A Scientific Ocean Drilling Coordination Office for the US Community FY25 Q4 Operations and Management Report

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TEXAS A&M UNIVERSITY

SODCO

75 YEARS OF DISCOVERY
LAMONT-DOHERTY EARTH OBSERVATORY
COLUMBIA UNIVERSITY

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1. Introduction

Texas A&M University (TAMU) and Lamont-Doherty Earth Observatory at Columbia University (LDEO) collaboratively form the Scientific Ocean Drilling Coordination Office (SODCO) to facilitate US scientific ocean drilling goals. TAMU assists principal investigators with creating drilling proposals; identifies suitable drilling platforms, coring, and logging tools; works with the scientific community to advance new technologies; and plans and implements expeditions. LDEO provides research community support services for successful planning and execution of expeditions, including pre-drilling activities, planning and training workshops, and science communications and outreach. Scripps Institution of Oceanography provides a Site Survey Data Bank (SSDB) for proposal acoustic and related site characterization data.

2. Management and Administration

The SODCO branches at TAMU and LDEO act as a fully integrated team. The SODCO Executive Team comprises the SODCO Director, the Director of Science Operations, and the Director of Science Services:

- SODCO Director (TAMU): provides overall project coordination and supervision of project personnel at TAMU and acts as the interface with other TAMU-provided services (general Information Technology [IT], Publications, Sponsored Research Services [SRS], and Gulf Coast Repository [GCR]).
- Director of Science Operations (TAMU): oversees day-to-day activities of operations, engineering, science, permitting and clearances, and a technical team.
- Director of Science Services (LDEO): manages community science planning, including pre-drilling and training activities; oversees science communications; and supervises the staff at LDEO.

An award for the site survey data-bank was finalized this quarter. Awards for the International Ocean Drilling Programme (IODP^3) Expedition 502 US Co-Chief Scientist, the American Museum of Natural History, the SODCO Advisory Board Chair, and the Scientific Drilling Forum US Co-Chair are in the final stage of completion.

Hiring efforts for SODCO continued with the progress reported below. The Directors at TAMU and LDEO meet weekly to track issues and updates. In addition, the directors meet with the Chair of the SODCO Advisory Board (SAB) on a biweekly basis (see below).

All three Directors and several SODCO staff members attended the annual American Geophysical Union (AGU) meeting on 15–19 December. SODCO hosted and organized the Scientific Ocean Drilling Town Hall, with speakers from the National Science Foundation, US leadership, and the IODP^3. Prior to the Town Hall, SODCO organized an informal meeting with members of the SAB, GCR Advisory Board, NSF representatives, and SODCO and GCR staff members.

3. Advisory structure

The SODCO advisory structure includes the central SAB and a series of working groups, advisory committees, and panels:

- SAB Science Staffing Subcommittee
- SAB Science Communications Subcommittee
- SAB Science and Workshops Subcommittee
- SODCO Engineering and Technology Advisory Committee (SETAC)
- SODCO Safety and Environment Panel (SSEP)

SODCO issued 14 invitations to members of the community to staff the open positions on the SAB, in addition to the already selected SAB chair. The Executive team met with the SAB Chair every ~2 weeks to discuss SODCO updates and upcoming issues and to work on the agenda for the upcoming SAB Meeting (9–11 March). Much of these meetings were spent discussing required program policies. SODCO staff at TAMU and LDEO are working on logistics for the SAB Meeting and coordinating travel with meeting participants.

4. Science operations

Operations and Engineering

The Operations and Engineering group consists of a Supervisor, two Operations Engineers, and one Staff Engineer. The final open position, a Staff Engineer, will be hired this year.

This group continues to explore information on vessels, platforms, tools, and other technology that are available on the market. Two employees attended the International WorkBoat Show in December in New Orleans and learned about available industry technologies. An additional two employees are attending the MINEXCHANGE conference in Salt Lake City this February.

Technical Support

The Technical Support group comprises a Supervisor, a Senior Technician, a Chemistry Technician, an Electronics Instrumentation Specialist, and a Mobilization and Logistics Coordinator. The Senior Technician and the Electronics Instrumentation Specialist started at TAMU at the beginning of Q4. An offer was made to an applicant for the Chemistry Technician position but was subsequently declined. This position will be reposted for hiring.

Customized seagoing containers will provide critical instrumentation and support for at-sea data collection, and laboratory facilities at the GCR will be available for shore-based description and measurements. TAMU issued a Request for Proposal (RFP) for the containerized laboratories and office spaces. Two responses were received, and a final decision was made on the vendor. TAMU is actively working to finalize a statement of work and a contract for the vendor to review. The electrical hookups for the containers at TAMU are mostly complete, with only minor tasks left on the contractor's punch list. SODCO staff met with TAMU Environmental Health and Safety to discuss the placement of fire extinguishers around the container lot.

