

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 5813
Order No. R-5353

APPLICATION OF THE OIL CONSERVATION
COMMISSION ON ITS OWN MOTION TO CONSIDER
THE ADOPTION OF GENERAL RULES AND REGULATIONS
GOVERNING ALL ASSOCIATED OIL AND GAS POOLS OF
SOUTHEAST AND NORTHWEST NEW MEXICO AND THE
ADOPTION OF SPECIAL RULES FOR CERTAIN ASSOCIATED
POOLS.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 23, 1976 at Santa Fe, New Mexico, before Examiner, Daniel S. Nutter.

NOW, on this 17th day of January, 1977, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the Commission has heretofore created and designated six pools in Northwest New Mexico and 15 pools in Southeast New Mexico as "associated" oil and gas pools, being pools in which a gas cap was found to overlie an oil zone.

(3) That in order to prevent waste and to protect correlative rights, the Commission has heretofore promulgated special rules and regulations for said associated oil and gas pools, as follows:

Northwest New Mexico

| <u>POOL</u> | <u>COUNTY</u> | <u>ORDER NO.</u> |
|-------------------------------|---------------|------------------|
| Angels Peak-Gallup | San Juan | R-1410-C |
| Devils Fork-Gallup | Rio Arriba | R-5181 |
| Escrito-Gallup | Rio Arriba | R-1793-A |
| Gallegos-Gallup | San Juan | R-3707 |
| Tapacito-Gallup | Rio Arriba | R-3211 |
| Tocito Dome-Pennsylvanian "D" | San Juan | R-2758 |

Southeast New Mexico

| <u>POOL</u> | <u>COUNTY</u> | <u>ORDER NO.</u> |
|--|---------------|--------------------|
| Bluitt-San Andres | Roosevelt | R-1670-I |
| Southeast Chaves Queen Gas Area | Chaves | R-4435 |
| South Dagger Draw-Upper Pennsylvanian | Eddy | R-4637 |
| Double L-Queen | Chaves | R-3981-A |
| Jennings-Delaware | Lea | R-4359 |
| Mesa-Queen | Lea | R-2935 |
| North Paduca-Delaware | Lea | R-3437 |
| Penasco Draw-San Andres-Yeso | Eddy | R-4365 |
| Peterson-Pennsylvanian | Roosevelt | R-4538 |
| Round Tank-Queen | Chaves | R-1670-J |
| Sawyer-San Andres | Lea | R-1517 |
| Todd-Lower San Andres | Roosevelt | R-1670-G R-3153 |
| Northwest Todd-San Andres | Roosevelt | R-4441 |
| Twin Lakes-San Andres | Chaves | R-4102 |
| Vest Ranch-Queen | Chaves | R-5180 |

(4) That the aforesaid special rules and regulations for the above-named associated oil and gas pools provide, among other things, for the definition of oil wells and gas wells, the size of oil spacing units and gas spacing units, standard well locations, gas-oil ratio limitations, well testing, and gas well allowables.

(5) That there is a wide variation in the various special pool rules applicable to the aforesaid associated pools, not only in substantive content and purpose, but also in format and general manner of presentation.

(6) That said variations have caused confusion and have resulted in unnecessary administrative burden to both the operators in said pools and the Commission.

(7) That the adoption of general rules applicable to all associated pools, with provision for certain special rules applicable to particular pools only, would tend to eliminate said confusion and would ease the administrative burden of both the operators in said pools and the Commission.

(8) That in order to more nearly equalize the time frame within which oil wells and gas wells in associated pools may produce their current allowable, thereby equalizing withdrawals from their respective portions of the associated reservoir, the general rules for associated pools should provide for a one-month proration period for gas wells, and oil wells should continue to be operated under the provisions of Rule 502 of the Commission General Rules and Regulations.

(9) That in order to provide a reasonable period of time for the production of the current allowable from a gas well in an associated pool, provision should be made in the general associated pool rules for underproduction from such well to be carried forward into subsequent proration periods, provided however, that such underproduction in excess of three times the current monthly allowable should not be carried forward, but should be cancelled.

(10) That in order to provide a reasonable period of time in which overproduction of current allowable by a gas well in an associated pool may be compensated for by underproduction, provision should be made in the general associated pool rules for such overproduction to be carried forward into subsequent proration periods, provided however, that any well which is overproduced by an amount exceeding three times its current monthly allowable should be shut in until such well is overproduced by an amount less than three times its current monthly allowable.

(11) That the volumetric gas allowable formulas applicable to the Bluit-San Andres Associated Pool and the Todd Lower-San Andres Associated Pool are no longer effective and should not be included in the special pool rules for said pools.

(12) That the inclusion of liquid gravity as a criterion in the classification of oil wells and gas wells in the Angels Peak-Gallup, Devils Fork-Gallup, Bluit-San Andres, Peterson-Pennsylvanian, and Todd-Lower San Andres Pools appears to serve no useful purpose, and should be discontinued.

(13) That the Jennings-Delaware Associated Pool and the North Paduca-Delaware Associated Pool, as heretofore created and defined, no longer fit the associated pool classification, and that said pools should be redefined as oil pools subject to the Commission General Rules and Regulations, and the Special Rules for said pools should be rescinded.

(14) That the Northwest Todd-San Andres Associated Pool as previously created and defined no longer fits the associated pool classification and should be redefined as an oil pool and the special pool rules therefor amended to provide only for 80-acre oil well spacing units and a gas-oil ratio limitation of 5,000 to 1.

(15) That the existing special associated pool rules for the remaining 18 associated pools which provide for spacing of oil wells and gas wells, oil well and gas well locations, definition of oil wells and gas wells based on gas-liquid ratios, and special gas-oil ratio limitations, any of which are in conflict with the general rules and regulations for associated pools should be retained, but should be incorporated in one overall order applicable to associated oil and gas pools, and the orders presently applicable to said pools superseded.

(16) That the gas well location requirements for the Double L-Queen Associated Pool should be amended to comply with the general rules and regulations for associated pools.

(17) That all associated pool gas well underproduction should be cancelled as of January 31, 1977.

(18) That the Secretary-Director of the Commission should be authorized to administratively reinstate such cancelled underproduction, up to three times the current monthly allowable, upon a showing by the operator that such underproduction could be made up.

(19) That the rescission, amendment, and supersedure of the Special Pool Rules listed in Finding No. (3) above, and the adoption of General Rules applicable to the associated oil and gas pools in the State of New Mexico in accordance with the above findings will prevent waste and protect correlative rights, is in the public interest, and should be approved.

IT IS THEREFORE ORDERED:

(1) That effective February 1, 1977, general rules and regulations are hereby adopted for the associated oil and gas pools of Northwest and Southeast New Mexico as follows:

GENERAL RULES AND REGULATIONS FOR THE ASSOCIATED OIL AND GAS POOLS OF NORTHWEST NEW MEXICO AND SOUTHEAST NEW MEXICO.

(See Special Pool Rules for each pool for rules applicable to that particular pool. Special Pool Rules will be found in the same classification order as in the General Section. If the Special Rule is in conflict with the General Rule, the Special Rule shall be applicable.)

A. WELL LOCATION AND ACREAGE REQUIREMENTS

RULE 1. Any well drilled to the producing formation of an associated pool regulated by this order and within said pool or within one mile outside the boundary of that pool, and not nearer to nor within the boundaries of another designated pool producing from the same formation, shall be spaced, drilled, operated, and prorated in accordance with the regulations in effect in that pool.

RULE 2. (a) See Special Pool Rules for applicable size of oil and gas spacing and proration units. Unless otherwise specified by the Special Pool Rules, 40-acre units shall comprise a governmental quarter-quarter section substantially in the form of a square, being a legal subdivision of the United States Public Land Surveys; 80-acre units shall comprise two contiguous quarter-quarter sections, being the N/2, S/2, E/2, or W/2 of a single governmental quarter section; 160-acre units shall comprise a governmental quarter section; and 320-acre units shall comprise two contiguous quarter sections, being the N/2, S/2, E/2, or W/2 of a single governmental section.

RULE 2. (b) Each well drilled or completed on a spacing and proration unit within an associated pool governed by these rules shall be located as provided below:

OIL WELLS AND GAS WELLS - NORTHWEST NEW MEXICO

Standard Proration Unit

40 Acres

Location Requirements

Not closer than 330 feet to the boundary of the tract

| | |
|-----------------------|--|
| 80, 160 and 320 acres | Not closer than 790 feet to any quarter section line nor closer than 330 feet to any quarter-quarter section line or subdivision inner boundary. |
|-----------------------|--|

OIL WELLS - SOUTHEAST NEW MEXICO

| <u>Standard Proration Unit</u> | <u>Location Requirements</u> |
|--------------------------------|--|
| 40 Acres | Not closer than 330 feet to the boundary of the tract |
| 80 and 160 acres | Within 150 feet of the center of the quarter-quarter section wherein located |

GAS WELLS - SOUTHEAST NEW MEXICO

| <u>Standard Proration Unit</u> | <u>Location Requirements</u> |
|--------------------------------|--|
| 160 Acres | Within 150 feet of the center of the quarter-quarter section wherein located. |
| 320 Acres | Not closer than 660 feet to the nearest side boundary nor closer than 1980 feet to the nearest end boundary of the spacing unit nor closer than 330 feet to any quarter-quarter section or subdivision inner boundary. |

RULE 2. (c) The Secretary-Director of the Commission shall have authority to grant an exception to the well location requirements of Rule 2(b) above without notice and hearing when the necessity for such unorthodox location is based upon topographical conditions or the recompletion of a well previously drilled to another horizon, provided said well was drilled at an orthodox location for such original horizon, or where the size and shape of an approved non-standard spacing and proration unit render a standard location impossible.

Applications for administrative approval of unorthodox locations shall be filed in triplicate and shall be accompanied by plats showing the ownership of all leases offsetting the proration or spacing unit for which the unorthodox location is sought, and also all wells completed thereon. If the proposed unorthodox location is based upon topography, the plat shall also show and describe the existent topographical conditions.

