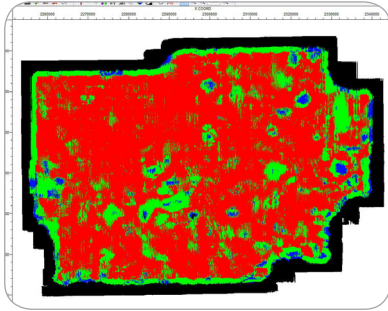


# MESA<sup>®</sup> | Seismic Survey Design Software



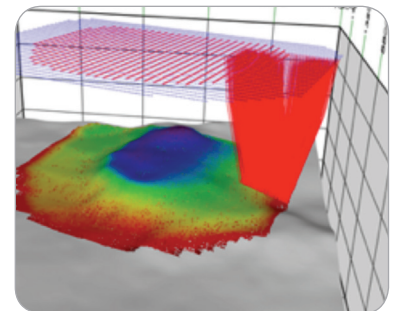
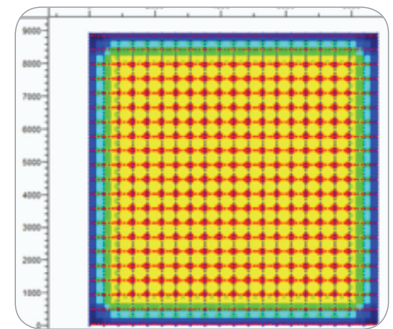
## ACQUISITION SURVEY DESIGN AND 3D MODELING SOFTWARE

ION's MESA software provides a flexible and robust toolkit to help optimize survey design and planning.

Since MESA was first in 1993, the ION team has worked in collaboration with its worldwide client base of E&P companies and contractors to add functionality, improve performance and enhance the user's experience.

### MESA'S comprehensive suite of products:

- **MESA Field:** Provides the tools required to build, manipulate and analyze survey designs, as well as to address day-to-day field operation requirements. MESA Field is ideal for users who want advanced 3D acquisition planning capabilities with a basic analysis package.
- **MESA Professional:** Builds on MESA Field with expanded tools to design, analyze and cost seismic surveys. Its main functionality includes advanced geophysical attribute analysis, multiple project management, map projection definition and translation, import/export of shape or vector files as exclusion zones, and KMZ and other outputs.
- **MESA Expert:** The definitive 3D survey design package, MESA Expert, incorporates all of the features of MESA Professional with the additional ability to create basic subsurface illumination through flexible and straightforward geologic model building and ray tracing. Synthetic traces are analyzed in multiple sort planes that can be exported or combined with well logs in a VSP display. 3D visualization assists in spatial interpretation of attribute diagnostics.



**Key benefits:**

- Provides advanced survey design and subsurface coverage analysis for land, marine and OBC survey designs, including 3D/3C and VSP surveys
- Optimizes survey results through the analysis of a broad spectrum of geophysical attributes
- Offers fast and simple geologic modeling, ray tracing and target illumination via a 3D viewer interface

	MESA Field	MESA Professional	MESA Expert
<b>Design layout</b>			
Basic (lines/bricks, SPS/SEGP import, Unit Template)	√	√	√
Advanced (VSP, 2D crooked line binning)		√	√
Notes, attachments, labels		√	√
<b>Editing tools</b>			
Source/receiver editing, editing undo, spreadsheet	√	√	√
Template editing	√	√	√
<b>Attribute displays</b>			
CMP bin attribute displays of fold, offset, azimuth	√	√	√
Source/receiver attribute definition and display	√	√	√
Advanced attribute displays		√	√
Histograms, cross plotting, pie charts		√	√
Attribute-based filtering	√	√	√
<b>Bin Analysis</b>			
Bin grid definition, statistics and fold calculation	√	√	√
Advanced bin analysis tools (OVT, cross spread)		√	√
Exclusion zone definition and export	√	√	√
Exclusion zone statistics and analysis tools		√	√
<b>Utility functions</b>			
Translation and rotation of survey coordinates	√	√	√
Land survey statistics, spreadsheet export	√	√	√
Cost analysis	√	√	√
Trace migration aperture and Fresnel Zone modeling		√	√
KMZ import/export for use in Google Earth™		√	√
Multiple format data output	√	√	√
Multi-import of survey files	√	√	√
Project tracking tools	√	√	√
Multiple project analysis and merging		√	√
Map projection definition and translation (Blue Marble™)		√	√
Marine survey design (P190 import, sail lines)		√	√
Multiple coordinate comparison		√	√
Synthetic trace generation		√	√
3D viewing window		√	√
Web mapping service (WMS/ web coverage service (WCS)		√	√
Geologic model building and model-based attribute display			√
Raytracing (offset, image, normal, PS converted wave)			√
Synthetic VSP generation			√
CMP v. CRP fold comparison			√
Well log import, curve display, cross plotting, AVO analysis			√
Model-based synthetic gathers			√

ION has been delivering field ready solutions to the oil and gas industry for over 40 years, and is the leading provider of real-time, multi-vessel positioning and control systems. For further information contact [gmgssupport@iongeo.com](mailto:gmgssupport@iongeo.com)

**About ION**

ION is a leading provider of technology-driven solutions to the global oil and gas industry. ION's offerings are designed to help companies reduce risk and optimize assets throughout the E&P lifecycle.