



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
 OIL CONSERVATION DIVISION
 AZTEC DISTRICT OFFICE

1000 RIO BRAZOS ROAD
 AZTEC, NEW MEXICO 87410
 (505) 334-6178

OIL CONSERVATION DIVISION
 BOX 2088
 SANTA FE, NEW MEXICO 87501

Case 8169

DATE March 20, 1984

RE: Proposed MC _____
 Proposed DHC X _____
 Proposed NSL _____
 Proposed SWD _____
 Proposed WFX _____
 Proposed PMX _____

RECEIVED
 MAR 29 1984
 OIL CONSERVATION DIVISION
 SANTA FE

Gentlemen:

I have examined the application dated March 15, 1984
 for the Southeast Royalty Johnson #1 I-7-25N-3W
 Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Docket for hearing. Measurede zone is non-marginal
and is overproduced by 2 1/2 times March allowable.

Yours truly,

Frank D. Dancy

EXHIBIT LIST

EXAMINER: *Michael E. Stogner*

CASE NUMBER: *8169*

HEARING DATE: *April 25, 1984*

| APPLICANT | | | OPPOSITION | | |
|-----------|------------------------------|--|------------|-------------|----------|
| No. | Description | Admitted | No. | Description | Admitted |
| <i>1</i> | <i>Land Plat</i> | <i>✓</i> | | | |
| <i>4</i> | <i>Production</i> | <i>✓</i> <i>✓</i> <i>✓</i> <i>✓</i> | | | |
| <i>6</i> | <i>Production Allocation</i> | <i>✓</i> | | | |

designated by the Division all wells shall remain completely shut in for at least 24 hours prior to the test. In the event a definite datum is not established by the Division the subsurface determination shall be obtained as close as possible to the mid-point of the productive sand of the reservoir. The report shall be on Form C-124 and shall state the name of the pool, the pool datum (if established), the name of the operator and lease, the well number, the wellhead elevation above sea level, the date of the test, the total time the well was shut in prior to the test, the subsurface temperature in degrees Fahrenheit at the test depth, the depth in feet at which the subsurface pressure test was made, the observed pressure in pounds per square inch gauge (corrected for calibration and temperature), the corrected pressure computed from applying to the observed pressure the appropriate correction for difference in test depth and reservoir datum plane and any other information as required by Form C-124.

RULE 303. SEGREGATION OF PRODUCTION FROM POOLS

A. SEGREGATION REQUIRED

Each pool shall be produced as a single common source of supply and the wells therein shall be completed, cased, maintained, and operated so as to prevent communication, within the well-bore, with any other specific pool or horizon, and the production therefrom shall at all times be actually segregated, and the commingling or confusion of such production, before marketing, with the production from any other pool or pools is strictly prohibited.

B. SURFACE COMMINGLING

The Division Director shall have the authority to grant an exception to Rule 303-A to permit the commingling in common facilities of the commonly owned production from two or more common sources of supply, without notice and hearing, provided that the liquid hydrocarbon production from each common source of supply is to be accurately measured or determined prior to such commingling in accordance with the applicable provisions of the Division "Manual for the Installation and Operation of Commingling Facilities," then current.

Applications for administrative approval to commingle the production from two or more common sources of supply shall be filed in triplicate with the Santa Fe Office of the Division. The application must contain detailed data as to the gravities of the liquid hydrocarbons, the values thereof, and the volumes of the liquid hydrocarbons from each pool, as well as the expected gravity and value of the commingled liquid hydrocarbons production; a schematic diagram of the proposed installation; a plat showing the location of all wells on the applicant's lease and the pool from which each well is producing. The application shall also state specifically whether the actual commercial value of such commingled production will be less than the sum of the values of the production from each common source of supply and, if so, how much less.

Where State or Federal lands are involved, applicant shall furnish evidence that the Commissioner of Public Lands for the State of New Mexico or the Regional Supervisor of the United States Geological Survey has consented to the proposed commingling.

