# COREX – Sand Retention Joint Industry Project

## 1. CURRENT LABORATORY SAND RETENTION TESTING METHODS

Most operators recognise that selection of optimum sand control for a given well can add great value to that well by ensuring maximum productivity with minimum sand production. Traditionally, sand control hardware selection has been based on rules of thumb or theory. More recently, laboratory tests have been conducted with an attempt to refine the selection process and produce well or lithology specific sand control recommendations. Tests developed in various research laboratories have now become standard throughout the industry. The test configurations and the philosophy behind individual tests differ but the objective is a common one – sand control selection.

Standard tests often employ the flow of a suspension of formation sand through the sand control hardware. Some tests establish a pack of sand prior to testing and some include multiple pressure measurements across and within the sand control. There is no API standard or recognised industry benchmark test. Different operators employ different tests, usually based on experience in particular reservoir types.

## 2. PROJECT OBJECTIVES

The objectives of the JIP is to evaluate laboratory sand retention testing methods and determine bias of different techniques and to determine impact of laboratory test procedures on sand control selection, do different tests lead to different results and different selection of hardware?

There are a number of procedural variables in the tests which, could be explored through a series of control tests. By addressing many of the variables which currently exist, greater use of company specific and general industry data would be possible. Tests could be directly compared, and trends in optimum sand control hardware could be established. There will always be a requirement for reservoir specific testing but the selection of hardware prior to testing could be refined and focussed. A standard procedure could be developed based on scientific experiments rather than specific reservoir experience. This test (or tests) could then be adopted by the industry as the standard benchmark for sand control selection. At the very least it is hoped that the project will enable sensible comparison of the current tests being conducted using their different procedures.

## 3. PHASE ONE

Phase 1 involved using two sands, one well sorted sand and one poorly sorted sand, tests where conducted using two screen types. Each participant contributed with a test conducted in a lab of their choice, all the data was drawn together to compare results from the different test methods. Following discussion of phase 1, a test matrix was drawn up for phase 2, which involved changing some of the variables from the different test methods.

For detailed information on this project or how to join this JIP, please contact sales@corex.co.uk.