All operators of proration or spacing units offsetting the unit for which the unorthodox location is sought shall be notified of the application by certified or registered mail, and the application shall state that such notification has been given. The Secretary-Director may approve the unorthodox location upon receipt of waivers from all offset operators or if no offset operator has entered an objection to the unorthodox location within 20 days after the Secretary-Director has received the application.

RULE 3. (a) Each gas well shall be located on a standard unit containing 160 acres or 320 acres, more or less, as provided in the special rules for the pool in which it is situate.

(b) Each oil well shall be located on a standard unit containing 40 acres, 80 acres or 160 acres, more or less, as provided in the special rules for the pool in which it is situate.

RULE 4. (a) The District Supervisor of the appropriate district office of the Commission shall have the authority to approve a non-standard unit as an exception to Rule 3(a) or 3(b) without notice and hearing when the unorthodox size or shape of the unit is necessitated by a variation in the legal subdivision of the U. S. Public Land Surveys and the non-standard unit is not less than 75% nor more than 125% of a standard unit.

The District Supervisor of the appropriate district office of the Commission may approve the non-standard unit by:

(1) Accepting a plat showing the proposed non-standard unit and the acreage to be dedicated to the non-standard unit, and

(2) Assigning an allowable to the non-standard unit.

(b) The Secretary-Director of the Commission may grant an exception to the requirements of Rule 3(a) or Rule 3(b), when the unorthodox size or shape of the unit is necessitated

by a variation in the legal subdivision of the U. S. Public Land Surveys and the non-standard unit is less than 75% or more than 125% of a standard unit, or where the following facts exist and the following provisions are complied with:

(1) The non-standard unit consists of quarter-quarter sections or lots that are contiguous by a common bordering side.

(2) The non-standard unit lies wholly within a governmental subdivision or subdivisions which would be a standard unit for the well (half quarter section, quarter section, or half section) but contains less acreage than a standard unit.

(3) The applicant presents written consent in the form of waivers from all offset operators and from all operators owning interests in the half quarter section, quarter section or half section (for 80-acre, 160-acre, and 320-acre standard dedications respectively) in which the non-standard unit is situated and which acreage is not included in said non-standard unit.

(4) In lieu of Paragraph (3) of this rule, the applicant may furnish proof of the fact that all of the foresaid operators were notified by registered or certified mail of his intent to form such non-standard unit. The Secretary-Director may approve the application if no such operator has entered an objection to the formation of such non-standard unit within 30 days after the Secretary-Director has received the application.

B. WELL CLASSIFICATION AND GAS-OIL RATIO LIMITATION

RULE 5. (a) A well shall be classified as a gas well if it has a gas-liquid ratio of 30,000 or more cubic feet of gas per barrel of liquid hydrocarbons. A well shall be classified as an oil well if it has a gas-liquid ratio of less than 30,000 cubic feet of gas per barrel of liquid hydrocarbons.

(b) The simultaneous dedication of any acreage to an oil well and a gas well is prohibited.

RULE 6. That the limiting gas-oil ratio shall be 2,000 cubic feet of gas for each barrel of oil produced.

RULE 7. An oil well shall be permitted to produce only that amount of gas determined by multiplying the top unit oil allowable for the pool by the limiting gas-oil ratio for the pool. In the event there is more than one oil well on an oil proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

A gas well shall be permitted to produce that amount of gas obtained by multiplying the top unit oil allowable for the pool by the limiting gas-oil ratio for the pool and by a fraction, the numerator of which is the number of acres dedicated to the particular gas well and the denominator of which is a number equal to the number of acres in a standard oil proration unit in such pool. In the event there is more than one gas well on a gas proration unit, the operator may produce the amount of gas assigned to the unit from the wells on the unit in any proportion.

C. WELL TESTING

RULE 8. The operator of each newly completed well shall cause a gas-liquid ratio test to be taken on the well upon recovery of all load oil from the well, provided however, that in no event shall the test be commenced later than 30 days from the date of first production unless the well is connected to a gas-gathering facility and is producing under a temporary gas allowable assigned in accordance with Rule 11. Any well which is shut-in shall be exempted from the gas-liquid ratio test requirement so long as it remains shut-in. The initial gas-liquid ratio test shall be taken in the manner prescribed by Rule 9. If the gas-liquid ratio is 30,000 cubic feet of gas per barrel of liquid hydrocarbons, or more, the operator shall not produce the well until beneficial use can be made of the gas.

RULE 9. (a) Semi-annual gas-liquid ratio tests shall be taken on all wells during each year in accordance with a test schedule prepared by the district office of the Commission. The initial gas-liquid ratio test shall suffice as the first semi-annual test. Tests shall be 24-hour tests, being the final 24 hours of a 72-hour period during which the well shall be produced at a constant normal rate of production. Results of such tests shall be filed on Commission Form C-116 on or before the 10th day of the following month. At least 72 hours prior to commencement of any such gas-liquid ratio tests, each operator shall file with the appropriate district office of the Commission a test schedule for its wells specifying the time each of its wells is to be tested. Copies of the test schedule shall also be furnished to all offset operators. The supervisor

of the appropriate district office of the Commission may grant an exception to the above test requirements where it is demonstrated that the well(s) produce(s) no liquids.

Special tests shall also be taken at the request of the Secretary-Director and may also be taken at the option of the operator. Such special tests shall be taken in accordance with the procedures outlined hereinabove, including notification to the Commission and offset operators.

(b) The Secretary-Director of the Commission shall have authority to grant pool-wide exceptions to Rule 9(a) above, without notice and hearing upon a showing that production from wells within such pool has stabilized to the point where such tests would be of essentially no value for application of these general rules for associated pools.

RULE 10. An initial shut-in pressure test shall be taken on each gas well and shall be reported to the Commission on Form C-125.

D. ASSIGNMENT OF ALLOWABLE

RULE 11. Any well completed after the effective date of these rules shall receive an allowable only upon receipt by the appropriate Commission district office of Commission Forms C-10, C-104, C-116, and, in the case of a gas well, a transporter's notice of gas connection, properly executed. The District Supervisor of the Commission's district office is hereby authorized to assign a temporary gas allowable to wells connected to a gas transportation facility during the recovery of load oil, which allowable shall not exceed the number of cubic feet of gas obtained by multiplying the daily top unit allowable for the pool by the limiting gas-oil ratio for the pool.

E. GAS PRORATIONING

RULE 12. The associated gas proration period shall be the proration month which shall begin at 7 a.m. on the first day of the month and shall end at 7 a.m. on the first day of the next succeeding month.

RULE 13. (a) Any associated gas well which has an under-produced status at the end of any associated gas proration period, shall carry such underproduction into subsequent periods.

(b) Underproduction in excess of three times the current monthly allowable shall not be carried forward but shall be cancelled. For purposes of this rule, the monthly allowable shall be the full monthly allowable which would be assigned an associated gas well with the same acreage dedication in the same pool.

(c) Overproduction during any month shall be applied to a well's cumulative underproduction, if any, calculated in accordance with Paragraphs (a) and (b) above.

RULE 14. Any associated gas well which has an overproduced status at the end of any associated gas proration period shall carry such overproduction into subsequent periods. If at any time a well is overproduced an amount exceeding three times its current monthly allowable, it shall be shut in during that month and each succeeding month until the well is overproduced less than three times its current monthly allowable.

RULE 15. The allowable assigned to a well during any one month of an associated gas proration period in excess of the production for the same month shall be applied against the overproduction carried into such period in determining the amount of overproduction, if any, which has not been compensated for.

RULE 16. The Commission may allow overproduction to be compensated for at a lesser rate than would be the case if the well were completely shut in upon a showing after notice and hearing that complete shut in of the well would result in material damage to the well or reservoir.

F. REPORTING OF PRODUCTION

RULE 17. The monthly gas production from each gas well shall be metered separately and the gas production therefrom shall be reported to the Commission on Form C-115 so as to reach the Commission on or before the 24th day of the month next succeeding the month in which the gas was produced. The operator shall show on such report what disposition has been made of the produced gas.

RULE 18. Each purchaser or taker of gas shall submit a report to the Commission so as to reach the Commission on or before the 15th day of the month next succeeding the month in which the gas was purchased or taken. Such report shall be filed on Form C-111 with the wells being listed in the same order as they are listed on the appropriate proration schedule.

G. GENERAL PROVISIONS

RULE 19. Failure to comply with any provision of these rules shall result in the immediate cancellation of allowable assigned to the affected well. No further allowable shall be assigned until all rules and regulations have been complied with. The Secretary-Director shall notify the operator of the well and purchaser in writing of the date of allowable cancellation and the reason therefor.

RULE 20. All transporters or users of gas shall file gas well connection notices with the Commission as soon as possible after the date of connection.

RULE 21. Allowables to wells whose classification has changed from oil to gas or from gas to oil as the result of a gas-liquid ratio test shall commence on the first day of the month following the month in which such test was reported, provided that a plat (Form C-102) showing the acreage dedicated to the well and the location of all wells on the dedicated acreage has been filed.

(2) That the above General Rules and Regulations for the Associated Oil and Gas Pools of Northwest New Mexico and Southeast New Mexico shall be applicable to the following associated pools:

NORTHWEST NEW MEXICO

Angels Peak-Gallup
Devils Fork Gallup
Escrito-Gallup

Gallegos-Gallup
Tapacito-Gallup
Tocito Dome-Pennsylvanian "D"

SOUTHEAST NEW MEXICO

Bluitt-San Andres
Southeast Chaves Queen
Gas Area
South Dagger Draw-Upper
Pennsylvanian
Double L-Queen
Mesa Queen

Penasco Draw-San Andres Yeso
Peterson-Pennsylvanian
Round Tank-Queen
Sawyer-San Andres
Todd-Lower San Andres
Twin Lakes-San Andres
Vest Ranch-Queen

(3) That effective February 1, 1977, the following Special Rules and Regulations shall be applicable to the below-named associated pools:

SPECIAL RULES AND REGULATIONS
FOR THE
ANGELS PEAK-GALLUP ASSOCIATED POOL

RULE 2. (a) A standard oil proration unit shall be 80 acres
A standard gas proration unit shall be 320 acres.

