



Polarcus is a marine acquisition services provider operating a global fleet of environmentally-responsible, high-performance seismic acquisition vessels.

In 2014, DUG was awarded the contract to provide onboard processing and imaging software and compute hardware to perform fast-track processing and seismic acquisition quality control (QC) on Polarcus' fleet of seismic vessels. It marked a milestone for the data acquisition business because it was the first time a full processing sequence, including 3D SRME and Kirchhoff pre-stack time migration, had been performed on board acquisition vessels.

Five acquisition vessels and a pop-up facility, in Sakhalin, were kitted out with a significant compute and storage cluster, along with five individual workstations and a full suite of software. Multi-tiered, 24 hour, hardware and software support was provided by DUG, along with hardware and software training for Polarcus personnel.

The initial contract was to run for three years, with an extension option for up to five years. The contract ran for five years. Subsequently it was renewed for a further three years which is the current status of the partnership. On renewal of the contract period Polarcus additionally signed a three-year agreement to leverage the DUG McCloud platform to significantly enhance their fast-track processing and imaging offering to E&P clients. The deal includes compute, disk storage, online archive, and DUG's processing and imaging software, DUG Insight.

Backed by DUG's innovative technology offerings Polarcus has built a successful fast-track seismic processing and imaging business. In late 2019 Polarcus and DUG together created another breakthrough milestone by being the first to transfer data off a seismic vessel in real time, via satellite, into a DUG datacentre for processing and imaging.

The acquisition location for this project was in West Africa, with the DUG datacentre in Houston.



Over the years DUG has worked to continually advance the technologies it provides Polarcus, giving them more capability and keeping the company at the forefront of acquisition service providers. The Polarcus acquisition QC system was built directly into DUG's data storage and visualization, signal processing, imaging and interpretation software; DUG Insight. The software has been used to store and randomly access data sets in excess of five petabytes. DUG Insight has been written by DUG's 40-strong research and development team based in Perth, and is now being used by radio astronomers and meteorologists.



This is the story of many successful years of collaboration, capitalising on the aligned strengths of both organisations: strong cultures of innovation and delivery of excellence. The partnership spans multiple technologies from raw data acquisition, in remote field locations, to highly-processed client deliverables from some of the most advanced and greenest datacentres in the world.

This collaboration gives Polarcus the ability to offer their clients a faster and better-informed exploration process. The early relationship paved the way for DUG to build their DUG McCloud platform: a customer-focussed and collaborative cloud solution that encapsulates DUG's high-performance computing (HPC) environment. The innovative platform allows clients to combine HPC as a service (HPCaaS), professional services, and software to suit their needs. DUG McCloud is now utilized by a wide-range of clients from oil and gas, to astrophysics, to medical science.