Integrated Ocean Drilling Program
Expedition 341 Scientific Prospectus Addendum

Southern Alaska Margin

Interactions of tectonics, climate, and sedimentation

John Jaeger
Co-Chief Scientist
Department of Geological Sciences
University of Florida
241 Williamson Hall
Gainesville FL 32611-2120
USA

Sean Gulick
Co-Chief Scientist
Institute for Geophysics
Jackson School of Geosciences
University of Texas at Austin
10100 Burnet Road, 196-ROC
Austin TX 78758-4445
USA

Alan Mix
APL-786 Proponent
College of Oceanic and Atmospheric Sciences
Oregon State University
COAS Administration Building 104
Corvallis OR 97331-5503
USA

Leah Schneider
Expedition Project Manager/Staff Scientist
Integrated Ocean Drilling Program
Texas A&M University
1000 Discovery Drive
College Station TX 77845-9547
USA

Published by
Integrated Ocean Drilling Program Management International, Inc.,
for the Integrated Ocean Drilling Program

Publisher's notes

Citation:
Jaeger, J., Gulick, S., Mix, A., and Schneider, L., 2012. Southern Alaska margin: interactions of tectonics, climate, and sedimentation. *IODP Sci. Prosp.,* 341 addendum. doi:10.2204/iodp.sp.341add.2012

Distribution:
Electronic copies of this series may be obtained from the Integrated Ocean Drilling Program (IODP) Scientific Publications homepage on the World Wide Web at **www.iodp.org/scientific-publications/.**

This publication was prepared by the Integrated Ocean Drilling Program U.S. Implementing Organization (IODP-USIO): Consortium for Ocean Leadership, Lamont-Doherty Earth Observatory of Columbia University, and Texas A&M University, as an account of work performed under the international Integrated Ocean Drilling Program, which is managed by IODP Management International (IODP-MI), Inc. Funding for the program is provided by the following agencies:

National Science Foundation (NSF), United States

Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan

European Consortium for Ocean Research Drilling (ECORD)

Ministry of Science and Technology (MOST), People's Republic of China

Korea Institute of Geoscience and Mineral Resources (KIGAM)

Australian Research Council (ARC) and GNS Science (New Zealand), Australian/New Zealand Consortium

Ministry of Earth Sciences (MoES), India

Disclaimer

This IODP *Scientific Prospectus* is based on precruise Science Advisory Structure panel discussions and scientific input from the designated Co-Chief Scientists on behalf of the drilling proponents. During the course of the cruise, actual site operations may indicate to the Co-Chief Scientists, the Staff Scientist/Expedition Project Manager, and the Operations Superintendent that it would be scientifically or operationally advantageous to amend the plan detailed in this prospectus. It should be understood that any proposed changes to the science deliverables outlined in the plan presented here are contingent upon the approval of the IODP-USIO Science Services, TAMU, Director in consultation with IODP-MI.

July 2012

Introduction

Based on the review by the Integrated Ocean Drilling Program (IODP) Environmental Protection and Safety Panel (EPSP) on 29–30 March 2012, Expedition 341 proposed Site GOA18-1A was required to be moved. Site GOA18-1A lay at the crossing lines of seismic Profile MGL1109MCS01, acquired by the R/V *Marcus G. Langseth*, and seismic Line L-689-13, acquired by the USGS vessel R/V *Farnella* (Jaeger et al., 2011); however, an amplitude anomaly was visible in the 2011 MGL1109MCS01 profile at this location (Shotpoint 1720). Therefore, the EPSP requested that Site GOA18-1A be replaced with proposed Site GOA18-1B, located at Shotpoint 1748 of multichannel seismic Profile MGL1109MCS01 to avoid an amplitude anomaly. All other aspects of this site, including goals, drilling depths, and priority, are the same as those proposed for Site GOA18-1A (Jaeger et al., 2011).

This addendum provides the new site summary for Site GOA18-1B, as well as bathymetric and location maps and seismic profiles. The operations strategy and site priorities remain unchanged from the original Expedition 341 *Scientific Prospectus* (Jaeger et al., 2011).

References

Jaeger, J., Gulick, S., Mix, A., and Petronotis, K., 2011. Southern Alaska margin: interactions of tectonics, climate, and sedimentation. *IODP Sci. Prosp.,* 341. **doi:10.2204/iodp.sp.341.2011.**

Figure F1. Ship track map of seismic profiles for proposed Site GOA18-1B. Figure numbers refer to figures in Jaeger et al. (2011).

