North Sea Transition Authority

Information Reporting

Form and Manner of NDR Information

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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'), and subsequently must be reported to the NSTA in accordance with a notice issued under section 34 of the Energy Act 2016 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.

Further, this document provides supplemental information in support of published guidance on the NSTA's requirements for the reporting of Information and Samples that are retained by relevant persons under the Oil and Gas Authority (Carbon Storage) (Retention of Information and Samples) Regulations 2025 (the 'Retention Regulations for CS'), and subsequently must be reported to the NSTA in accordance with a notice issued under section 112 of the Energy Act 2023 or in accordance with the exercise of other powers under the Energy Act 2023.

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 Data and Digital Strategy 2026-2030[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 both the Energy Act 2016, for petroleum, and the Energy Act 2023, for carbon storage, alongside relevant 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 and 'carbon storage information' as defined in section 107(4) of the Energy Act 2023. 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/2uqpc2a0/data-and-digital-strategy-2026.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 a petroleum licence or a carbon storage 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 seismic close out form https://www.nstauthority.co.uk/media/x34aakzc/seismic-survey-close-out-guidance-march-2026.pdf

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 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. 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 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. 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. 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

Information Tag	Classification Tag	Description	File Format
Mudlogging End of Well Report	GEOL_MUD	Mud log / mudlogging activity and results EOWR	PDF
		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

Information Tag	Classification Tag	Description	File Format
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
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

Information Tag	Classification Tag	Description	File Format
MWD/LWD Log	LOG_MWD	Logs recorded by Measurement While Drilling (MWD) or Logging While Drilling (LWD) techniques	PDF, TIFF
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

Information Tag	Classification Tag	Description	File Format
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
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, PNG, JPEG
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

Information Tag	Classification Tag	Description	File Format
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
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

Information Tag	Classification Tag	Description	File Format
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
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

Wellbore information types and corresponding well events

From November 2026, the NSTA has aligned the disclosure period for all well information, irrespective of the regulatory regime that determines when the data may be disclosed. From then, any newly created well information is to be associated to an NDR Project that corresponds to the event during which the information was created, acquired or is related to. Certain information types are not created in each event type. Accordingly, the information types that may be associated with certain NDR projects can be constrained to provide clarity to those with reporting obligations.

Associating information to an event organises data such that it may be protected and disclosed at a time that relates to the end of the event.

Table 5. Wellbore information types and corresponding well events sets out which information types may be associated with well event types, and which Classification Tags may be assigned to that information.

Table 5. Wellbore information types and corresponding well events

Information Tag	Classification Tag	Drilling and Completion	Well Test or Extended Well Test	Re-Completion	Suspension Activities (AB1 & AB2)	Abandonment Phase 3 (AB3)	Workover or Intervention	Other Well Operations	Sample Analysis
Pre Drill									
Pre-drill Report	PRE_GEN	X							
Well Proposal	PRE_PROP	X							
Drilling Programme	PRE_DPROG	X							
Geological Programme	PRE_GPROG	X							
Site Survey Report	PRE_SITE	X							
Rig Move/Positioning	PRE_MOVE	X							

Information Tag	Classification Tag	Drilling and Completion	Well Test or Extended Well Test	Re-Completion	Suspension Activities (AB1 & AB2)	Abandonment Phase 3 (AB3)	Workover or Intervention	Other Well Operations	Sample Analysis
Drilling Operations									
General Drilling Report	DRILL_GEN	X		X	X	X	X	X	
Drilling HSE Notification	DRILL_HSE	X	X	X	X	X	X	X	
Daily Drilling Report	DRILL_DAILY	X							
Drilling Cementing Report	DRILL_CEMENT	X							
Drilling Fluid Report	DRILL_FLUID	X							
MWD/LWD End of Well Report	DRILL_MWD	X							
General Core Report	CORE_GEN	X							
Well Examiner Report	WELL_EXAM	X		X	X	X	X	X	
Deviation Survey Report	DRILL_DEV	X							
Deviation Survey Data	WDD_FILE	X							
Drilling End of Well Report	DRILL_EOWR	X							
Mud Log	LOG_MUD	X							
Mud Data	MUD_FILE	X							
Mudlogging End of Well Report	GEOL_MUD	X							

