North Sea Transition Authority

# Information Reporting

Form and Manner of NDR Information

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The document can be found on the NSTAs website.


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# Contents

# 1. Scope and Purpose

This document provides supplemental information in support of published guidance on the North Sea Transition Authority's ('**NSTA'**) requirements for the reporting of Information and Samples that are retained by relevant persons under the Oil and Gas Authority (Offshore Petroleum) (Retention of Information and Samples) Regulations 2018 (the 'Retention Regulations'1), and subsequently must be reported to the NSTA in accordance with a notice issued under section 34 of the Energy Act 2016 ('the Act') or in accordance with the exercise of other powers under Part 2, Chapter 32 of the Act.

The powers under section 34 commenced in December 2016.

This document also provides supplemental information in support of Petroleum Operations Notice 9 (PON9) for the reporting of data created and acquired before 2018, in accordance with the requirements set out in offshore petroleum licence model clauses.

This document is intended to aid understanding of what specific information must be reported to the UK National Data Repository and the "form and manner" in which the information must be reported.

This document is not a replacement for published guidance, which explains what action is required on the part of the relevant person when reporting information to the NSTA. This document explains how information should be formatted and how the action of reporting is to be carried out.

The NSTA is not bound by this document and where it departs from this document it will explain why. This document is issued in support of the relevant guidance and is not a substitute for any regulation or law and is not legal advice.

This document will be kept under review and may be revised as appropriate in the light of further experience and developing law and practice, and any change to the NSTA's powers and responsibilities.

If the NSTA changes this information in a material way, it will publish a revised document.

# 2. Introduction and Context

The NSTA Digital Strategy 2020-2025[1] describes how the NSTA will deliver, promote, and influence digital excellence through digitalisation to support the OGA Strategy.

Aiming to be an innovator and a catalyst, the NSTA is helping industry, academia, and the supply chain to use digitalisation to unlock the huge value from data, whilst at the same time providing excellent digital services to its stakeholders in support of regulatory excellence.

The NSTA's ambition is to enable digital services that ensure digital, data and technology work for all.

The requirement for relevant persons to retain petroleum-related Information and Samples (as defined in section 9A(1)(b) of the Petroleum Act 1998), and to report certain of them to the NSTA via the NDR, is explained in Petroleum Operations Notice 9. Such information and samples may be disclosed by the NSTA, at its discretion.

Broadly similar requirements for such retention and disclosure are also set out in the Retention Regulations and the Disclosure Regulations in relation to information and samples in the Energy Act 2016 and supporting guidance documents.

A main aim of these regulatory requirements is to "ensure greater access to the timely and transparent data necessary for a competitive market".

### What is information?

In this document, the term 'information' means 'petroleum-related information' which is defined in section 27(1) of the Energy Act 2016. The Retention Regulations (and the supporting guidance) set out what categories, and the information and sample types within those categories, that must be retained; these also include those that must be reported.

[1] https://www.nstauthority.co.uk/media/7381/oga-digital-strategy.pdf

# 3. Reporting of Information

### Form and Manner

This document sets out the form of and manner in which the NSTA will normally require information to be reported. i.e. what digital format or industry standard (for instance, in the case of certain geophysical datasets) and through which mechanism (e.g. online submission or on physical media such as a portable media storage device).

The costs of reporting information will be for the account of the relevant person(s).

Specified information that has been acquired or created pursuant to an offshore petroleum licence, such as well logs and reports or seismic volumes, is to be reported to the National Data Repository (NDR) https://ndr.nstauthority.co.uk

General or “summary” information about wells should be reported via the Energy Portal.

General or “summary” information about surveys should be reported via the ISC mailbox ISC@nstauthority.co.uk

# 4. General Reporting Requirements

### Coordinate Reference System

Required map projections for data containing projected XY coordinates in reportable information are listed in *Table 1. NDR Compliant Coordinate Reference Systems.*

Note: ETRF89 and ETRS89 are equivalent to WGS84 for these offshore positioning purposes.

**Table 1. NDR compliant coordinate reference systems**

| Map Projection | Datum | EPSG code | Area of use | Range of use (Degrees) |
|---|---|---|---|---|
| **UTM 31 North** | ED50 | 23031-1311 | UKCS offshore | -2, 6, 40, 70 |
| | | 23031-1613 | Norway - offshore South of 62°N | |
| | | 23031-1612 | Norway - offshore North of 62°N | |
| | WGS84 | 32631 | UK - North Sea | |
| **UTM 30 North** | ED50 | 23030-1311 | UKCS offshore | -5, 6, 40, 70 |
| | | 23030-1613 | Norway - offshore South of 62°N | |
| | | 23030-1612 | Norway - offshore North of 62°N | |
| | WGS84 | 32630 | UK - North Sea | |
| **UTM 29 North** | ETRF89 ETRS89 | 25829-1149 | Europe, onshore and offshore | -11, -6, 40, 70 |
| | WGS84 | 32629 | UK | |
| **UTM 28 North** | ETRF89 ETRS89 | 25828-1149 | Europe, onshore and offshore | -17, -12, 40, 70 |
| | WGS84 | 32628 | Greenland. Iceland. Ireland - offshore | |
| **UTM 27 North** | WGS84 | 32627 | Greenland. Iceland. | -23, -18, 40, 70 |
| **TM 0 North** | ED50 | 23090-1311 | Offshore United Kingdom - Denmark – Ireland – Netherlands | -6, 5, 50, 63 |
| **British National Grid** | OSGB 1936 | 27700 | UK Onshore | -7, 3, 49, 61 |

### File Extensions

Information that is reported to the NDR must align to the formats described in this document. No other file formats are to be submitted to the NDR.

*Table 2. NDR Compliant file extensions for reportable information* sets out the file extensions that are required according to the permitted file format.

**Table 2. NDR compliant file extensions for reportable information**

| File Type | File Extension |
|---|---|
| **DLIS Digital log data** | .dlis |
| **LAS Digital log data** | .las |
| **PDF Portable document format** | .pdf |
| **ASCII text** | .txt |
| **CSV comma separated values text file** | .csv |
| **Tag Image File Format** | .tiff (preferred); .tif (accepted) |
| **SEG-D seismic data** | .segd (preferred); .sgd (accepted) |
| **SEG-Y seismic data** | .segy (preferred); .sgy (accepted) |
| **Seismic raw navigation P format** | .p286, .p291, .p294 or .p211 |
| **Seismic processed navigation P format** | .p184, .p190 or .p111 |
| **Seismic bin grid navigation P format** | .p698, .p611 |
| **Seismic OBN node navigation SEG SPS V2.1** | .sps, .rsps, .ssps or .xsps |
| **Seismic onshore navigation SEG-P3** | .segp3 |
| **Wellbore positioning - P7/2000 and P7/17** | .p72, .p717 |
| **Velocity DISKOSV98** | .v98 |
| **JPEG Images** | .jpg |
| **PNG Portable network graphics** | .png |
| **Video MPEG-4** | .mp4 |
| **GeoTIFF maps** | .geotiff |

# 5. Wellbore Information

## Specific wellbore information reporting requirements

The effective reuse of information that is obtained from the NDR is dependent on information being aligned to standard formats. Those formats of well information that may be reported to the NDR are set out in *Table 3. NDR compliant wellbore data formats*.
This is to apply generally to information of any vintage, regardless of the original format.

**Table 3. NDR compliant wellbore data formats**

| Data format | Applicable data types | Requirements |
|---|---|---|
| **PDF** | Reports<br><br>Log images | All modern reportable documents and data are required to be in machine readable digital formats, where “machine readable” means the data format can be easily processed by a computer without human intervention while ensuring no semantic meaning is lost.<br><br>PDF must not be password protected or encrypted. |
| **P7/2000, P7/17** | Digital deviation data | Complies with IOGP format definitions https://www.iogp.org/workstreams/engineering/geomatics/surveying-and-positioning/ |
| **LAS** | Digital log data | Format definition https://www.cwls.org/products/#products-las<br><br>Header information block must include the Wellbore Registration ID in the “WELL.” section. The Wellbore Registration ID must be a match for the Well ID in WONS, including spaces where appropriate, special characters ( / and - ) and no leading or other additional characters. |
| **DLIS** | Digital log data | Format definition https://energistics.org/sites/default/files/RP66/V2/Toc/main.html |
| **SEG-Y** | Wellbore seismic | Data can be SEG-Y format rev 0, rev 1 or rev 2.<br><br>SEG-Y data should comply with the requirements of the “SEG-Y Data format requirements” section in this document. |
| **JPEG, PNG** | Images, photographs | Images/photos must have a minimum resolution of 300 pixels per inch. |
| **ASCII, CSV** | Supporting information | Should only contain UTF-8 characters. |
| **TIFF** | Log images | May be reported for wells completed prior to 1st January 2018.<br><br>Width cannot exceed 100,000 pixels; length cannot exceed 1,000,000 pixels. Resolution must be between 200 and 2,000 ppi. Orientation must have value ‘1’ |

## Wellbore information types, classification and required formats

Classification of wellbore information in the NDR owes itself to the classification systems developed and applied by industry in preceding services. The NSTA intends that the investment to date in developing and adhering to the CS8 system should persist in the NDR. Indeed, the framework will be continuously developed by the NSTA in collaboration with industry representatives and, where appropriate, other users of the NDR service.

*Table 4. Wellbore information types, classification and format* sets out the classifications that are required to be assigned to information as it is reported to the NDR, with a summary description for each information type. This table also specifies the required format in which each information type should be reported.