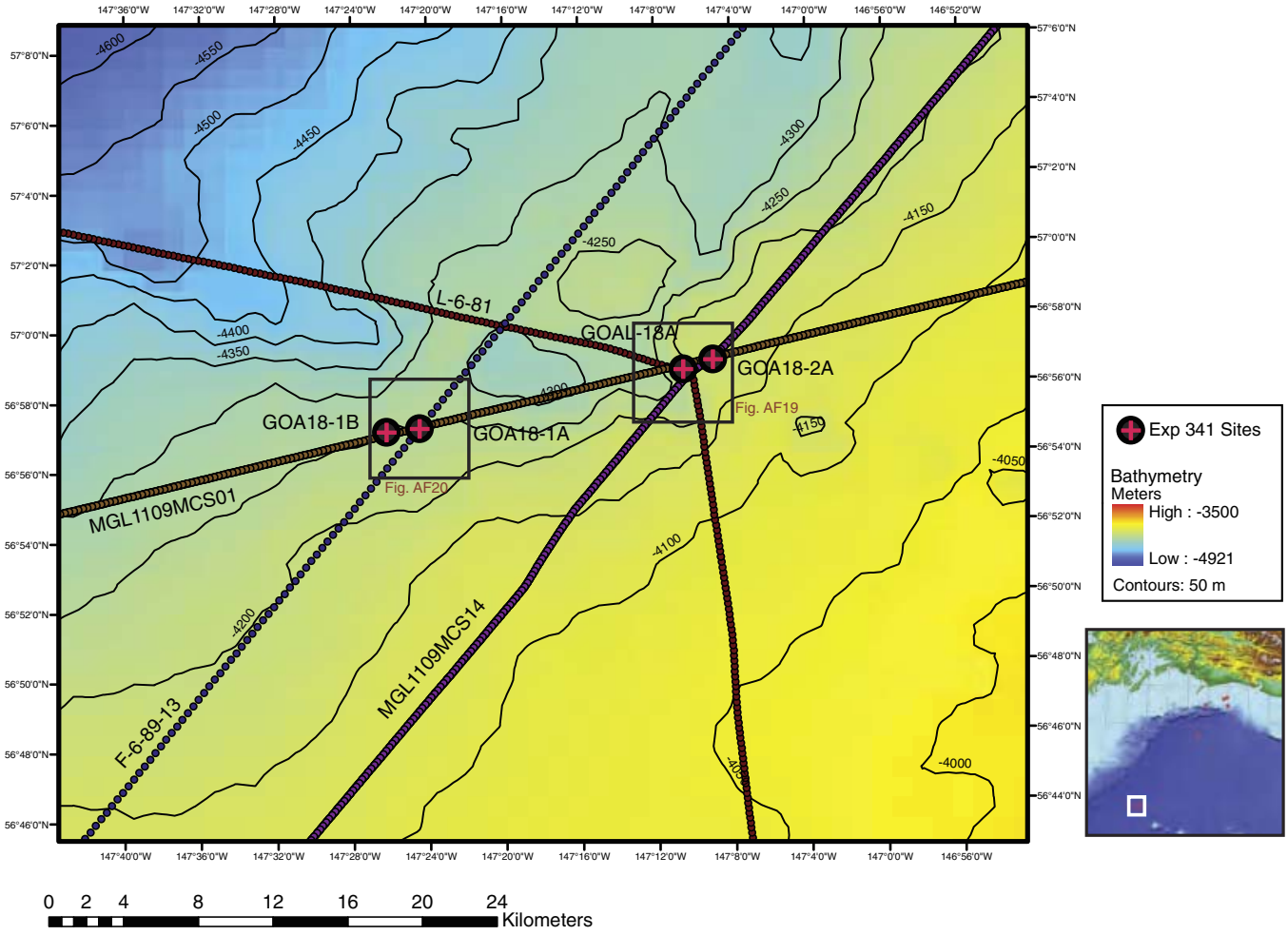


Figure F2. Close-up of seismic profiles and shot points for proposed Site GOA18-1B.

