunity to recover his just and equitable share of the crude petroleum oil and natural gas in the Pool; provided, that the owner of any tract that is smaller than the drilling unit establishment for the field, shall not be deprived of the right to drill on and produce from such tract if same can be done without waste; but in such case the allowable production from such tract, as compared with the allowable production therefrom if such tract were a full unit, shall be in the ratio of such tract to the area of a full unit of 320 acres.

Section 4. Allocation:

(a) The reasonable lawful required production from the Blanco Mesaverde Pool, San Juan and Rio Arriba Counties, New Mexico, shall be determined by nominations for the production from gas wells produced therein submitted to the Commission in a required affidavit form, but the Commission in considering such nominations shall not necessarily be bound thereby; however, the Commission will adjust the allowed production as determined by this method to the actual production from the pool as determined from its records.

(b) The daily allowable production of gas from individual wells completed in the Blanco Mesaverde Pool of San Juan and Rio Arriba Counties, New Mexico, shall be determined by allocating the allowable production among the individual wells completed in the Mesaverde horizon in the proportion that the product that the datum reservoir pressure and the acreage containing such well bears to the summation of this product with respect to each well producing from said pool.

(c) Datum reservoir pressure for each well shall be determined either by the bomb method or by an approved calculation method.

(d) Datum reservoir pressure is defined as the pressure in pounds (p.s.i.) determined either by the bomb method or by an approved calculation method at a datum of \_\_\_\_\_.

(e) Reservoir pressure whether determined either by the bomb method or by an approved calculation method shall be made after a shut in period of not more than 8 nor less than 7 continuous days.

(f) Prior to the shutting in of any well, in order to determine the reservoir pressure as set out herein, any such well shall have been produced at a stabilized rate of flow for a 72 hour period and shall have produced as a minimum that volume of gas assigned to the well as its daily average allowable on the Commission's schedule for the current period, or that volume of gas which would be assigned to such well in accordance with the allocation formula as provided herein.

(g) Reservoir pressure determination on all such wells, as required by the provisions of this order, shall be submitted to the Commission on forms provided by the Commission, which forms must be submitted to the Commission by the \_\_\_\_\_ day of \_\_\_\_\_, 1954, and semi-annual reservoir pressure determinations are to be submitted on all wells in such pool thereafter with the filing of such information as required by the Commission on such forms.

Section 5. Underproduction and Overproduction:

(a) For the purpose of computing and balancing overproduction and underproduction in the Blanco Mesaverde Pool, San Juan and Rio Arriba Counties, New Mexico, the dates 7 o'clock a.m., March 1, and 7 o'clock a.m., September 1, are to be known as balancing dates; and the six months period beginning 7 o'clock a.m., March 1, and ending 7 o'clock a.m., September 1, and beginning 7 o'clock a.m., September 1, and ending 7 o'clock a.m., March 1, will be considered as separate entities and will be known as balancing periods.

(b) Underproduction:

1. In the event there shall not be produced from any gas well in the Blanco Mesaverde Pool during a balancing period as much gas as is allocated thereto, under orders of the Commission the operator of any such well shall be permitted to carry such underproduction forward to the next succeeding balancing period as future allowable credit to be produced during that period.

2. The amount of underproduction to be carried forward into any new balancing period as allowed production during such new balancing period, shall consist of the actual underproduction that accrued in the balancing period immediately preceding such new balancing period, and the accumulated well status as to underproduction will be adjusted on each balancing date accordingly.

3. With respect to a producing well that has been accumulatively underproduced on each of two succeeding balancing dates, such well shall not be credited with any underproduction except that this shall not apply to wells shut in for lack of pipe line connection, and such well shall not be assigned a monthly allowable greater than the maximum monthly production had from such well during the immediate preceding balancing period; provided, however, that such limited allowable as is assigned to such well hereunder may be adjusted to a value not to exceed the allowable accruing to such well under the allocation formula, upon certification to the Commission from the operator thereof that such well is producing gas in excess of the limited allowable assigned it.