Science Support

Two Expedition Project Managers (EPMs) make up the Science Support group at TAMU. The EPMs participated in SODCO website requirements and SODCO communications meetings and have been developing web content with the operations and engineering team to augment the basic website to assist drilling proposal proponents. Both EPMs attended and presented research at the AGU meeting in New Orleans.

Information Technology

The TAMU SODCO IT team, consisting of an applications developer and an IT specialist, is determining the networking and power requirements for the containerized laboratories. Modifications to existing in-house software, data management structures, and potentially new computer software will need to be developed to support operations at sea; identification of these needs are in progress.

5. Science Services

The Science Officer position description was approved for posting by LDEO and Columbia University at the end of Q4. The position will be posted early in Q1 of FY2, and interviews and hiring will be carried out following a review of applications.

The LDEO SODCO team met internally and with international colleagues to finalize plans for the 2025 AGU Fall Meeting. A collaborative booth on Scientific Drilling, with representation from SODCO, IODP^3, the Japan Agency for Marine-Earth Science and Technology, the European Consortium for Ocean Research Drilling, and the International Continental Scientific Drilling Program, was installed and staffed by the SODCO team and international colleagues. SODCO planned and led an informal US leadership meeting that brought members of the SAB, the GCR Advisory Board, and NSF representatives together with SODCO staff. SODCO also hosted a community Scientific Ocean Drilling Town Hall event during the AGU meeting that included presentations on recent activities and future opportunities by the US and international programs.

Communications

SODCO continued planning the transition of communication tasks from USSSP to SODCO. A new mailing list was established for SODCO, and standard procedures for email communications are in development. SODCO will take over email communications from USSSP beginning on 1 March 2026. To continue receiving scientific ocean drilling-related email communications, individuals must subscribe to the SODCO email list. The first announcements of this change were circulated to the science community in Q4 and more than 300 subscribers joined the new SODCO list within the first week following the announcement.

The SODCO communications staff worked with C&G Partners to finalize templates for SODCO's email campaigns that include new branding and logos.

SODCO communications and other team members planned the transition of existing social media accounts, including Facebook, Instagram, X, and YouTube, from their previous identification with the *JOIDES Resolution* to a new identity, the US Scientific Ocean Drilling Program. The new identity was developed by the SODCO staff and will be launched early in Q1 of FY2. Plans to launch new social media channels with the new identity were also developed.

Outreach

SODCO-TAMU staff members visited two local schools' STEM nights and introduced students to scientific ocean drilling, cores, and micropaleontology. Each event had ~700 visitors in attendance.

SODCO-LDEO staff began detailed planning for AMNH's EarthFest event in April 2026, at which members of the SODCO-LDEO team will staff a scientific ocean drilling booth and interactive exhibit for families and visitors.

6. SODCO website

The SODCO.org one-page website went live on or about 7 November 2025. SODCO has developed a number of informational pages to expand the launch version of SODCO.org to share timely information and announce current activities, including open calls for applications to both the TAMU and LDEO summer internship programs for undergraduates.

C&G Partners is continuing development work on the full version of the website. LDEO personnel met with C&G Partners in mid-January to discuss the next stages of development, and LDEO and TAMU personnel met on 21 January 2026 to discuss and provide feedback on the proposed website feature list.

7. Site Survey Data Bank

The new SSDB server has been fully set up, with all software installed and fully tested. The SSDB system (not currently open for use) and the iodp.org website have been moved to the new server. Several items have been completed towards setting up this SSDB version to operate independent of the Proposal Data Base (the previous proposal submission system for IODP): a new web form for entering/importing site names and locations, a new page for "creating" a proposal (i.e., launching a proposal to hold data) in SSDB, and a new user registration and account validation workflow.

8. Financials

Project expenditures are proceeding as expected, with the costs now spread over salaries, subaward invoices, and other direct costs.

All subawards and amendments have been finalized, and Federal Funding Accountability and Transparency Act (FFATA) reporting is complete. LDEO's subaward procedures were reviewed and were approved by TAMU-Sponsored Research Services (SRS). TAMU-SRS staff clarified the subaward invoicing requirements with both subawardees, and invoices are being received and processed on a regular basis.

TAMU-SRS purchasing and project staff worked together to develop the RFP for mobile laboratory and office space container procurement. The RFP was released on September 26, and final proposals were due on November 11. After the initial review of the proposals, project staff reached out to the proposers for clarification and additional information before making the final determination on the vendor.

