

GEOLOGICAL SUMMARY
EXXON MARY FEDERAL #5

The attached cross section shows two wells. The Exxon Mary Federal #1, to the far left, was formerly the Hanagan Sheep Draw #1, and is on the NMOCD "Pennsylvanian Stratigraphic Cross Section", Eddy County, New Mexico, B-B' as well #18. Three formation tops were taken from the NMOCD cross section: Upper Penn, Strawn, and Atoka. The well on the right is the subject well, the Exxon Mary Federal #5. The three formation tops are correlated from the Mary Federal #1 to the Mary Federal #5. Current perforations are indicated on the Mary Federal #5 all of which are within the Strawn Formation. The proposed additional perforations are also indicated, located stratigraphically within the Upper Penn Formation.

Deposits of the Strawn Formation are composed of interbedded limestones, shales, and sandstones. Most of the gas production that has been established has been from the limestones which were deposited as carbonate shelf sediments. The Upper Penn sediments reflect a continuation of limestone and shale deposition similar to the Strawn Formation. In the Mary Federal #5 limestones of the Upper Penn Formation locally thicken and are possibly gas productive.

The index map shows the location of both wells on the cross section plus a third well; the discovery well for the White City - Pennsylvanian Gas Pool, the Gulf Oil Corporation Federal Estell "AD" #1. This pool was formed by Case No. 2157, Order No. R-1857, and "classified as a gas pool for Pennsylvanian production". The Pennsylvanian in this case includes the Upper Penn, Strawn, Atoka and Morrow Formations. The discovery well initially completed only in the Strawn Formation. It was later recompleted to the Atoka and Morrow Formations. Subsequent wells have completed in Strawn, Atoka, or Morrow Formations. In the White City - Pennsylvanian Pool gas produced simultaneously from more than one Pennsylvanian Formation has not resulted in damage or waste. No damage or waste is anticipated if gas production from the Upper Penn and Strawn Formations are commingled in the Mary Federal #5.

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EXHIBIT NO. 9

DOCKET NO. 8858, 8842

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