TG08

Formation Damage in Tight Gas Reservoirs from Well Test Data

S. A. Bin Akresh* (Saudi Aramco)

SUMMARY

As the oil and gas industry matures and the known reserves continue to be depleted, the focus moves towards more challenging environments. The industry is expanding its exploration and development efforts to include the horizons with very low permeabilities as $K < 0.1$ md.

The natural productivity of tight formations is extremely poor, and usually permeability enhancement through acid stimulation or fracturing is required to improve their productivity and make them economical. Unlike high permeability reservoirs where they can tolerate formation damage to some degrees, tight reservoirs are very sensitive to formation damage which can adversely impact the formation productivity or even impair it completely. Therefore, extra caution should be exercised during drilling, completion and production phases to avoid causing any damages to the tight reservoirs.

During my presentation I will discuss several types of formation damage and show well test data from tight gas fields in the Middle East to highlight the above theme.