(c) Overproduction:

1. Each operator of each gas well in the Blanco Mesaverde Pool may produce such well in excess of the allowable for the proration period; provided, that no well shall, during the proration period, produce at a rate in excess of twice the daily average rate required to produce the normal current allowable for the current proration period.

2. Any well overproduced as of a balancing date, and which well was also overproduced on the balancing date immediately preceding and remained overproduced for the entire period between the two balancing dates, shall be shut in until the overproduction, existent as of the later of such two balancing dates, is made up; this unless exception is had as provided for in the next succeeding paragraph hereof.

3. The operator of a well which, under the provisions of the immediately preceding paragraph, would be required to be shut in may, if such operator is of the opinion that complete well shut in will materially damage his well, request a hearing before the Commission, which hearing will be held only after due notice is given to all operators in the pool.

4. Except where shut in is required in making up overproduction, as outlined in paragraphs 2 and 3 above, overproduction existent as of any balancing date shall be made up during the balancing period immediately following, and may be made up at any time during such period.

Section 6. Casing and Cementing Program:

(a) Surface Pipe: The surface pipe shall be set to a minimum depth of 100 feet, and where shallow potable water-bearing beds are present, the surface pipe shall be set to such shallow potable water-bearing beds and a sufficient amount of cemented shall be used to circulate the cement behind the pipe to the bottom of the cellar. This surface casing shall stand cemented for at least 24 hours before drilling plug or initiating tests. The surface casing shall be tested after drilling plug by bailing the hole dry. The hole shall remain dry for one hour to constitute satisfactory proof of a water shut-off. In lieu of the foregoing test the cement job shall be tested by building up a pressure of 1,000 psi. closing the valves, and allowing to stand thirty minutes. If the pressure does not drop more than 100 pounds during that period, the test shall be considered satisfactory. This test shall be made both before and after drilling the plug. In this regard all fresh waters and waters of present or probable future value for domestic, commercial or stock purposes shall be confined to their respective strata and shall be adequately protected by methods approved by the Commission. Special precaution shall be taken in drilling and abandoning wells to guard against any loss of artesian potable water from the strata in which it occurs and the contamination of artesian potable water by objectionable water, oil or gas. The Commission shall be notified at least 24 hours prior to the conducting of any test.

(b) Production String: The production string shall be set on top of the Cliff House Sand with a minimum of 100 sacks of cement and shall stand cemented not less than 36 hours before testing the casing. This test shall be made by building up a pressure of 1,000 Psi, closing the valves, and allowing to stand thirty minutes. If the pressure does not drop more than 100 pounds during that period, the test shall be considered satisfactory.

(c) General: All cementing shall be done by the pump and plug method. Bailing tests may be used on all casing and cement tests, and drill stem tests may be used on cement tests in lieu of pressure tests. In making bailing test, the well shall be bailed dry and remain approximately dry for thirty minutes. If any string of casing fails while being tested by pressure or by bailing tests herein required, it shall be re-cemented and re-tested or an additional string of casing should be run and cemented. If an additional string is used, the same test shall be made as outlined for the original string. In submitting Form C-101, "Notice of Intention to Drill", the number of sacks of cement to be used on each string of casing shall be stated.

(d) Rules and Regulations of the Commission relating to drilling, abandonment, production shall be applicable.

Section 7. Tubing:

(a) Any completed well which produces any oil shall be tubed. This tubing shall be set as near the bottom of the hole as practicable, but in no case shall tubing perforations be more than 250 feet from the bottom. The bottom of the tubing shall be restricted to an opening of less than 1 inch or bullplugged in order to prevent the loss of pressure bombs or other measuring devices.

