

## **SPECIAL FEATURES OF SOME CHLORIDE-SODIC FRESH GROUNDWATERS IN CAMPO ARAÑUELO AQUIFER (SW TAJO BASIN-SPAIN).**

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An aquifer with a simple flow system is developed in Campo Arañuelo detrital basin. Its groundwaters composition goes from bicarbonate-calcic to bicarbonate-sodic ones, and with a mineralization between 100 and 1000  $\mu\text{S}/\text{cm}$ . In several points appears a set of chloride-sodic groundwaters with a conductivity between 800 and 2800  $\mu\text{S}/\text{cm}$ , located in anomalous positions in their flow paths. The objective of this study is try to determine the origin of these "anomalous" groundwaters, taken into account that several brackish manifestations with a chloride-sodic character and a mineralization between 3000 and 13000  $\mu\text{S}/\text{cm}$ , also appear in the basin's granitic borders. These groundwaters could be considered as coming from deep flows through basement's faults, discharging due to a hydraulic potential difference. The research starts from two assumptions: (a) the anomalous groundwaters could come from a mixing between detrital groundwaters and granitic groundwaters, or (b) could be the result of deep flows in the detrital aquifer outflowing due to groundwaters exploitation in irrigated land. It has been studied groundwater's chemical characteristics through a hydrogeological profile, considering ionic relations, typical in a detrital aquifer, as well as those that seem to give some data about granitic flows. Seing that the ionic relationships do not correspond with the typical relationship in detrital aquifer, due to their high chloride contents, and likewise, the low mixing percentage are differing with granitic groundwaters chemical characteristics, it can be said that the obtained results are not conclusive.