Technical Data Sheet

The Power of Partnership

Oseis™ Hardware

Orica Seismic Electronic Initiating System Hardware

System Description

The **Orica™** Seismic Electronic Initiating System, **Oseis™**, consists of electronic detonators, Tester and Shooter control equipment with trigger interface and software. The system was designed specifically for geophysical exploration and can be used for both single and pattern firing applications in challenging environments

Benefits

- System is protected against accidental or unintended detonation through inherent security.
- System is protected against unintended detonation caused by static electricity, stray currents or electromagnetic inductions.
- Enables security tracking and inventory control of detonators via a unique identification number for every detonator that can be matched to shotpoint location.
- System is fully compatible with most seismic acquisition systems.
- **Oseis™** control equipment is easy to use and interpret.
- Assures superior performance in the toughest of environments.

Oseis™ Tester

The **Oseis™** Tester is a multi function device used during loading to perform detonator function, identification and positioning tasks.
The **Oseis™** Tester checks for full detonator function including continuous monitoring of current leakage and displays user warning messages. The **Oseis™** Tester reads and stores the unique detonator identity number (Det-ID) to memory and allows for entering and storage of corresponding shotpoint information for each detonator. The user is able to review this data stored in the **Oseis™** Tester and to upload to a PC. The unique Oseis Det-ID is also printed on the flag tag and allows further inventory traceability for **Oseis™** Detonators.

Oseis™ Shooter

To fire the shot, the **Oseis™** Shooter is connected to the conventional shooting system via the trigger cable. The **Oseis™** Shooter is protected by a personalized identification number (PIN) to prevent use by unauthorized personnel. **Oseis™**Detonators can only be programmed and fired by **Oseis™** Shooters, which provide the required firing energy and digital information. The ultimate firing

command to the **Oseis™** Detonators is given by the **Oseis™** Shooter upon receipt of a dedicated trigger signal. The trigger signal is enabled by the firing command from a conventional seismic shooting system. The time between trigger signal to the detonator firing is a constant 20ms +/- 0.075ms.

Technical Properties

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Oseis™ Tester	**Tester I** is an inherently safe hand held data capture and testing device capable of saving up to a maximum of 300 **Oseis™** shot points. **Tester II** memory can save data for up to 1000 shot points. Each logged shotpoint is marked with a time and date stamp via the internal real time clock (RTC). Data is transferable to a computer with both versions.
Oseis™ Shooter	Firing capacity up to 10 **Oseis™** electronic detonators in a single pattern shot. The **Shooter II** memory can save data for up to 1000 shot points. Data is transferable to computer-based software.

Packaging

Oseis™ Testers and Shooters are available in nylon carry cases to protect equipment during transport, storage and use. **Oseis™** Testers and Shooters contain sensitive electronic circuitry that is designed to be robust under normal operating conditions. However care should be taken to prevent this equipment being subject to mechanical damage through rough handling or impact.

Storage

Oseis™ Testers and Shooters should be stored in a protective case in a location not subject to high temperatures or humidity. Normal storage precautions applying to electronic equipment will maximize the useful life of the control equipment.

Safety and Security

The Orica Seismic Electronic Initiating System complies with the principle of 'Inherent Safety'. This means the **Oseis™** Tester, used at the blasthole, is unable to fire **Oseis™** Detonators even if the Tester and the Detonator develop faults. In addition, the **Oseis™** Tester does not contain any circuitry or programming capable of generating program, arm and fire signals.

Trademarks

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For additional information visit our web site at *oricaminingservices.com* under Seismic Exploration

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