C. DOWNHOLE COMMINGLING

1. The Director of the Division shall have the authority to grant an exception to Rule 303-A to permit the commingling in the well-bore of oil-oil, gas-gas, or gas-oil zones in a well when the following facts exist and the following conditions are met:

(a) For wells involving oil zones:

- (1) The total combined daily oil production from oil zones before commingling (as determined in accordance with Section 2, paragraphs (d) and (e) below) does not exceed the following:

| <u>Bottom perforation, lowermost pool</u> | <u>Bbls/day oil</u> |
|---|---------------------|
| Less than 4,999 feet | 20 |
| 5,000 feet to 5,999 feet | 30 |
| 6,000 feet to 6,999 feet | 40 |
| 7,000 feet to 7,999 feet | 50 |
| 8,000 feet to 8,999 feet | 60 |
| 9,000 feet to 9,999 feet | 70 |
| More than 10,000 feet | 80 |

- (2) Oil zones require artificial lift, or, both zones are capable of flowing. (Special consideration may be given to an exception to this latter requirement in the case in which a particular well's characteristics may justify same; however, the commingled production must be artificially lifted if either zone required artificial lift prior to commingling.)
- (3) Neither zone produces more water than the combined oil limit as determined in paragraph (1) above.

- (4) The fluids from each zone are compatible with the fluids from the other, and combining the fluids will not result in the formation of precipitates which might damage either reservoir.
- (5) The total value of the crude will not be reduced by commingling.
- (6) Ownership of the zones to be commingled is common (including working interest, royalty, and overriding royalty).
- (7) The commingling will not jeopardize the efficiency of present or future secondary recovery operations in either of the zones to be commingled.

(b) For Wells Involving a Gas Zone:

- (1) That the commingling is necessary to permit a zone or zones to be produced which would not otherwise be economically producible.
- (2) That there will be no crossflow between the zones to be commingled.
- (3) That any zone which is producing from fluid-sensitive sands, which may be subject to damage from water or other produced liquids, is protected from contact from such liquids produced from other zones in the well.
- (4) The fluids from each zone are compatible with the fluids from the other(s), and combining the fluids will not result in the formation of precipitates which might damage any of the reservoirs.
- (5) That ownership of the zones to be commingled is common (including working interest, royalty, and overriding royalty).
- (6) The bottom hole pressure of the lower pressure zone is not less than 50 percent of the bottom hole pressure of the higher pressure zone adjusted to a common datum.

2. To obtain approval for downhole commingling, the operator of the well shall submit the following in duplicate to the Division Director plus one copy to the appropriate District Office of the Division.

- (a) Name and address of the operator.
- (b) Lease name, well number, well location, name of the pools to be commingled.
- (c) A plat of the area showing the acreage dedicated to the well and the ownership of all offsetting leases.
- (d) A current (within 30 days) 24-hour productivity test on Division Form G-116 showing the amount of oil, gas, and water produced from each zone.
- (e) A production decline curve for both zones showing that for a period of at least one year a steady rate of decline has been established for each zone which will permit a reasonable allocation of the commingled production to each zone for statistical purposes. (This requirement may be dispensed with in the case of a newly completed or recently completed well which has little or no production history. However, a complete resume of the well's completion history including description of treating, testing, etc., of each zone, and a prognostication of future production from each zone shall be submitted.)
- (f) Estimated bottom-hole pressure for each artificially lifted zone. A current (within 30 days) measured bottom-hole pressure for each zone capable of flowing.
- (g) A description of the fluid characteristics of each zone showing that the fluids will not be incompatible in the well-bore.
- (h) A computation showing that the value of the commingled production will not be less than the sum of the values of the individual streams.
- (i) A formula for the allocation of production to each of the commingled zones and a description of the factors or data used in determining such formula.
- (j) A statement that all offset operators and, in the case of a well on Federal land, the United States Geological Survey, have been notified in writing of the proposed commingling.

3. The Division Director may approve the proposed downhole commingling in the absence of a valid objection within 20 days after the receipt of the application if, in his opinion, there is no disqualifying disparity of bottomhole pressures or other reservoir characteristics, waste will not result thereby, and correlative rights will not be violated. The 20-day waiting period may be dispensed with upon receipt of waivers of objection from all parties mentioned in Section 2, paragraph (j).

