**CHALLENGE**
Reduce wax deposition in oil and gas wells in the Eagle Ford Shale of South Texas.

**SOLUTION**
- Perform standard and atypical cold finger laboratory tests to identify a wax inhibitor and reduce paraffin buildup.
- Deploy PI-7475* paraffin inhibitor to control wax deposition and paraffin formation.

**RESULTS**
Demonstrated superior performance in a laboratory test and field application, resulting in fewer paraffin cleanout operations.

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Identify remedy for high-molecular-weight paraffin deposition
In some areas of the Eagle Ford Shale of southern Texas, oil contains high-molecular-weight paraffin often in excess of C100. An operator in the area was using a conventional inhibitor treatment in its wells, but treatments were declining in effectiveness. After a pig became stuck during an attempted cleanout operation, the operator requested that Schlumberger perform laboratory tests and identify a solution.

Conduct normal and atypical laboratory tests to demonstrate paraffin control
Schlumberger specialists retrieved paraffinic oil samples from the subject well for laboratory testing. The first sample was taken using standard sampling procedures—the oil was collected and allowed to cool during transport to the laboratory before being reheated prior to the test work. Another sample was taken and kept at wellhead temperature from the time of sampling in the field to the start of the cold finger tests at the laboratory.

In both scenarios, the cold finger tests conducted on the fluids in the laboratory identified the best product to be PI-7475 paraffin inhibitor, a specialty chemical designed to control wax deposition in oil and gas production and inhibit the formation of paraffin in tubing and flowlines.

Cold finger experiments had shown promising results with over 70% inhibition in the normal laboratory tests. In the atypical tests, the product demonstrated improved performance at equivalent dose rates with over 85% inhibition in a higher-rate test.

Demonstrate excellent wax inhibition
During product screening using the cold finger method, PI-7475 inhibitor demonstrated excellent performance on both samples. The product reduced wax deposition, resulting in the need for fewer and easier paraffin cleanout operations and less risk of pig sticking. PI-7475 inhibitor was implemented on all wells in the field, and subsequent reports showed continued reduction in wax deposition.