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**Technical
Conference
Paper**



**Contribution to a Better Understanding of
Brine Production Using a Long Period of
Microseismic Monitoring**

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Contribution to a better understanding of brine production using a long period of microseismic monitoring

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Abstract

Over the last 12 years, an important microseismic activity has been recorded by 3-axis downhole sensors, on great depth brine production on Arkema site in South of France. This unique database corresponds to more than 250,000 seismic detections, among which 55,000 events located.

The 3-D evolution of the seismicity location relative to the long period of monitoring, allows to follow exploitation areas and to underline geological structure acting as fluid path. Microseismic occurrence correlated with well pressure confirms formation response. The study of seismic energy provides additional informations of the source origins and the type of activated geological mechanism.

The evolution of the microseismicity (source space distribution, energy) and its correlation with pressure has provided us helpful clues to better understand the formation behaviour induced by brine production and overburden readjustments.