### Table 4. Wellbore information types, classification and format

| Information Tag | Classification Tag | Description | File Format |
|---|---|---|---|
| **Pre Drill** | | | |
| **Pre-drill Report** | PRE_GEN | Prepared before drilling, Pre Drill reports not covered specifically by other tags | PDF |
| **Well Proposal** | PRE_PROP | Business case for drilling the well. Authorisation for Expenditure AFE | PDF |
| **Drilling Programme** | PRE_DPROG | Well design from an engineering and operations perspective | PDF |
| **Geological Programme** | PRE_GPROG | Expected geological considerations and aims and how the well design will be influenced by geology. Target information and geological context | PDF |
| **Site Survey Report** | PRE_SITE | Rig site conditions, shallow gas hazard considerations and location factors including bathymetry and anchorages. May be associated to a separate shallow seismic survey | PDF |
| **Rig Move/Positioning** | PRE_MOVE | Planning and operations for siting the rig accurately at the planned location | PDF |

| Information Tag | Classification Tag | Description | File Format |
|---|---|---|---|
| **Drilling operations** | | | |
| **General Drilling Report** | DRILL_GEN | Any aspect of drilling not covered specifically by other tags | PDF |
| **Drilling HSE Notification** | DRILL_HSE | Notification of Well Operations to the Health and Safety Executive, HSE | PDF |
| **Daily Drilling Report** | DRILL_DAILY | Produced daily for drilling operations | PDF |
| **Drilling Cementing Report** | DRILL_CEMENT | Cementing in relation to Drilling produced daily | PDF |
| **Drilling Fluid Report** | DRILL_FLUID | Drilling fluid related operations report | PDF |
| **MWD/LWD End of Well Report** | DRILL_MWD | End of Well Report EOWR on activity and results of Measurement While Drilling MWD or Logging While Drilling LWD | PDF |
| **General Core Report** | CORE_GEN | General reports from Conventional & Rotary Cut coring operations | PDF |
| **Well Examiner Report** | WELL_EXAM | Produced at any stage of the well life cycle including Drilling, Completions, Workovers and Abandonment | PDF |
| **Deviation Survey Report** | DRILL_DEV | Wellbore trajectory deviations from vertical with depth | PDF |
| **Deviation Survey Data** | WDD_FILE | Deviation Survey Data stored as a digital ASCII formatted text | P72, P717 |
| **Drilling End of Well Report** | DRILL_EOWR | Operator End of Well Report EOWR for drilling activity | PDF |
| **Mud Log** | LOG_MUD | Formation Evaluation Log, Pressure Evaluation Log, Gas Detection Log and any other drilling data log image | PDF, TIFF |
| **Mud Data** | MUD_FILE | Digital record of a borehole derived through examination of rock cuttings brought to the surface by drilling fluids where data was not originally written to DWL formats. | PLAIN, CSV |
| **Mudlogging End of Well Report** | GEOL_MUD | Mud log / mudlogging activity and results EOWR | PDF |

| Information Tag | Classification Tag | Description | File Format |
|---|---|---|---|
| **Digital Well Logs** | | | |
| **Digital Mud Log** | DWL_MUD | Digital Well Log including Mud log, Formation Evaluation Log, Pressure Evaluation Log, Gas Detection Log and any other drilling data logs | LAS, DLIS |
| **Digital MWD/LWD** | DWL_MWD | Digital Well Log recorded by Measurement While Drilling (MWD) or Logging While Drilling (LWD) techniques | LAS, DLIS |
| **Digital Wireline Log** | DWL_WIRE | Digital Well Log recorded by sensors on wireline or on coiled tubing | LAS, DLIS |
| **Digital Production Log** | DWL_PROD | Digital Well Log including Production logs, Production Logging Tool (PLT), Thermal Neutron Decay Time (TDT) data | LAS, DLIS |
| **Digital Well Test Log** | DWL_TEST | Digital Well Log Testing logs run in casing or open hole | LAS, DLIS |
| **Digital Log Other** | DWL_OTHER | Any other Digital Well Log data not covered by other tags | LAS, DLIS |
| **Joined Well Log** | JWL_FILE | Digital Well Log data, composited, environmentally corrected, depth matched joined well log curves JWL | LAS, DLIS |
| **Joined Well Log Audit** | JWL_AUDIT | Audit trail document for Joined Well Log (JWL) File | PDF |
| **Wellbore geophysical data and reports** | | | |
| **General Geophysical Report** | GPHYS_GEN | Geophysics, borehole seismic, velocity surveys not covered by other tags | PDF |
| **VSP Report** | GPHYS_VSP | Borehole seismic acquisition, processing and interpretation | PDF |
| **VSP QC Report** | GPHYS_QCVSP | Operations and positioning information for offset Vertical Seismic Profiles VSP | PDF |
| **Checkshot Report** | GPHYS_CSHOT | Checkshot velocity analysis operations, time depth listing and results | PDF |
| **Array Sonic Report** | GPHYS_SONIC | Acquisition, processing and interpretation of array sonic data | PDF |

| Information Tag | Classification Tag | Description | File Format |
|---|---|---|---|
| **Seismic Log** | LOG_SEIS | Graphical plots of Borehole seismic logs, VSP plots and Synthetic Seismograms. | PDF, TIFF |
| **Velocity Log** | LOG_VEL | Velocity Log and Two-Way Travel Time Log | PDF, TIFF |
| **VSP Data** | VSP_FILE | Digital Borehole seismic logs, VSP data and Synthetic Seismograms | PLAIN, CSV, SEGY |
| **Checkshot Data** | CSHOT_FILE | Checkshot or Time/Depth data in tabulated digital format | PLAIN, CSV |
| | | | |
| **Wellbore data collection and reports** | | | |
| **Composite Log** | LOG_COMP | Final log image showing well header information, lithology, casing joints, core intervals, geological zones, tops and basic petrophysical logs | PDF, TIFF |
| **Core Log** | LOG_CORE | Log image depicting core descriptions and gamma response from core. | PDF, TIFF |
| **CPI Log** | LOG_CPI | Computer Processes Interpretation CPI log image, correlation panels (Not dipmeter). | PDF, TIFF |
| **Lithological Log** | LOG_LITH | Log image of lithological descriptions | PDF, TIFF |
| **Wireline Log** | LOG_WIRE | Logs recorded by sensors on wireline or on coiled tubing not covered by other tags | PDF, TIFF, PNG,JPEG |
| **Testing Log** | LOG_TEST | Log image for testing run in casing or open hole e.g. Production Logging Tool (PLT), Thermal Neutron Decay Time (TDT), Repeat Formation Test (RFT), Modular Formation Dynamics Tester (MDT). | PDF, TIFF |
| **MWD/LWD Log** | LOG_MWD | Logs recorded by Measurement While Drilling (MWD) or Logging While Drilling (LWD) techniques | PDF, TIFF |

| Information Tag | Classification Tag | Description | File Format |
|---|---|---|---|
| **Summary Log Chart** | LOG_SUM | Log image of summary charts not covered by other tags | PDF, TIFF |
| **Daily Geology Report** | GEOL_DAILY | Daily geologist / geological observations during drilling | PDF |
| **General Geology Report** | GEOL_GEN | General reports on geology or geological analysis & interpretation | PDF |
| **Geology End of Well Report** | GEOL_GEOW | Geological operations, results and interpretation EOWR | PDF |
| **Dipmeter Log** | LOG_DIP | Graphical plot of dipmeter results or Imaging Logs | PDF, TIFF |
| **Dipmeter Report** | GEOL_DIP | Dipmeter operations & interpretation, including Image Log analysis | PDF |
| **Petrophysical Report** | GEOL_PPHYS | Rock properties determined by logging. Details of logging programmes, processing and analysis and results | PDF |
| **Geochemistry Report** | GEOL_CHEM | Methodology, results and interpretation of geochemical analysis of samples | PDF |
| **Well Summary Report** | WELL_SUMMARY | Summary of operations, geology, data collection, interpretation and well results | PDF |
| **Core and Samples Analysis and Reports** | | | |
| **Conventional Core Analysis** | CORE_CCA | Analysis methodology and results on Conventional or Rotary Cut core | PDF |
| **Conventional Core Analysis Data** | CCA_FILE | Analysis data supplied in a digital file, usually as a table | PLAIN, CSV |
| **Special Core Analysis** | CORE_SCAL | SCAL methodology and results | PDF |
| **Special Core Analysis Data** | SCAL_FILE | SCAL data supplied in a digital file, usually as a table (results not interpretation) | PLAIN, CSV, PDF |
| **Core Permeametry** | CORE_PERM | Acquisition, results and interpretation of core permeability measurements | PDF |

| Information Tag | Classification Tag | Description | File Format |
|---|---|---|---|
| **Sidewall Core Report** | CORE_SIDEWALL | Acquisition, analysis or testing of Sidewall Core | PDF |
| **Sedimentology Report** | GEOL_SED | Sedimentological facies description, interpretation and / or description and classification of rock type | PDF |
| **Core Photographs** | CORE_PHOTO | High resolution core images, typically referenced using driller's depths | PDF, JPEG, PNG |
| **Biostratigraphy Report** | GEOL_BIO | Micropalaeontology and palynology analysis and interpretation of fossil organisms | PDF |
| **Biostratigraphical Log** | LOG_BIO | Summary log image of the results of biostratigraphical (palaeontological and palynological) analysis | PDF, TIFF |
| | | **Completion and Workover Operations** | |
| **Completions Programme** | COMPL_PROG | Plans for Completion operations before activity has taken place | PDF |
| **Completions HSE Notification** | COMPL_HSE | Notification of Completion operations to Health and Safety Executive | PDF |
| **Daily Completions Report** | COMPL_DAILY | Daily Completions Operations Reports | PDF |
| **Completions End of Job Report** | COMPL_EOJR | Completion Operations after activity has taken place EOJR | PDF |
| **Casing Log** | LOG_CASE | Engineering log image, including Cement Bond Log (CBL), Casing Collar Locator (CCL), perforating and junk catching usually correlated by GR to Surface. Not including logs run for the purposes of abandonment. | PDF, TIFF |
| **Workover Programme** | WORKOV_PROG | Plans for Workover operations before activity has taken place | PDF |
| **Workover HSE Notification** | WORKOV_HSE | Notification of Workover operations to Health and Safety Executive | PDF |

