

**DOSITS 2019 Webinar Series: Anthropogenic Sound Sources
May 1, 2019**

*Marine Seismic Surveys: What are they, and how are they done?
Dr. Bob Gisiner, International Association of Geophysical Contractors (IAGC)*

Webinar Outline:

Seismic Sound Source(s)

- Single source
- Alternative sources
- Vibratory/tonal sources
- Seismic array

Performing a Seismic Survey

- Equipment
- Vessel operations
 - o Deployment and retrieval
 - o Planning

Types of Surveys

- 2D (one receiving streamer), 3D (multiple receiving streamers), and 4D (multiple 3-D surveys over time)
- Multi-vessel surveys
- Life-of-Field surveys

Uses of Seismic Surveys

- Oil and gas exploration
- Other uses:
 - o Site selection for cables, pipelines and offshore wind
 - o Earthquake and tsunami forecasting/preparedness
 - o Global geophysics/plate tectonics

Additional information on the DOSITS website:

Audio Gallery > Airgun

<https://dosits.org/galleries/audio-gallery/anthropogenic-sounds/airgun/>

Technology Gallery > Airgun

<https://dosits.org/galleries/technology-gallery/observing-the-sea-floor/airgun-technology/>

Technology Gallery > Projector Array

<https://dosits.org/galleries/technology-gallery/basic-technology/projector-array/>

Technology Gallery > Hydrophone

<https://dosits.org/galleries/technology-gallery/basic-technology/hydrophonereceiver/>

Technology Gallery > Hydrophone Array

<https://dosits.org/galleries/technology-gallery/basic-technology/hydrophone-arrays/>

People > How is sound used to explore for oil and gas?

<https://dosits.org/people-and-sound/examine-the-earth/how-is-sound-used-to-explore-for-oil-and-gas/>

People > How is sound used to study the Earth's history?

<https://dosits.org/people-and-sound/examine-the-earth/how-is-sound-used-to-study-the-earths-history/>

Science > Sound Movement > Reflection

<https://dosits.org/science/movement/how-does-sound-move/reflection/>

Science > Advanced Topic > Introduction to Signal Levels

<https://dosits.org/science/advanced-topics/introduction-to-signal-levels/>

Science > Advanced Topic > Sound Pressure Levels and Sound Exposure Levels

<https://dosits.org/science/advanced-topics/sound-pressure-levels-and-sound-exposure-levels/>

Science > Advanced Topic > Propagation from a Sound Source Array in the Near Field and Far Field

<https://dosits.org/science/advanced-topics/near-far-field-propagation/>

Animals > Effects > Anthropogenic sound sources > Seismic Airguns

<https://dosits.org/animals/effects-of-sound/anthropogenic-sources/seismic-airguns/>

Archived DOSITS Webinar: Potential Effects of Sound on Marine Mammals

<https://dosits.org/decision-makers/webinar-series/webinars-2018/potential-effects-mammals2018/>

Archived DOSITS Webinar: Potential Effects of Sound on Marine Fishes

<https://dosits.org/decision-makers/webinar-series/webinars-2018/potential-effects-sound-fishes/>

DOSITS Sound Source Tutorials: <https://dosits.org/decision-makers/tutorials/sound-source/>

- Seismics: <https://dosits.org/decision-makers/tutorials/sound-source/seismic-airgun/>

DOSITS Fact Sheet > Seismic Airguns

<https://dosits.org/resources/resource-categories/dosits-publications/#seismic>

DOSITS Hot Topic > Seismic Airguns

<https://dosits.org/hot-topic-seismic-airguns/>