

# Reporting and Disclosure of Information and Samples: Supplemental Guidance

on the disclosure of certain Geophysical Survey Data (created or acquired under an Exploration Licence pre-2018)

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The consultation can be found on the OGAs website: https://www.ogauthority.co.uk/media/5459/reporting-and-disclosure-of-information-and samples-supplemental-guidance-pre-2018.pdf

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# 1. Scope and purpose of this guidance

- The Oil and Gas Authority ('OGA') has published guidance on the requirements for the reporting of information relating to, amongst other things, geological surveys, acquired or created in or after 2018. That guidance – the Reporting and Disclosure Guidance¹ - also sets out generally how the OGA will disclose such information.
- This guidance sets out how certain Geophysical Survey Data acquired or created under an Exploration Licence prior to 2018 will generally be made available by the OGA on a basis consistent with such data created or acquired in or after 2018.
- The OGA has also published supplemental guidance in relation to the reporting and disclosure of information relating to geological surveys acquired or created in or after 2018<sup>2</sup>.
- 4. The OGA is not bound by this guidance and where it departs from this guidance it will explain why. This guidance is not a substitute for any regulation or law and is not legal advice.
- 5. This guidance 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 OGA's powers and responsibilities. If the OGA changes this guidance in a material way, it will publish a revised document.

#### 6. Note:

- (a) All capitalised terms are defined in Section 9
   of this guidance, and in relation to geophysical
   terms, may be italicised in this document for
   readability;
- (b) As set out in Section 9 of this guidance, the term "geological" where used in this guidance refers only to "geophysical", that is - to surveys using passive physical methods or active physical methods, and the resultant 'geophysical' data. This is consistent with the guidance set out in Section 8 of the Reporting and Disclosure Guidance.

<sup>&</sup>lt;sup>1</sup> https://www.ogauthority.co.uk/media/4855/oga-guidance-on-retention-of-information-and-samples-may-2018.pdf

<sup>&</sup>lt;sup>2</sup> https://www.ogauthority.co.uk/media/5458/reporting-and-disclosure-of-information-and-samples-supplemental-guidance-post-2017.pdf

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## 2. Introduction

7. Licences granted under the Petroleum Act 1998 ('1998 Act') set out powers and obligations relating to the retention of petroleum-related information and samples by relevant persons (as defined), reporting them to the OGA and their subsequent disclosure by the OGA.

#### **Disclosure of Geophysical information**

- 8. Under each Exploration Licensee's respective Exploration Licence, the earliest that the OGA may disclose information, including information relating to surveys, acquired or created by such Exploration Licensees is:
  - (a) three (3) or five (5) years from the date on which:
  - the OGA was due to receive the information,
  - or, if earlier, the OGA in fact received the information;
  - (b) after the Exploration Licence ceases to have effect, whether because of its termination or revocation or the expiry of the licence period; or
  - (c) after the expiry of such longer period as the OGA may determine after considering any representations made by the Exploration Licensee about the publication of the data.
- 9. The following sets out how Geophysical Survey Data acquired or created under an Exploration Licence pre-2018 (i.e. before the Disclosure Regulations came into effect) will generally be disclosed by the OGA, and provides additional information (to that set out in the Exploration Licence clauses) on the reporting of such data.

#### **Consultation process**

- 10. The OGA has recognised the role that good availability of Geophysical Survey Data can play in unlocking value in the UKCS (it has itself acquired and released seismic datasets in 2016 and 2017), yet understands that in most instances the Geophysical Survey Data obtained under Exploration Licences is generally made available on commercial terms. As a result, throughout the process of drafting this guidance, the OGA has engaged with a number of Exploration Licensees, both through the International Association of Geophysical Contractors (IAGC) and with a small group of Production Licensees. That engagement, including around 25 meetings in the past two years and numerous versions of the draft guidance, has informed the approach set out in this guidance.
- 11. More recently, the OGA undertook an informal consultation on the draft guidance before publication, engaging with all extant Exploration Licensees, the IAGC, Oil and Gas Independents' Association (OGIA) members and Oil and Gas UK members.
- 12. It is anticipated that wider availability of legacy data products at low cost will lead to a higher technical baseline for work done on prospect generation and lead to an increase in the reworking of the data or the uptake of newer data as suggested in the OGA's 'Stewardship Expectations SE-03 Optimum Use of Subsurface Data Implementation Guide'<sup>4</sup>.

