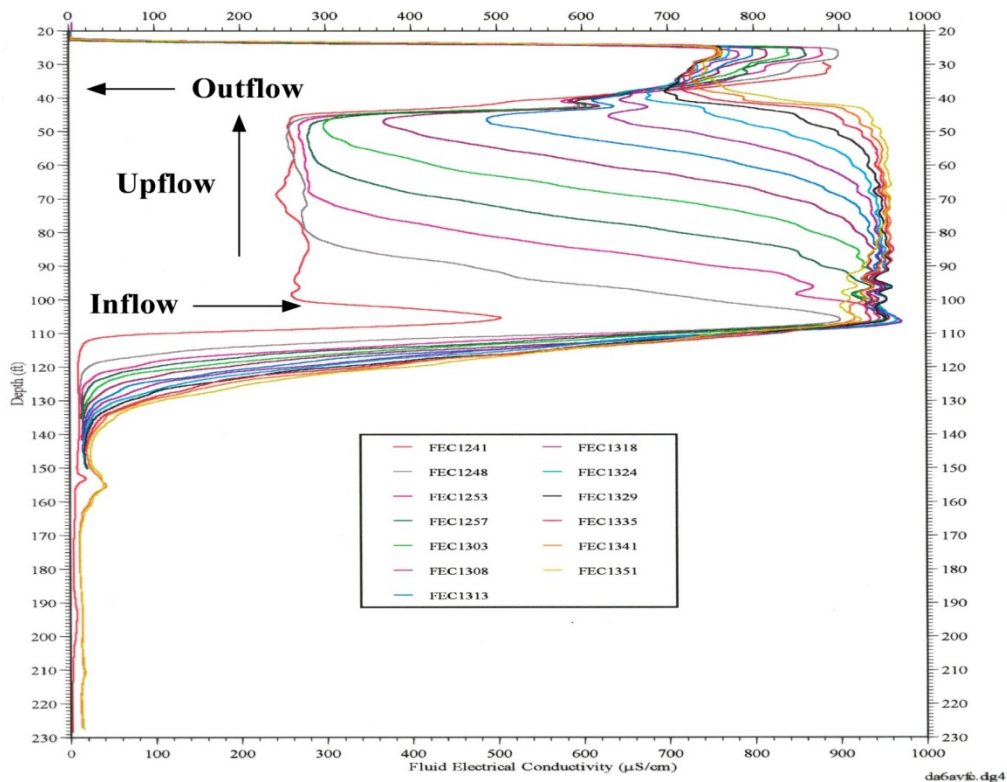


UPWARD VERTICAL MIGRATION OF BOREHOLE CONTAMINATION

Contaminant migration from a deeper aquifer to a shallower zone can have implications when the shallower interval is a drinking water aquifer. Evaluation of fate and transport mechanisms can be accomplished by using hydrophysical and geophysical methods which can identify the specific locations of inflowing and outflowing zones. In this case, hydrophysical logging was applied to investigate specifically how the shallow groundwater system is impacted by the deeper aquifer. In the ambient condition, the conductive feature in the lower zone flows upward vertically and affects the upper zone. When the deeper zone is contaminated, and the shallower zone is not, this example of an actual well logged with hydrophysics in an ambient test procedure shows how the contamination can move vertically and impact drinking water.



Example of Hydrophysical logs during ambient vertical (upward) flow conditions. Times series of FEC logs are acquired after flushing the wellbore fluids with DI water. For ambient flow characterization no pumping is conducted after DI water emplacement.

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