

SUMMARY

The results and conclusions from this study of the test, core and log data in Pelican Field gas wells confirm those of earlier reports. Test and core data indicate that although some sands are gas saturated, it is unlikely that they would be productive because they have low permeabilities.

This interpretation of the available test data indicates that the gas is rich in all wells. Permeabilities are low, generally in the range 1-10md. Pelican 1 appears to be the best of the four wells examined in terms of test results. Several sands between 2470m and 3163m produced very rich gas with no water. The sands were all tight however.

Some doubt exists as to the usefulness of much of the FIT and RFT data as the probe samples such a small area of the reservoir interval. In wells 1, 2 and 4 no DST data were obtained and it cannot be certain that the FIT/RFT fluid samples which were recovered are fully representative of these sand intervals.

Log analysis similarly confirms Pelican 1 as potentially the best of the three wells examined, although the accuracy of some of the log derived data for Pelican 1 could be questioned.

Another major problem with the log analysis was the determination of an accurate value for R_w . It was decided to use two values; a base value derived from water recovery from Pelican 5 DST's and a more saline value, and consequently more optimistic 'guesstimate' based on SP derived values. The differences of possible and probable net pay that can be assigned to each R_w value are clearly illustrated in Table 4.

In light of this latest review of test and core data it appears that the values of water saturation (S_w) and net pay obtained using the base case R_w figure of 5200ppm equivalent NaCl are probably correct.

The S_w values are high, this being a function of the low permeability. In tight rock the capillary forces are high and more water is bound to the sand grains. Petrographic studies on core samples have shown that abundant kaolinite and other fine grained material is present in these sands. This has caused a reduction in permeability and the clays cause higher S_w 's because of the bound water they attract. Overall the calculated values of S_w and probable and possible net pay appear consistent with the test results.