| Information Tag | Classification Tag | Description | File Format |
|---|---|---|---|
| **Daily Workover Report** | WORKOV_DAILY | Daily Workover Operations Reports | PDF |
| **Workover End of Job Report** | WORKOV_EOJR | Workover Operations after activity has taken place EOJR | PDF |
| **General Well Engineering Report** | WELL_ENG | Well engineering operations not covered by other tags | PDF |
| **Well Testing** | | | |
| **Fluid Analysis/RFT Report** | TEST_FLUID | Analysis and interpretation of fluid samples, formation fluid pressure Repeat Formation Test | PDF |
| **PLT/TDT Report** | TEST_PLT | Production Logging Tool / Thermal Neutron Decay Time Log cased hole monitoring of reservoir flow and performance | PDF |
| **DST Report** | TEST_DST | Drill Stem Test to evaluate reservoir performance | PDF |
| **Luminescence Fingerprinting** | TEST_LUM | Acquisition, results & interpretation to differentiate oil-based mud from crude oil in drill cuttings | PDF |
| **Well Test Data** | TEST_FILE | Data in a tabulated digital file | PLAIN, CSV |
| **General Testing Report** | TEST_GEN | Well production tests, laboratory tests and downhole measurements not covered by other tags | PDF |
| **Abandonment Operations** | | | |
| **Abandonment Programme** | ABANDON_PROG | Well abandonment/decommissioning operations produced before the activity takes place | PDF |
| **Abandonment HSE Notification** | ABANDON_HSE | Notification of well abandonment/decommissioning operations to Health and Safety Executive HSE | PDF |

| Information Tag | Classification Tag | Description | File Format |
|---|---|---|---|
| **Daily Abandonment Report** | ABANDON_DAILY | Well abandonment/decommissioning Daily Operations Reports | PDF |
| **Abandonment Cement Report** | ABANDON_CEMENT | Cementing operations as part of well abandonment/decommissioning | PDF |
| **Abandonment Seabed Clearance Certificate** | ABANDON_SEABED | Issued after Well Origin is fully Decommissioned AB3 Status | PDF |
| **Well Schematic** | WELL_SCHEM | Well Schematic Diagram. Required at the change of Wellbore Status or Well Origin Status | PDF |
| **Abandonment Log** | LOG_ABANDON | Log image associated with well abandonment or decommissioning operations including Cement Evaluation Tools | PDF, TIFF |
| **Digital Abandonment Log** | DWL_ABANDON | Digital Well Log run during or associated with well abandonment/decommissioning operations including Cement Evaluation Tools | LAS, DLIS |
| **Abandonment End of Job Report** | ABANDON_EOJR | Well abandonment/decommissioning operations after activity has taken place EOJR | PDF |

# 6. Geophysical Information

## Geophysical data reporting requirements

The effective reuse of information that is obtained from the NDR is dependent on information being aligned to standard formats. Those formats of geophysical information that may be reported to the NDR are set out in this section.

Seismic information formats are detailed in *Table 6. NDR compliant seismic survey data formats* (following page). This is to generally apply to information of any vintage, regardless of the original format, however it is acknowledged that in cases of older seismic data there may be little value in upgrading data to later formats. Such data may be reported in older revisions of relevant standards. While certain data can be reported in older revisions, it is still subject to the conditions set out in *Table 7* below.

## Required reporting of site surveys data

Information pertaining to Site Surveys is to be reported to the NDR in the formats set out in *Table 5. NDR compliant site survey data formats*.

**Table 5. NDR compliant site survey data formats**

| Type | Format | Remarks |
|---|---|---|
| **Reports (Acquisition, processing and interpretation)** | PDF | PDF including machine readable text and must not be password protected or encrypted. |
| **Sub-bottom profiler data** | SEG-Y rev 0, rev 1 or rev 2 | SEG-Y data must comply with the requirements set out in the SEG-Y data: file format mandatory requirements section in this document. |
| **High resolution seismic data** | SEG-Y rev 0, rev 1 or rev 2 | SEG-Y data must comply with the requirements set out in the SEG-Y data: file format mandatory requirements section in this document. |
| **Processed single or multibeam bathymetric data as x, y, z data** | ASCII or GeoTIFF | GeoTIFF standard https://www.ogc.org/docs/is |
| **Sidescan Sonar** | GeoTIFF | GeoTIFF standard https://www.ogc.org/docs/is |
| **Site investigation photos** | JPEG | Referenced in the reports. |
| **Site investigation videos** | MPEG-4 | Referenced in the reports. |
| **Hazard maps** | GeoTIFF | Referenced in the reports. |

**Table 6. NDR compliant seismic survey data formats**

| Information type | Remarks | Online upload data formats | Physical media and data formats |
|---|---|---|---|
| **Field data:**<br>**Recorded trace data**<br>**Or**<br>**Group formed**<br>**Or**<br>**Final field produced** | Including auxiliary channels and source signature, where available<br><br>Where partial processing has occurred during acquisition. Including de-ghosted data<br><br>Nodal data in common receiver order | SEG-D rev 2.1, rev 3.0 or rev 3.1. | SEG-D rev 2.1, rev 3.0 or rev 3.1.<br>Single copy to be provided on either 3592 JA/JC tape or USB 3/C storage device.<br>Data supplied on non-tape media must be without encapsulation.<br>Data in earlier SEG-D versions and in SEG-A, B, or C formats can be processed, subject to additional charges for conversion to a compliant format before upload.<br>**Conversion of such data to nav-seis merged data in SEG-Y is encouraged.** |
| **Field data:**<br>**Final field produced as used in processing**<br>**Or**<br>**Nav-seis merge data** | Source /receiver navigation data assigned to CMP positions<br><br>Nodal data in common receiver order | SEG-Y rev 0, rev 1 or rev 2.<br><br>SEG-Y data must comply with the requirements set out in SEG-Y data: file format mandatory requirements. | SEG-Y rev 0, rev 1 or rev 2.<br>Single copy to be provided on either 3592 JA/JC tape or USB 3/C storage device.<br>SEG-Y data must comply with the requirements set out in SEG-Y data: file format mandatory requirements in this document. |
| **Pre-stack time migrated data** | Raw and final PSTM gathers | SEG-Y rev 0, rev 1 or rev 2.<br>SEG-Y data must comply with the requirements set out in SEG-Y data: file format mandatory requirements in this document. | SEG-Y rev 0, rev 1 or rev 2. Single copy to be provided on either 3592 JA/JC tape or USB-3/C storage device.<br>SEG-Y data must comply with the requirements set out in SEG-Y data: file format mandatory requirements in this document. |

| Information type | Remarks | Online upload data formats | Physical media and data formats |
|---|---|---|---|
| **Pre-stack depth migrated data** | Raw and final Pre-Stack Depth Migration gathers | SEG-Y rev 0, rev 1 or rev 2.<br><br>SEG-Y data must comply with the requirements set out in SEG-Y data: file format mandatory requirements in this document. | SEG-Y rev 0, rev 1 or rev 2. Single copy to be provided on either 3592 JA/JC tape or USB-3/C storage device.<br><br>SEG-Y data must comply with the requirements set out in SEG-Y data: file format mandatory requirements in this document. |
| **Post stack data** | The final migrated stack after full pre-stack processing | SEG-Y rev 0, rev 1 or rev 2.<br><br>SEG-Y data must comply with the requirements set out in the SEG-Y data: file format mandatory requirements section in this document. | SEG-Y rev 0, rev 1 or rev 2.<br><br>Single copy to be provided on either 3592 JA/JC tape or USB-3/C storage device.<br><br>SEG-Y data must comply with the requirements set out in the SEG-Y data: file format mandatory requirements section in this document. |
| **Final migrated stack** | Includes angle and offset stacks | SEG-Y rev 0, rev 1 or rev 2.<br><br>SEG-Y data must comply with the requirements set out in the SEG-Y data: file format mandatory requirements section in this document. | SEG-Y rev 0, rev 1 or rev 2.<br><br>Single copy to be provided on either 3592 JA/JC tape or USB-3/C storage device.<br><br>SEG-Y data must comply with the requirements set out in the SEG-Y data: file format mandatory requirements in this document. |
| **Final migrated stack after full pre-stack and post stack processing** | Includes post stack time migrated volumes if created | SEG-Y rev 0, rev 1 or rev 2.<br><br>SEG-Y data must comply with the requirements set out in the SEG-Y data: file format mandatory requirements section in this document. | SEG-Y rev 0, rev 1 or rev 2.<br><br>Single copy to be provided on either 3592 JA/JC tape or USB-3/C storage device.<br><br>SEG-Y data must comply with the requirements set out in the SEG-Y data: file format mandatory requirements section in this document. |

| Information type | Remarks | Online upload data formats | Physical media and data formats |
|---|---|---|---|
| **All other post stack depth migrated volumes** | If created as part of a PSDM project | SEG-Y rev 0, rev 1 or rev 2.<br>SEG-Y data must comply with the requirements set out in the SEG-Y data: file format mandatory requirements section in this document. | SEG-Y rev 0, rev 1 or rev 2.<br>Single copy to be provided on either 3592 JA/JC tape or USB-3/C storage device.<br>SEG-Y data must comply with the requirements set out in the SEG-Y data: file format mandatory requirements section in this document. |
| **Post stack time migrated volumes** | The final migrated stack after full pre-stack processing | SEG-Y rev 0, rev 1 or rev 2.<br>SEG-Y data must comply with the requirements set out in the SEG-Y data: file format mandatory requirements section in this document. | SEG-Y rev 0, rev 1 or rev 2.<br>Single copy to be provided on either 3592 JA/JC tape or USB-3/C storage device.<br>SEG-Y data must comply with the requirements set out in the SEG-Y data: file format mandatory requirements section in this document. |

## Required reporting of positional information

Positional information for geophysical surveys is to be reported to the NDR in the formats set out in *Table 7. NDR compatible positional data formats*

