

## Study on quantitative relationship between injected fluid and streaming potential using rock core samples

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In order to evaluate effectiveness of streaming-potential (SP) survey for EOR monitoring, we conduct laboratory tests to reveal quantitative relationship between injected fluid and streaming-potential (SP) using Berea sandstone core samples (porosity is 17.3%). As results, observed SP indicates good correlation between injected pressure (0-1000kPa) and pore water resistivity and calculated SP coupling coefficients range from 0.66 to 13.2 in the condition of pore water resistivity from 0.38 to 65.4 ohm-m. The observed SP in the sample saturated by oil is inferred that it is caused by KCl electrolyte in pore. Furthermore, the calculated Zeta potential ranges from -10.5 mV to -24.9 mV, which match to the results by previous studies.