

Survey Design

Polarcus Geophysical Toolbox : Designing for intelligent geophysics

Purpose

To balance geological requirements with operational efficiency, taking into account the full data sequence of time processing, imaging and final interpretation products. Intended results are fit-for-purpose, cost-effective surveys which utilize all available technology.

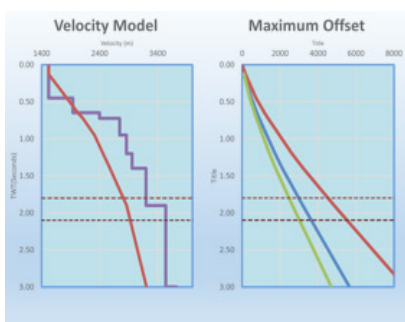
Benefits

- Multiple geophysically-driven strategies are offered for improving data quality while reducing acquisition time, providing clients with cost efficient solutions
- Intelligent geophysical products are applied including fan shooting, continuous recording, RightBAND™ broadband and infill management
- Polarcus' experienced team of survey design geophysicists analyze survey design options to optimize each of our solutions to match or improve upon the design criteria, choosing the best parameters for each product based on the client's needs

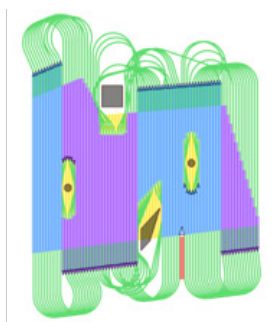
Field Example

The broadband technique is an example of a survey design option for which the benefits must be fully understood as well as the attendant issues which must be addressed by means of other methods. The benefits of extending the bandwidth of the data, particularly the low frequencies, are well documented. It is also important to consider the effects of high frequencies on shallow imaging and target level imaging. At target level, the increase in frequency content is generally modest and conventional spatial sampling, i.e. crossline bin size, is adequate. However, high-frequency shallow data may be spatially aliased. The source and streamer configurations could be modified to compensate for this, but this may not be a suitable solution. Polarcus can recommend innovative alternatives, such as simultaneous sources, to increase the shot density, and reduce crossline bin size without reducing fold.

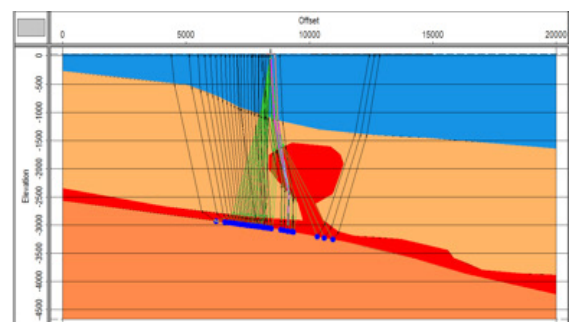
Polarcus can provide you with Survey Evaluation and Design (SED) advice, utilizing (A) Polarcus 1D Survey Design and various industry standard software packages such as (B) SurvOPT™, (C) OMNI 3D®, Nucleus and Gundalf™.



(A) Polarcus 1D Survey Design



(B) SurvOPT™



(C) OMNI 3D®

Impact on EHSQ

Polarcus' geophysical initiatives contribute to our Green Agenda by minimizing the time our vessels must spend on location to acquire high quality surveys in a safe and efficient manner. This optimization of survey time reduces the global environmental footprint of our operations and minimizes the exposure of our crews in the remote regions of the world where our vessels are designed to operate.