TechNote

Marine Acquisition

4 Continents
Africa, Australia, Europe, South America

Commercial Experience
All Major Oil Companies

20 000 sq. km
Since 2012

PGS Marks 25th GeoStreamer 4D

In May 2018 Ramform Sterling completed PGS' 25th true broadband GeoStreamer 4D survey since 2012. It's the fourth 4D GeoStreamer survey from PGS this year and the rate is increasing.

This marks another milestone for GeoStreamer technology. These 25 surveys accumulate to 20 000 sq. km of multi-sensor 4D data. That is an impressive track record. The data quality and attribute reliability are particularly important when assessing production decisions. PGS' experience in the acquisition of multi-sensor, true broadband HD4D data is unique in the marine seismic industry and the demand for multi-sensor data is on the rise.

KEY BENEFITS

- Backward and forward compatibility (GeoStreamer, conventional, OBN, OBC, other broadband)
- Better repeatability with industry leading source and streamer steering
- Better sampling and increased resolution with more streamers and denser spreads

Source & Streamer Steering
Efficient acquisition and better repeatability

More Streamers, Denser Spreads
Better sampling, increased resolution

Backward & Forward compatibility
GeoStreamer, conventional and other broadband

Flexible, Compatible, Repeatable

PGS has processed numerous 4D projects, proving repeatedly that high-quality GeoStreamer data can not only be matched (i.e. downgraded) to conventionally-acquired monitor or baseline data, but it can also be used to upgrade the legacy data in a 4D-friendly manner. GeoStreamer data acquired on top of slanted streamer solutions can also provide reliable 4D results.

The first commercial multi-sensor 4D surveys have now been acquired. Test results demonstrate high-quality 4D data across an extended frequency bandwidth. Needless to mention GeoStreamer data is free from non repeatable rough sea surface effects. This is an ideal starting point for high-resolution 4D and QI analysis.

Ramform + GeoStreamer = Quality, Efficiency, Repeatability

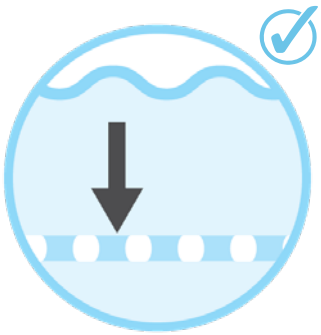
The success of GeoStreamer 4D is about more than the dual-sensor cable. Most of the 4D surveys are acquired with high-density configurations (HD4D). A typical configuration deploys 12-14 cables with a streamer separation of 50 m to ensure both dense receiver sampling as well as high repeatability. Some surveys were acquired with 16 or even 17 streamers.

The PGS Ramform fleet is built to operate these dense spreads. Repeatability requirements are supported by advanced streamer steering technology (eBirds) and a source steering solution that is considered by many as the best in the industry. Shot-by-shot farfield signatures are offered as standard.

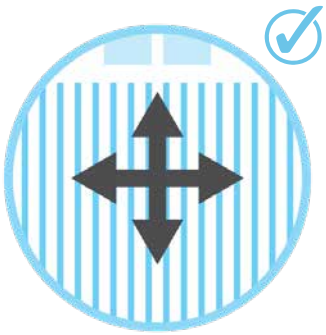
Our unrivaled track record of 25 multi-sensor 4D projects is a result of pioneering technology, a high capacity seismic fleet, operational excellence and geophysical competence.

Five 4D Challenges Solved with PGS Solutions

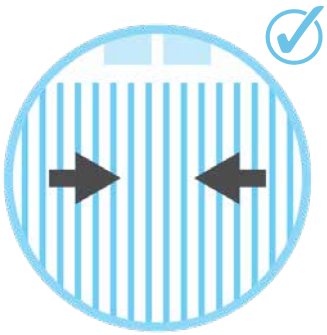
Noise – *deep tow and effective sea-surface noise removal*



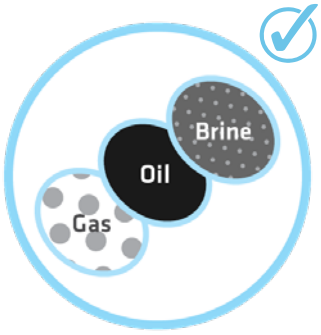
Repeatability – *industry leading source and streamer steering*



Resolution – *better sampling with more streamers and denser spreads*



Detectability – *reducing noise to the lowest in the industry, more accurate attributes*



Compatibility – *GeoStreamer can be combined with any other sensor data*