

## EPSP 1809 Meeting Minutes

Meeting Introduction
<p>Meeting was called to order by the Chair Barry Katz at 08:30 on September 4, 2018 at Texas A&amp;M University, College Station, TX.</p> <p>The Chair reminded the panel and guests as to the conflict of interest rules utilized by the Panel</p> <p>Mitch Malone, meeting host, presented the meeting logistics including emergency procedures and information on the evening's social activity.</p> <p>Self-introductions were made by all attendees:</p> <p>Panel members and alternates: Brandon Dugan, Jacek Lupa, Earl Doyle, Craig Shipp, Lisa Hawkins, Ingo Pecher, Martin Hovland, Dieter Strack, Phillipe Lapointe, Jim-Oh Park, Donald Potts, Minghui Zhao, and Barry Katz (Chair)</p> <p>Proponents, liaisons, TAMU Safety Panel, and guests: Volkhard Spiess, Neil DeSilva, George Claypool, Tim McHargue, Ross Parnell-Turner, Bobby Reece, Trevor Williams, Mitch Malone, James Allan, Helen Feng, Julia Wellner, Paul Baker, Sheri Fritz, Cleverson Silva, Tadev Reis, Sean Gulick, Tom Dunkley Jones, Brad Clement, Denise Kulhanek, Leah LeVay, Katerina Petrontis, Brittany Stockmaster, Carlos Alvarez Zarikian, Stephen Midgley, Laurel Childress, Peter Blum, Kevin Grigar, Adam Klaus, Will Sager, Debbie Thomas, and Calvin Campbell</p> <p>No additional changes to previous EPSP meeting minutes. Minutes approved for posting.</p> <p>EPSP recommendations: approval, relocation, depth adjustment, no approval</p>

### Proposals Reviewed

IODP ID	Short Title	Submitted	Summary Result
839-Add2	Amundsen Sea Ice Sheet history	2016-08-07 12:11:42	Reviewed; changes requested
892-Full2	Reykjanes Mantle Convection	2017-04-03 15:37:51	Reviewed; changes requested
864-Add2	Equatorial Atlantic Gateway	2018-07-25 14:36:48	Reviewed; changes requested
853-Add	South Atlantic Transect	2017-10-04 13:27:00	Reviewed; no changes
910-Full	Continental Margin Methane Cycling: Rio Grande	2018-04-05 14:22:10	Reviewed; changes requested
859-Full2	Amazon Margin Drilling	2017-10-05 18:32:42	Reviewed; changes requested
874-Full2	Newfoundland Neogene Sediment Drifts	2017-10-02 14:26:35	Reviewed; no changes
890-Add	Walvis Ridge Hotspot	2018-03-04 21:54:20	Reviewed; no changes
902-Add2	Iceberg Alley Paleooceanography	2017-03-02 18:28:16	Reviewed; no changes
912-Add	Drake Passage Paleooceanography	2017-03-03 18:02:40	Reviewed; no changes
909-Full	NW Greenland Glaciated Margin	2017-10-09 20:44:43	Reviewed; changes requested
924-Pre	Chatham Rise Geologic CO2 Release	2017-10-01 16:34:25	Reviewed; changes requested
567	South Pacific Paleogene Climate	2018-08-27 13:01:02	Reviewed; no changes

## Summary Remarks

The panel conducted a look-back to assess how some of the issues that occurred during the technical review could have been avoided.

Some of the issues identified included: 1) differences between material presented and the site safety report; 2) confusion between the target depth and the requested depth to allow for the rat-hole; and 3) the need to be able to discuss the uncertainty in the time-to-depth conversion. It was also stated that the data lead needs to present.

Several panel members have provided comments that have been converted to questions for a proposed SRR checklist. These questions, which are presented below, have been divided into seismic and map presentation.

### Seismic data presentation

- Is the seabed signature clearly visible and can the polarity be established?
- Have the seismic data been displayed with and without an interpretation?
- Have both a time and a depth section been presented.
- Do the final site displays result in the drill stick representing about half of the vertical section? (This is not required for regional displays.)
- Has depth of proposed penetration been marked? (This should include the target depth and the total depth of penetration if a logging tool is to be used. "Stick" should also include an estimate of uncertainty.)
- Have key geologic and/or safety issues been highlighted on the seismic data?
- Have attributes been presented in color rather than black and white?
- Are the vertical and horizontal scales on associated strike- and dip-sections the same?
- Have intersections with cross-lines been clearly labeled?
- Have shot or CDP points been appropriately labelled?
- Are both vertical and horizontal scales present? (Preferably on the axis.)
- Has a summary of acquisition and processing been provided?
- Is the processing appropriate for imaging the target depth?
- Has the information utilized to establish the time-depth conversion been provided?