<sup>&</sup>lt;sup>3</sup> The period is as set out in the applicable Exploration Licence, and may vary depending on the date of grant of the Exploration Licence.

<sup>4</sup> https://www.ogauthority.co.uk/media/3827/se-03.pdf

# 3. Disclosure Protection Periods

- 13. As referenced above, under each applicable Exploration Licence the period after which the OGA may disclose or make available the Pre-2018 Survey Data is, as per paragraph 8 above, typically three (3) or five (5) years after the date on which the OGA receives (or should have received) the data under the terms of the Exploration Licence, whilst it remains extant.
- 14. However, the OGA intends that in general there should be consistency in the periods after which disclosure of information relating to geophysical surveys carried out under an Exploration Licence may be disclosed by the OGA with those set out in the Disclosure Regulations, whether created or acquired before, during or after 2018 (see Appendix 1)
- 15. Therefore, subject to paragraph 18 (and **Appendix 1**):
  - the **Initial Confidentiality Period** (in respect of Processed Information) is ten (10) years; and
  - the Full Confidentiality Period (in respect of Original Information) is fifteen (15) years, respectively a 'Confidentiality Protection Period'.
- 16. The start of the Confidentiality Protection Period is the date on which the original final processing relating to the relevant survey is completed ('Completion Date').
- 17. The Exploration Licensee should inform the OGA of the Completion Date as soon as reasonably practicable thereafter or in accordance with any of the conditions for disclosure as set out in the relevant Exploration Licence, whichever is the later, and this date will be used to determine the relevant Confidentiality Protection Period(s) and the resultant disclosure date(s).

- 18. Where the Completion Date is in **2009 or earlier** the Confidentiality Protection Periods are:
  - for Processed Information with a Completion
    Date in 2009 or earlier, no further Initial
    Confidentiality Period is granted after 31
    Dec 2018. Consequently, such Processed
    Information may be disclosed immediately; and
  - for Original Information with a Completion
    Date in 2009 or earlier, the Full Confidentiality
    Period will be a period of five (5) years
    beginning 1 January 2019. Consequently, the
    disclosure date for Original Information having
    a Completion Date in 2009 or earlier will be 1
    January 2024;

(see Appendix 1).

# 4. Reporting of data

- 20. The Exploration Licence clauses generally describe what type of information from geological surveys the OGA will normally require to be reported to it.
- 21. Specifically, in relation to Pre-2018 Survey Data:
  - (a) Copies of all 'Initial Confidentiality Period' data (Processed Information), if not already provided, should be reported to the OGA on request as per the Exploration Licence clauses within any time limit specified in the request; or if there is no time limit specified, within four (4) weeks of the request (see Appendices 1 & 2).
  - (b) Copies of all 'Full Confidentiality Period' data (Original Information), if not already provided, should be reported to the OGA on request as per the Exploration Licence clauses within any time limit specified in the request; or if there is no time limit specified, within four (4) weeks of the request (see Appendices 1 & 2).

#### **Seismic Data**

- 22. Where the Initial Confidentiality Period data comprises Seismic Data, the reported data should be as set out in **Appendices 1 & 2** and include the:
  - original Final Processed Full Stack Volume;
  - any Final Processed Angle/Offset Volumes;
  - stacking/migration velocities; and
  - original final processing report.
- 23. Where the Full Confidentiality Period data comprises Seismic Data, the reported data should be as set out in **Appendices 1 & 2** and include:
  - the basic Field Data or Group Formed Data; and
  - any Derivative Data and all reports.