### Table 7. NDR compatible positional data formats

| Type | Remarks | Online Upload Data Format | Physical Media |
|---|---|---|---|
| **Raw navigation** | Includes raw navigation, source-receiver navigation, final processed navigation, bathymetry data, and 3D survey bin grids | P2/86, P2/91, P2/94 or P2/11 ASCII for offshore surveys or SEG-P3 for onshore surveys. | P2/86, P2/91, P2/94 or P2/11 ASCII for offshore surveys or SEG-P3 for on-shore surveys.<br>Single copy to be provided on either 3592 JA/JC tape or USB-3/C device. |
| **Processed Navigation and bathymetric / topographic data** | | P1/84, P1/90 or P1/11 ASCII for offshore surveys or SEG-P3 for onshore surveys.<br>SEG SPS Rev 2.1 if applicable. | P1/84, P1/90 or P1/11 ASCII<br>Single copy to be provided on either 3592 JA/JC tape or USB-3/C device. |
| **Projected and Geographic coordinate reference systems for processed data** | | UKOOA P6/98 ASCII<br>or IOGP P6/11. | UKOOA P6/98 ASCII or IOGP P6/11.<br>Single copy to be provided on either 3592 JA/JC tape or USB-3/C device. |
| **Acquisition, including QC reports and sources / receivers / navigation details** | Detailing the acquisition and quality check of seismic surveys, including weekly reports and the final deliverables or outputs from surveys. To include shot point base maps and maps showing the full fold of coverage | PDF including machine readable text and must not be password protected or encrypted.<br>CSV ASCII for supporting information. | PDF including machine readable text and must not be password protected or encrypted.<br>CSV ASCII for supporting information.<br>Single copy to be provided on either 3592 JA/JC tape or USB-3/C device. |
| **Field tape listings** | Field QC output listing | PDF including machine readable text and must not be password protected or encrypted.<br>CSV ASCII for supporting information. | PDF including machine readable text and must not be password protected or encrypted.<br>CSV ASCII for supporting information.<br>Single copy to be provided on either 3592 JA/JC tape or USB-3/C device. |

| Type | Remarks | Online Upload Data Format | Physical Media |
|---|---|---|---|
| **Observer logs** | Observer logs | PDF including machine readable text and must not be password protected or encrypted.<br>CSV ASCII for supporting information. | PDF including machine readable text and must not be password protected or encrypted.<br>CSV ASCII for supporting information.<br>Single copy to be provided on either 3592 JA/JC tape or USB-3/C device. |
| **Source logs** | Source logs | PDF including machine readable text and must not be password protected or encrypted.<br>CSV ASCII for supporting information. | PDF including machine readable text and must not be password protected or encrypted.<br>CSV ASCII for supporting information.<br>Single copy to be provided on either 3592 JA/JC tape or USB-3/C device. |
| **Processing reports** | Information on processing system and sequence, final products, input data etc. | PDF including machine readable text and must not be password protected or encrypted.<br>CSV ASCII for supporting information. | PDF including machine readable text and must not be password protected or encrypted.<br>CSV ASCII for supporting information.<br>Single copy to be provided on either 3592 JA/JC tape or USB-3/C device. |
| **Navigation logs, reports and QC reports** | | PDF including machine readable text and must not be password protected or encrypted.<br>CSV ASCII for supporting information. | PDF including machine readable text and must not be password protected or encrypted.<br>CSV ASCII for supporting information.<br>Single copy to be provided on either 3592 JA/JC tape or USB-3/C device. |

## Required reporting of sub surface parameter information

Velocity surveys and other sub surface parameter data are to be reported to the NDR in the formats set out in *Table 8. NDR compliant Sub surface parameters data formats*.

**Table 8. NDR compliant sub surface parameters data formats (velocity, anisotropy, attenuation etc.)**

| Type | Online upload data formats | Physical media form and data formats |
|---|---|---|
| **Stacking, migration, anisotropy and water column Velocities**<br><br>**Time to depth velocity datasets.**<br><br>**Seismic attenuation** | SEG-Y rev 0, rev 1, rev 2 or DISKOSV98 as appropriate to the sampling of the model.<br><br>Velocity data must comply with the "Seismic velocity data format requirements" section in this document and if applicable, the SEG-Y data: file format mandatory requirements section in this document. | SEG-Y rev 0, rev 1, rev 2 or DISKOSV98 as appropriate to the sampling of the model.<br><br>Single copy to be provided on either 3592 JA/JC tape or USB-3/C storage device.<br><br>Velocity data must comply with the "Seismic velocity data format requirements" section in this document and if applicable the SEG-Y data: file format mandatory requirements section in this document. |

## Required reporting of supporting geophysical information

Ancillary reports that support reportable geophysical survey information are to be reported to the NDR in the formats set out in *Table 9. NDR Compliant supporting geophysical data formats*.

**Table 9. NDR compliant supporting geophysical data formats**

| Type | Online upload data format | Physical media form and manner |
|---|---|---|
| **Source signature** | ASCII files, recorded or modelled far field (with and without source + receiver ghost). | ASCII files recorded or modelled far field (with and without source + receiver ghost). Single copy to be provided on either 3592 JA/JC tape or USB-3/C storage device. |
| **Transcription reports** | | CSV ASCII format. Single copy to be provided on either 3592 JA/JC tape or USB-3/C storage device. |

### SEG-Y data: file format mandatory requirements

SEG-Y formats accepted are rev 0 using rev 1 trace header locations, rev 1, rev 2 and newer (https://library.seg.org/seg-technical-standards).

The requirements as set out are normally fulfilled automatically in the creation of SEG-Y datasets. As a minimum SEG-Y data being submitted must comply with the following requirements:

1. The data must be the original precision, data that has been reduced to 8 bit and exported as 32 bit will not be accepted.
2. All SEG-Y must be of fixed length traces, i.e. all traces in a file must be the same number of samples and the sample rate must remain constant.
3. All SEG-Y rev 0 and rev 1 datasets must be written as Big Endian ordered data.
4. The information in *Table 10. SEG-Y Binary header - mandatory byte locations* must be present in SEG-Y Binary Header.

**Table 10. SEG-Y Binary header – mandatory byte locations**

| Byte location | Description |
|---|---|
| **3213-3214** | Number of data traces per ensemble, (1 for post stack). |
| **3215-3216** | Number of auxiliary traces per ensemble (0 for post stack). |
| **3217-3218** | Sample interval. Microseconds for time data, meters/feet for depth data. |
| **3221-3222** | Number of samples per data trace. |
| **3225-3226** | Data sample format code. |
| **3227-3228** | Ensemble fold, (1 for post stack). |
| **3229-3230** | Trace sorting code (type of ensemble). |
| **3255-3256** | Measurement system (1 = Meters, 2 = Feet). |
| **3501-3502** | SEG-Y Format Revision Number. |

5. SEG-Y Trace headers - 2D and 3D Post-stack datasets must have CDP/CMP projected XY coordinates for each trace (referencing a CRS included in Table 1 NDR Compliant Coordinate Reference Systems).
6. SEG-Y Trace headers - 2D and 3D Pre-stack datasets pre-binning (un-regularized) must have source and receiver projected XY coordinates for each trace (referencing a CRS included in Table 1 NDR Compliant Coordinate Reference Systems).
7. SEG-Y Trace headers - 2D and 3D Pre-stack datasets post-binning (regularized) must have CDP/CMP Projected XY coordinates for each trace (referencing a CRS included in Table 1 NDR Compliant Coordinate Reference Systems).

### SEG-Y data: file format recommendations

1. The EBCDIC (Textual) header should contain the coordinate reference system used for the trace XY headers, either as EPSG codes or a CRS description. This CRS system must be the same as that which is detailed in the processed navigation data.
2. The preferred data sample type is 4-byte IEEE floating-point (SEG format code 5).

3. *Table 11. SEG-Y Trace Header: Recommended byte locations* sets out the recommendation. Alternate locations for information in trace headers are accepted.

**Table 11. SEG-Y trace header: recommended byte locations**

| Byte location | Description |
|---|---|
| **1-4** | Trace sequence number within line. |
| **5-8** | Trace sequence number within SEG-Y file. |
| **13-16** | Channel/Receiver number (if applicable). |
| **17-20** | Source point number (if applicable). |
| **21-24** | Unique ensemble number (CDP, CMP, CRP, CDPLBL etc.) (if applicable). |
| **29-30** | Trace identification code (1 = Time domain, 25 = Depth domain). |
| **37-40** | Offset/Angle header (Pre-stack only). |
| **71-72** | Scalar to be applied to all coordinates (negative = divisor). |
| **73-76** | Map projected X coordinate relating to Source location for unregularised data or trace location for regularised pre-stack and post-stack data. |
| **77-80** | Map projected Y coordinate relating to Source location for unregularised data or trace location for regularised pre-stack and post-stack data. |
| **81-84** | Map projected X coordinate relating to Receiver location for unregularised data. |
| **85-88** | Map projected Y coordinate relating to Receiver location for unregularised data. |
| **89-90** | XY Coordinate units (1 as should be in metres or feet). |
| **103-104** | Total static applied in milliseconds (Zero if none applied). |
| **181-184** | Map projected X coordinate of this trace (alternatives of 73-76 and or 81-84 in post migration data). |
| **185-188** | Map projected Y coordinate of this trace (alternatives of 77-80 and or 85-88 in post migration data). |
| **189-192** | Inline number (if applicable). |
| **193-196** | Crossline number (if applicable). |

4. Textual header (EBCDIC Header) - The recommended information contained in the SEG-Y Textual header as shown in Figure 1 below, the header should contain Geographic coordinate reference systems for the data. Additional information such as processing flow details can be included within spare rows. Merged datasets can have multiple NDR ProjectIDs of the various inputs listed in the Textual header.