SPECIAL RULES AND REGULATIONS
FOR THE
DEVILS FORK-GALLUP ASSOCIATED POOL

RULE 2. (a) A standard oil proration unit shall be 80 acres
A standard gas proration unit shall be 320 acres.

SPECIAL RULES AND REGULATIONS
FOR THE
ESCRITO-GALLUP ASSOCIATED POOL

RULE 2. (a) A standard oil proration unit shall be 80 acres
A standard gas proration unit shall be 320 acres.

SPECIAL RULES AND REGULATIONS
FOR THE
GALLEGOS-GALLUP ASSOCIATED POOL

RULE 2. (a) A standard oil proration unit shall be 80 acres
A standard gas proration unit shall be 320 acres.

SPECIAL RULES AND REGULATIONS
FOR THE
TAPACITO-GALLUP ASSOCIATED POOL

RULE 2. (a) A standard oil proration unit shall be 80 acres
A standard gas proration unit shall be 320 acres.

SPECIAL RULES AND REGULATIONS
FOR THE
TOCITO DOME-PENNSYLVANIAN "D" ASSOCIATED POOL

RULE 2. (a) A standard oil proration unit shall be 160 acre
A standard gas proration unit shall be 320 acres.

RULE 2. (b) Oil wells shall be located within 150 feet of
the center of the quarter-quarter section.

Gas wells shall be located within 150 feet of
the center of the quarter-quarter section.

RULE 5. (a) A well shall be classified as a gas well if it has a gas-liquid ratio of 20,000 or more cubic feet of gas per barrel of liquid hydrocarbons. A well shall be classified as an oil well if it has a gas-liquid ratio of less than 20,000 cubic feet of gas per barrel of liquid hydrocarbons.

SPECIAL RULES AND REGULATIONS
FOR THE
BLUITT-SAN ANDRES ASSOCIATED POOL

RULE 2. (a) A standard oil proration unit shall be 80 acres. A standard gas proration unit shall be 320 acres.

RULE 2. (b) Oil wells shall be located within 150 feet of the center of the quarter-quarter section.

Gas wells shall be located not closer than 990 feet to the quarter section line nor closer than 330 feet to any quarter-quarter section line.

SPECIAL RULES AND REGULATIONS
FOR THE
SOUTHEAST-CHAVES QUEEN GAS AREA ASSOCIATED POOL

RULE 2. (a) A standard oil proration unit shall be 40 acres. A standard gas proration unit shall be 320 acres.

SPECIAL RULES AND REGULATIONS
FOR THE
SOUTH DAGGER DRAW-UPPER PENNSYLVANIAN ASSOCIATED POOL

RULE 2. (a) A standard oil proration unit shall be 320 acres. A standard gas proration unit shall be 320 acres.

RULE 2. (b) All oil wells and gas wells shall be located not closer than 660 feet to the nearest side boundary nor closer than 1980 feet to the nearest end boundary of the spacing unit nor closer than 330 feet to any subdivision inner boundary.

RULE 6. The limiting gas-oil ratio shall be 8,000 cubic feet of gas for each barrel of oil produced.

RULE 22. The special depth bracket allowable for an oil well on a 320-acre tract shall be 267 barrels of oil per day.

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

CASE NO. 5048
Order No. R-5353-A

IN THE MATTER OF CASE 5048 BEING REOPENED
PURSUANT TO THE PROVISIONS OF ORDER NO. R-4637-A,
WHICH ORDER EXTENDED THE TEMPORARY SPECIAL POOL
RULES FOR THE SOUTH DAGGER DRAW-UPPER PENNSYLVANIAN
ASSOCIATED POOL, EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on March 9, 1977,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 15th day of March, 1977, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

(1) That due public notice having been given as required by
law, the Commission has jurisdiction of this cause and the subject
matter thereof.

(2) That by Order No. R-4637, dated September 26, 1973,
temporary special pool rules for the South Dagger Draw-Upper
Pennsylvanian Associated Pool were promulgated establishing 320-
acre spacing and proration units, an 8,000 to one gas-oil ratio
limitation, and a special depth bracket allowable of 267 barrels
of oil per day.

(3) That by Order No. R-4637-A, dated October 21, 1975, the
temporary special pool rules for the South Dagger Draw-Upper
Pennsylvanian Associated Pool, Eddy County, New Mexico, were
extended through January, 1977.

(4) That pursuant to the provisions of Order No. R-4637-A,
this case was reopened to allow the operators in the subject pool
to appear and show cause why the temporary special pool rules for
the South Dagger Draw-Upper Pennsylvanian Associated Pool should
not expire.

(5) That Order No. R-5353, dated January 17, 1977, super-
seded said Order No. R-4637 as extended by Order No. R-4637-A.

(6) That the evidence presently available establishes that
the temporary special pool rules for the South Dagger Draw-Upper
Pennsylvanian Associated Pool have afforded and will afford to the
owner of each property in the pool the opportunity to produce his
just and equitable share of the oil and gas in the pool, and that
one well will efficiently and economically drain and develop 320
acres.

(7) That the Special Rules and Regulations promulgated by Order No. R-4637, as extended by Order No. R-4637-A, and as now promulgated by Order No. R-5353 will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, prevent reduced recovery which might result from the drilling of too few wells, and otherwise prevent waste and protect correlative rights, and the Special Rules and Regulations promulgated by Order No. R-5353 should be continued in full force and effect until further order of the Commission.

IT IS THEREFORE ORDERED:

(1) That the temporary special pool rules for the South Dagger Draw-Upper Pennsylvanian Associated Pool, promulgated by Order No. R-5353, are hereby continued in full force and effect until further order of the Commission.

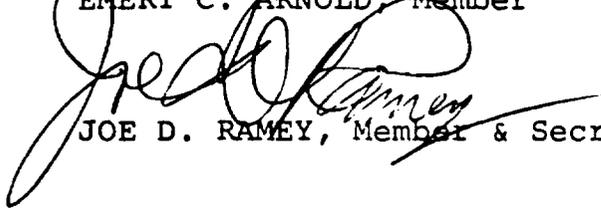
(2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

PHIL R. LUCERO, Chairman


EMERY C. ARNOLD, Member


JOE D. RAMEY, Member & Secretary

S E A L

**STATE OF NEW MEXICO
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:**

**CASE NO. 10108 (Reopened)
Order No. R-5353-L-2**

**IN THE MATTER OF CASE NO. 10108 BEING
REOPENED PURSUANT TO THE PROVISIONS OF
DIVISION ORDER NO. R-5353-L, AS AMENDED,
WHICH ORDER AMENDED THE SPECIAL RULES
AND REGULATIONS FOR THE SOUTH DAGGER
DRAW-UPPER PENNSYLVANIAN ASSOCIATED POOL,
EDDY COUNTY, NEW MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on December 3, 1992, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 17th day of December, 1992, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) By Order No. R-5353-L issued in Case No. 10108 on October 26, 1990, the Division, upon application of Yates Petroleum Corporation (Yates), amended the Special Rules and Regulations for the South Dagger Draw-Upper Pennsylvanian Associated Pool in Eddy County, New Mexico. Order No. R-5353-L, in effect, left the spacing unchanged at 320 acres, amended the well location requirements to provide that each well shall be located no nearer than 660 feet to the nearest side or end boundary of the tract, nor closer than 330 feet to any quarter-quarter section line or subdivision inner boundary, increased the limiting gas-oil ratio to 10,000 cubic feet of gas per barrel of oil, and increased the special depth bracket allowable to 700 barrels of oil per day for a standard proration unit.

(3) By Order No. R-5353-L-1 issued in Case No. 10222 on March 25, 1991, the Division, upon application of Yates Petroleum Corporation, increased the special depth bracket allowable for a 320-acre proration unit within the South Dagger Draw-Upper Pennsylvanian Associated Pool to 1400 barrels of oil per day.

(4) Pursuant to the provisions of Division Order No. R-5353-L, this case was reopened to allow the operators in the subject pool to appear and present evidence and testimony and show cause why the amended Special Rules and Regulations for the South Dagger Draw-Upper Pennsylvanian Associated Pool should remain in effect.

(5) Yates Petroleum Corporation, the operator of approximately 91 percent of the wells in the subject pool, appeared and presented evidence and testimony in support of the continuation of the amended special rules and regulations.

(6) Marathon Oil Company and Conoco Inc., both operators in the subject pool, appeared through counsel at the hearing but presented no evidence or testimony.

(7) The evidence presented indicates that subsequent to the amendment of the special rules and regulations for the subject pool, approximately 43 new wells have been drilled by Yates.

(8) The subject pool has effectively been drilled on 40-acre spacing within the oil bearing portion of the reservoir.

(9) Production from the subject pool has increased from approximately 600 barrels of oil per day in October, 1990, to 6,565 barrels of oil per day at the present time.

(10) The average gas-oil ratio fieldwide during 1992 is approximately 5,300 cubic feet of gas per barrel of oil.

(11) According to testimony presented, a strong effort has been made by Yates not to develop the gas reserves contained within the gas cap in the subject reservoir, which will result in the conservation of reservoir energy.

(12) The evidence and testimony presented by the applicant indicates that the current well location requirements, gas-oil ratio limitation, and special depth bracket allowable within the South Dagger Draw-Upper Pennsylvanian Associated Pool will not cause the premature abatement of reservoir energy and will not reduce the ultimate oil recovery from the subject pool.

(13) Evidence presented in Case No. 10108 in October, 1990, established that the South Dagger Draw-Upper Pennsylvanian Associated Pool and the North Dagger Draw-Upper Pennsylvanian Pool are in geological and pressure communication and are in fact both part of the same pool.

(14) The rules currently in effect for the North Dagger Draw-Upper Pennsylvanian Pool include 160-acre spacing, a limiting gas-oil ratio of 10,000 cubic feet of gas per barrel of oil, and a special depth bracket allowable of 700 barrels of oil per day.

(15) The 160-acre spacing, the 700 barrels of oil per day allowable and the limiting gas-oil ratio of 10,000 cubic feet of gas per barrel of oil are equivalent to the South Dagger Draw-Upper Pennsylvanian spacing of 320 acres, 1400 barrels of oil per day and 10,000 cubic feet of gas per barrel of oil.