The Final Processed Full Stack and Angle/Offset Volumes and Derivative Data should be identified from the original final processing report provided to the OGA.

#### **Potential Fields Data**

- 24. Where the Initial Confidentiality Period data comprises Potential Fields Data, the reported data should be as set out in **Appendices 1 & 2** and include the:
  - original Final Processed Volumes; and
  - final processing report.
- 25. Where the Full Confidentiality Period data comprises Potential Fields Data, the reported data should be as set out in Appendices 1 & 2 and include:
  - the basic Field Data; and
  - any Derivative Data and all reports;

The Final Processed Volumes and Derivative Data should be identified from the original final processing report provided to the OGA.

#### Form and format of information to be provided

- 26. All reported Geophysical Survey Data should include but not be limited to:
  - 2D, 3D, 4D (Baseline or Monitor),
  - Dual or Multi-azimuth 3D,
  - Site Survey,
  - OBC & OBN 2D or 3D,
  - Gravity,
  - IP,
  - Magnetic,
  - MT and CSEM surveys.

Data should be supplied in a common format and on media specified by the OGA at the time of request (see **Appendix 2**).

# 5. Disclosure of information by the OGA

- 27. After expiry of the relevant Confidentiality Protection Period(s), the OGA may disclose the Geophysical Survey Data on the basis set out in the NDR User Agreement.<sup>5</sup>
- 28. However, Pre-2018 Survey Data provided to the OGA by a Production Licensee under its obligations for data reporting will only be made available for wider data disclosure after the underlying Full Confidentiality Period has expired.
- 29. The OGA may from time to time request permission from the data owner to disclose or publish selected subsets of this reported data prior to the completion of the Full Confidentiality Period.

## 6. Data access

- 30. The OGA notes that, for the applicable Confidentiality Protection Period(s) only, any access to or use of Pre-2018 Survey Data by persons other than the owner of that information may be governed by existing contractual arrangements and, subject to applicable laws including the Competition Act 1998, charges may apply thereunder. Where the OGA discloses any such information after that Confidentiality Protection Period, access to and use of that information will generally be on the basis set out in the NDR User Agreement<sup>6</sup>.
- 31. The OGA further notes that, at the time of issuance of this guidance, notwithstanding that the OGA may have requested that Pre-2018 Survey Data be reported to it pursuant to the Exploration Licence clauses, that Pre-2018 Survey Data may have been retained by the Exploration Licensee.
- 32. Therefore, where any request is submitted to the NDR for Pre-2018 Survey Data which is eligible for disclosure after:
  - (a) the Initial Confidentiality Period; and/or
  - (b) the Full Confidentiality Period,

that Pre-2018 Survey Data will be supplied by the Exploration Licensee to the requesting person(s) on the basis set out in the NDR User Agreement (see **Appendix 1**) and subject only to industry standard Data Copy Charges.

# 7. Value Added Data

- 33. The OGA does not propose that Value Added Data derived from Pre-2018 Survey Data will generally be subject to disclosure.
- 34. Additionally, Value Added Data or other products that are derived from Geophysical Survey Data generated and provided to the OGA by a Production Licensee under its obligations for data reporting or on relinquishment of any part of the licensed area, will also not generally be subject to such disclosure. However, the OGA may from time to time request permission from the data owner to disclose or publish selected subsets of this reported Value Added Data.
- 35. In relation to such reprocessing products, Exploration Licensees should, if requested, inform the OGA of planned or completed reprocessing projects. Final reprocessed volumes and Derivative Data should be identified from a processing flow submitted to the OGA on request.
- 36. In relation to Value Added Data, Derivative Data and reports should be reported to the OGA in accordance with the Exploration Licence clauses on request within any time limit specified in the request; or if there is no time limit specified, within **four (4) weeks** of the request.
- 37. Reprocessing products should include but not be limited to: reprocessing of 2D, 3D, 4D (baseline or monitor), dual or multi-azimuth 3D, site survey, OBC & OBN 2D or 3D, gravity, IP, magnetic and CSEM surveys. Data should be reported in the format and on media specified by the OGA at the time (see **Appendix 2**).

