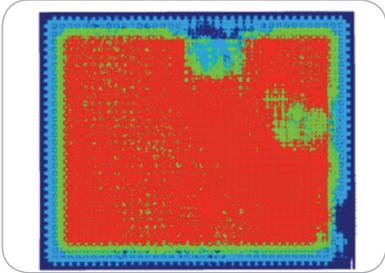# MESA® 14 | Seismic Survey Design Software

ACQUISITION SURVEY DESIGN AND 3D MODELING SOFTWARE

ION's MESA 14 release has a number of anticipated new features and enhancements. Improving the software's overall flexibility and speed has been an ongoing development focus and, without exception, MESA 14 has delivered on these goals.

The new features in MESA 14 have been designed to meet the challenges of modern survey design methods.

The Unit Template feature has been greatly enhanced to accommodate large projects with complex boundaries and taper regions.

Several features have been added with OBS surveys in mind. The layout speed of the Unit Template feature can be as much as five times faster than previous versions.
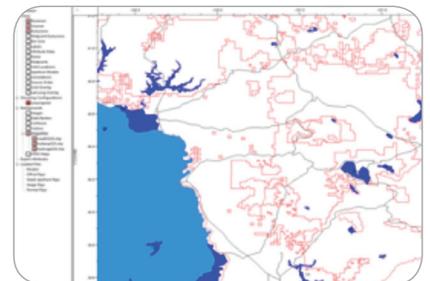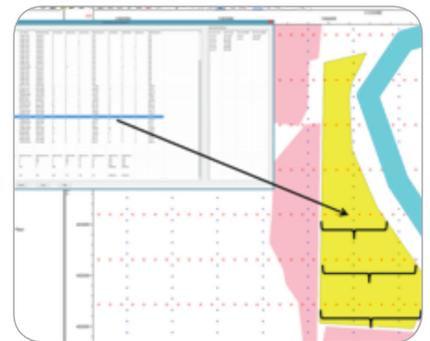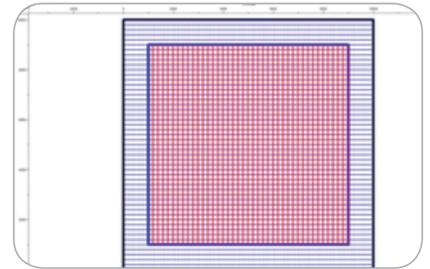
There is a new tool for evaluating the percentage of bins in the project that meet multiple sets of offset and azimuth criteria.

Another new tool can quickly calculate the linear distance across hundreds of exclusion zones for source and receiver line permitting. Expanded attribute capabilities have improved MESA's capabilities for tracking acquisition progress.

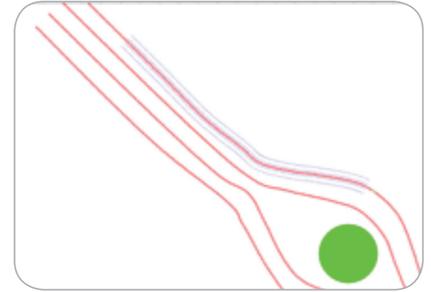**MESA 14 New features and enhancements:**

Improved unit template

→ Automatic centering for groups of sources and receivers

→ New roll distance calculator to show which spacings will produce uniform fold coverage

→ Additional polygon filling options including separate polygons for sources and receivers

→ Enhanced scalability for generating large projects

→ More design flexibility as source points are no longer restricted to grid intersections

Expanded statistical tools

→ New bin analysis tool allows the user to evaluate multiple offset and azimuth objectives

→ Analysis of linear distance exclusion zones are crossed by shot and receiver lines

→ Statistical data on number of shots and receivers affected by each exclusion zone
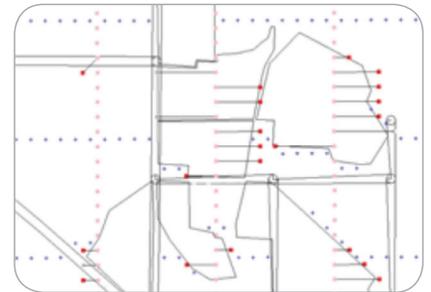
→ CSV export of statistical data

GeoTiff capability

→ Ability to stream map of attribute data through Web Coverage Services (WCS)

→ GeoTiff data can be extracted as source and receiver attributes

→ Elevation data can be displayed as color contour, hill-shade and slope maps

Additional marine modeling tools

→ Import non-linear sail lines
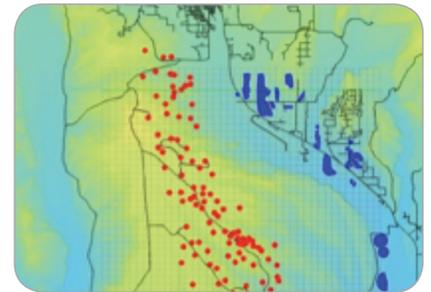
→ Support for coil and racetrack sail lines

Support for multiple sets of project coordinates

→ Easily compare and track pre-plot, surveyed and post-plot coordinates

→ Calculate coordinate differences and store as source and receiver attributes

Project tracking improvements

→ New source and receiver attribute types, including strings, date/times and BOOLEANS, enhance the ability to use MESA as an acquisition progress tracking tool

Synthetic data improvements

→ Generate zero-offset synthetic gathers from image and normal ray tracing

Faster speed and enhanced displays

→ Color offset and vector diagrams are an order of magnitude faster than previous versions

→ Faster calculation speed for exclusion zones

ION has been delivering 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 gmgsupport@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.