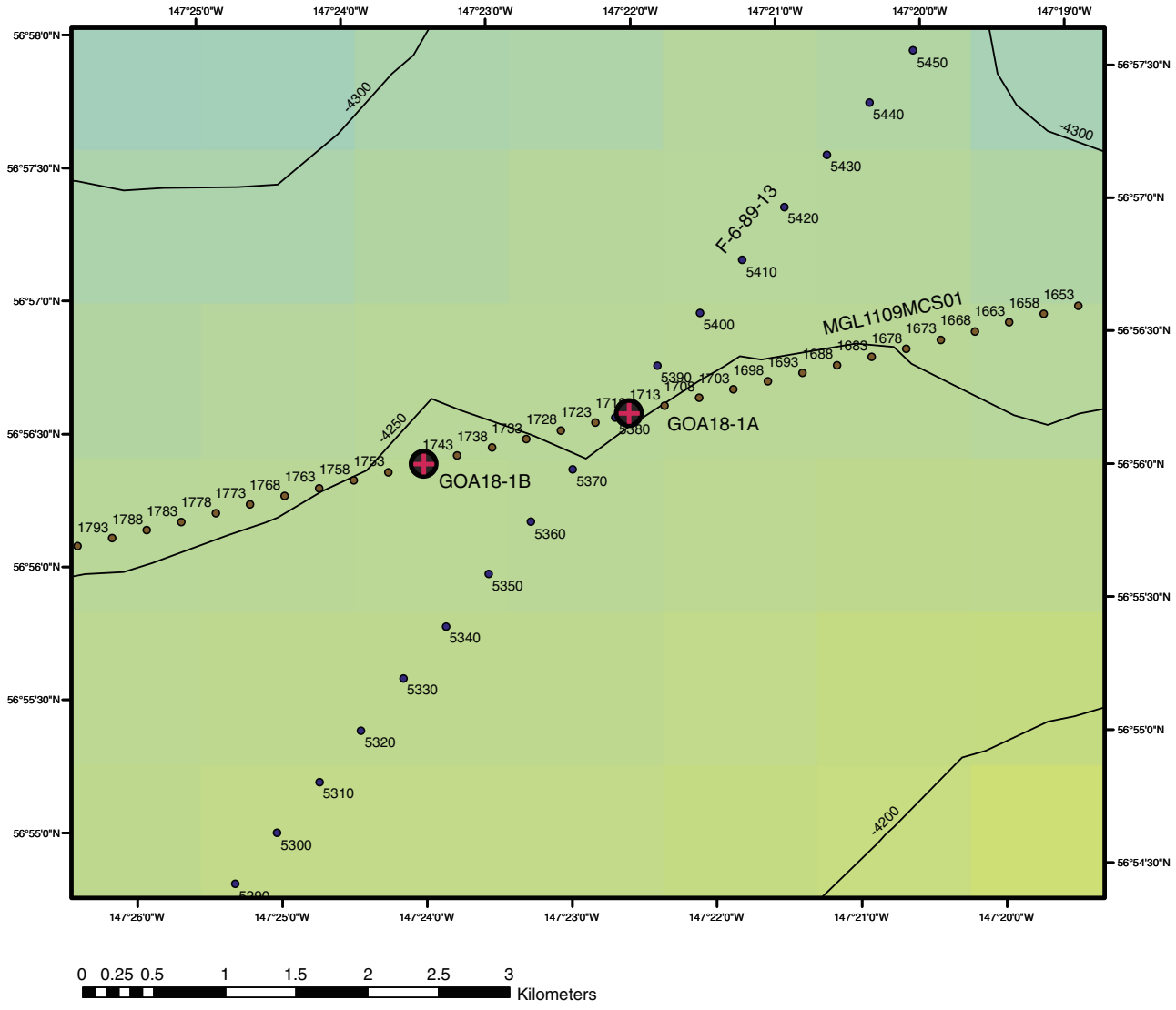


Figure F3. *Langseth* seismic Profile MGL1109MCS01 with primary and alternate sites. Proposed Site GOA18-1B is located at Shotpoint 1748.