# 8. Higher education institutions

- 38. Exploration Licensees should consider requests received from academic higher education institutions for data access before expiry of the Confidentiality Protection Period(s), on a case by case basis.
- 39. In general, such institutions with connections to the UKCS or the general North Sea region should be given priority, however institutions with connections outside of the North Sea region should also be considered for such disclosure provided they can demonstrate benefit to the UKCS that will result from their intended research and use of the data.
- 40. While approval of such data requests will be at the discretion of the Exploration Licensee, the OGA would expect that Exploration Licensee to provide to the OGA reasons for declining any such request where requested to do so.

# 9. Definition of Terms

In this guidance, the following terms have the following meanings:

**1998 Act** has the meaning set out in paragraph 7.

**2D** means two-dimensional seismic data

3D means three-dimensional seismic data

4D means four-dimensional seismic data

**Completion Date** – has the meaning set out in paragraph 16.

**Confidentiality Protection Period** is the specified period(s) in Appendix 1. during which the Geophysical Survey Data remains confidential.

**CSEM** means Controlled Source Electro-Magnetic data

**Data Copy Charges** means charges associated with the copying or remastering of all disclosed data requested for disclosure through the NDR, to be paid by the requesting party prior to release.

**Derivative Data** means those data or data volumes created during the original processing of Geophysical Survey Data, produced as a result of computer processing techniques.

- Derivative Data does not include interpretations, surfaces or computer models generated from interpretations of Geophysical Survey Data.
- Derivative Data generated after the completion of the original final processing may also be Value Added Data.

**Disclosure Regulations** means The Oil and Gas Authority (Offshore Petroleum) (Disclosure of Protected Material after Specified Period) Regulations 2018.

**Exploration Licence** means an offshore licence which confers on the holder of that licence the right to search for petroleum.

**Exploration Licensee** means the person(s) who holds an Exploration Licence.

- The Exploration Licensee may, pursuant to the terms of the Exploration Licence, create or acquire Geophysical Survey Data.
- The Exploration Licence obligations in respect of Geophysical Survey Data that has been obtained either through merger, change of control or purchase remain with the Exploration Licence under which it was acquired.

**Field Data** – see the definition of Geophysical Survey Data.

Final Processed Angle/Offset Volumes means the final partial angle stack or partial offset stack volumes other than the Final Processed Full Stack Volume, output at the time of project completion, including and not limited to: PreSTM, PreSDM, RTM, post stack migration or any other method used to create the Final Processed Angle/Offset Volumes and will be identified from the reported final processing report.

Final Processed Full Stack Volume means the final full offset stack or full angle stack, output at the time of project completion, including and not limited to: PreSTM, PreSDM, RTM, post stack migration or any other method used to create the Final Processed Full Stack Volume and will be identified from the reported final processing report.

**Full Confidentiality Period** means the period after which all Original Information, namely Geophysical Survey Data, may be disclosed by the OGA.

 Geophysical Survey Data disclosed under the NDR User Agreement will be released by the Exploration Licensee on request from the NDR user, for industry standard Data Copy Charges, through the OGA or direct to the NDR user as may first be agreed with the OGA. acquired or generated in the course of a geological survey using passive physical methods (i.e. with a passive sensor) or active physical methods (i.e. with an artificial source and sensor/receiver) and subsequent Derivative Data, produced as a result of computer processing techniques, and includes:

- all Individual Survey Data techniques.
- basic data recorded at the sensor or sensors (also known as Raw Data or Field Data) which may or may not include Group Formed or Final Field Produced Data as well as any normallyarchived intermediate and final processed data (including volumes, stacks, Derivative Data, stacking and migration velocities, navigation data, field reports and processing reports).