Information Tag	Classification Tag	Drilling and Completion	Well Test or Extended Well Test	Re-Completion	Suspension Activities (AB1 & AB2)	Abandonment Phase 3 (AB3)	Workover or Intervention	Other Well Operations	Sample Analysis
Digital Well Logs									
Digital Mud Log	DWL_MUD	X							
Digital MWD/LWD	DWL_MWD	X							
Digital Wireline Log	DWL_WIRE	X		X	X	X	X	X	
Digital Production Log	DWL_PROD	X		X	X	X	X	X	
Digital Well Test Log	DWL_TEST	X	X	X	X	X	X	X	
Digital Log Other	DWL_OTHER	X	X	X	X	X	X	X	
Joined Well Log	JWL_FILE	X	X	X	X	X	X	X	
Joined Well Log Audit	JWL_AUDIT	X	X	X	X	X	X	X	
Wellbore Geophysical data and Reports									
General Geophysical Report	GPHYS_GEN	X				X		X	
VSP Report	GPHYS_VSP	X				X		X	
VSP QC Report	GPHYS_QCVSP	X				X		X	
Checkshot Report	GPHYS_CSHOT	X				X		X	
Array Sonic Report	GPHYS_SONIC	X				X		X	

Information Tag	Classification Tag	Drilling and Completion	Well Test or Extended Well Test	Re-Completion	Suspension Activities (AB1 & AB2)	Abandonment Phase 3 (AB3)	Workover or Intervention	Other Well Operations	Sample Analysis
Seismic Log	LOG_SEIS	X				X		X	
Velocity Log	LOG_VEL	X				X		X	
VSP Data	VSP_FILE	X				X		X	
Checkshot Data	CSHOT_FILE	X				X		X	
Wellbore data collection and reports									
Composite Log	LOG_COMP	X	X	X	X	X	X	X	
Core Log	LOG_CORE	X							
CPI Log	LOG_CPI	X	X	X	X	X	X	X	
Lithological Log	LOG_LITH	X							
Wireline Log	LOG_WIRE	X	X	X	X	X	X	X	
Testing Log	LOG_TEST	X	X	X	X	X	X	X	
MWD/LWD Log	LOG_MWD	X							
Summary Log Chart	LOG_SUM	X	X	X	X	X	X	X	
Daily Geology Report	GEOL_DAILY	X							
General Geology Report	GEOL_GEN	X							

Information Tag	Classification Tag	Drilling and Completion	Well Test or Extended Well Test	Re-Completion	Suspension Activities (AB1 & AB2)	Abandonment Phase 3 (AB3)	Workover or Intervention	Other Well Operations	Sample Analysis
Geology End of Well Report	GEOL_GEOW	X							
Dipmeter Log	LOG_DIP	X							
Dipmeter Report	GEOL_DIP	X							
Petrophysical Report	GEOL_PPHYS	X				X		X	
Geochemistry Report	GEOL_CHEM	X	X					X	X
Well Summary Report	WELL_SUMMARY	X							
Core and Samples Analysis and Reports									
Conventional Core Analysis	CORE_CCA	X							X
Conventional Core Analysis Data	CCA_FILE	X							X
Special Core Analysis	CORE_SCAL	X							X
Special Core Analysis Data	SCAL_FILE	X							X
Core Permeametry	CORE_PERM	X							X
Sidewall Core Report	CORE_SIDEWALL	X							X
Sedimentology Report	GEOL_SED	X							X
Core Photographs	CORE_PHOTO	X							X

Information Tag	Classification Tag	Drilling and Completion	Well Test or Extended Well Test	Re-Completion	Suspension Activities (AB1 & AB2)	Abandonment Phase 3 (AB3)	Workover or Intervention	Other Well Operations	Sample Analysis
Biostratigraphy Report	GEOL_BIO	X							X
Biostratigraphical Log	LOG_BIO	X							X
Completion and Workover Operations									
Completions Programme	COMPL_PROG	X							
Completions HSE Notification	COMPL_HSE	X							
Daily Completions Report	COMPL_DAILY	X							
Completions End of Job Report	COMPL_EOJR	X							
Casing Log	LOG_CASE	X		X	X	X	X	X	
Workover Programme	WORKOV_PROG						X		
Workover HSE Notification	WORKOV_HSE						X		
Daily Workover Report	WORKOV_DAILY						X		
Workover End of Job Report	WORKOV_EOJR						X		
General Well Engineering Report	WELL_ENG	X		X	X	X	X	X	

