

# Mator News

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Mator AS – the separation specialist

## Troubleshooting a crude dehydration and desalination process

Mator has recently conducted an offshore troubleshooting where the operator experienced **demanding challenges to meet offloading specifications of the crude oil, both regards to BS&W and salinity**. Such a problem can typically have many causes, and the following parameters were especially focused:

- Oil viscosity and emulsion tendency
- Solids content
- Water cut and water salinity
- Temperature
- Wash water rate for desalination
- Degree of mixing oil and wash water

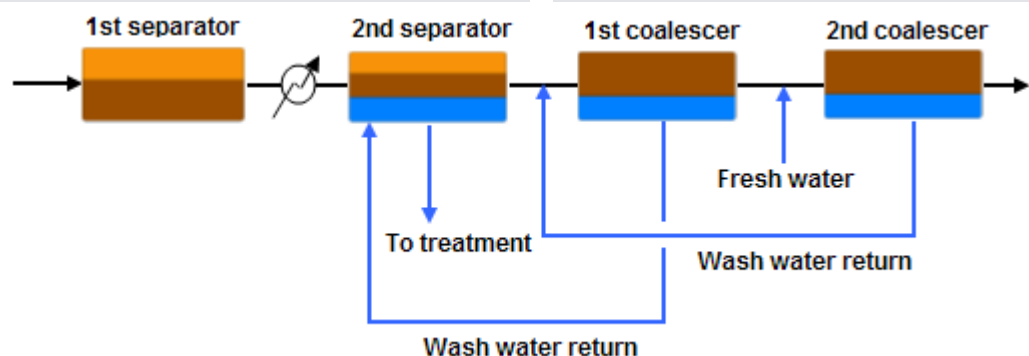
The following was concluded:

- High emulsion tendencies due to production of mud from the newly completed production wells.

- Extensive and undesirable water carry over from the 2<sup>nd</sup> stage separator to the 1<sup>st</sup> stage coalescer due to unstable production flow from the reservoir.
- Too low mixing of oil and wash water due to too low pressure drop across mixing valves.

Recommendations:

- Improved level control in 2<sup>nd</sup> stage separator.
- Injection of demulsifier u/s 2<sup>nd</sup> stage separator and 1<sup>st</sup> stage coalescer.
- Wash water to be heated to process temperature, and allow for wash water also at 1<sup>st</sup> stage coalescer inlet.
- Evaluate turn-down of the mixing valves.
- Operate at max temperature but avoid salt deposit.



Recent Mator projects:

- ◆ **Statoil Staffjord C:** Process baseline and CTOur optimization.
- ◆ **Statoil Åsgard B:** Produced water troubleshooting.
- ◆ **ConocoPhillips Ekofisk:** Separator scanning and defoamer test.
- ◆ **Statoil Bressay:** Produced water technology evaluation study.
- ◆ **Sevan Piranema:** Produced water treatment concept design.



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