**Group Formed or Final Field Produced Data** means recorded field data where partial processing has occurred during acquisition, including de-ghosted data.

**Individual Survey Data** is defined as comprised of either Seismic Data or Potential Fields Data created under an Exploration Licence.

Initial Confidentiality Period means the period after which Processed Information, namely Final Processed Full Stack Volumes, Final Processed Angle/Offset Volumes and final stacking/migration velocity data plus the original final processing report may be available for release (on request) by the Exploration Licensee through the OGA under the NDR User Agreement for industry standard Data Copy Charges.

IP means Induced Polarization

MT means Magnetotelluric

**NDR** means the OGA's UK national data repository.

**NDR User Agreement** means the terms and conditions for use of the NDR.

**OBC** means Ocean Bottom Cable

**OBN** means Ocean Bottom Node

**OGA** – has the meaning set out in paragraph 1.

**Original Information** for the purpose of this guidance shall have the meaning given to it in regulation 7(4) of the Disclosure Regulations.

**Potential Fields Data** is a subcategory of Geophysical Survey Data, and is defined as all data that measures and records the gravitational, magnetic or electrical properties of the Earth's subsurface, whether passive or induced, including but not limited to: gravity, magnetic, IP, MT or CSEM data.

**Pre-2018 Survey Data** means any original Geophysical Survey Data acquired or created by or on behalf of an Exploration Licensee (or other than on behalf of a Production Licensee) prior to 2018

**PreSDM** or **PSDM** means Pre-Stack Depth Migration

**PreSTM** or **PSTM** means Pre-Stack Time Migration

**Processed Information** for the purpose of this guidance has the meaning given to it in regulation 7(4) of the Disclosure Regulations.

**Production Licence** means a licence to search and bore for, and get, petroleum.

**Production Licensee** means a person who holds a Production Licence.

**Raw Data** – see the definition of Geophysical Survey Data.

**Reporting and Disclosure Guidance** means the OGA's published guidance: Reporting and Disclosure of Information and Samples Guidance<sup>7</sup>.

<sup>&</sup>lt;sup>7</sup> https://www.ogauthority.co.uk/news-publications/publications/2019/reporting-and-disclosure-of-information-and-samples-guidance/

**RTM** means Reverse Time Migration

**Seismic Data** is a subcategory of Geophysical Survey Data and is defined as all data generated using an acoustic source, whether artificial (active) or natural (passive). It includes seismic surveys using any type and combination of source(s) or sensor(s)/receiver(s), including and not limited to: 2D streamer, 3D streamer, 4D (baseline or monitor), dual or multi-azimuth 3D, site survey, OBC and OBN 2D or 3D.

**UKCS** means the UK Continental Shelf.

Value Added Data means any data that has been created post the completion of the original Final Processed Full Stack Volume and Derivative Data volumes as determined by the final processing flow and is not subject to disclosure. This includes data shown to provide uplift over the original product such as new reprocessing or migration products, conditioned gathers, inversions, merging and reprocessing of volumes but does not include interpretations, surfaces or derived non-seismic models such as static and dynamic reservoir models created from interpretations.

# Appendix 1

#### Schedule of data availability

Data Availability Schedule				
Completion Date	Data Disclosure/ Availability	Disclosure Dates	Initial Confidentiality Period (from 1 Jan 2019)	Full Confidentiality Period (from 1 Jan 2019)
Pre-2001				
2002				
2003	Processed Information:	Processed Information:		
2004	immediate	2019		
2005	Original Information: after	Original Information:	0 years	5 years
2006	5 years from 1 Jan 2019	2024		
2007				
2008				
2009				
2010		Processed Information: 2020 Original Information: 2025	1 years	6 years
2011	Processed Information:	Processed Information: 2021 Original Information: 2026	2 years	7 years
2012	10 years Original Information: 15 years	Processed Information: 2022 Original Information: 2027	3 years	8 years
2013		Processed Information: 2023 Original Information: 2028	4 years	9 years
2014		Processed Information: 2024	5 years	10 years