(16) Continuation of the special rules and regulations will allow the continued "equivalent" development of both the North Dagger Draw-Upper Pennsylvanian and South Dagger Draw-Upper Pennsylvanian Associated Pools, thereby protecting correlative rights.

(17) No other operator and/or interest owner appeared at the hearing to present evidence and testimony, or to oppose the position taken by Yates in this case.

(18) The amended Rules and Regulations for the South Dagger Draw-Upper Pennsylvanian Associated Pool will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, prevent reduced recovery which might result from the drilling of too few wells, and otherwise protect correlative rights, and therefore should be made permanent.

IT IS THEREFORE ORDERED THAT:

(1) The Special Rules and Regulations for the South Dagger Draw-Upper Pennsylvanian Associated Pool, Eddy County, New Mexico, as amended by Division Order Nos. R-5353-L and R-5353-L-1, are hereby continued in full force and effect until further order of the Division.

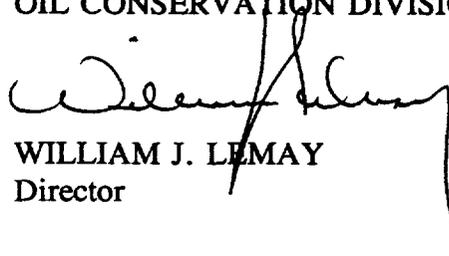
(2) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

CASE NO. 10108 (Reopened)
Order No. R-5353-L-2
Page -4-

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.



STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY
Director

S E A L

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 10108
Order No. R-5353-L

APPLICATION OF YATES PETROLEUM CORPORATION
TO AMEND THE SPECIAL POOL RULES FOR THE
SOUTH DAGGER DRAW-UPPER PENNSYLVANIAN
ASSOCIATED POOL, EDDY COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on October 3, 1990, at Santa Fe, New Mexico, before Examiner Jim Morrow.

NOW, on this 26th day of October, 1990, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) The applicant, Yates Petroleum Corporation, seeks an order amending the special pool rules and regulations for the South Dagger Draw-Upper Pennsylvanian Associated Pool, as promulgated by Division Order No. R-5353, as amended, to provide that each well, oil or gas, shall be located no closer than 660 feet to the outer boundary of the proration unit, nor closer than 330 feet to any quarter-quarter section or subdivision inner boundary, to increase the limiting gas-oil ratio to 10,000 cubic feet of gas for each barrel of oil, and for a special depth bracket oil allowable for oil wells on a 320-acre proration unit of 700 barrels of oil per day. Said pool comprises either all or portions of Sections 11, 14, 22, 23, 26, and 35, Township 20 South, Range 24 East.

(3) Rules currently in effect for the South Dagger Draw-Upper Pennsylvanian Associated Field are as follows:

-2-

Case No. 10108
Order No. R-5353-L

SPECIAL RULES AND REGULATIONS
FOR THE
SOUTH DAGGER DRAW-UPPER PENNSYLVANIAN ASSOCIATED POOL

RULE 2. (a) A standard oil proration unit shall be 320 acres. A standard gas proration unit shall be 320 acres.

RULE 2. (b) All oil wells and gas wells shall be located not closer than 660 feet to the nearest side boundary nor closer than 1980 feet to the nearest end boundary of the spacing unit nor closer than 330 feet to any subdivision inner boundary.

RULE 6. The limiting gas-oil ratio shall be 8,000 cubic feet of gas for each barrel of oil produced.

RULE 22. The special depth bracket allowable for an oil well on a 320-acre tract shall be 267 barrels of oil per day.

(4) Pool rules for the North Dagger Draw-Upper Pennsylvanian Pool provide for 160-acre spacing, a special depth bracket allowable of 350 barrels of oil per day, and a limiting gas-oil ratio of 10,000.

(5) At the hearing, the applicant presented evidence to show that the North Dagger Draw-Upper Pennsylvanian Pool and the South Dagger Draw- Upper Pennsylvanian Associated Pool are in geological and pressure communication and are in fact both part of the same pool.

(6) Applicant does not recommend consolidation of the two pools. The North pool has been developed with 160-acre rules and the South pool with 320-acre rules. A change in proration unit size for either pool would disturb ownership equities which have been created in compliance with existing rules. The proposed change in rules for the South pool would allow a second well to be drilled on the 320-acre proration units in the South pool and would result in rules which are "equivalent" to those in the North pool.

(7) Applicant submitted testimony that additional drilling, recompletion work, and equipment installations will result in the development of additional reserves and will increase oil and gas production if the proposed rules are adopted.

(8) Data submitted by the applicant indicates that Yates is operator of 9 producing wells in the South Dagger Draw Pool.

(9) Yates Petroleum Corporation submitted projections which estimate increased daily oil production of 600 barrels to 2,500 barrels

-3-

Case No. 10108
Order No. R-5353-L

(depending on the number of new wells drilled) following approval of the proposed rules.

(10) Testimony indicates that facilities and markets are available for handling the increased volume of gas production which could result from the proposed higher allowables.

(11) Production records for January through June, 1990 indicate that one well in the South Dagger Draw Pool, the Yates John AGU No. 1, is capable of producing more than the current top allowable rate of 267 barrels per day. Records show that this well produced 10,434 barrels (347.8 bbls. per day) in June, 1990.

(12) Production records indicate that no well in the South Dagger Draw pool is currently producing as much gas as is allowed by the current gas limit (2,136 MCF per day).

(13) No operator or interested party objected to the proposed rules amendments.

(14) The proposed changes in pool rules for the South Dagger Draw- Upper Pennsylvanian Associated Pool will result in rules which are equivalent to those in the North Dagger Draw-Pennsylvanian Pool and should be approved. The proposed rules will allow additional wells to be drilled and recompleted and will result in higher producing rates and the recovery of additional oil and gas.

IT IS THEREFORE ORDERED THAT:

(1) The application of Yates Petroleum Corporation to amend the Special Pool Rules for the South Dagger Draw-Upper Pennsylvanian Associated Pool, Eddy County, New Mexico, is hereby approved on a temporary basis.

(2) Temporary special pool rules for the South Dagger Draw-Upper Pennsylvanian Associated Pool are hereby promulgated as follows as an amendment to Division Order No. R-5353.

SPECIAL RULES AND REGULATIONS
FOR THE
SOUTH DAGGER DRAW-UPPER PENNSYLVANIAN ASSOCIATED POOL

RULE 2. (a) A standard oil proration unit shall be 320 acres. A standard gas proration unit shall be 320 acres.

-4-

Case No. 10108
Order No. R-5353-L

RULE 2. (b) Each well shall be located no nearer than 660 feet to the nearest side boundary of the tract, nor nearer than 660 feet to the nearest end boundary of the tract, nor closer than 330 feet to any quarter-quarter section or subdivision inner boundary.

RULE 6. The limiting gas-oil ratio shall be 10,000 cubic feet of gas for each barrel of oil produced.

RULE 22. The special depth bracket allowable for a 320-acre proration unit shall be 700 barrels of oil per day. All or any part of the allowable may be produced by a single well or by two or more wells on the unit. However, total oil allowable assigned to a 320-acre unit shall not exceed 700 barrels per day.

IT IS FURTHER ORDERED THAT:

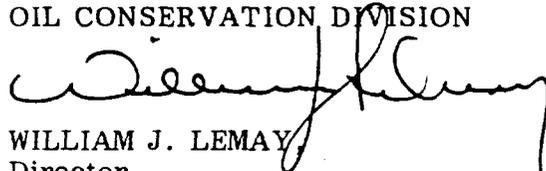
(3) The Amended Special Rules and Regulations for the South Dagger Draw-Upper Pennsylvanian Associated Pool shall become effective November 1, 1990.

(4) This case shall be reopened at an examiner hearing in November, 1992, at which time the operators in the pool may appear and present evidence and show cause why the foregoing Special Rules and Regulations should remain in effect.

(5) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


WILLIAM J. LEMAY
Director

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STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 10222
ORDER NO. R-5353-L-1

**APPLICATION OF YATES PETROLEUM
CORPORATION TO AMEND THE SPECIAL
RULES AND REGULATIONS FOR THE SOUTH
DAGGER DRAW-UPPER PENNSYLVANIAN
ASSOCIATED POOL, EDDY COUNTY, NEW MEXICO**

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on February 7, 1991, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 25th day of March, 1991 the Division Director, having considered the testimony, the record and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

- (1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.
- (2) At the time of the hearing, this case was consolidated with Division Case No. 10221 for purposes of testimony.
- (3) The General Rules and Regulations for the Associated Oil and Gas Pools of Northwest and Southeast New Mexico as promulgated by Division Order No. R-5353, dated January 17, 1977, also enacted temporary special rules and regulations for the South Dagger Draw-Upper Pennsylvanian Associated Pool, Eddy County, New Mexico, establishing 320-acre spacing, designated well locations, set the limiting gas-oil ratio at 8,000 cubic feet of gas for each barrel of oil produced and adopted a special depth bracket allowable for an oil well of 267 barrels of oil.

(4) Division Order No. R-5353-A, dated March 15, 1977 made permanent the above-described temporary pool rules.

(5) By Division Order No. R-5353-L, dated October 26, 1990, it was established that both the North Dagger Draw-Upper Pennsylvanian Pool and said South Dagger Draw-Upper Pennsylvanian Associated Pool were, "in geological and pressure communication and are in fact both part of the same pool." Therefore the Special Rules and Regulations for the South Dagger Draw-Upper Pennsylvanian Associated Pool were temporarily changed to parallel the special rules for the adjacent North Dagger Draw-Upper Pennsylvanian Pool (Division Order No. R-4691, as amended) to the north. Said Order No. R-5353-L left the spacing unchanged at 320 acres, but modified the designated well locations, changed the limiting gas-oil ratio to 10,000 cubic feet of gas for each barrel of oil produced, and increased the special depth bracket allowable from 267 barrels of oil per day to 700 barrels of oil per day.