9. Publications

Articles and abstracts published during this quarter authored by SODCO staff include the following. Bold type indicates SODCO staff.

Articles authored by SODCO staff

Hodell, D.A., Crowhurst, S.J., Mleneck-Vautravers, M.J., Rolfe, J.E., Du, M., Herbert, T.D., Huang, H.-H.M., Abrantes, F., **Alvarez Zarikian, C.A.**, and the Expedition 397 Scientists, 2026. Data report: composite section and chronology of IODP Sites 339-U1385 and 397-U1385 based on postcruise XRF analysis. In Hodell, D.A., Abrantes, F., Alvarez Zarikian, C.A., and the Expedition 397 Scientists, Iberian Margin Paleoclimate. Proceedings of the International Ocean Discovery Program, 397: College Station, TX (International Ocean Discovery Program). https://doi.org/10.14379/iodp.proc.397.204.2026

Huang, H., Gutjahr, M., Hu, Y., Pöppelmeier, F., Kuhn, G., Lippold, J., **Ronge, T.A.**, Wu, S., Blaser, P., Lembke-Jene, L., Jaccard, S.L., Luo, Y., and Yu, J., 2025. Expansion of Antarctic Bottom Water driven by Antarctic warming in the last deglaciation. Nature Geoscience, 19:113–119. https://doi.org/10.1038/s41561-025-01853-7

Metcalfe, A., Druitt, T., Pank, K., Kutterolf, S., Preine, J., Beethe, S., Schmitt, A., Hübscher, C., Nomikou, P., **Ronge, T.A.**, Berthod, C., Chen, H., Chiyonobu, S., Clark, A., DeBari, S., Gertisser, R., Johnston, R., Koukousioura, O., Manga, M., McCanta, M., McIntosh, I., Peccia, A., Tominaga, M., Yamamoto, Y., Woodhouse, A., Bernard, A., Perez, T.F., Jones, C.K., Joshi, K.B., Kletetschka, G., Morris, A., Polymenakou,

P., Li, X., Papanikolaou, D., Pyle, D., and Sternai, P., 2025. Tectonic modulation of caldera volcanism on the South Aegean Volcanic Arc. Earth and Planetary Science Letters, 671:119633. https://doi.org/10.1016/j.epsl.2025.119633

Voelker, A.H.L., Ducassou, E., Balestra, B., Flores, J.A., Acton, G.D., Richter, C., Xuan, C., Lofi, J., Alberto, A., Kuhnert, H., and **Alvarez Zarikian, C.A.**, 2026. Early Pleistocene (1.94–1.46 Ma) records for the upper Mediterranean Outflow Water branch reveal low and high latitude climate influences. Marine Geology, 492:107697. https://doi.org/10.1016/j.margeo.2025.107697

Abstracts authored by SODCO staff

Alvarez Zarikian, C.A., Llerena, F., Huang, H.H.M., Abrantes, F.F.G., Wu, J., Kaboth-Bahr, S., and Hodell, D.A., 2025. Reconstructing the northward flow dynamics of Mediterranean outflow water over the last 600,000 years from IODP Site U1588 in the west Iberian margin. Presented at the American Geophysical Union Annual Meeting, New Orleans, LA, 11–19 December 2025.

Fundalewicz, X., Viskupic, O., Sarco, M., Stroop, R., Nehring, K., McCollum, J., Johnson, E.A., Elmi, C., St John, K.K., Lucchi, R., **Ronge, T.**, and IODP Expedition 403 shipboard scientific party, 2025. Compositional analyses of mixed detrital-authigenic sediments to inform sample processing decisions, IODP Expedition 403 Site U1620, Svyatogor Ridge sediment drift. Presented at the American Geophysical Union Annual Meeting, New Orleans, LA, 11–19 December 2025.

Gallagher, M., Williams, T., Hemming, S.R., Jasper, C.E., Mossell, H., and **Ronge, T.**, 2025. Provenance of iceberg rafted detritus during Termination 2 at Site U1537 in Antarctica's Iceberg Alley. Presented at the American Geophysical Union Annual Meeting, New Orleans, LA, 11–19 December 2025.

Huang, H.H.M., Yasuhara, M., **Alvarez Zarikian, C.A.**, Cronin, T.M., and Deutsch, C.A., 2025. Climatic forcing of deep-sea benthic ecosystem. Presented at the American Geophysical Union Annual Meeting, New Orleans, LA, 11–19 December 2025.

