



Sand Injection Calibration Services

Eliminate uncertainty on data accuracy from acoustic sand monitoring instruments with in-situ calibration to increase well production envelopes with confidence.



The client contacted SMS to validate the accuracy of the existing solids monitoring system, used to mitigate the risk of erosion and solids deposition within pipeline and topside. The scope of work included maintenance and sand injection calibration on a total of 8 acoustic sand detector locations on board the asset.



Location: Southern North Sea

Industry: Oil & Gas

Challenge:

- Validation of Acoustic Sand Detector performance.
- Optimise effectiveness of the existing Acoustic Sand Monitoring (ASM) system to quantify solids produced from wells.
- Location of proppant catchers on 3 x wells results in differential of solids background signature upstream / downstream of catchers. Required separate injections upstream and downstream of the catchers.
- Complete maintenance of existing Acoustic Sand Monitoring (ASM) system.

Solution:

- SMS provided ASM sand injection system to calibrate acoustic sand detectors based on specific flowing characteristics of each location and then using the calibrated reliable data to optimise effectiveness of the existing ASM system. The sand injection system allows for a safe displacement of a known volume of gel, containing a set concentration of sand, into the process system.
- Each injection consisted of 100g of sand suspended in 4 litres of gel solution, injected at 1 gr/s into flowline flowing at different flow rates.

Results:

SMS successfully completed sand injection calibration of eight (8) acoustic sand detectors through 19 separate sand injections in total (minimum of 2 per location). The acoustic sand detectors picked up the acoustic signals from the injected sand passing the detectors. This data was captured in the software and graphed against solid free production signals. Matched against known flowrate velocities acquired during the injections. The calibrated data was then used to output reliable "sand rate" values from the detectors. Detectors now provide an accurate quantifiable sand rate (gr/s) value.

SMS successfully completed maintenance of all 8 x acoustic sand monitors, including completion of sensitivity tests to confirm reading validity.



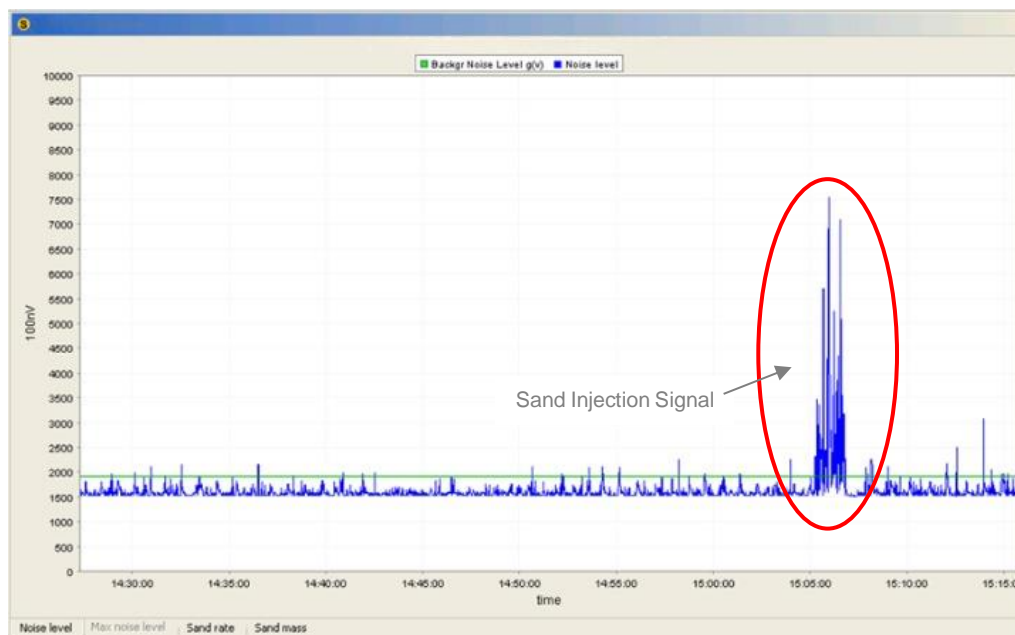
Sense



Understand



Perform



Sand Data Monitoring Sample

Value to Client:

Production Optimisation

- ASM detectors now provide a reliable and quantifiable sand rate (gr/s) value based on specific flowing characteristic of each well / location.
- Higher ASM detector accuracy.
- Using reliable data to take proactive measures to prevent LOC.
- Increased well production from ability to balance maximum flow rates versus solids production.
- Experience in servicing world's leading sand monitoring system brands.

Related Costs Reduction

- Safe operations in sand producing wells.
- Increased assets integrity and optimized overall production.

Contact us at info@smsintegrity.com or click [here](#) for more details on our services.



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