(6) The South Dagger Draw-Upper Pennsylvanian Associated Pool presently comprises the S/2 of Section 11 and all of Sections 14, 15, 22, 23, 26 and 35, Township 20 South, Range 24 East, NMPM, Eddy County, New Mexico.

(7) At this time the applicant, Yates Petroleum Corporation, seeks to amend the Special Rules and Regulations for the South Dagger Draw-Upper Pennsylvanian Associated Pool changing the special depth bracket allowable for a standard 320-acre oil spacing and proration unit in said pool from 700 barrels of oil per day to 1400 barrels of oil per day.

(8) The timing of this matter is in conjunction to Division Case No. 10221 which is the application of Conoco, Inc. to amend the Special Rules and Regulations for the North Dagger Draw-Upper Pennsylvanian Pool, as promulgated by Division Order No. R-4691, as amended, changing the special depth bracket allowable for a standard 160-acre oil spacing and proration unit in said pool from 350 barrels of oil per day to 700 barrels of oil per day.

(9) In said companion Case No. 10221 it was found that additional drilling, recompletion work and equipment installations should result in the development of additional reserves and would increase oil and gas production if the proposed amendment as described above was adopted.

(10) Said amendment to the North Dagger Draw-Upper Pennsylvanian Pool was approved by Division Order No. R-4691-D, dated March 21, 1991.

(11) To continue the consistent development of both pools by similar operating rules, the proposed amendment to the Special Rules for the South Dagger Draw-Upper Pennsylvanian Associated Pool should be approved.

IT IS THEREFORE ORDERED THAT:

(1) Effective April 1, 1991, Rule 22 of the temporary special pool rules for the South Dagger Draw-Upper Pennsylvanian Associated Pool, as promulgated by Division Order No. R-5353-L, dated October 26, 1990, is hereby amended to read in its entirety as follows:

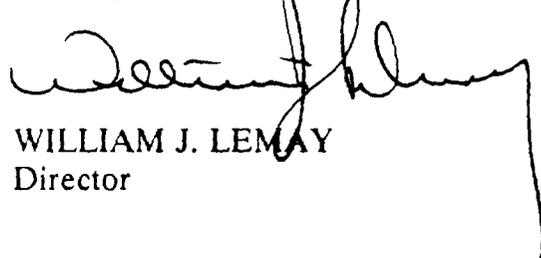
"Rule 22. The special depth bracket allowable for a 320-acre proration unit shall be 1400 barrels of oil per day. All or any part of the allowable may be produced by a single well or by two or more wells on the unit. However, total oil allowable assigned to a 320-acre unit shall not exceed 1400 barrels per day."

(2) All other provisions of said Order No. R-5353-L shall remain in full force and effect.

(3) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


WILLIAM J. LEMAY
Director

S E A L

**STATE OF NEW MEXICO
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:**

**CASE NO. 10108 (Reopened)
Order No. R-5353-L-2**

**IN THE MATTER OF CASE NO. 10108 BEING
REOPENED PURSUANT TO THE PROVISIONS OF
DIVISION ORDER NO. R-5353-L, AS AMENDED,
WHICH ORDER AMENDED THE SPECIAL RULES
AND REGULATIONS FOR THE SOUTH DAGGER
DRAW-UPPER PENNSYLVANIAN ASSOCIATED POOL,
EDDY COUNTY, NEW MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on December 3, 1992, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 17th day of December, 1992, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) By Order No. R-5353-L issued in Case No. 10108 on October 26, 1990, the Division, upon application of Yates Petroleum Corporation (Yates), amended the Special Rules and Regulations for the South Dagger Draw-Upper Pennsylvanian Associated Pool in Eddy County, New Mexico. Order No. R-5353-L, in effect, left the spacing unchanged at 320 acres, amended the well location requirements to provide that each well shall be located no nearer than 660 feet to the nearest side or end boundary of the tract, nor closer than 330 feet to any quarter-quarter section line or subdivision inner boundary, increased the limiting gas-oil ratio to 10,000 cubic feet of gas per barrel of oil, and increased the special depth bracket allowable to 700 barrels of oil per day for a standard proration unit.

(3) By Order No. R-5353-L-1 issued in Case No. 10222 on March 25, 1991, the Division, upon application of Yates Petroleum Corporation, increased the special depth bracket allowable for a 320-acre proration unit within the South Dagger Draw-Upper Pennsylvanian Associated Pool to 1400 barrels of oil per day.

(4) Pursuant to the provisions of Division Order No. R-5353-L, this case was reopened to allow the operators in the subject pool to appear and present evidence and testimony and show cause why the amended Special Rules and Regulations for the South Dagger Draw-Upper Pennsylvanian Associated Pool should remain in effect.

(5) Yates Petroleum Corporation, the operator of approximately 91 percent of the wells in the subject pool, appeared and presented evidence and testimony in support of the continuation of the amended special rules and regulations.

(6) Marathon Oil Company and Conoco Inc., both operators in the subject pool, appeared through counsel at the hearing but presented no evidence or testimony.

(7) The evidence presented indicates that subsequent to the amendment of the special rules and regulations for the subject pool, approximately 43 new wells have been drilled by Yates.

(8) The subject pool has effectively been drilled on 40-acre spacing within the oil bearing portion of the reservoir.

(9) Production from the subject pool has increased from approximately 600 barrels of oil per day in October, 1990, to 6,565 barrels of oil per day at the present time.

(10) The average gas-oil ratio fieldwide during 1992 is approximately 5,300 cubic feet of gas per barrel of oil.

(11) According to testimony presented, a strong effort has been made by Yates not to develop the gas reserves contained within the gas cap in the subject reservoir, which will result in the conservation of reservoir energy.

(12) The evidence and testimony presented by the applicant indicates that the current well location requirements, gas-oil ratio limitation, and special depth bracket allowable within the South Dagger Draw-Upper Pennsylvanian Associated Pool will not cause the premature abatement of reservoir energy and will not reduce the ultimate oil recovery from the subject pool.

(13) Evidence presented in Case No. 10108 in October, 1990, established that the South Dagger Draw-Upper Pennsylvanian Associated Pool and the North Dagger Draw-Upper Pennsylvanian Pool are in geological and pressure communication and are in fact both part of the same pool.

(14) The rules currently in effect for the North Dagger Draw-Upper Pennsylvanian Pool include 160-acre spacing, a limiting gas-oil ratio of 10,000 cubic feet of gas per barrel of oil, and a special depth bracket allowable of 700 barrels of oil per day.

(15) The 160-acre spacing, the 700 barrels of oil per day allowable and the limiting gas-oil ratio of 10,000 cubic feet of gas per barrel of oil are equivalent to the South Dagger Draw-Upper Pennsylvanian spacing of 320 acres, 1400 barrels of oil per day and 10,000 cubic feet of gas per barrel of oil.

(16) Continuation of the special rules and regulations will allow the continued "equivalent" development of both the North Dagger Draw-Upper Pennsylvanian and South Dagger Draw-Upper Pennsylvanian Associated Pools, thereby protecting correlative rights.

(17) No other operator and/or interest owner appeared at the hearing to present evidence and testimony, or to oppose the position taken by Yates in this case.

(18) The amended Rules and Regulations for the South Dagger Draw-Upper Pennsylvanian Associated Pool will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, prevent reduced recovery which might result from the drilling of too few wells, and otherwise protect correlative rights, and therefore should be made permanent.

IT IS THEREFORE ORDERED THAT:

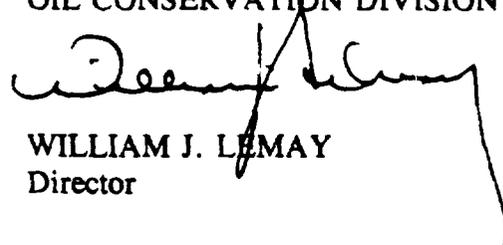
(1) The Special Rules and Regulations for the South Dagger Draw-Upper Pennsylvanian Associated Pool, Eddy County, New Mexico, as amended by Division Order Nos. R-5353-L and R-5353-L-1, are hereby continued in full force and effect until further order of the Division.

(2) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

CASE NO. 10108 (Reopened)
Order No. R-5353-L-2
Page -4-

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY
Director

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| <p>o Indian Hills St Com No. 3 660' x 160' N/12 Sec 1 7/03</p> | | | |
| <p>o Indian Hills St. Comm No. 4 180' x 160' x 160' w/1/2 acre cont. 8/93</p> | | <p>o Indian Hills St Com No. 1 160' x 160' x 160' N/12 Sec 1 No. 2-012</p> | |
| | <p>o Indian State Comm No. 8 976' x 160' x 160' S/2 Dedication</p> | | |

SECTION _____

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STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
CASE 10,108

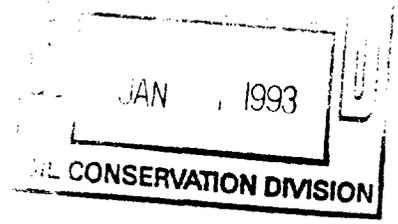
EXAMINER HEARING

IN THE MATTER OF:

In the matter of Case 10,108 being reopened pursuant to the provisions of Division Order Number R-5353-L, as amended, which order amended the special rules and regulations for the South Dagger-Upper Pennsylvanian Associated Pool in Eddy County

TRANSCRIPT OF PROCEEDINGS

BEFORE: DAVID R. CATANACH, EXAMINER



STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO
December 3rd, 1992

A P P E A R A N C E S

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FOR THE DIVISION:

ROBERT G. STOVALL
Attorney at Law
Legal Counsel to the Division
State Land Office Building
Santa Fe, New Mexico 87504

FOR YATES PETROLEUM:

LOSEE, CARSON, HAAS & CARROLL, P.A.
Attorneys at Law
By: ERNEST L. CARROLL
300 American Home Building
Post Office Drawer 239
Artesia, New Mexico 88211-0239

FOR MARATHON OIL COMPANY AND CONOCO, INC.:

KELLAHIN & KELLAHIN
Attorneys at Law
By: W. THOMAS KELLAHIN
117 N. Guadalupe
P.O. Box 2265
Santa Fe, New Mexico 87504-2265

* * *

I N D E X

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YATES EXHIBITS:

| | |
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* * *

1 WHEREUPON, the following proceedings were had
2 at 10:04 a.m.

3

4 EXAMINER CATANACH: Call the hearing back to
5 order, and at this time we'll call Case 10,108.

6 MR. STOVALL: In the matter of Case 10,108
7 being reopened pursuant to the provisions of Division
8 Order Number R-5353-L, as amended, which order amended
9 the special rules and regulations for the South Dagger-
10 Upper Pennsylvanian Associated Pool in Eddy County.

