Oman Drilling Project Sample, Data and Obligations Policies

This policy has been developed to ensure transparent access by scientists to Oman Drilling Project samples and data. Scientists who receive samples and access data incur obligations on their use and reporting of the science outcomes from research based on these samples or data. The distribution and use of all cores, samples and data fall under the oversight of the OmanDP Sample Oversight and Allocation Committee (SOAC), a sub-group of the Project Steering Committee.

Table A: Oman Drilling Project Sample Oversight and Allocation Committee (SOAC)

Name	Institution	Role
Prof. Damon Teagle	Univ. Southampton	Chair of OmanDP SOAC; Principal Investigator OmanDP
Prof. Peter Kelemen	Univ. Columbia	Chief Scientist of the Oman DP and Chair of PSC
Dr Marguerite Godard	Univ. Montpellier II	Geochemistry
Prof. Sobhi Nasir	Sultan Qaboos Univ.	Representative of the Oman Drilling Committee, co-ordinating sample allocations for Omani institutuions
Prof. Alexis Templeton:	Univ. Colorado, Boulder	Waters, gases, microbiology
Dr Jürg Matter	Univ. Southampton	Logging and hydrogeological data
Prof Eiichi Takazawa	Niigata Univ.	Co-Chief OmanChikyu Phase 1
Prof Katsu Michibayashi	Shizuoka Univ.	Co-Chief OmanChikyu Phase 1

The goals of the Oman Drilling Project sample policies are to ensure the:

- Availability of samples and data to **Science Party** members so they can fulfill the objectives of the drilling project and their responsibilities to the OmanDP;

- Dissemination of the scientific findings of the Oman Drilling Project coring, logging, sampling, experimentation and related activities to gain maximum scientific exposure and public engagement;

- Scientific community has access to findings and, following the moratorium periods, data and samples to encourage scientific analyses over a wide range of research disciplines; and

- Preservation of core and cuttings material as an archive for future description and observations, non-destructive analyses, and sampling.

Sample and Data Requests

There are two classes of sample requesters: Members of the Science Party and Post-Moratorium Researchers. Both groups incur their own particular obligation once a data or sample request has been approved and delivered.

The **Moratorium Period** is defined as two and a half years following the end of the description of the cores. The Oman Drilling Project will be divided into two Science Parties relating to the 2016-2017 and 2017-2018 Phases of operation. For Phase 1 of the OmanDP the moratorium period will be from September 2017 until the end of February 2020. To submit a sample/data request you must be registered with OmanDP (via the application form). Membership of one Phase does not necessarily ensure membership in the other Science Party unless certain criteria are fulfilled. For example, membership of the OmanDP Phase 1 Science Party requires at least one of the following:

1) Participation on-site during the Phase 1 drilling, sampling, logging, experiment operations of OmanDP;

2) Contribution to the visual and/or instrumental logging of the Phase 1 Oman DP cores onboard Chikyu (July to September, 2017);

3) A financial contribution to Oman Drilling Project via one or more scientific research grants that provides funds for drilling operations and/or core logging onboard Chikyu.

In addition, the SOAC will also consider sample requests, on a case by case basis, from science groups who provide specific skills or approaches NOT provided by colleagues covered by 1, 2, 3 above.

Personal sample requests will be prioritised by the OmanDP SOAC. The SOAC encourages a ***pooled*** sampling approach, as commonly used on IODP Expeditions, to ensure that a comprehensive suite of geochemical, mineralogical, and physical properties measurements are made on a representative suite of shared samples/powders. The SOAC will also encourage boutique isotopic and other geochemical measurements to be initially undertaken on the well characterised pool samples.

Post-moratorium researchers are those who submit sample & data requests after the specific OmanDP Phase moratorium period ends. We will also consider sample applications by educators and outreach institutions on a case-by-case basis.

All data and observations produced from the on-site drilling and logging phases and shipboard activities of the Oman Drilling Project will be published in open access volumes akin to the IODP Initial Reports following the moratorium period. During the moratorium period data and samples will be restricted to the Science Party of that Phase of the OmanDP.

Requests for data or samples must be made through official OmanDP processes and use the OmanDP sample request form. These requests will be assessed by the SOAC and accepted, refined, combined, or rejected to ensure the best scientific outcomes. Core samples will generally only be taken during the core logging activities (in 2017 onboard Chikyu, in 2018, TBC) in a series of sampling meetings immediately following the description of each hole. To oversee these sampling events the SOAC will delegate specific sample allocation to a shipboard team comprising the Co-Chief Scientists and Staff Scientists with assistance from the Curator. This team (Table B) will resolve conflicts and ensure a fair and efficient distribution of samples. If sample request conflicts cannot be resolved aboard, these teams will seek advice from the wider OmanDP SOAC.

Table B: 2017 OmanChikyu Phase 1 Shipboard Sample Allocation Teams

Name	**Role**	**Phase 1** (Jul-**A**-Aug-**B**-Sep)
Damon Teagle	Co-Chief Scientist; Chair SAOC	Part A
Eiichi Takazawa	Co-Chief Scientist	Part A
Peter Kelemen	Co-Chief Scientist	Part A & B
Katsu Michibayashi	Co-Chief Scientist	Part B
Jude Coggon	Project Manager/Staff Scientist	Part A
Michelle Harris	Staff Scientist (BT1)/ Co-Chief (GT3)	Part B
Juan Carlos de Obeso	Staff Scientist (GT3)	Part B (GT3)

During the core description phases, community samples will be selected by each discipline team (e.g., Igneous and Alteration/Metamorphic petrology; Structure, Geochemistry, Paleomagnetics, Physical Properties) and taken daily to assist in the characterization of the cores. Samples will be taken from the Working Half of the core only. Typical sample volumes are shown in Table C. Geochemistry powders, thin sections, mini-cores and billets may be requested by members of the scientific party for personal research.