*Figure 1 EBCDIC Header: Recommended Layout*

```
1234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
C01 CLIENT: NAME OF OPERATOR                ; PROCESSED BY:
C02 DATA TYPE: FINAL GATHERS        ;DOMAIN: TIME OR DEPTH ;DATE: JUNE 2014
C03 OGA PROJECTID PREFIX: CCCCYYYYtype
C04 PROJECT NAME:
C05
C06 ACQ BY:                  ;VESSEL:                              ;YEAR: 2012
C07 NUM SOURCES:    ;VOL:       CU; DEPTH:  M; SP INT:  M
C08 NUM CABLES:     ;LENGTH:     M;DEPTH:    M; CHANS/CABLE:     ;CHAN SEP:    M
C09 SOURCE SEPARATION:     M;CABLE SEPARATION:        M   OR AS APPROPRIATE
C10 TRACES/RECORD:    ;SAMP INT:   MS;SAMP/TRACE:
C11
C12 PROCESSING DATE:  2014;
C13 PROCESSING: SEGD READ; NAV SEIS MERGE; ............;
C14 MORE PROCESSING INFORMATION ….........
C15 MORE PROCESSING INFORMATION ….........
C16 MORE PROCESSING INFORMATION ….........
C17 MORE PROCESSING INFORMATION ….........
C18 MORE PROCESSING INFORMATION ….........
C19 MORE PROCESSING INFORMATION ….........
C20 MORE PROCESSING INFORMATION ….........
C21 MORE PROCESSING INFORMATION ….........
C22 MORE PROCESSING INFORMATION ….........
C23 MORE PROCESSING INFORMATION ….........
C24 MORE PROCESSING INFORMATION ….........
C25 HDR BYTE POSITIONS: NAME BYTE POS LEN; INLINE 189 4; XLINE 193 4
C26 CDPLBL 21 4; CDP-X 181 4; CDP-Y 185 4;
C27
C28 PROJ EPSG CODE: 23031-1311
C29 ELLIPSOID:Int 1924; DATUM: ED50 ; PROJ: UTM; ZONE: 31N
C30
C31 INLINE BIN:  12.5 M ;INCR: 1 ; XLINE BIN: 12.5 M ;INCR: 1
C32 INLINE AXIS: 15.415 ;DEG (CLOCKWISE FROM NORTH)
C33 CROSSLINE AXIS:  105.415 ; DEG (CLOCKWISE FROM NORTH)
C34 ORIGIN IL,XL:     ,     ; X:         UNIT ;Y:           UNIT
C35 DATA CORNER COORDINATES:
C36 IL        XL            X             Y
C37 IL        XL            X             Y
C38 IL        XL            X             Y
C39 IL        XL            X             Y
C40 END TEXTUAL HEADER
```

## SEG-D data: mandatory file format requirements

SEG-D formats accepted are rev 2.1, rev 3.0 or rev 3.1 and newer as defined by the SEG. (https://library.seg.org/seg-technical-standards).

SEG-D data must be supplied with sufficient metadata in the form of observers logs and tape or disk listings to be able to verify the line sequence number or line identifier for each file. If the line sequence number or line identifier is contained within the SEG-D extended or external headers, then information should accompany the data submission to indicate where it can be found.

If the SEG-D channel sets, extended or external headers contain near field hydrophone data, the submission should include an explanation as to how to locate and read the data.

Data supplied on non-tape media must be without encapsulation and must be multiple native acquisition data grouping per file.

Streamer data must have a separate file per sailline and be grouped by source within the file. A sailline should be supplied to the NDR as either one file or less than ten files, where each file has multiple source locations in it. A sailline must not be supplied to the NDR as one file per source location.

Nodal data supplied to the NDR must have each file grouped by recording location or multiple recording locations. Each file must have multiple source records per recording location. Recording location files must not be supplied to the NDR as one file per source location.

If the SEG-D file contains headers or blocks of data that are outside the SEG-D specification, the submission will be rejected.

Data in earlier SEG-D versions and in SEG-A, B, or C formats can be processed, subject to additional charges for conversion, to a compliant format before upload. Conversion of such data to nav-seis merged data in SEG-Y is encouraged

Original data that is marked with 'NTBP' was identified as ***Not To Be Processed*** at the time of acquisition. Such data would have been reacquired during the original survey acquisition. Under no circumstances should files marked as NTBP be loaded to the NDR.

## Seabed Recorded Field Data

Seabed located field data includes Ocean Bottom Node (OBN) and Ocean Bottom Cable (OBC) acquisitions. These may be referred to collectively as Ocean Bottom Seismic (OBS).

Seabed located field data has been produced in many different data formats. Various recording devices and systems have been used, with various survey design specifications. Variation in the collection of this data type means it is not possible to standardise on a specific format for this to be reported.

The purpose of reporting data to the NSTA via the NDR is to ensure that the information can be reused, by the appropriate user at the appropriate time. The NSTA considers that it is the field dataset that was or will be used as the input to the main processing exercise following the acquisition that should be reported to the NDR.

Points to consider include:

**Data Collection and Processing**: Seabed field data is collected in various formats and may undergo several preparation steps, such as instrument response removal, time alignment, and component rotation. Multiple outputs with different record lengths may be generated.

**Quality and Specification**: Extra data recorded outside the survey specifications may vary in quality and relevance to the data product. ‘Continuous recording’ data and other records that are not included in the processed product are not relevant to the survey and should not be reported. Hydrophone and geophone datasets are processed differently and may only partially contribute to the final processing.

**The NSTA requires licensees to report**:

- Datasets used as input to the full processing sequence. This is likely to be determined after processing is complete.
- Alternatively, report datasets after initial processing stages like navigation updates, source deblending and noise reduction.
- Nodal data should be reported in common receiver gathers, and seabed cable data can be reported per cable, or common shot gather.
- For data that has been recorded into many separate SEG-Y files (1000's), these should be grouped based on a shared spatial connection and then written to fewer SEG-Y format files. For example, grouping the node data based on either receiver line or receiver area into single SEG-Y files that, individually, could be up to 400 GB in size.
- For data that has been recorded into many separate SEG-D files, these should be grouped based on a shared spatial connection and then written to fewer TAR-SEG-D format files (see *add reference to relevant section in F&M*).

**The NSTA expressly prohibits upload of non-reportable information, including but not limited to:**

- Continuous recordings when there is no active acoustic source relating to the survey,
- Proprietary interim or component products that are only useable by the acquisition company

## Reporting data on physical media: mandatory requirements

The NDR User Interface includes workflows that enable all reportable information to be uploaded. These workflows are available to users that have been granted the "Company Data Manager" role by their Company Administrator.

Alternatively, licensees have the option to report licence information on physical media, to be uploaded by the NDR Service Provider. Optional use of such services is chargeable according to the latest schedule of rates.

The most recent version of the upload submission charges is available via the NDR Support Centre here: https://support.uk-ndr.co.uk/hc/en-gb/articles/4402396433170

It is expected that data submitted on physical media will be ordered and structured with meaningful file names, ready to be loaded to the NDR, without the requirement for any pre-conditioning of the data or metadata. Where pre-conditioning is necessary, or insufficient information is provided, the fulfilment of reporting activities may be delayed or media may be returned to the sender without any action having been taken, at the discretion of the NSTA and its agents.

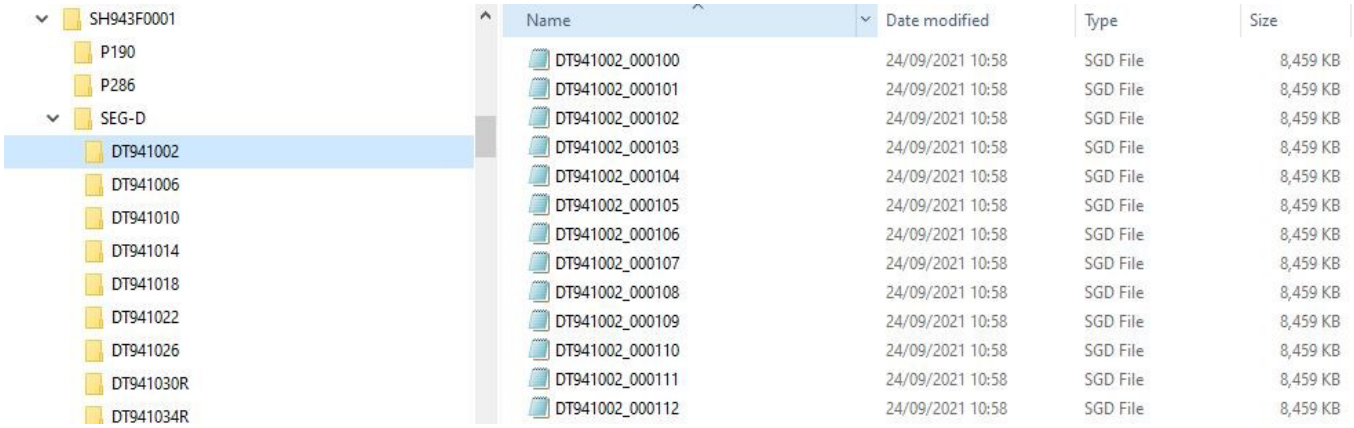
Costs relating to pre-conditioning of reported information that is necessary to meet submission criteria, or return of media to the sender, are to be borne by the submitter or owner of the information. The responsible party will be notified of such costs prior to any work being carried out. The responsible party can, at its discretion, appoint a service provider of its choice to carry out pre-conditioning of reportable information.

For streamer survey datasets, the data is expected and required to be arranged in a logical 2D line or 3D sequence folder directory structure, with a corresponding single UKOOA P1 file per navigation line/sequence.

Files for each line/sequence are to be clearly labelled with line name and/or sequence number.

This requirement is also essential for any data that has previously been transcribed where multiple lines now exist on a single tape.

***Figure 2. Example directory structure for streamer survey datasets***




SEG-D field data must be supplied with adequate information to enable the naming convention of each file. SEG-D field data must always be accompanied by appropriately formatted navigation data files.