11 EXAMINER CATANACH: Are there appearances in
12 this case?

13 MR. CARROLL: Mr. Examiner, my name is Ernest
14 Carroll of the Artesia law firm of Losee, Carson, Haas
15 and Carroll.

16 I'm here today representing Yates Petroleum,
17 and I will have one witness.

18 EXAMINER CATANACH: Other appearances?

19 MR. KELLAHIN: Mr. Examiner, I'm Tom Kellahin
20 of the Santa Fe law firm of Kellahin & Kellahin,
21 appearing today on behalf of Marathon Oil Company and
22 Conoco, Inc.

23 EXAMINER CATANACH: Additional appearances?

24 Will the witness please stand and be sworn
25 in?

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DAVID F. BONEAU,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. CARROLL:

Q. Would you please state your name and employment for the record?

A. My name is David Francis Boneau. I'm employed by Yates Petroleum in Artesia, New Mexico as a reservoir engineering supervisor.

Q. Mr. Boneau, have you previously testified before the Oil Conservation Division and had your credentials accepted with respect to the field of oil reservoir engineering?

A. Yes, sir.

MR. CARROLL: Mr. Examiner, I tender Mr. Boneau as an expert in the field of reservoir engineering.

EXAMINER CATANACH: Mr. Boneau is so qualified.

Q. (By Mr. Carroll) Mr. Boneau, today you're here on behalf of Yates Petroleum with respect to the reopening of Case 10,108; is that correct?

A. Yes, sir.

Q. You are familiar with the matters that that

1 case dealt with in the past, are you not?

2 A. That's correct.

3 Q. Would you briefly state for the record and
4 this Examiner the position that Yates Petroleum takes
5 with respect to the reopening of this case?

6 A. I think it would help to take a minute or two
7 to review where we are and what we -- how we got here
8 and what we want, what we need.

9 Case 10,108 was heard October 3rd, 1990, by
10 Jim Morrow and resulted in Order 5353-L.

11 At that time Yates asked that the special -
12 pool rules for South Dagger Draw field be made
13 equivalent or parallel to those for the North Dagger
14 Draw-Upper Penn field, and we put on engineering and
15 geological testimony at that time which showed that
16 North and South Dagger Draw-Upper Penn Pools are in
17 geological and pressure communication and are in fact
18 both part of the same pool, and one of the findings in
19 Order 5353-L states that.

20 MR. STOVALL: Dr. Boneau, if I might
21 interrupt you, just to get my -- I don't know what --
22 orientation.

23 Is this the one where you've got a 160 and a
24 320 pool adjacent to each other, and you're --

25 THE WITNESS: That's correct.

1 MR. STOVALL: -- and that was originally to
2 balance the allowables and GORs so they could produce
3 at a common rate with different spacing?

4 THE WITNESS: You're thinking the right
5 place, yes, sir.

6 MR. STOVALL: Oh, good, I know where I am
7 now. Please continue. I'm sorry to interrupt you.

8 THE WITNESS: Yeah, I was hoping to get to
9 that point pretty quickly.

10 MR. STOVALL: Got you there quick.

11 THE WITNESS: Before October, 1990, the rules
12 were, in North Dagger, 160-acre spacing with 350-
13 barrel-a-day allowable and 10,000 GOR.

14 And the rules in South Dagger before this
15 hearing in October of 1990 were 320-acre spacing, 267
16 barrels of oil a day and an 8000 GOR.

17 And in the case we asked, along with some
18 other operators, that South Dagger Draw be made
19 equivalent or parallel or -- you know, not exactly the
20 same, retain the 320-acre spacing, but raise the
21 allowable to 700 barrels of oil per day, per 320 acres,
22 with a 10,000 GOR, and the space -- the well locations
23 were changed so that wells could be 660 from an outer
24 boundary and no closer than 330 to a quarter quarter
25 section.

1 And that's what was granted. In the Order of
2 October 26th, 1990, the 700-barrel-a-day allowable and
3 the 10,000 GOR were granted on a temporary basis with
4 the case to be re-opened late in 1992, which is now.

5 One other factor, then, in February of 1991,
6 just a couple of months after this, Conoco came and
7 asked that the allowable in North Dagger Draw be
8 doubled, and at the same time Yates came and asked that
9 the allowable in South Dagger Draw be kept equivalent
10 and also doubled.

11 And that resulted in an Order 5353-L-1, which
12 doubled the allowable temporarily till now, is how it
13 was stated. So it modified the October Order to be
14 1400 barrels a day in South Dagger Draw.

15 So the present rules in South Dagger Draw are
16 320-acre spacing, 1400 barrels a day allowable, 10,000
17 GOR, and the wells 660 from the outer boundary and 330
18 from the quarter quarter section.

19 And we are here today asking that these rules
20 be retained and made permanent.

21 Q. (By Mr. Carroll) Now, Mr. Boneau, you have
22 prepared certain exhibits to substantiate this request
23 of the Commission to make these rules permanent; is
24 that correct?

25 A. That's correct, yes, sir.

1 Q. Would you turn to your first two exhibits,
2 which is -- they are marked 1 and 1A -- and would you
3 identify for the record what these exhibits are and
4 then explain their significance.

5 A. At the time of these earlier hearings, the
6 main findings in my mind were that the two pools were
7 in communication; they really are part of the same
8 reservoir.

9 And secondly, we essentially promised that
10 the new rules would result in increased production from
11 South Dagger Draw.

12 Exhibit Number 1 shows the average daily
13 production for the last month that's available, which
14 is September, and the oil production in South Dagger
15 Draw has gone from about 500 barrels a day in October
16 of 1990 to 6565 barrels of oil per day in the fall of
17 1992. The gas production is now 40 million a day, and
18 water production is 18,732 barrels of water per day.

19 Kind of as a point of interest, the combined
20 pools are producing about 22,000 barrels of oil per
21 day, which is the largest production from any field in
22 New Mexico.

23 Q. So basically the operator's promise to make
24 more -- or create more production, they have at least
25 followed through with that promise, have they not?

1 A. There were about ten wells in South Dagger
2 Draw. There are now 57.

3 It's a big thick dolomite reservoir with up
4 to -- as Exhibit 1 says, up to 236 feet of net pay. We
5 estimate there are around 50 million barrels of oil in
6 place and 100 BCF of gas in place in South Dagger Draw,
7 and in the past two years there's been a lot of
8 activity to develop these resources.

9 Exhibit 1A simply breaks down the production
10 by operator, and it basically just shows that Yates
11 operates 80 to 90 percent of the production in South -
12 Dagger Draw. The other operators there are Nearburg,
13 McKay, Conoco, and also Marathon, who has started a
14 well or two in the recent past.

15 Yates is not so much the dominant operator in
16 North Dagger Draw, but in South Dagger Draw we are the
17 largest part of the operation.

18 Q. All right, Mr. Boneau, would you turn now to
19 your Exhibit Number 2 --

20 A. Okay.

21 Q. -- and describe it and --

22 A. The two things I'm trying to show the
23 Examiner are that the 10,000 GOR is reasonable and that
24 the 1400-barrel-a-day allowable is being used and is --
25 ought to be maintained.

1 So Exhibit Number 2 is a map, and it's the
2 only map I brought, and so it's -- going to be the map
3 we refer to from time to time.

4 Q. This map does cover Townships 19 South and 20
5 South of Range 24 East of Eddy County, New Mexico, does
6 it not?

7 A. Well, it covers the south part of 19 and 24,
8 and the --

9 Q. -- north part of 20?

10 A. Pretty much all of 20-24.

11 Q. All right.

12 A. To kind of help orient people, South Dagger
13 Draw is the field south of the dashed line that goes
14 through Sections 9, 10, 11 and 12. The field continues
15 up into 20-24, and continues five or so miles further
16 up to the northeast. The Indian Basin-Upper Penn Pool
17 is in the township to the south.

18 Dagger Draw South consists of a -- is an
19 associated pool, and it consists of a strong oil leg,
20 where most of the black dots are, down through Sections
21 11, 14, 23 and 26. And to the west there is a gas cap,
22 and the gas wells out in Sections 15, 16, 22, et cetera
23 are in the gas cap of the South Dagger Draw-Upper Penn
24 Pool. Also the Conoco gas well in Section 35 of 20-24,
25 the Preston Federal, is in the gas cap of the South

1 Dagger Draw-Upper Penn Pool.

2 What's shown on this figure, the numbers next
3 to each dot is the GOR for the particular well in
4 September of 1992, and they range from, a few of them,
5 around a thousand, up to 8000 and 10,000 and 12,000 for
6 the oil wells. And then out in the gas cap, of course,
7 the GORs are 100,000, very large.

8 If you go down the wells that are on the east
9 side of Sections 11, 14, 23 and 26, those GORs average
10 about 3800.

11 If you go one set of 40s west, the GORs
12 average about 5000.

13 And if you go down that line of wells that
14 are essentially 1980 feet in from the west of 11, 14,
15 23 and 26, the average GOR is about 11,000.

16 And it increases as you go west. The field
17 is heterogeneous, and so it's not -- every well doesn't
18 follow what I'm saying. But the GORs increase to the
19 west.

20 And in the oil leg -- you can see the
21 numbers, but they're 2000s, 4000s, 6000s and some
22 8000s, and you're -- that's the GOR that occurs.

23 And the operators are trying to produce the
24 oil and keep the gas down, because the oil is what's
25 valuable.

1 But the GORs that occur are, in my opinion,
2 consistent with a GOR of 10,000. This is the data.

3 Q. All right. Would you turn now to your
4 exhibits, and I think Exhibits 3 and 4 can be talked
5 about concurrently, if you would describe what they are
6 and their significance.