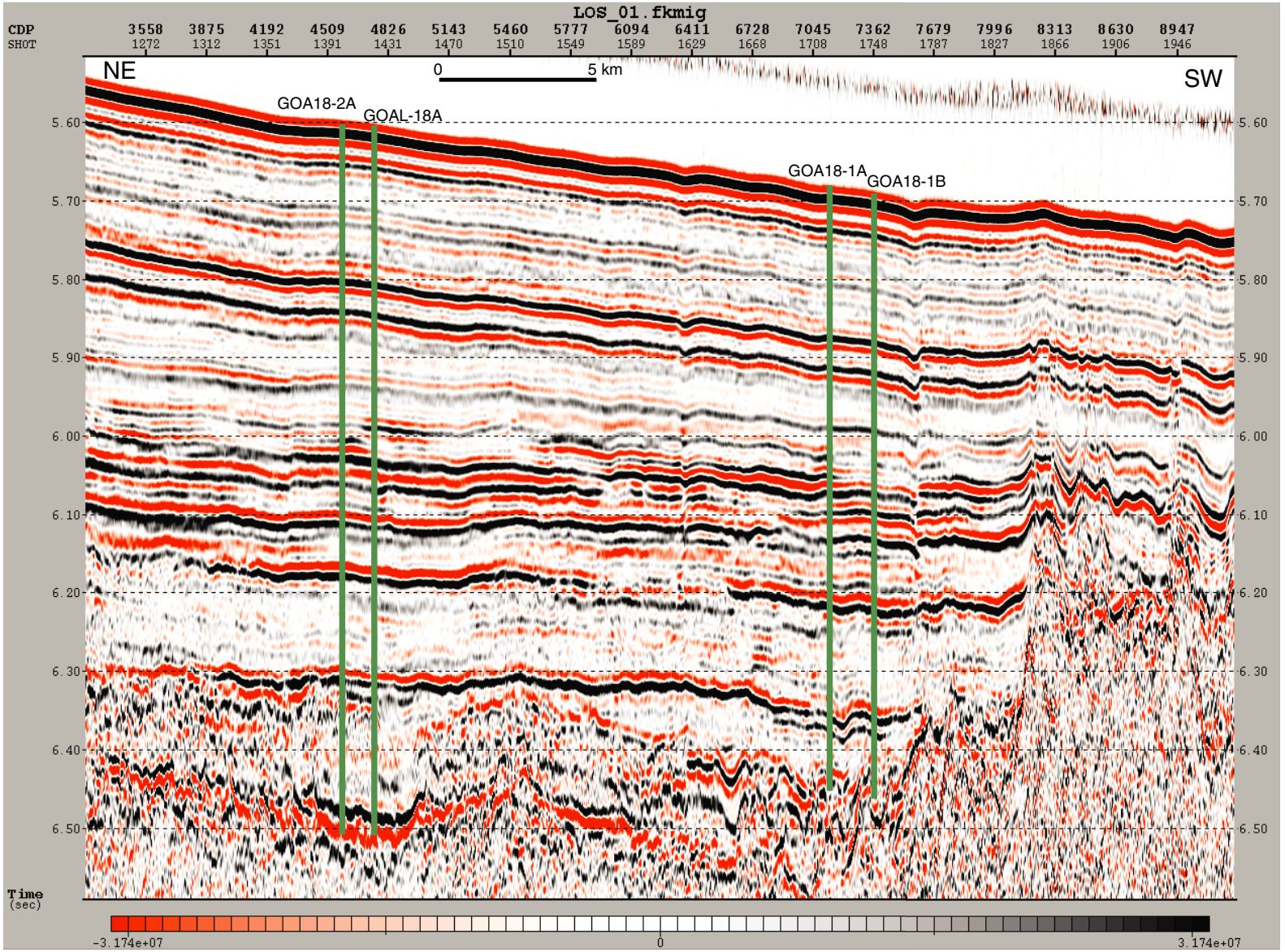
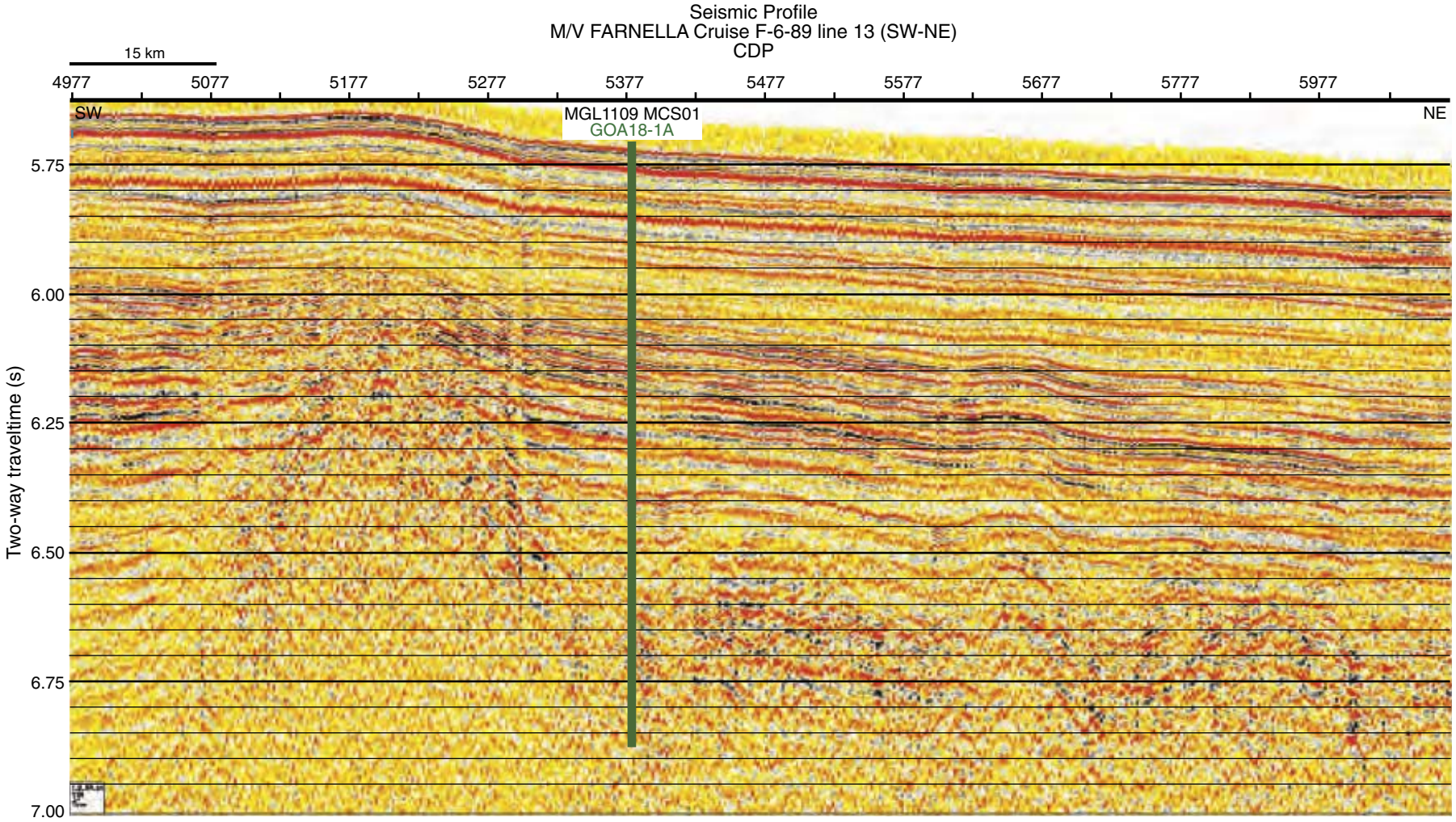