Section 8. Special Equipment:

(a) Any well which produces oil shall be equipped with a meter setting of adequate size to measure efficiently the gas, with this meter setting to be installed on the gas vent or discharge line. Wellhead equipment for all wells shall be installed and maintained in first class condition, so that static, bottom hole pressures and surface pressures may be obtained at any time by a duly authorized agent of the Commission. Valves shall be installed so that pressures may be readily obtained on the casing and also on the tubing, wherever tubing is installed. All connections subject to well pressure and all wellhead fittings shall be of first class material, rated at 2,000 psi working pressure and maintained in gas-tight condition. Bradenheads rated at 2,000 psi shall be installed on all production string and bradenhead connections maintained in gas-tight condition. There shall be at least one valve on each bradenhead. Operators shall be responsible for maintaining all equipment in first class condition and shall repair or replace equipment where gas leakage occurs.

Section 9. Safety Requirements:

(a) Drilling boilers shall not be set closer than 200 feet to any well or tank battery. All electrical equipment shall be in first class condition and properly installed.

Section 10. Shooting of Wells:

(a) Wells shall not be shot or chemically treated until the permission of the Commission is obtained. Each well shall be shot or treated in such manner as will not cause injury to the sand or result in water entering the oil or gas sand, and necessary precautions shall be taken to prevent injury to the casing. If shooting or chemical treatment results in irreparable injury to the well or to the oil or gas sand, the well shall be properly plugged and abandoned. (See Rule 42, Order Number 4, Effective 8-12-35).

Section 11. Initial Potential Test:

(a) The initial potential test in the Mesaverde Formation shall be made after a minimum shut in time of seven (7) days. The shut in pressure will be measured by the use of a dead-weight gauge. The open flow shall be determined by a pitot tube measurement after unrestricted flowing of the gas to the air for a period of three (3) hours; the flow nipple shall be at least eight (8) diameters long. The pitot tube shall be constructed of one-eighth (1/8) inch pipe (nominal diameter). Standard tables (Keid's) will be provided by the Commission.

(b) This test shall be reported on Commission Form C-122-B.

Section 12. Protection of Mineral Deposits:

(a) Since the Menefee coal beds bear some gas and since these coal beds are of non-commercial value, Rule 20, Order Number 4 of the Commission dated August 12, 1935, shall not apply to this field.

Section 13. Gas Wastage:

(a) Mesaverde gas shall not be flared since this is principally a gas reservoir and any well not connected to a commercial or domestic taker shall be shut in until such market is obtained. Wells in this field shall be permitted to produce and market gas, as long as such can be done without waste, equitably between proration units for the field.

Section 14. Bradenhead Gas:

(a) Bradenhead gas shall not be used either directly or expansively in engines, pumps or torches, or otherwise wasted. It may be used for lease and development purposes and for the development of nearby leases, except as prohibited above. Wells shall not be completed as Bradenhead gas wells unless special permission is obtained from the Commission.

Section 15. Any provision herein to the contrary notwithstanding, the Commission may, and in proper cases will, on petition or on its own motion, by order entered after notice and hearing to the extent required by law, grant exceptions and permit drilling locations to become effective, thereby authorizing the drilling or completion of wells in the pool not conforming to the requirements of Section 1 through 12 above if the Commission shall find that the property sought to be drilled would be deprived of an opportunity to produce gas from the pool in the absence of such exception, or irrespective of such findings, if the Commission shall find that by reason of all circumstances an exception is proper in the prevention of waste, or undue drainage between properties, or otherwise in the exercise by the Commission of its jurisdiction over the spacing of wells or its order powers conferred by law express or implied.

Section 16. All additional lands located within one mile of any land in the pool as defined above or as it may be extended shall conform to these rules and regulations; provided, however, that by order of this Commission the pool may be redesignated from time to time so as to embrace other lands in the vicinity which are believed on the basis of additional developments, to be capable of producing gas from the Mesaverde formation, whether or not such other lands shall have been at one time included in another designated field or pool producing from Mesaverde.