4. Upon such approval, the well shall be operated in accordance with the provisions of the administrative order which authorized the commingling, and allocation of the commingled production from the well to each of the producing zones shall be in accordance with the allocation formula set forth in the order. The production from a well with commingled oil zones shall be subject to the lower of the daily gas-oil ratio limitations applicable to the reservoirs. The production attributable to an oil zone commingled with a gas zone shall be subject to the daily gas-oil ratio limitation applicable to such oil zone or pool. Wells shall be tested on a commingled basis annually, except that a well penalized for a high gas-oil ratio shall be tested semi-annually.

5. The Division Director may rescind authority to commingle production in the well-bore and require both zones to be produced separately, if, in his opinion, waste or reservoir damage is resulting thereby or the efficiency of any secondary recovery project is being impaired, or if any change of conditions renders the installation no longer eligible for downhole commingling under the provisions of Section 1(a) or 1(b).

RULE 304. CONTROL OF MULTIPLE COMPLETED WELLS

Multiple completed wells which have been authorized by the Division shall at all times be operated, produced, and maintained in a manner to ensure the complete segregation of the various common sources of supply. The Division may require such tests as it deems necessary to determine the effectiveness of the segregation of the different common sources of supply.

RULE 305. METERED CASINGHEAD GAS

The owner of a lease shall not be required to measure the exact amount of casinghead gas produced and used by him for fuel purposes in the development and normal operation of the lease. All casinghead gas produced and sold or transported away from a lease, except small amounts of flare gas, shall be metered and reported in standard cubic feet monthly to the Division. The amount of casinghead gas sold in small quantities for use in the field may be calculated upon a basis generally acceptable in the industry, or upon a basis approved by the Division in lieu of meter measurements.

RULE 306. CASINGHEAD GAS

(a) No casinghead gas produced from any well in this state shall be flared or vented after 60 days following completion of the well.

(b) Any operator seeking an exception to the foregoing shall file an application therefor on Division Form C-129, Application for Exception to No-Flare Rule 306. Form C-129 shall be filed in triplicate with the appropriate district office of the Division. The district supervisor may grant an exception when the same appears reasonably necessary to protect correlative rights, prevent waste, or prevent undue hardships on the applicant. The district supervisor shall either grant the exception within ten days after receipt of the application or refer it to the Division Director who will advertise the matter for public hearing if a hearing is desired by the applicant.

(c) The flaring or venting by an operator of gas from any well in violation of this rule will result in suspension of the allowable assigned to the well.

(d) No extraction plant processing gas in the State of New Mexico shall flare or vent such gas unless such flaring or venting is made necessary by mechanical difficulty of a very limited temporary nature or unless the gas flared or vented is of no commercial value.

WITNES LIST

Case No. 8169 Date of Hearing April 25, 1984

APPLICANT: Southland Property Company OPPOSITION:

No: Satisfied Sworn

1) Name : C. Terry Hobbs

Position : Hesperous, CO.

Act. Engineer w/ Southland
II - "68" P.E. Home, Steam Eng. Torrey;

2) Name :

Position : _____

3) Name :

Position : _____

No. Qualified Sworn

1) Name :

Position : _____

2) Name :

Position : _____

3) Name :

Position : _____

For Downhole Corrosion of Cjilo ballad:
Dakota and Blanco Mesaverde production
in its Johnson Well No. 1 located
1590' FSL - 1000' FEL of Sec. 7,
T-25N, R-3W, Rio Arriba Co.

CASE #: 8169

DATE FILED March 19, 1984
Applied for Administrative

APPLICANT

Name: Southland Royalty Company

1. Representative: C. Terry Hobbs

2. Position: Petroleum Engineer

3. Address: P.O. Drawer 570
Farmington, NM 87401

4. Telephone: 325-1841

5. ATTORNEY: Wm. F. Carr

6. Address: _____

7. Telephone: _____

OPPOSITION

Name: _____

1. Representative: _____

2. Position: _____

3. Address: _____

4. Telephone: _____

5. ATTORNEY: _____

6. Address: _____

7. Telephone: _____

INTERVENOR (if any) :

or

INTERESTED PARTY (IES):