Figure F4. *Farnella* seismic Profile F-689 Line 13 showing projected location of proposed Site GOA18-1B (Common Depth Point 5380). The site is located ~800 m off the line crossing by EPSP request.



Site summary

Site GOA18-1B

Priority:	Alternate
Position:	56°56.2543′N, 147°23.7345′W
Water depth (m):	4273
Target drilling depth (mbsf):	758 (755 m sediment; 3 m basement)
Approved maximum penetration (mbsf):	834
Survey coverage (track map, seismic profile):	*Langseth* seismic Profile MGL1109MCS01 (Shotpoint 1748) and crossline *Farnella* seismic Profile F-689 Line 13 (CDP 5380; ~800 m away, as site is moved off the line crossing by EPSP request) (navigation maps, Figs. **F1** and **F2;** seismic profiles, Figs. **F3** and **F4**)
Objective(s):	• Tectonic and climate history from 10 Ma to recent • Provenance of unroofed sediments
Drilling program:	• Hole A: APC to ~200 mbsf with nonmagnetic core barrels and core orientation • Hole B: APC to ~200 mbsf with nonmagnetic core barrels • Hole C: APC/XCB to 758 mbsf with nonmagnetic core barrels • Hole D: APC/XCB to 500 mbsf with nonmagnetic core barrels • Similar to originally proposed Site GOA18-1A (see "Drilling and coring strategy" and Table T3 in Jaeger et al., 2011)
Logging program or downhole measurements program:	• Hole A: APCT-3 (SET if needed) formation temperature measurements • Hole C: wireline logging with triple combo, FMS-sonic, VSI, and magnetic properties tool strings • Similar to originally proposed Site GOA18-1A (see "Drilling and coring strategy" and Table T3 in Jaeger et al., 2011)
Nature of rock anticipated:	Mud (possibly diatom rich), silt, fine sand, volcanic ash, ice-rafted debris, basalt

Expedition scientists and scientific participants

The current list of participants for Expedition 341 can be found at **iodp.tamu.edu/scienceops/precruise/alaskamargin/participants.html.**