For Ocean Bottom Seismic datasets (including OBC and OBN), it is required that the field recording sort order will be maintained, and that data on media will be arranged in a logical file structure, for example: /receiver_line/node/sequence/SP.

Any datasets reported on physical media (including tapes and USB or RJ45 connected portable devices etc.) must be labelled with the information listed below, which should also be included on a 'Physical Media Submission Information' form.

https://support.uk-ndr.co.uk/hc/en-gb/articles/4403099504146-Physical-Media-Data-Submission

Dataset information, must be clearly described including data format and revision, number of sequences, number of media etc. The form should be submitted digitally as an attachment to the 'Submit a Request' workflow.

1. Data owner
2. NDR service ticket ID reference for on-media reporting
3. Unique survey identifier (NDR9 Code or Project ID)
4. Project or Survey name/alias
5. Survey type: 2D, 3D, 4D, OBN, OBC, VSP, Site survey (as applicable)
6. Date of acquisition or creation of the data set (not date written to media)
7. Data type: e.g., velocities, navigation, seismic
8. Data format and revision: e.g., SEG-D rev 3, SEG-D 2.1, UKOOA P1/90 etc.
9. Processed data description (if applicable) e.g., stack, migration, gather etc.
10. Data range (if applicable)
11. Tape/device number if multiple tapes/devices are submitted (i.e., 1 of 2, 2 of 2)
12. Geographical area: e.g., Quad15, Southern North Sea, West of Shetlands

The submitter will be notified by the NDR Support Team should any information be missing or unclear. If the data has previously been transcribed, the transcription report must also be included.

**New Project IDs**

Where a new NDR Project ID is to be created, the following information is to be provided:

1. Coordinate Reference System
2. Polygon coordinates (the approximate extent of survey, encompassing all lines).
3. Project “Processing Completion Date”
4. Project type (2D, 3D, 4D, OBN, OBS, Site Survey)
5. Licence(s)
6. Contractor
7. NDR9 code (if available)
8. Brief project description

The NSTA and its agents have no obligation to receive any shipments where advanced notice of their delivery has not been provided.

Advanced notification of any shipments of media should be raised to support@ndr-uk.co.uk

## Delivery address for reporting on physical media

Information that is reported on physical media should be addressed to:

**NSTA National Data Repository**
c/o Moveout Data Seismic Services Ltd
The Stable Block
Lockwood Park
Brewery Drive
Huddersfield
HD4 6EN
United Kingdom

By default, the media submitted to the NDR will not be returned to the submitter.

Once the content has been verified in the NDR, media will be repurposed or sent for managed disposal.

Information will be removed or otherwise made unreadable prior to disposal.

### Seismic velocity data: mandatory file format requirements

Velocities should be submitted in the form that they were used in processing the data. See *Table 12. NDR compliant seismic velocity formats* for accepted formats for common velocity data types. Gridded velocity models are to be provided in SEG-Y format.

SEG-Y data must comply with the requirements of the “SEG-Y Data format requirements” section in this document.

Non regularly sampled velocities are to be provided in DISKOSV98 format, as defined in the NPD Yellow book: https://www.sodir.no/globalassets/1-sodir/regelverk/forskrifter/en/geophysical-guidelines.pdf

**Table 12. NDR compliant seismic velocity formats**

| Velocity data type | Online upload data format |
|---|---|
| **RMS Stacking** | DISKOSV98 (sparse, and/or non-regular sampling) or SEG-Y (dense regular sampling). |
| **RMS migration** | DISKOSV98 (sparse, and/or non-regular sampling) or SEG-Y (dense regular sampling). |
| **Interval migration – Time or Depth** | SEG-Y. |
| **Anisotropy components** | SEG-Y. |
| **Time to depth** | DISKOSV98 (sparse, and/or non-regular sampling) or SEG-Y (dense regular sampling). |
| **Other velocity datasets** | DISKOSV98 (sparse, and/or non-regular sampling) or SEG-Y (dense regular sampling). |

# 7. Geophysical data classification and format

Classification of seismic information in the NDR builds on the classification systems developed and applied by industry in preceding services.

Geophysical information is to be reported under a project code that is descriptive of the type of geophysical survey information acquired or produced. *Table 13. Geophysical project types and codes* describes the scope of each geophysical project type.

**Table 13. Geophysical project types and codes**

| Code | Geophysical project type |
|---|---|
| **seis** | Seismic projects - Acquisition, processing, or reprocessing projects. This includes all acquisition types (e.g., 2d,3d,4d) and all data types, supporting information, reports etc. |
| **mhaz** | Near surface high resolution site survey projects - shallow investigation seismic, shallow boreholes, acoustic, sonar, bathymetry surveys, shallow hazard reports. All data types, supporting information and reports etc. |
| **rems** | Remote sensing, potential and diffusive field projects - CSEM surveys, stand-alone gravity and/or magnetic surveys, Lidar, satellite observations. All data types, supporting information and reports etc. |
| **intp** | General studies projects - Projects that combine multiple data sources for multiple spatial locations to report on a larger area than the items covered by the other project type codes. e.g., Reservoir studies, CCS potential studies, Hydrocarbon studies, Basin Studies, Reservoir models, earth models, field reports etc. |

*Table 14. Geophysical information types, classification and formats* sets out the classifications that are required to be assigned to geophysical information as it is reported to the NDR, with a summary description for each type. This table also specifies the required format in which each information type should be reported.

**Table 14. Geophysical information types, classification and formats**

| Information Tag | Classification Tag | Description | File Format |
|---|---|---|---|
| | | **Survey Reports** | |
| **Acquisition Report** | REPORT_ACQUISITION | Data acquisition and navigation reports | PDF |
| **Processing Report** | REPORT_PROCESSING | Explaining the inputs and approach to processing of data | PDF |
| **Interpretation Report** | REPORT_INTERPRETATION | Reports on the interpretation of seismic data | PDF |
| **Supporting Information** | SUPPORTING_INFORMATION | Other supporting documents and reports | PDF |
| **Legacy Loading Sheet** | LEGACY_LOADING_SHEET | Summary data loading parameters from legacy systems | PDF |
| | | | |
| | | **Survey Acquisition data** | |
| **Observer Log** | OBSERVER_LOG | Observations recorded during survey acquisition | PDF |
| **Source Signature** | SOURCE_SIGNATURE | The waveform corresponding to the acoustic source for a seismic event | PLAIN, PDF |
| **Navigation data** | NAVIGATION | Positional information that can include shotpoint and receiver positions | P184, P190, P111, P291, P294, P211, SPS, SEGP3 |
| **Raw Navigation** | RAW_NAVIGATION | Original records of positional information that can include shotpoint and receiver positions | P291, P294, P211, SPS, SEGP3 |
| **Final Navigation** | FINAL_NAVIGATION | Processed records of positional information that can include shotpoint and receiver positions | P184, P190, P111, SPS, SEGP3 |

| Information Tag | Classification Tag | Description | File Format |
|---|---|---|---|
| **Binning Grid** | BINNING_GRID | seismic bin grid positional data from 3D surveys | P698, P611 |
| **Field Acquisition Data** | DATA_ACQUIRED | Seismic field data | SEGD |
| **Field Acquisition Data** | DATA_ACQUIRED | Seismic field or navigation seismic merge data | SEGY |
| **Field Acquisition Data** | DATA_ACQUIRED | Seismic field data - SEG-D and supporting acquisition information | GZIP |
| **Field Acquisition Data** | DATA_ACQUIRED | ASCII text files and supporting acquisition information for remote sensing surveys | PLAIN |
| **Coverage Plot** | COVERAGE_PLOT | Showing the spatial coverage of a seismic acquisition | PLAIN, PDF |
| **Line Listing** | LINE_LISTING | Record of lines included in a seismic survey | PLAIN |
| **Supporting Data** | DATA_SUPPORTING | Supplementary data including tide measurements etc | PLAIN, GEOTIFF, GEO+JSON, CSV |
| **Video** | VIDEO | Digital video images - subsea infrastructure etc. | MP4 |
| **Ends and Bends** | ENDS_AND_BENDS | Rationalised navigation defining the start, end and turning points in 2D lines | P184, P190, P111 |
| **Digital image file** | IMAGE | Digital still image | JPEG, PNG, PDF |
| | | | |
| | | **Pre stack data** | |
| **Raw Gathers (Time)** | GATHERS_RAW_TIME | Post migration pre-stack seismic from intermediate step - time domain | SEGY |
| **Final Gathers (Time)** | GATHERS_FINAL_TIME | Final post migration pre-stack seismic - time domain | SEGY |
| **Raw Gathers (Depth)** | GATHERS_RAW_DEPTH | Post migration pre-stack seismic from intermediate step - depth domain | SEGY |
| **Final Gathers (Depth)** | GATHERS_FINAL_DEPTH | Final post migration pre-stack seismic - depth domain | SEGY |

| Information Tag | Classification Tag | Description | File Format |
|---|---|---|---|
| | | | |
| | | **Post stack data (Time)** | |
| **Final Post Stack (Time)** | FINAL_POST_STACK_TIME | Final processed stacked seismic - time domain | SEGY |
| **Post Stack (Time)** | POST_STACK_TIME | Intermediate processed stacked seismic - time domain | SEGY |
| **Angle Stack (Time)** | ANGLE_STACK_TIME | Stacked data from limited angle range - time domain | SEGY |
| **Offset Stack (Time)** | OFFSET_STACK_TIME | Stacked data from limited offset range - time domain | SEGY |
| **Inversion (Time)** | INVERSION_TIME | Inversion process output - time domain | SEGY |
| **Velocity (Time)** | VELOCITY_TIME | Velocity profile data - time domain | SEGY, V98 |
| | | | |
| | | **Survey Processed data** | |
| **Processed Data (Time)** | DATA_PROCESSED_TIME | Processed data | PLAIN |
| **Processed Data (Time)** | DATA_PROCESSED_TIME | Processed data geographically referenced | GEOTIFF |
| | | | |
| | | **Post stack data (Depth)** | |
| **Final Post Stack (Depth)** | FINAL_POST_STACK_DEPTH | Final processed stacked seismic - depth domain | SEGY |
| **Post Stack (Depth)** | POST_STACK_DEPTH | Intermediate processed stacked seismic - depth domain | SEGY |
| **Angle Stack (Depth)** | ANGLE_STACK_DEPTH | Stacked data from limited angle range - depth domain | SEGY |
| **Offset Stack (Depth)** | OFFSET_STACK_DEPTH | Stacked data from limited offset range - depth domain | SEGY |
| **Inversion (Depth)** | INVERSION_DEPTH | Inversion process output - depth domain | SEGY |

