

DISCUSSION OF NECESSITY FOR UNORTHODOX LOCATION
4 - T20S - R37E EUMONT GAS POOL

Exxon seeks approval of three unorthodox well locations; the Eumont Gas Com #1-3, 660' from the South line and 1780' from the West line the #1-4, 1191' from the North line and 674' from the West line and the #1-5, 660' from the South line and 960' from the East line, all in Section 4 - T20S - R37E, Eumont Gas Pool. Exxon further seeks an exception to the Special Rules for Eumont Gas Pool to allow the existing 640-acre gas proration unit comprised of section 4 to be simultaneously dedicated in the Eumont Gas pool to the three proposed wells and to the two existing wells Exxon, Eumont Gas Com #1-1 and #1-2, also in section 4. These exceptions are requested in order to protect the correlative rights of section 4 mineral owners by placing wells where they will most efficiently produce the gas underlying section 4 and prevent drainage by offset operations.

Examination of cumulative produced gas volumes from the Eumont Gas Pool in the eight sections surrounding the subject unit (4-20S-37E) shows that the highest recoveries occur to the south and west. Examination of recent average daily production in the same eight section area reveals that the highest average daily rates also occur to the south and west.

The geologic control for this production trend is the variation in porosity and permeability of the upper Penrose sand (3414-3450 feet in Exxon, Eumont Gas Com. #1-2). The accompanying crosssection illustrates the variation in upper Penrose net porosity thickness (29' in north, 72' in south). The sand interval in the north is discontinuous and has lower average neutron log response. The sand interval in the south is vertically more continuous with a higher average neutron log response and is interpreted to have higher permeability. The accompanying upper Penrose net porosity map of the area shows that significant portions of section 4 have net porosity thickness similar to governmental sections to the south and west.

Additionally, the locations requested in this application would result in an effective spacing density and recovery efficiency that is similar to the governmental sections to the south, west, and southwest (sections 9, 5, and 8 respectively). Each of these section is being produced by four or more wells, half of which are located 660' or closer to the outer boundary of the section. Section 4 is also offset to the southeast and east (sections 10 and 3) by wells located 660' or closer to the section boundary. Additional wells are needed in section 4 to recover the underlying gas reserves in an efficient manner which is comparable to offset operations.

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