April 5, 1948

CASE NO. 126, Southern Union Production Company.

MEMORANDUM:

Testimony shows that in Fulcher Basin-Kutz Canyon, San Juan County, that there was an original rock pressure of 585 pounds as of 1927 and 1928. A pressure survey in 1947 showed that the average rock pressure of gas to be 385 pounds, and it is indicated that since 1947 test the gas pressure has declined from the average of 385 pounds.

Certain wells, some of which have been drilled during recent years, are shown by chart to be below the original 585-pound pressure, but slightly above the 385-pound average of 1947. Evidence was submitted to the effect that approximately one-third of the gas of the field has already been taken out.

Upon the plat or diagram submitted there are "two sinks" indicating roughly the two old fields. In these the pressure is down to about to 350 pounds. Some of the recent wells drilled showed the pressure of between 400 and 500 pounds, which is below the pressure in the Feasel Well to the northwest end of the field which has 565-pound pressure indicating that the closely drilled wells has caused pressure decline.

The petitioner offered in evidence the results of an

interference test covering seven wells on a 160-acre spacing to substantiate claim that there was gas drainage across 160 acres. The test consisted of Walker No. 1, Walker No. 2, McGrath 1, 2, and 3, Kattler No. 1, and Hudson No. 2 wells. All were shut in for twelve days, then all except Walker No. 1 were put on production against a line pressure of 261 P F I. Thereafter, on the following day, the six surrounding wells were taken off the gas line and blown to the air, with the Walker No. 1 continuing to be shut in. A recording pressure chart on the wellhead of Walker No. 1, the shut in well, showed a considerable gain in pressure, explained as the normal build up. Pressures on the third and fourth days continued this build up. On the fourth day, the six surrounding wells were put back on production. On the fifth day, the pressure of Walker No. 1 fell back below because of previous delays, thus indicating pressure interference. The average pressures dropped 1.8 pounds pressure, (not large but petitioner urges that in consideration of other reservoir factors is conclusive for a material drainage under 160 acres). The drop-back was about two pounds. Figures submitted were that the porosity of the Pictured Cliff was about 20%, estimated from about 20 core samples. The engineer calculated that under 160 acres under original pressure of 585 pounds that there was an approximate 1,878,000,000 cubic feet. The field would not be any good

after the pressure goes down to 150 pounds, figured about 72% of the initial gas in place