ABSOLUTE™ CLEAN

Case Study

"The Straight Test"

Straight Tube Heat Exchanger

the CLIENT

The client is an international integrated energy company with operations in 33 countries and are operating and developing their SAGD Assets in the Athabasca oil sands region.

As in all SAGD operations the bitumen is brought to the surface mixed with particulate and water. The exchangers that do the initial cooling of this mixture are regularly fouled by the bitumen and particulate. The exchanger was a straight tube bundle, 24 feet long, 32" in diameter, with 596 tubes that were ¾" in diameter.

the CHALLENGES

- This was the first time this particular bundle had been pulled for cleaning
- The shell side of the tubes were plugged and caked with baked on heavy oil and particulate
- The interior tubes presented a significant challenge for traditional high pressure water blasting
- Traditional high pressure washing of this bundle would use 50,000 gallons of water to clean the shell and tube side of the exchanger
- High pressure cleaning would take between four to eight days to complete
- The cleanliness of the bundle would not be an ABSOLUTE CLEAN right through to the interior tubes using traditional cleaning methodology
- The time it takes for a traditional clean can increase cost and decrease production by reducing asset availability and throughput

the SOLUTION

We used our patent pending technology to clean the exchanger bundle quickly and ABSOLUTELY. The quality of the cleaning passed the client's inspection

the BENEFITS

- The time for cleaning was reduced from 4-8 days to 1 day
- The interior tubes were easily cleaned without risk of damage to the tubes
- Bundle was returned to optimal process efficiency
- Eliminated labour and safety issues from high pressure water blasting
- Consequently no water was consumed and no waste was created in recovering hydrocarbon fouling from the exchanger

Client Testimonial

"This is the cleanest bundle we have ever had returned."