Information Tag	Classification Tag	Drilling and Completion	Well Test or Extended Well Test	Re-Completion	Suspension Activities (AB1 & AB2)	Abandonment Phase 3 (AB3)	Workover or Intervention	Other Well Operations	Sample Analysis
Well Testing									
Fluid Analysis/RFT Report	TEST_FLUID	X	X						X
PLT/TDT Report	TEST_PLT	X	X						
DST Report	TEST_DST	X	X						
Luminescence Fingerprinting	TEST_LUM	X							X
Well Test Data	TEST_FILE	X	X						
General Testing Report	TEST_GEN	X	X						
Abandonment Operations									
Abandonment Programme	ABANDON_PROG	X			X	X			
Abandonment HSE Notification	ABANDON_HSE	X			X	X			
Daily Abandonment Report	ABANDON_DAILY	X			X	X			
Abandonment Cement Report	ABANDON_CEMENT	X			X	X			
Abandonment Seabed Clearance Certificate	ABANDON_SEABED	X			X	X			
Well Schematic	WELL_SCHEM	X		X	X	X			
Abandonment Log	LOG_ABANDON	X			X	X			
Digital Abandonment Log	DWL_ABANDON	X			X	X			
Abandonment End of Job Report	ABANDON_EOJR	X			X	X			

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 6. 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: **Recorded trace data** **Or** **Group formed** **Or** **Final field produced**	Including auxiliary channels and source signature, where available Where partial processing has occurred during acquisition. Including de-ghosted data 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. Single copy to be provided on either 3592 JA/JC tape or USB 3/C storage device. Data supplied on non-tape media must be without encapsulation. 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.**
Field data: **Final field produced** **as used in processing** **Or** **Nav-seis merge data**	Source /receiver navigation data assigned to CMP positions Nodal data in common receiver order	SEG-Y rev 0, rev 1 or rev 2. 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. Single copy to be provided on either 3592 JA/JC tape or USB 3/C storage device. 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. 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. 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. 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. 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. 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. Single copy to be provided on either 3592 JA/JC tape or USB-3/C storage device. 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. 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. Single copy to be provided on either 3592 JA/JC tape or USB-3/C storage device. 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. 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. Single copy to be provided on either 3592 JA/JC tape or USB-3/C storage device. 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. 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. Single copy to be provided on either 3592 JA/JC tape or USB-3/C storage device. 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. 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. Single copy to be provided on either 3592 JA/JC tape or USB-3/C storage device. SEG-Y data must comply with the requirements set out in the SEG-Y data: file format mandatory requirements section in this document.
Seismic Section	All scans must have a minimum resolution of 400dpi. The compression method for TIFFs should be limited to "1d_B&W", "2d_B&W", and "grp4_2d_B&W". Please see footnote[2] for further information	TIFF (recommended for black and white sections) JPEG (recommended for dual polarity greyscale sections) PNG (recommended for colour sections)	

[2] https://datanstauthority.blob.core.windows.net/external/Documents/NSTA_Seismic_Section_Scanning_Recommendations_V1_0.pdf

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. 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. SEG SPS Rev 2.1 if applicable.	P1/84, P1/90 or P1/11 ASCII 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 or IOGP P6/11.	UKOOA P6/98 ASCII or IOGP P6/11. 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. CSV ASCII for supporting information.	PDF including machine readable text and must not be password protected or encrypted. CSV ASCII for supporting information. 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. CSV ASCII for supporting information.	PDF including machine readable text and must not be password protected or encrypted. CSV ASCII for supporting information. 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. CSV ASCII for supporting information.	PDF including machine readable text and must not be password protected or encrypted. CSV ASCII for supporting information. 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. CSV ASCII for supporting information.	PDF including machine readable text and must not be password protected or encrypted. CSV ASCII for supporting information. 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. CSV ASCII for supporting information.	PDF including machine readable text and must not be password protected or encrypted. CSV ASCII for supporting information. 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. CSV ASCII for supporting information.	PDF including machine readable text and must not be password protected or encrypted. CSV ASCII for supporting information. Single copy to be provided on either 3592 JA/JC tape or USB-3/C device.
Seismic Section	All scans must have a minimum resolution of 400dpi. The compression method for TIFFs should be limited to "1d_B&W", "2d_B&W", and "grp4_2d_B&W".	1. TIFF (recommended for black and white sections) 2. JPEG (recommended for dual polarity greyscale sections) 3. PNG (recommended for colour sections)	

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 **Time to depth velocity datasets.** **Seismic attenuation**	SEG-Y rev 0, rev 1, rev 2 or DISKOSV98 as appropriate to the sampling of the model. 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. Single copy to be provided on either 3592 JA/JC tape or USB-3/C storage device. 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	PDF or ASCII files, recorded or modelled far field (with and without source + receiver ghost). Or included in SEG-Y headers	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.