7 A. Exhibits 3 and 4 are a history of production
8 and GOR in the South Dagger Draw-Upper Penn Pools,
9 starting from 1981 to -- through the first nine months
10 of 1992, and the -- Exhibit 4 is a plot of the GOR over
11 that time period.

12 There was not a whole lot of activity in
13 South Dagger Draw from 1981 to -- through 1989. If you
14 look at the oil production, it sort of decreased from
15 that 40,000 barrels a year down to almost nothing. And
16 the GORs were in the 20,000, 30,000, 40,000 range. The
17 main production during that time was from the Conoco
18 Preston Federal well.

19 Then in 1990, 1991 and 1992, occurred the
20 development that we talked about, and the GORs during
21 that time period have been 11,000 in 1990, 6875 in 1991
22 and about 5300 on average during 1992.

23 A real strong effort's been made to develop
24 the oil and stay away from the gas cap, and so we've
25 tried and the other operators have tried to drill oil

1 wells and minimize the GOR. And with all that effort,
2 the GOR is 5300.

3 The plot in Exhibit 4 shows exactly those
4 numbers, and the GORs in the last several years has
5 been in the 5000-to-10,000 range.

6 Q. All right. Would you next go to your
7 Exhibits 5 and 6?

8 A. Exhibits 5 and 6 are similar pictures for
9 North Dagger Draw, and the -- Again, there's been a big
10 upsurge in development in North Dagger Draw, but North
11 Dagger Draw does not have the gas cap, it has a little
12 better water support, and it's always had lower GORs.

13 So the GORs in North Dagger Draw are shown in
14 the right-hand column from 1976 to 1992. Actually, the
15 number for the 1984 is incorrect. It really should be
16 about 2500. But the GOR in North Dagger Draw has been
17 between 2500 and 4000 over the last ten years,
18 basically.

19 Q. Mr. Boneau, let me ask at this point, has
20 anything developed since the original hearing of this
21 case back in -- which resulted in the first Order
22 granting the special pool rules, has there been
23 anything come to your attention which would cause you
24 to change your opinion as to whether or not the North
25 and the South Dagger Draw fields are actually one field

1 geologically and are in communication?

2 A. No, there's nothing happened to change that.
3 In fact, the development has confirmed that. The map
4 in Exhibit 2 shows that wells have been developed right
5 across the boundary between the pools, and the wells
6 behave similarly and are clearly in pressure
7 communication.

8 Q. All right. Your next set -- group of
9 exhibits, 7 through 11, are individual proration unit
10 case histories, are they not?

11 A. Yes, sir, and what I had in mind for showing
12 that 1400 barrels a day is an acceptable allowable are
13 really two kinds of arguments.

14 First argument simply is that in the oil leg,
15 the field has been developed on what you would call 40-
16 acre spacing. You look at the map, and there's a well
17 on every 40 acres.

18 The depth bracket allowable for these wells
19 at 7500 feet is 187 barrels a day on a -- for a 40-acre
20 well, and you multiply that by eight wells in a 320-
21 acre spacing unit and you get 1496, which to me is
22 consistent with the 1400-barrel-a-day allowable that we
23 now have and that we're asking for.

24 So my first argument is that the field has in
25 fact been developed on 40 acres in the oil leg, and the

1 plain vanilla rules for 40-acre spacing at 7500 foot
2 would result in something very close to 1400 barrels of
3 oil per day.

4 MR. STOVALL: Except for the GOR. Pardon me.

5 THE WITNESS: Yes, sir. You've heard my
6 comments about the GOR in earlier exhibits, and now I'd
7 like to talk about the oil wells.

8 MR. STOVALL: Right, got you. I understand.

9 THE WITNESS: Yes, sir.

10 My other argument for the reasonableness of
11 the oil allowable is simply that the 1400-barrel-a-day
12 allowable is being used by proration units both in
13 South Dagger Draw and in nearby parts of North Dagger
14 Draw, and I have five exhibits which show specific
15 proration units and what their production has been.

16 Do you want to proceed to those?

17 Q. (By Mr. Carroll) Yes, just go right -- if
18 you would, starting with Exhibit Number 7 and proceed
19 through 11.

20 A. Exhibit Number 7 is a plot of monthly oil
21 production from the proration unit that consists of the
22 north half of Section 14 of 20-24, and that's in South
23 Dagger Draw.

24 The lines -- The black lines, the black
25 horizontal lines indicate -- the upper one indicates

1 the 1400-barrel-a-day allowable, approximately 43,000
2 barrels of oil per month. And the lower black line is
3 70 percent of that top allowable, just to indicate that
4 it's reasonably close to the top allowable.

5 The production from these wells in the north
6 half of 14 -- and there are five wells in that spacing
7 unit -- was around 15,000 barrels a day.

8 And when the other -- the wells were drilled
9 to bring it up to five wells, the production increased,
10 and it increased, as you can see, in early 1992, past
11 the allowable. And there was a month it was over
12 60,000 barrels, and it's dropped back down. But
13 through 1992 it's been producing mostly over 30,000
14 barrels a month and still producing 25,000 barrels a
15 month.

16 So it's using a really good part of that 1400
17 barrels a day allowable. And Yates will -- is
18 attempting to get two more wells drilled in that
19 proration unit. So this proration unit is capable of
20 producing over 1000 barrels of oil per day.

21 The second example is in Exhibit 8, and it
22 shows the spacing unit which is the east half of
23 Section 23, again in South Dagger Draw, and in that
24 spacing unit there are seven wells drilled. And since
25 mid-1991, the production has been over 25,000 barrels a

1 month, and mostly over 30,000 barrels a month. And
2 those seven wells are producing, again, approximately a
3 thousand barrels of oil per day out of that spacing
4 unit.

5 Exhibit 9 is the third example from South
6 Dagger Draw, and it consists of the east half of
7 Section 26 of 20-24. There, there are -- Six wells
8 exist on the map. There are actually five of them that
9 are producing. One of them is an old Roger Hanks well
10 from 20 or 25 years ago which is not producing very
11 much.

12 Again, those wells have just been drilled in
13 1992, and in the last half of 1992 they've been
14 producing above 30,000 barrels a month, so that those
15 five wells are producing approximately 1000 barrels of
16 oil per day from that spacing unit.

17 So pretty much throughout and in different
18 parts of South Dagger Draw, there are 320-acre spacing
19 units that are using this 1400 -- a very good part of
20 this 1400-barrel-a-day allowable, and they're capable
21 of producing that.

22 Exhibit 10, then, and Exhibit 11 are two
23 examples from North Dagger Draw. And there's a lot of
24 examples from North Dagger Draw we could bring up, but
25 I brought two that are fairly close to South Dagger

1 Draw.

2 Exhibit 10 is the 160 acres consisting of the
3 northeast quarter of Section 36 of 19-24, and that's at
4 the very top right of the map in Exhibit 2. This
5 spacing unit contains four wells, so it's fully
6 developed. And here for the 160-acre spacing unit, the
7 allowable is now 700 barrels a day, and these four
8 wells have been producing right at 700 barrels of oil
9 per day, or you can see some months have been over the
10 allowable.

11 And the final example is quite close to
12 Dagger Draw. It's the northeast quarter -- It's quite
13 close to South Dagger Draw. The spacing unit in
14 Exhibit 11 consists of the northeast quarter of Section
15 11, 20-24. It's immediately adjacent to South Dagger
16 Draw. There are three wells and one undrilled location
17 in this spacing unit.

18 In 1991, the production was between 18,000
19 and 22,000, 25,000 barrels of oil per month, and it's
20 decreased to about 15,000 barrels of oil per month.
21 And there will probably be a fourth well drilled in
22 this. But this spacing unit just offsetting South
23 Dagger Draw has been using the 700-barrel-a-day
24 allowable in North Dagger Draw.

25 So 160 acres -- There are many examples where

1 160 acres can produce very close to the 700 barrels a
2 day, and a number of examples are shown where the 320-
3 acre proration unit can produce near 1400 barrels of
4 oil per day. And we think that production should be
5 allowed to continue.

6 Q. All right. Mr. Boneau, your last exhibit is
7 Exhibit number 12. Would you describe what that
8 exhibit is?

9 A. Exhibit Number 12 is a letter faxed from a
10 man representing Nearburg Exploration, and it simply
11 says that they agree with keeping the rules the way
12 they are and they support all we're saying this
13 morning.

14 Q. All right. Mr. Boneau, is it your opinion
15 that the making permanent of the present temporary
16 rules that were put into effect by Order R-5353-L, as
17 amended, and R-5353-L-1 -- is it your opinion that the
18 making permanent of those special pool rules would
19 prevent waste and protect correlative rights?

20 A. Yes, sir.

21 Q. Is there any other issue that you'd like to
22 bring before the -- or bring to the attention of the
23 Examiner that I've overlooked to ask you about, Mr.
24 Boneau?

25 A. I don't believe so. I've assumed that the

1 well location part of the previous Order is really
2 what's standard, and I don't see any reason for
3 controversy about that.

4 I've tried to talk about the GOR and the oil
5 allowable, which are large numbers for an oil pool in
6 New Mexico, and I've shown what evidence there is to
7 show about how reasonable they are.

8 MR. CARROLL: All right, thank you, Mr.
9 Boneau.

10 At this time, Mr. Examiner, I would move
11 admission of Yates Exhibits 1 through 12.

12 EXAMINER CATANACH: Exhibits 1 through 12
13 will be admitted as evidence.

14 MR. CARROLL: Mr. Examiner, I would pass the
15 witness at this time.

16 EXAMINER CATANACH: Mr. Kellahin?

17 MR. KELLAHIN: Thank you.

18 CROSS-EXAMINATION

19 BY MR. KELLAHIN:

20 Q. Let me ask you about projections of future
21 expansions of the pool.

22 As we move south into 35 and into the next
23 township, do you anticipate that the oil will continue
24 to be productive in the pool as the pool is extended
25 further south, or have we determined and found the

1 limits of the oil production?