	Data Availability Schedule				
Completion Date	Data Disclosure/ Availability	Disclosure Dates	Initial Confidentiality Period (from 1 Jan 2019)	Full Confidentiality Period (from 1 Jan 2019)	
		Original Information: 2029			
2015		Processed Information: 2025 Original Information: 2030	6 years b) 5 years	11 years	
2016		Processed Information: 2026 Original Information: 2031	7 years	12 years	
2017		Processed Information: 2027 Original Information: 2032	8 years	13 years	
2018		Processed Information: 2028 Original Information: 2033	9 years	14 years	

# Appendix 2

#### **Geophysical information: detailed reporting requirements**

The following table is a copy of Table 5 from the Reporting and Disclosure Guidance, included here for ease of reference. For the purposes of this guidance, the column headed 'Reported by' should be disregarded: this table sets out the common format and media that the OGA will generally specify when requiring the reporting of Pre-2018 Survey Data.

Туре	Remarks	Report category	Form and manner	Reported by
Field data				
Recorded trace data	Including source signature, where available		SEG-D rev 3.1 (little endian, IEEE 9058) to be provided on 3592 format tapes (two identical copies) or on a USB 3-connected storage device. Data in earlier SEG-D versions and in SEG-A, B, or C formats may exceptionally be accepted by agreement	Proprietary surveys: No later than 6 months after completion of processing
Group formed or final field produced	Where partial processing has occurred during acquisition. Including de- ghosted data		SEG-Y rev 2 (little endian, IEEE floating point) preferred; SEG-Y rev 1 may be accepted exceptionally. To be provided on 3592 format tapes (two	Commercial surveys: As per standalone s.34 notice
Nav-seis merge data	Source/receiver navigation data assigned to CMP positions		identical copies) or on a USB 3-connected storage device	

Pre-stack data					
Pre-stack time migrated	time migrated Raw and final PSTM		SEG-Y rev 2 (little endian, IEEE floating point) preferred; SEG-Y rev 1 may be accepted exceptionally	Proprietary surveys: No later than 6 months after completion of processing	
data	gathers		To be provided on a USB	Commercial surveys:	
			3-connected storage device. May be accepted on 3592	As per standalone s.34 notice	
			format tape by agreement	Proprietary and	
Pre-stack depth migrated data	Raw and final PSDM gathers		a USB 3-compatible storage late	commercial surveys: No later than 6 months after completion of processing	
Stacking and migration velocities	As used in depth migration processing			completion of processing	

Туре	Remarks	Report category	Form and manner	Reported by	
Post-stack data					
Final migrated stack	The final migrated stack after full prestack processing		SEG-Y rev 2 (little endian, IEEE floating point) preferred; SEG-Y rev 1 may be accepted		
Final migrated stack after full pre-stack and post stack processing	Includes angle and offset stacks		exceptionally  To be provided on a USB  3-connected storage device.  May be accepted on 3592	To be provided on a USB  3-connected storage device. May be accepted on 3592	Proprietary and commercial surveys: No
All other post stack depth migrated volumes	Includes post stack time migrated volumes if created				later than 6 months after completion of processing
Post stack time migrated volumes	If created as part of a PSDM project		format tape by agreement		

Positional data			
Positional data	Includes raw navigation, source- receiver navigation, final processed navigation, bathymetry data, and 3D survey bin grids	Raw navigation: IOGP P2/11; processed navigation: IOGP P1/11; bin grids: IOGP P6/11 format. Earlier IOGP / UKOOA formats may exceptionally be accepted by agreement  To be provided on a USB 3-compatible storage device.	Proprietary surveys: No later than 6 months after completion of processing  Commercial surveys: Final processed navigation, no later than 6 months after completion of processing  Other: as per standalone notice