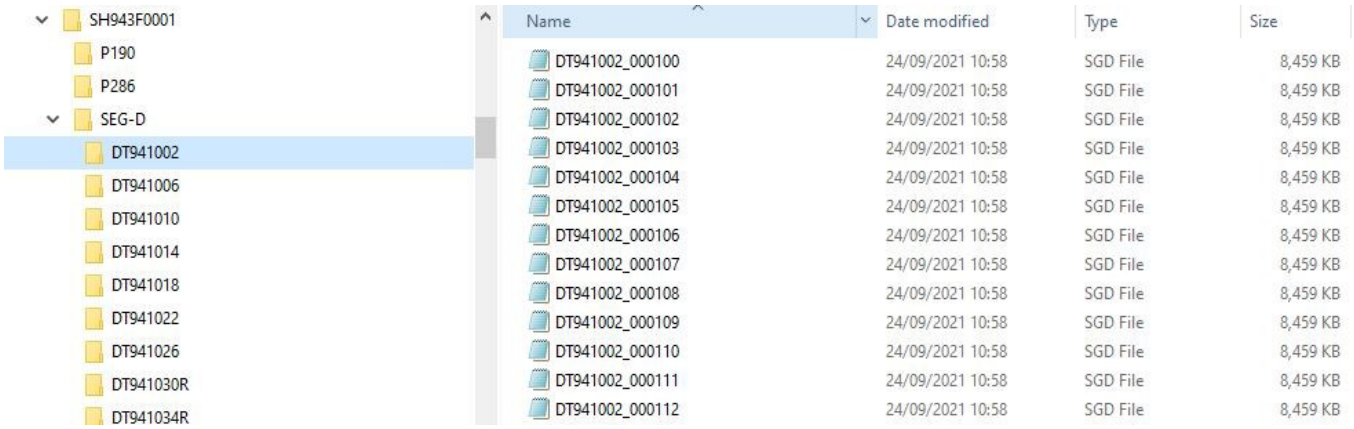
Costs relating to pre-conditioning of reported information that is necessary to meet submission criteria, or return of media to the sender, are to be borne by the submitter or owner of the information. The responsible party will be notified of such costs prior to any work being carried out. The responsible 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, SEGY
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

Information Tag	Classification Tag	Description	File Format
Final Navigation	FINAL_NAVIGATION	Processed records of positional information that can include shotpoint and receiver positions	P184, P190, P111, SPS, SEGP3
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
Seismic Section	SEISMIC_SECTION	Image file of seismic section (usually a scanned image)	JPEG, PNG, TIFF
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

Information Tag	Classification Tag	Description	File Format
Final Gathers (Depth)	GATHERS_FINAL_DEPTH	Final post migration pre-stack seismic - depth domain	SEGY
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

Information Tag	Classification Tag	Description	File Format
Inversion (Depth)	INVERSION_DEPTH	Inversion process output - depth domain	SEGY
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 geographically 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 I

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.
Project ID	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 (September 2025)

Section	Sub Section	Amendment
5. Wellbore Information	Table 5. Wellbore information types and corresponding well events	Table added to identify which information types are relevant to each well event type and hence which CTAGs may be assigned to associated files.
6. Geophysical Information	Table 6. NDR compliant seismic survey data formats	Additional information type ‘Seismic Section’ has been included in the table.
8. Geophysical data classification tags	Table 14. Geophysical information types, classification and formats	Source Signature compliant data reporting formats expanded to include SEG-Y. A number of licensees have approached the NSTA to advise that the source signature has been included in SEG-Y headers for certain datasets.
8. Geophysical data classification tags	Table 14. Geophysical information types, classification and formats	Additional information type ‘Seismic Section’ has been included in the table. Sections may be reported in JPG, TIFF or PNG formats and are required to have a minimum resolution of 400 dpi.

11. Contacts

Questions or comments in relation to this document, should be directed to ndr@nstauthority.co.uk

North Sea Transition Authority

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