

Floating Production Storage and Offloading

FPSO Deployment

Customer: SLI Coastal Solutions



Nortek Signature55 being lowered from an FPSO in the Campos Basin.

“ Our experience with the use of the Signataure55 as a long-range current profiler in the demanding O&G Market was that the instrument was easy to operate, robust, and small enough for a two-person crew to deploy and service ”



Leandro Franklin,
Chief Operating Officer, SLI

As part of SLI activities in Brazil, we offer the service of metocean instrumentation in shallow and deep water, including O&G unities. One of our clients requested a practical test with the Signature 55 manufactured by Nortek as an alternative to their existing 38kHz APCP, with the intention to achieve longer profiling distances – beyond 600m, and eventually reaching 1000m. The purpose was to install one Signature55 on an FPSO, which was already equipped with a winch to deploy the ADCP; the instrument deployment cage, and cable were the only required upgrades to the existing infrastructure. Additionally, an Aquadopp was deployed from the same ADCP cage to measure surface currents near the FPSO.

The integration of the Signature55 with the main computer was an easy task, and, as with all Nortek instruments, the process was seamless thanks to the simple user-interface and hardware. Putting together the knowledge of SLI, Nortek, and the client’s technicians, we succeeded in the integration of the measurements from the Signature55 and Aquadopp into the proper Metocean Information System, which, up to now was designed to operate with competing ADCP brands. The software DADAS (from A+D) was utilized for this deployment.

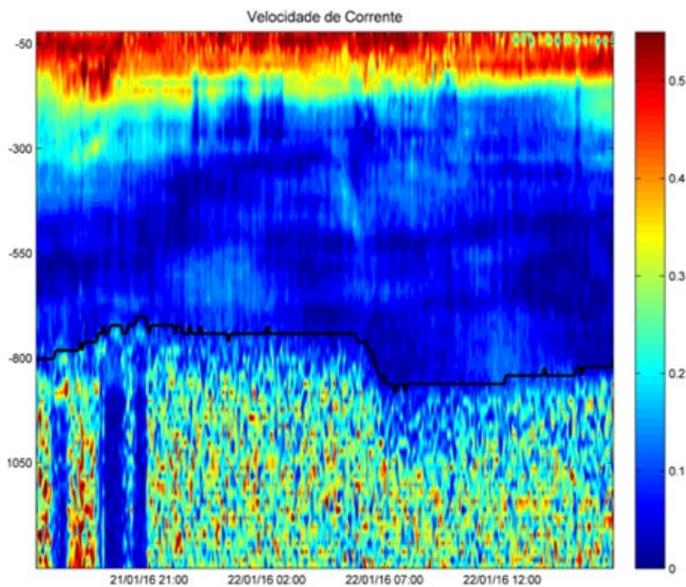
The system was deployed and operated for almost three consecutive years, located about 20m below water surface. The water depth at the location of the FPSO was more than 1,500m. Preventive maintenance intervals occurred every three months to treat biofouling and test

specific components prior to redeployment. The maximum range oscillated between 750m and 850m. The client configured the Signature 55 to profile up to 750m to ensure the highest resolution continuous time series was obtained. At this range the Signature 55 had great performance throughout the whole deployment, even with the acoustic and structural complexities of an O&G production field.

In terms of maintenance and robustness, no inconsistencies or problems were detected over the course of the three-year deployment, apart from four oxidized screws surrounding the connector. At the end of the deployment, the screws were replaced with an alloy that is not prone to oxidation. Given that the deployment was three years, this issue was negligible.

Our experience with the use of the Signataure55 as a long-range current profiler in the demanding O&G Market was that the instrument was easy to operate, robust, and small enough for a two-person crew to deploy and service. The Signature 55 performed flawlessly for three years, with no problems related to communication, data collection or corrosion in the housing/transducers; we now include this instrument as the preferred ADCP for O&G projects of this nature. We prefer the Signature 55 because it allows us to keep our operational index at the highest possible level within the O&G Market.

CASE STUDY



Velocities reported from the Signature55 in real time.
The client chose to optimize for resolution.

Leandro Franklin,
Chief Operating Officer,
SLI Coastal Solutions



Leandro Franklin is currently Chief Operating Officer at SLI Coastal Solutions, which includes the following Business Units: Environmental Modeling & Navigation, Oceanography & Environment, Meteoceanographic Instrumentation, Port & Coastal Engineering, and Dredging & Marine Works. He holds a Bachelor's degree in Oceanography (1999), M.Sc. in Coastal Geology and Oceanography (2003) and PhD in Geosciences (2011). He has over 20 years of professional experience related to operational oceanography, environmental monitoring, management and execution of projects related to the Oil & Gas, Mining and Port sectors.