Reports					
Acquisitior QC reports	n, including s	Reports detailing the acquisition and quality checking of seismic surveys, including weekly reports and the final deliverables or outputs from surveys. These include shot point base maps and maps showing the full fold of coverage	Acquisition report	PDF/A, including machine readable text. Scanned images in PDF or TIFF format may exceptionally be accepted by agreement  To be submitted online to the NDR. Not accepted on physical media	Proprietary and commercial surveys: No later than 6 months after completion of processing
Field tape	listings		Field QC output listing		

Туре	Remarks	Report category	Form and manner	Reported by
Observers logs		Observers logs	PDF/A, including machine readable text. Scanned images in PDF or TIFF	Proprietary and commercial surveys: No later than 6 months after
Processing reports	Information on processing system and sequence, final products, input data etc.	Processing reports	format may exceptionally be accepted by agreement to be submitted online to the NDR. Not accepted on physical media.	completion of processing
Navigation reports		Navigation reports		
Navigation QC reports		Navigation QC reports		

Gravity and magnetic				
Gravity and magnetic	All raw and processed and gridded data	N/A	Data type submitted to Bridgeporth / BGS (see notes below)	Proprietary surveys: No later than 6 months after completion of processing  Commercial surveys: As per standalone s.34 notice
Electromagnetic	Field data (both raw and calibrated), time series data, magnitude and phase data, traces (transient CSEM) and impedance tensor (MT)	N/A	Data type submitted to Bridgeporth/BGS (see notes below)	Proprietary surveys: No later than 6 months after completion of processing  Commercial surveys: As per standalone s.34 notice

### Notes

All tapes and other media must be labelled with the following information:

- Survey owner
- NDR/CS9 survey identifier
- Survey name
- Acquisition dates
- Data type (or list of contents if space permits)
- Processing version e.g. Near/Far/Full/Ufar
- Format i.e. SEG-Y, SEG-D as appropriate
- Inline/crossline
- Tape number if multiple tapes submitted (i.e. 1 of 2, 2 of 2)
- Survey area (ie. Western Approaches, Southern North Sea)
- This also applies to USB media (see below) where a "README" file with the above information should also be included. When signal, navigation and velocity data are stored on tape with the UNIX 'tar' or 'dd' commands, the correct commands to retrieve the data must be provided.
- All tapes submitted must be 3592 format. JC tapes preferred (4Tb capacity, suitable for reading in an IBM 3592 E07 generation device), but JA and JB tapes will be accepted exceptionally. Other tape media will not be accepted.

- 3. When reporting data on tape, emphasis must be placed on cost effectiveness and practicality in order to minimise loading costs and the burden on the OGA's ongoing data management and duplication costs. Whilst JC tapes are preferred, JA/JB tapes may be acceptable if the data volume and hence the number of tapes is reasonable. Due care should be taken to avoid excessive wastage of capacity (i.e. tapes should be full). In the case of reporting large field and pre-stack volumes, the OGA will discuss with relevant persons on a case by case basis the best way to achieve this aim.
- 4. A tape transcription report must accompany all tapes containing field and pre-stack data submitted for loading to the NDR.
- 5. All storage devices submitted must provide a USB 3 interface. USB 2 and earlier devices will not be accepted. Seismic data sets must be provided on a single device only. They must not be split across multiple USB devices.
- All documentation must be submitted in PDF/A format, including machine readable text. Scanned images will not be accepted; in the case of legacy surveys where no digital master document exists, a pdf should be generated.
- 7. A loading sheet must accompany each data submission, providing instructions to ensure the data is loaded and quality controlled correctly. An example may be obtained from the OGA.
- 8. GeoVault® is a data management service for gravity, magnetic and other non-seismic exploration data run by BGS and Bridgeporth http://www.geo-vault.com/