Khamitov, S., Reilly, B., Zhong, Y., Monito, L., Libman-Roshal, O., Lucchi, R., St John, K.K., and **Ronge, T.**, 2025. Late Quaternary paleo- and environmental magnetism of International Ocean Discovery Program (IODP) Site U1623, located on the Bellsund Drift, offshore the paleo-Svalbard-Barents Sea ice sheet (76.5 °N). Presented at the American Geophysical Union Annual Meeting, New Orleans, LA, 11–19 December 2025.

Maher, T., DeBari, S.M., Druitt, T.H., Metcalfe, A., Kutterolf, S., Peccia, A., **Ronge, T.**, and IODP Expedition 398 Scientists, 2025. Characterizing eruption initiation mechanisms and storage conditions at the high-threat Submarine Volcano, Kolumbo, Greece. Presented at the American Geophysical Union Annual Meeting, New Orleans, LA, 11–19 December 2025.

Nehring, K., Sarco, M., Stroop, R., Buckley, M., St John, K.K., Lucchi, R., **Ronge, T.**, and IODP Expedition 403 shipboard scientific party, 2025. Preliminary characterization of sediment pellets to infer ice-rafting mechanism in the Eastern Fram Strait, IODP Expedition 403 Site U1623. Presented at the American Geophysical Union Annual Meeting, New Orleans, LA, 11–19 December 2025.

Redman, B., Reilly, B., Suganuma, Y., Zhong, Y., Libman-Roshal, O., Monito, L., Lucchi, R., St John, K.K., **Ronge, T.**, and Scientific Team of IODP Expedition 403, 2025. Addressing the greigite problem: towards isolating primary remanence in sediments from International Ocean Discovery Program (IODP)

Expedition 403. Presented at the American Geophysical Union Annual Meeting, New Orleans, LA, 11–19 December 2025.

Reilly, B.T., Bailey, I., Brachfeld, S., Fenton-Samuels, K., Gonzalez-Lanchas, A., Hatfield, R.G., Hemming, S.R., Jasper, C.E., Khamitov, S., Libman-Roshal, O., Lucchi, R., Monito, L., Oconnell, S., Raymo, M.E., Redman, B., **Ronge, T.**, St John, K.K., Stoner, J.S., Suganuma, Y., Tauxe, L., Warnock, J., Williams, T., Zhong, Y., and IODP Expedition 403 Scientists, 2025. Pliocene-Pleistocene accumulation rate patterns in polar deep-sea contourite systems from International Ocean Drilling Program (IODP) expeditions in the Scotia Sea and Fram Strait constrained by paleomagnetic stratigraphy. Presented at the American Geophysical Union Annual Meeting, New Orleans, LA, 11–19 December 2025.

Ronge, T., Kletetschka, G., Druitt, T.H., Kutterolf, S., and Expedition 398 Science Party, 2025. Glass droplets from the Aegean Sea: volcanic origin or tektites? Presented at the American Geophysical Union Annual Meeting, New Orleans, LA, 11–19 December 2025.

Sakai, Y., Lin, W., Plaza-Faverola, A.A., Yamamoto, Y., Lucchi, R., St John, K.K., **Ronge, T.**, and IODP Exp. 403 Science Party, 2025. Stress controls on seepage activity in Eastern Fram Strait: insights from three-dimensional in-situ stress regime via anelastic strain recovery. Presented at the American Geophysical Union Annual Meeting, New Orleans, LA, 11–19 December 2025.

St John, K.K., Lucchi, R., **Ronge, T.**, Gruetzner, J., Reilly, B., Gonzalez-Lanchas, A., Sakai, Y., Johnson, J.E., Plaza-Faverola, A.A., Gebhardt, C., Rosenthal, Y., Barcena, M., De Schepper, S., Duxbury, L., Goss, G., Greco, N., Haygood, L., Husum, K., Iizuka, M., Kapuge, I., Lam, A.R., Libman-Roshal, O., Liu, Y., Monito, L., Suganuma, Y., Sijinkumar, A.V., and Zhong, Y., 2025. Evidence that regional geomorphic events and local tectonic influences were first order controls on sedimentation rates at Svyatogor and Vestnesa Ridges (IODP Sites U1620 and U1619) Since ~3 Ma. Presented at the American Geophysical Union Annual Meeting, New Orleans, LA, 11–19 December 2025.

Stepanova, A., **Alvarez Zarikian, C.A.**, Belanger, C.L., and Anwar, S., 2025. Exploring environmental impacts with high school students through interactive FossilSketch activities. Presented at the American Geophysical Union Annual Meeting, New Orleans, LA, 11–19 December 2025.