Table C: Guidelines for Typical Sample Volumes.

Sample Type	Typical Sample Volumes
Thin Section Billets	10 cm^3 (up to 50 cm^3 for coarse-grained plutonic rocks)
Slabs	Up to 50-100 cm^3 depending on feature; often expected that these samples will be shared between science teams
X-ray diffraction	5 cm^3
Geochemistry (e.g., X-ray fluorescence, Isotopes, ICP, Volatiles, Ferric Iron)	20-50 cm^3 depending on grainsize and homogeneity
Paleomagnetism	7 cm^3 cubes, 12 cm^3 minicores
Physical Properties	12 cm^3 minicores, or up to 50 cm^3 ¼ cores

Most sampling is likely to be of quarter cores to preserve some material in the working half for future sampling. The length of core required will depend on the core size (NQ vs HQ). Larger sample sizes may be required to account for geological factors such as very coarse grain sizes, and these requests will be considered by the SOAC and Shipboard Sample Allocation Teams. Where very large samples are requested, it is expected that these will be shared by a number of science groups.

Table D: Indicative sample volumes and masses for different core sizes.

Quarter Core									
Length, mm	10	30	50	100	10	30	50	100	150
Core	**HQ**	**HQ**	**HQ**	**HQ**	**NQ**	**NQ**	**NQ**	**NQ**	**NQ**
Vol, cm^3	8	24	40	79	4	13	22	44	67
Mass, g	22	67	111	222	12	37	62	125	187
Fat Slab									
Length, mm	10	30	50	100	10	30	50	100	150
Core	**HQ**	**HQ**	**HQ**	**HQ**	**NQ**	**NQ**	**NQ**	**NQ**	**NQ**
Vol, cm^3	6	19	32	64	5	14	24	48	71
Mass, g	18	53	89	178	13	40	67	133	200

Note: HQ core, 63.5 mm diameter; NQ core, 47.6 mm diameter; Assumed density 2.8 g/cm^3

Sample requests from undergraduate and post-graduate students should be accompanied by a letter of support from their academic supervisors confirming that the student has the time and resources to complete their proposed research program and can fulfill their sample obligations.

For the initial sample requests, it is expected that individual scientists will request no more than 50 samples per OmanDP Hole. For larger sample requests the OmanDP Leadership encourage science groups to work collaboratively and share samples. Future sampling within the Moratorium period will be possible with the approval of the SOAC.

Obligations for Members of the OmanDP Science Parties receiving Samples and/or Data:

All members of the OmanDP Science Parties who receive samples or data incur obligations to conduct research during the moratorium period and publish their data and results in an English language peer-reviewed scientific journal, or a peer-reviewed data report that will supplement the open access OmanDP

Phase 1 or 2 Initial Reports, within 48 months of the core description campaign. Failure to meet these obligations may result in the rejection of future sample requests and may influence participation in other aspects of the Oman Drilling Project

All publications arising from the OmanDP operations must acknowledge the Oman Drilling Project using a modified version of the following wording:

"This research used samples and/or data provided by the Oman Drilling Project. The Oman Drilling Project (OmanDP) has been possible through co-mingled funds from the International Continental Scientific Drilling Project (ICDP; Kelemen, Matter, Teagle Lead PIs), the Sloan Foundation – Deep Carbon Observatory (Grant 2014-3-01, Kelemen PI), the National Science Foundation (NSF-EAR-1516300, Kelemen lead PI), NASA – Astrobiology Institute (NNA15BB02A, Templeton PI), the German Research Foundation (DFG: KO 1723/21-1, Koepke PI), the Japanese Society for the Promotion of Science (JSPS no:16H06347, Michibayashi PI; and KAKENHI 16H02742, Takazawa PI), the European Research Council (Adv: no.669972; Jamveit PI), the Swiss National Science Foundation (SNF:20FI21_163073, Früh-Green PI), JAMSTEC, the TAMU-JR Science Operator, and contributions from the Sultanate of Oman Ministry of Regional Municipalities and Water Resources, the Oman Public Authority of Mining, Sultan Qaboos University, CRNS-Univ. Montpellier II, Columbia University of New York, and the University of Southampton."

Publications should include the words "Oman Drilling Project" as keywords provided to the journal or book published of the manuscript.

Authors should send a pdf copy of the manuscript to the Chair and Vice-Chair of the OmanDP Project Steering Committee and the Project Director (Kelemen, Teagle and Matter respectively).

All data generated should be made openly available and either lodged in the OmanDP Initial Results supplements as data reports or archived in an open access data repository (e.g., PetDP).

Authors who wish to publish scientific papers within the Moratorium Period must receive prior approval in writing by a majority of the scientific party and the support of the OmanDP Project Steering Committee. This approval will be coordinated by the OmanDP Project Manager who will circulate the manuscript among the scientific party, tabulate responses, and notify the author of the scientific party's decision. Unless specifically agreed, all publications within the Moratorium period **must include the "Oman Drilling Project Phase X Science Party" in the authorship.**