

Brines and salty waters associated to gas reservoirs in Northern Italy (Po Valley) were studied by many authors in an attempt to understand the relationship between deep circulation of salty groundwaters, gas and oil genesis (1, 2, 3 and ref. therein). The Castrocaro area was selected in this study as a snapshot to investigate the origin of sulphur in local saline water, together with other geochemical and isotopic tracers (ref.4). sulphur isotopes ( $\delta^{34}\text{S}$  and  $\delta^{18}\text{O}$  of  $\text{SO}_4$  and  $\delta^{34}\text{S}$  of  $\text{H}_2\text{S}$ ) appear crucial to highlight different hydrological circuits, i.e. water flowing through flysch and/or evaporite rocks