2 A. You're getting my opinion for your money --

3 Q. Yes, sir.

4 A. -- and that's what I'll tell you.

5 We are close to the limits of oil production
6 in the pools. There may be some oil production in the
7 north half of 35, there may be some oil production in a
8 decent part of 36, in the north half of 36, say.

9 There is probably no oil production
10 associated with South Dagger Draw in the township to
11 the south or in anything west of what we've talked
12 about.

13 Most of it -- mostly to the east -- Yates is
14 looking to go as far west as we can go and still get
15 oil. And you see on this exhibit there's a couple
16 wells in that westernmost column that have 22,000 GOR
17 and 67,000 GOR, but you also see in Section 14 there's
18 a well in the west half of the west half of Section 14
19 that still has a low GOR. So Yates is exploring moving
20 towards the gas cap and still getting oil.

21 People who have leases on the edge of the
22 pool are exploring to the south that we've talked
23 about.

24 And there still may be some wells, a few
25 wells to the east, but I think that's as far as the oil

1 can go.

2 Q. I'm curious in how the rules are going to
3 address the transition areas between the oil and the
4 gas production.

5 Under the associated pools, we currently are
6 precluded from having a 320 spacing unit that's
7 simultaneously dedicated to a gas well and to an oil
8 well in this pool. Is that yet a problem for anyone?
9 And if so, how do we handle it?

10 A. To my knowledge, that is not yet a problem
11 for anyone.

12 Well, the real answer to the problem is that
13 the -- in my mind, the gas is more valuable as energy
14 to produce the oil than it is as produced gas, and --

15 Q. If the operator is unfortunate enough,
16 though, in the first well in that spacing unit to have
17 drilled a gas well, then he needs to either not produce
18 the gas well and try again for an oil well --

19 A. Yes, and the reason there's not been a
20 problem like that to date is that Yates has the
21 majority of the oil and the majority of the gas leases.
22 If different people had the gas and the oil, that would
23 be a problem right now.

24 Q. So you don't see any problem in continuing
25 the associated rules as to this pool in terms of that

1 limitation?

2 A. No, I don't see a problem. I see that the
3 field cries to be unitized at some time in the not real
4 distant future.

5 Q. Okay. Are you satisfied that there is a gas
6 cap in the South Dagger Draw, that the gas zone is
7 going to be in communication with this oil zone?

8 A. Yes, definitely.

9 Q. What is the explanation for the limitation on
10 production as we move to the east?

11 A. Two limitations: You run out of dolomite.
12 But before you run out of dolomite, you run into water,
13 because it's downdip and the wells get wetter and
14 wetter. And not very far out there you run out of
15 dolomite, but you hit the water and -- excessive water.

16 Q. Within this fairway of oil, then, I don't see
17 any dry holes in the oil production. Has every well
18 that's been drilled in here been able to produce oil?

19 A. Yeah, there are four or five examples of
20 stinker wells in amongst good wells where it may be a
21 5- or 10-barrel-a-day well, surrounded by 200-barrel-a-
22 day wells. There are a couple of examples of things
23 like that.

24 But the Dolomite and the pay zone is
25 continuous through that fairway. It's very

1 heterogeneous, as low-porosity carbonates often are,
2 but it's all through there for sure.

3 Q. And the operators thus far have been
4 generally successful in maximizing the oil production
5 and minimizing the water?

6 A. Been fairly successful, yes. On a scale of 1
7 to 1, we've been 8 1/2 or 9, or something like that,
8 but not perfect.

9 MR. KELLAHIN: Okay. Thank you, Mr.
10 Examiner.

11 EXAMINATION

12 BY EXAMINER CATANACH:

13 Q. Mr. Boneau, in the North Dagger Draw Pool,
14 what is the GOR in that pool?

15 A. What is the --

16 Q. What is the GOR?

17 A. The allowed GOR is 10,000. The actual
18 producing GOR is about 3000.

19 The 10,000 that has been in effect in South
20 Dagger, and we're asking to continue in effect, arose
21 from North, from North Dagger Draw. And I don't know
22 all that history, but we took the GOR from North Dagger
23 Draw and said, Sounds like it would be good in South
24 Dagger Draw too.

25 Q. Do you know if the allowable and the GOR in

1 the north pool, are those subject to a review in the
2 near -- in the future?

3 A. My understanding is that they are not.

4 Q. Those are permanent rules?

5 A. Those are permanent rules, that's my
6 understanding.

7 MR. CARROLL: Mr. Examiner, if I might help,
8 in Case Number 10,221 and Order Number R-4691-D, it set
9 -- it made specific findings about when the gas/oil
10 ratio was set at 10,000, which was set November 1,
11 1977, by Order Number R-5565.

12 And with respect to the Order of the -- the
13 Order I just -- the 4691-D, it made no mention in the
14 Order that such was a temporary or special. And I
15 would suggest that from my reading of it, that it is a
16 permanent order with respect to the north pool.

17 Q. (By Examiner Catanach) It was my
18 understanding that the allowable was bumped up in the
19 pool fairly recently; is that correct?

20 A. November of 1991.

21 MR. CARROLL: That's correct, and that is the
22 Order R-4691-D --

23 EXAMINER CATANACH: Okay.

24 MR. CARROLL: -- and it recited all the
25 earlier orders. That bumped just the allowable, but

1 the gas/oil ratio had been set back in 1977 --

2 EXAMINER CATANACH: I see.

3 MR. CARROLL: -- and those other things, and
4 they were all apparently permanent orders of the
5 Commission.

6 EXAMINER CATANACH: So as far as you can
7 tell, that Order does not have a reopening provision?

8 MR. CARROLL: It does not have a reopening
9 position. It just has the standard statement that
10 jurisdiction of this cause is retained for entry of
11 such further orders as the Division may deem necessary.

12 EXAMINER CATANACH: Okay.

13 Q. (By Examiner Catanach) Mr. Boneau, are there
14 wells on any given proration unit that are capable of
15 producing more than a standard 40-acre allowable of 187
16 today?

17 A. Yes.

18 Q. Do you have an opinion as to whether
19 producing in excess of 187 barrels per day per 40 is in
20 any way detrimental to the reservoir?

21 A. You may or may not recall, in the hearings
22 that we're talking about in February of 1991, Yates
23 appeared and asked that the spacing be set at 80 acres,
24 that one well per 80 acres be allowed and not one well
25 per 40 acres.

1 higher concentration of wells in the oil leg with lower
2 GORs to negate the effect of the few wells that were in
3 the gas cap.

4 There used to be two wells in the gas cap and
5 eight wells in the oil leg, and now there are three
6 wells in the gas cap and 50 wells in the oil leg, and
7 the GOR goes down.

8 Q. So it's not an effect of the mechanism,
9 what's happening in the reservoir; it's more of an
10 indication of what operators have done as far as how
11 they're producing the reservoir?

12 A. Yes, if you look at a particular well, the
13 GOR has probably gone up a little for a particular well
14 in the oil leg.

15 Q. You stated earlier that you thought the
16 field, probably the best operations for the field would
17 be under unitized operations to avoid -- specifically
18 the concern Mr. Kellahin has is the operator who
19 doesn't have an oil leg is going to want his gas for
20 sale since he doesn't have any -- can't use it to get
21 oil.

22 A. Yeah, and in my opinion -- What I said to Mr.
23 Catanach, the rules are okay, but what needs to happen
24 to increase production is maintaining reservoir energy
25 by not blowing down the gas cap.

1 Q. Does -- Is the logical extension of that to
2 do some pressure maintenance?

3 A. Yes, sir.

4 Q. So in other words, it could be unitized for
5 secondary operations?

6 A. It sure needs to be looked at for that, yes.

7 Q. What's the time frame. In your opinion, is
8 it approaching that stage now, or are you looking at
9 some more production to maximize ultimate oil recovery?

10 A. It's approaching that stage, and Yates has
11 initiated on our own a fairly elaborate reservoir study
12 of most of our part of South Dagger Draw with the idea
13 of trying to answer some of the questions you brought
14 up about pressure maintenance and with the idea of
15 getting with -- with the idea that if that's
16 encouraging, getting with the other operators and
17 trying to get something started in the first quarter or
18 first half of 1993.

19 Q. I rarely venture into engineering, but every
20 once in a while I get tempted.

21 Am I correct in my understanding that it
22 isn't necessarily right to wait until you pretty well
23 deplete a primary well before you start pressure
24 maintenance? In this type of -- in a gas-cap-type
25 reservoir, you do better by maintaining pressure

1 earlier in the life of the reservoir?

2 A. As a general rule, you're ahead to maintain
3 pressure rather than to dissipate it and try to
4 regenerate it somehow, yes.

5 MR. STOVALL: That's enough for now.

6 FURTHER EXAMINATION

7 BY EXAMINER CATANACH:

8 Q. Is that the primary drive in the reservoir,
9 is the gas cap?

10 A. There are clearly three significant drive
11 mechanisms in the reservoir, and I'm unable to rank -
12 them, really -- Well, solution gas drive is a -- is one
13 of the three primary mechanisms in South Dagger Draw.

14 The gas cap is important, and in South Dagger
15 Draw water is important, but probably not as important
16 as the other two.

17 In North Dagger Draw, solution gas drive is
18 important and water is, in my opinion, important, and
19 the gas cap is the least important of the three in
20 North Dagger Draw.

21 But all three of those mechanisms are
22 significant, and that's why the -- what to do with the
23 field is not obvious without really close study.

24 EXAMINER CATANACH: I believe that's all I
25 have.

1 Anything further of this witness?

2 MR. CARROLL: Nothing.

3 EXAMINER CATANACH: If not, he may be
4 excused.

5 MR. CARROLL: Mr. Examiner, that completes
6 our presentation.

7 EXAMINER CATANACH: Okay, there being nothing
8 further, case 10,108 will be taken under advisement.

9 Thereupon, these proceedings were concluded
10 at 10:48 a.m.)

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I do hereby certify that the foregoing is
a complete and correct transcript of the proceedings in
the Examiner hearing of Case No. 10108,
heard by me on December 3, 1992.
David R. Catnach, Examiner
Oil Conservation Division

