

Updated position data exchange formats now available



IOGP has developed two updated position data exchange formats to replace the outdated UK00A P1/90 and P2/94 formats.

The revised and modernized formats – IOGP P1/11 and P2/11 – are available to download for free from IOGP's bookstore at www.iogp.org/bookstore

The UK00A P1/90 and P2/94 position data exchange formats that have historically been used in seismic data acquisition have outlived their design life and can no longer support modern acquisition techniques without adaptation. They have therefore ceased to be standards, as each user of the formats has modified them, to suit their own purpose.

In 2011, IOGP, the custodian of these formats, redesigned them to meet the needs of complex seismic acquisition techniques current and future, with the latest enhancements added in 2024 with the benefit of more than a decade of industry use.

Furthermore, while use of the post-processed position data format (P1/90) was common only in the marine environment, the revised version has the advantage of being applicable to all environments (marine, transition zone, and land), whether for 2D, 3D, or 4D acquisition, and also for multiple acquisition formats (marine tow, spiral, OBC, OBN, HR & seabed hazard, etc). Other legacy formats, such as the unsupported SEG P1, can therefore be retired in favour of the P1/11.*



Photo: ©Stephan Gladieu/TOTAL

Among the benefits of the new formats:

- A structured ASCII text style for human and machine-readability.
- Comma-separated fields enabling direct extraction into a spreadsheet.
- The ability to store single or multiple seismic lines in the same file which, with conventional file compression, can be reduced to manageable file sizes for transmission.
- Freedom from previous constraints on field or file line lengths – the receiver groups for an entire streamer can be stored on one line, if required.
- A comprehensive user guide giving both theoretical background and practical guidance.

* The Technical Standards Committee of the Society of Exploration Geophysicists (SEG TSC) and IOGP's Geomatics Committee agreed to deprecate the SEG P1 and recognize IOGP P1/11 as its replacement



Key features include:

- A **Common Header** across all seismic 'P' position formats.
- **Unambiguous geospatial definition** of position data in up to three coordinate reference systems, including relevant transformations.
- Full support for the IOGP **EPSG Geodetic Parameter Dataset** (www.epsg.org).
- Data values recorded to their **full measured resolution**.
- Record extension through **additional user-defined fields**.
- Any node defined as a position object can be recorded, with **positional error estimates** and other attributes.
- A standard means of **exchanging pre-plots** (lines, points, arcs, spirals) current predictions, shot and receiver edits, and survey areas.
- Support for **relational records** linking source & receiver positions as required for 3/4D surveys.
- Optional fields allow support for **data in legacy formats**.
- Support for raw **GNSS data recording** (P2/11).
- Support for **environmental data** such as magnetic variation, speed of sound, and tidal information (P2/11).
- Ability to record **Site Hazard position data** for HR/UHR and Seabed Clearance Surveys (MBES, SSS, SBP, magnetometer).

For more information about the Geomatics Committee

please see: www.iogp.org/geomatics

or contact the Committee Manager at lks@iogp.org

Environments

- Marine
- Transition zone
- Land

Applications

- Preplot exchange
- Seismic acquisition
- Shot and receiver edits
- Seismic processing
- Geophysical site hazard surveys
- Workstation data loading
- Data management

**IOGP P1/11 replaces
UK00A P1/90**

**IOGP P2/11 replaces
UK00A P2/94**

**SEG P1 deprecated,*
replaced by IOGP P1/11**

Photo: Geokinetics



IOGP Headquarters

City Tower, 40 Basinghall Street, London EC2V 5DE, United Kingdom
T: +44 20 4570 6879
E: reception@iogp.org

IOGP Americas

T: +1 281 219 9908
E: reception-americas@iogp.org

IOGP Asia Pacific

T: +61 7 2139 9714
E: reception-asiapacific@iogp.org

IOGP Europe

T: +32 2 882 16 53
E: reception-europe@iogp.org

IOGP Middle East & Africa

T: +244 226 434 245
E: reception-mea@iogp.org

www.iogp.org