| Information Tag | Classification Tag | Description | File Format |
|---|---|---|---|
| **Velocity (Depth)** | VELOCITY_DEPTH | Velocity profile data - depth domain | SEGY, V98 |
| | | | |
| | | **Survey Processed data** | |
| **Processed Data (Depth)** | DATA_PROCESSED_DEPTH | Processed data | PLAIN |
| **Processed Data (Depth)** | DATA_PROCESSED_DEPTH | Processed data spatially referenced | GEOTIFF |
| | | | |
| | | **Other geophysical data** | |
| **Velocity data** | VELOCITY | Legacy velocity data files | V98 |
| | | | |
| | | **Interpretation data** | |
| **Interpretation (Time)** | INTERPRETATION_TIME | Horizon, fault, grid and other interpretive data - time domain | CSV |
| **Interpretation (Time)** | INTERPRETATION_TIME | Geographically referenced horizons and other interpretations - time domain | GEOTIFF |
| **Interpretation (Time)** | INTERPRETATION_TIME | Horizons and other interpretations - time domain | PLAIN |
| **Interpretation (Depth)** | INTERPRETATION_DEPTH | Horizon, fault, grid and other interpretive data - depth domain | CSV |
| **Interpretation (Depth)** | INTERPRETATION_DEPTH | Geographically referenced horizons and other interpretations - depth domain | GEOTIFF |
| **Interpretation (Depth)** | INTERPRETATION_DEPTH | Horizons and other interpretations - depth domain | PLAIN |
| | | | |

# 8. TAR-SEG-D Specification

## For uploading seismic field data

To upload previously non-compliant seismic field data, e.g. SEG-D rev 0 or many SEG-D files per acquisition line, the files can be combined into a gzipped TAR file per acquisition line (unless file size > ~400 Gbyte in which case multiple files per acquisition line or equivalent should be made).

Each TAR-SEG-D file also requires its own supporting information file to be created. This will allow NDR users to easily determine the content of a TAR-SEG-D file prior to download.

The relevant Project must have two supporting information files present to allow NDR users to easily determine the format of the contents of the TAR-SEG-D without having to download them. These are the 'project_info' and 'project_line_listing' files.

The TAR-SEG-D files and respective supporting files must follow the naming convention detailed below and please note that spaces are not permitted in any filenames.

1. filename.segd.tar.gz
2. filename_segd_listing.txt - one file for each *filename.segd.tar.gz*
3. surveyname_field_data_project_line_listing.txt – (one file per project)
4. surveyname_field_data_project_info.txt – (one file per project)

Examples of these file names for a survey called TT112D0002 would be:

1. TT112D0002_TOB13-0990P1-033.segd.tar.gz
2. TT112D0002_TOB13-0990P1-033_segd_listing.txt
3. TT112D0002_field_data_project_line_listing.txt
4. TT112D0002_field_data_project_info.txt

All of these files must be present to upload the TAR-SEG-D dataset.

The specification and examples of these files in a TAR-SEG-D dataset are detailed below:

**1)** **filename.segd.tar.gz** - a gzipped TAR file made from multiple SEG-D files, the filename must not contain any spaces. Example command to create a suitable TAR file:

tar --numeric-owner -cvzf AH963F0003_AH10106Q.segd.tar.gz AH96-15-0106Q_93714_000*.sgd l

or, using pigz software to run the compression in parallel (much faster)

tar --use-compress-program="pigz -k --best" --numeric-owner -cvf AH963F0003_AH10106Q.segd.tar.gz AH96-15-0106Q_93714_000*.sgd

2) **filename_segd_listing.txt** file - For each TAR-SEG-D file is the user must create a matching SEG-D listing file, the naming must match the filename with the ".segd.tar.gz" in the end of the TAR-SEG-D file replaced with "_segd_listing.txt". The file must contain three sections denoted by leading "## " and on their own line, the three sections are:

A. "## Header" - Required Header information following the format below: (items in quotes to be replaced with appropriate information)

NDR TAR-SEG-D field files for "Survey ID" "Sail-line name"
Produced by "company name"
Date dd-mm-yyyy "DD-MM-YYYY"
Created with tar --numeric-owner -czf
Read using tar -xf
Info "some information on how the file naming relates to the data"

B. "## File info" - Listing of all the SEG-D files expected in the TAR-SEG-D file, SEG-D file names must not contain spaces. Each line must contain a minimum of SEG-D filename and the file number (FFID) for that file in the form:

Filename.segd FFID: AAAAAA

C. "## Tar listing" - Tar listing of all the files in the TAR-SEG-D file created by reading the tar file back with the -t (--list) option, this provides a cross check against the expected list of SEG-D files. It is created from the output of command:

tar --full-time -tvf **filename.segd.tar.gz**

Example contents of **filename_segd_listing.txt** file

---

## Header
NDR TAR-SEG-D field files for AH963F0003 AH10106Q
Produced by Example Company Name Ltd
Date dd-mm-yyyy 04-08-2021
Created with tar --numeric-owner -czf
Read using tar -xf
Info Individual files in TAR archives are named by linename/linename_ffid.segd (or .sgd)
## File info
AH96-15-0106Q_93714_000007.sgd FFID: 106 DATE: 96:111:15:12:11
AH96-15-0106Q_93714_000008.sgd FFID: 107 DATE: 96:111:15:12:23
AH96-15-0106Q_93714_000009.sgd FFID: 108 DATE: 96:111:15:12:35
AH96-15-0106Q_93714_000010.sgd FFID: 109 DATE: 96:111:15:12:47
AH96-15-0106Q_93714_000011.sgd FFID: 110 DATE: 96:111:15:12:59
## Tar listing
-rw-r--r-- 1000/1000 15964128 2021-01-21 14:11:21 AH96-15-0106Q_93714_000007.sgd
-rw-r--r-- 1000/1000 15964128 2021-01-21 14:11:22 AH96-15-0106Q_93714_000008.sgd
-rw-r--r-- 1000/1000 15964128 2021-01-21 14:11:23 AH96-15-0106Q_93714_000009.sgd
-rw-r--r-- 1000/1000 15964128 2021-01-21 14:11:24 AH96-15-0106Q_93714_000010.sgd
-rw-r--r-- 1000/1000 15964128 2021-01-21 14:11:26 AH96-15-0106Q_93714_000011.sgd

---

3) **surveyname_field_data_project_line_listing.txt**- A text file containing the spatially related acquisition ordering, that corresponds to the field data files being uploaded to the NDR, e.g. sail-lines. All the lines in the survey are written as one line name per line. The file is required to have one section titled "## Survey line listing" on the first line of the file.

   Example contents of **surveyname_field_data_project_line_listing.txt**:

---

## Survey line listing
NDR TAR-SEG-D field files for AH963F0003
Produced by Example Company Name Ltd
Date dd-mm-yyyy 04-08-2021
AH10106Q
AH10108A
AH10116A

---

4) **surveyname_field_data_project_info.txt** - one required for each survey, this metadata file details the SEG-D formats used in the survey and the range of field file index (ffid) in each TAR-SEG-D file.

   A partially filled template is generated by previewing one of the filename.segd.tar.gz files in the NDR upload interface. This populates sections A and B of the file. The file must contain three sections denoted by leading "##" and on their own line, the sections are:

   A. "## Header" - Required Header information following the format below: (items in quotes to be replaced with appropriate information)

      NDR TAR-SEG-D survey file for "NDR9 code"
      Produced by "company name"
      Date dd-mm-yyyy "DD-MM-YYYY"
      Metadata for SEG-D
      Info "if required, some information on how the file naming relates to the data"

   B. "## SEG-D info" - Metadata extracted from the SEG-D (example of each SEG-D format used in the survey) must contain a minimum of:

      1. Number of chanSets
      2. List of all channel sets, with number of traces and samples per channel set
      3. SEG-D data format code and its definition
      4. Manufacturer code
      5. Recording date in YY:DOY:HHH:MM:SS
      6. SEG-D revision number
      7. Base Sample Rate - (from general or extended header)
      8. Number of Samples per trace - either from general or extended header
      9. Record length in ms

C. "## Tar Files" - Line per TAR-SEG-D filename and the field file index (FFID) range for that file in the form:

Filename.segd.tar.gz FFIDmin: AAA FFIDmax: BBB

Example contents of **surveyname_field_data_project_info.txt**:

---

```
## Header
NDR TAR-SEG-D survey file for AH963F0003
Produced by Example Company Name Ltd
Date dd-mm-yyyy  04-08-2021
Metadata for SEG-D
Info Individual files in TAR archives are named by linename/linename_ffid.segd (or .sgd)
## SEG-D info
SEG-D Revision Number              : 0.0
Manufacturer                       : Syntron Inc      (34)
Format Code                        : 20 bit binary demultiplexed  (8015)
Date / Time  (YY:DOY:HH:MM:SS)       : 96:111:15:12:35
Date / Time Stamp (s from 1970)      : 830013155
File Number                        : 108
Number of General Headers          : 1
Record Length (ms)                 : 7168.0
File Base Sample Scan Interval (ms)  : 2.0
Number of Scan Types Per Record      : 1
Number of Channel Sets Per Scan Type : 7
Number of Channels/Traces In Scan    : 1776
Set:  1  streamer no.:   0  scale:  -3.00  no. chans:   288  samples:  3584  exp:   0  type: Seismic
Set:  2  streamer no.:   0  scale:  -3.00  no. chans:   288  samples:  3584  exp:   0  type: Seismic
Set:  3  streamer no.:   0  scale:  -3.00  no. chans:    48  samples:  3584  exp:   0  type: External
Set:  4  streamer no.:   0  scale:  -3.00  no. chans:   288  samples:  3584  exp:   0  type: Seismic
Set:  5  streamer no.:   0  scale:  -3.00  no. chans:   288  samples:  3584  exp:   0  type: Seismic
Set:  6  streamer no.:   0  scale:  -3.00  no. chans:   288  samples:  3584  exp:   0  type: Seismic
Number of Channels In All Scans      : 1776
Number of Skew Headers Per Scan Type : 0
Number of Extended Headers           : 19
Number of External Headers           : 78
Number of Manufacturers Headers      : 384
Number of Trailer Headers            : 0
Number of Bytes in File              : 15964128
Number of Bytes in All File Headers  : 15648   Number 32 byte records: 489
Number of Bytes in Trailer Headers   : 0
Source Line Number                 : 0
Source Point Number                : 0
Line Name/Number                   : AH10106Q
## Tar Files
AH963F0003_AH10106Q.segd.tar.gz FFIDmin: 106  FFIDmax: 210
AH963F0003_AH10108A.segd.tar.gz FFIDmin: 101  FFIDmax: 1009
AH963F0003_AH10116A.segd.tar.gz FFIDmin: 106  FFIDmax: 974
```

# 9. Definition of Terms

**Table 15. Definition of terms**

| Term or Abbreviation | Description/Definition |
|---|---|
| **2D** | Two-dimensional seismic data. |
| **3D** | Three-dimensional seismic data. |
| **4D** | Four dimensional - 3D seismic data acquired at times over the same area to monitor change. |
| **AB3** | The status of a fully abandoned well, where the well origin at the surface has been permanently removed. |
| **AFE** | Application or Authorization for expenditure. |
| **ASCII** | American Standard Code for Information Interchange - a standard representing text in digital file format. |
| **BGS** | British Geological Survey. |
| **CBL** | Cement bond log. |
| **CCL** | Casing collar locator. |
| **CCS** | Carbon Capture and Storage. |
| **CDP** | Common depth point. |
| **CMP** | Common mid-point. |
| **CPI** | Computer processed interpretation. |
| **CRP** | Common reflection point. |
| **CRS** | Coordinate Reference System. |
| **CS8** | A common standard for wellbore information classification, developed by CDA and industry. |
| **CSEM** | Controlled source electro-magnetic. |
| **CSV** | Comma-separated values file format used to store tabular data. |
| **DLIS** | Digital Log Interchange Standard - structured binary files for well information and logging. |
| **DSI** | Dipole sonic imager. |
| **DST** | Drill stem test. |

| Term or Abbreviation | Description/Definition |
|---|---|
| **EBCDIC** | Extended Binary Coded Decimal Interchange Code - an eight-bit character encoding format. |
| **Energy Portal** | An NSTA/BEIS online gateway to software applications that allow industry to apply for and receive consent for a range of regulated operational activities. |
| **EPSG** | European Petroleum Survey Group. |
| **FEL** | Formation Evaluation Log. |
| **FFID** | Field File ID – a filename given to raw seismic data files during seismic acquisition |
| **GeoTIFF** | A metadata standard allowing georeferencing information in a file including images and data. |
| **HSE** | The Health and Safety Executive. |
| **IOGP** | The International Association of Oil & Gas Producers. |
| **JPEG** | The Joint Photographic Experts Group - creator of a commonly used method of compression for digital images, especially those produced by digital photography. |
| **Licensee** | A holder (or former holder) of an offshore petroleum licence. |
| **LWD** | Logging while drilling. |
| **MDT** | Modular formation dynamics testing. |
| **MER** | Maximising economic recovery. |
| **MPEG** | Standard for media coding, especially audio, video and graphics and transmission and file formats. |
| **MWD** | Measurement whilst drilling. |
| **NSTA** | The North Sea Transition Authority. |
| **OBC** | Ocean bottom cable - seismic surveying apparatus and method using fixed cables to power the apparatus. |
| **OBN** | Ocean bottom node - seismic surveying apparatus and method using battery-powered cableless receivers. |
| **OGA** | The Oil and Gas Authority. |
| **P format** | An umbrella term of the standardised formats for positional data, developed and implemented by UKOOA, for seismic surveys and well trajectories. |
| **PDF** | Portable Document Format - a standard file format developed by Adobe. |
| **PEL** | Pressure Evaluation Log. |
| **Information and samples** | As defined in Section 27 (1) of the Energy Act 2016. |
| **PLT** | Production log test. |

| Term or Abbreviation | Description/Definition |
|---|---|
| **PNG** | Portable Network Graphics - a raster-graphics file format that supports data compression. |
| **PPI** | Pixels per inch - the density of pixels within a digital image. |
| **ProjectID** | NDR Project Identification code – assigned in the NDR as a logical container for reported information. |
| **PSDM** | Post-stack depth migration. |
| **PSTM** | Pre-stack time migration. |
| **PVT** | Pressure, volume, temperature. |
| **QC** | Quality control. |
| **Relevant person** | A person listed under 9A(1) (b) of the Petroleum Act 1998. |
| **Reporting** | the provision of information and/or samples to the NSTA. |
| **RFT** | Repeat formation testing. |
| **SCAL** | Special core analysis laboratory. |
| **SEG** | Society of Exploration Geophysicists. |
| **SPS** | Shell Processing Support - a format for geophysical positioning data. |
| **TDT** | Thermal decay time. |
| **TIFF** | Tag Image File Format – a digital image file format. |
| **TLC** | Trough logging conditions. |
| **TVD** | True Vertical Depth. |
| **TWT** | Two-way time. |
| **UKCS** | United Kingdom Continental Shelf. |
| **UKOOA** | UK Offshore Operators Association, former name of the oil & gas trade association, OEUK. |
| **UTF-8** | Unicode Transformation Format 8-bit - variable-width character encoding of text in files. |
| **VSP** | Vertical seismic profile. |
| **WONS** | Well Operations and Notifications System - Energy Portal application for well consents and notifications. |

# 10. Version amendments

**Table 16. Amendments from the preceding version of this document (April 2025)**

| Section | Sub Section | Amendment |
|---|---|---|
| **5. Wellbore Information** | Table 4. Wellbore information types, classification and format | Information from two tables in previous versions of this document have been combined. In this version, the revised Table 4 incorporates information from:<br>Table 4. Wellbore information types and classification, and<br>Table 5. Data classification tags for wellbore information<br><br>This has simplified the document, leading to the removal of the old section 6. Wellbore data classification tags.<br><br>Subsequent numbering of sections and tables will be inconsistent with previous versions. |
| **5. Wellbore Information** | Table 4. Wellbore information types, classification and format | Information Tags (ITAGs) have been included in the table.<br>ITAGs are a recent introduction that provide 'plain language' alternatives to the more established Classification Tags (CTAGs).<br>ITAGs normally have a one-to-one relationship with CTAGs.<br>ITAGs are assigned by the NSTA, based in its understanding of the content of a given file. In some cases, these may not align to CTAGs, where CTAGs may be incorrect or may be incomplete.<br>Where the NSTA has yet to determine and assign ITAGs to a file, the ITAG alternative to a CTAG will be presented as a temporary measure. |
| **5. Wellbore Information** | Table 4. Wellbore information types, classification and format | Well life cycle phases have been updated.<br>Data Collection & Interpretation has been split into new categories:<br>Digital Well Logs<br>Wellbore geophysical data and reports<br>Wellbore data collection and reports<br>Core and Samples Analysis and Reports |
| **5. Wellbore Information** | Table 4. Wellbore information types, classification and format | Compliant file formats for each Information Type have been added to the table. This information was previously available in Table 5. |
| **5. Wellbore Information** | Table 4. Wellbore information types, classification and format | Tags for Completions and Workovers used to be combined as e.g. Completion/Workover end of job reports. The previous four combined tags have been changed to eight tags; four |

| Section | Sub Section | Amendment |
|---|---|---|
| | | specifically for Completions and four specifically for Workovers.<br><br>The four new workover CTAGs are prefixed with “WORKOV_”. The descriptions of the four original “COMPL_” CTAGs have been amended to refer only to Completions. |
| **5. Wellbore Information** | Table 4. Wellbore information types, classification and format | VSP_FILE and VSP_SEGY CTAGs have been combined as one CTAG, VSP_FILE.<br>VSP_FILE can be assigned to ASCII (plain text), CSV and SEG-Y format VSP data files.<br>VSP_SEGY is no longer available to assign.<br><br>The corresponding ITAG is VSP_Data |
| **8. Geophysical data classification tags** | Table 15. Geophysical information types, classification and formats | This is a revision of the previous Table 16. Geophysical information types and classification. The table has been amended to include Information Tags (ITAGs) for geophysical information types.<br>Please see Wellbore Information above in this table for a summarised explanation of ITAGs. |
| **8. Geophysical data classification tags** | Table 15. Geophysical information types, classification and formats | Additional Information Types added to the table include:<br><br>Field Acquisition Data – ASCII text files and supporting acquisition information<br><br>Digital Image files – Static images in various digital formats |
| **8. Geophysical data classification tags** | Table 15. Geophysical information types, classification and formats | Other geophysical data – the CTAG ‘VELOCITY’ has been suspended and can no longer be assigned to files in DISKOS V98 format. Velocity data in either SEG-Y or V98 format can be tagged with either of the previously available tags, VELOCITY_TIME or VELOCITY_DEPTH. |
| | | |
| | | |

# 11. Contacts

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North Sea Transition Authority



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