### Map presentation

- On the map has directionality been established with an arrow or with latitude/longitude grid?
- Has a suitable map scale been provided?
- Are contours appropriately labeled with units identified?
- Are all necessary seismic track lines identified on maps, with shot points labelled at a regular interval?
- Has the resolution of the grid been provided? And, has the appropriate scale bar presented?
- Do all maps share a common coordinate reference system?

The next two EPSP meetings are scheduled for February 12, 2019 and September 4-5, 2019. Both meetings will be held at IODP-TAMU, College Station, TX.

The chair thanked the TAMU staff for their assistance with the planning and support of the meeting.

The meeting was adjourned at 11:35 on September 6, 2018.

## EPSP Proposal Summary

Proposal Review
<p>Amundsen Sea Ice Sheet History</p> <p>Karsten Gohl presented the scientific overview of the proposal. The proposal had five primary objectives.</p> <p>1- Reconstruct the glacial history of West Antarctica from the Paleogene to the Holocene, with attention to the dynamic behavior of the WAIS during the Neogene and Quaternary.</p> <p>2- Correlate the WAIS proximal records of ice sheet dynamics with Amundsen Sea global records of ice volume changes and proxy records for air and seawater temperatures.</p> <p>3- Study the relationship between incursions of warm CDW onto the continental shelf of the Amundsen Sea Embayment and the stability of marine-based ice sheet margins.</p> <p>4- Reconstruct the processes of major WAIS advances onto the middle and outer shelf since the middle Miocene and compare their timing and processes to the other Antarctic shelves.</p> <p>5- Search for evidence for the first ice sheet expansion onto the continental shelf of the Amundsen Sea Embayment and its possible control by the uplift of Marie Byrd Land.</p> <p>This was a supplemental review, including 4 additional alternate sites and the clarification of drilling "ribbons" (including starting/ending points on available seismic lines).</p> <p>Site reviews followed.</p>

## Proposed Sites

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
ASRE-01B (Primary)	-70.242 -103.718	3820	950	950	Approved	Already approved at site location; range approved: Line AWI-94042, shot point 2190-1850 (proponent's preference) SW-NE 1300-1560 W-E - min -70.1823 / -103.66 to max -70.3047 / 103.786 and Line AWI-2006022, min -70.2374 / -103.827 to max 70.2477 / -103.531
ASRE-02B (Alternate)	-70.528 -102.394	3060	950	950	Approved	Already approved at site location; Line AWI-20100129, shot point range approved: 1750-1450 - min -70.5747 / -102.393 to max -70.4824 / -102.401
ASRE-03B (Alternate)	-69.7737 -103.2990	4040	1400	1050	Approved	Already approved at site location; Line AWI-20100130, shot point range approved: 1430-1200 NW-SE [Requested drilling depth 950, not 1400] - min -69.7737 / -103.299 to max -69.7353 / -103.458
ASRE-04A (Alternate)	-70.2409 -105.775	3600	900	900	Approved	Already approved at site location; line AWI-20060023, shot point range approved: 1980-1750; min -70.2409 / -105.775 to max -70.2248 / -106.061
ASRE-05B (Primary)	-70.0793 -108.6122	3720	1200	1200	Approved	Already approved at site location; Line AWI-20060023, shot point range approved: 4210-4070; min -70.0844 / -108.522 to max -70.0754 / -108.68
ASRE-06A (Alternate)	-70.325 -114.223	3466	1200	1200	Approved	Already approved at site location; Line AWI-20060023, shot point range approved: 8825-8600; min -70.3177 / -114.136 to max -70.3389 / -114.413
ASRE-07A (Alternate)	-69.2438 -105.2470	3960	1200	1200	Approved	Line AWI-20100130; CDP range for approval: 5940-5590; min -69.209 / -105.374 to max -69.2567 / -105.2
ASRE-08A (Alternate)	-68.6114 -107.5250	4020	1200	1200	Approved	Line AWI-20100130; CDP range for approval: 10500-10052; min -68.5867 / -107.613 to max -68.6478 / -107.395
ASRE-09A (Alternate)	-68.7336 -109.0100	4210	1200	1200	Approved	Line TH86003B; CDP range for approval: 2110-2040; min -68.7342 / -109.051 to max -68.7331 / -108.955
ASRW-01C (Alternate)	-71.7052 -120.6681	2643	900	900	Approved	Already approved at site location; Line AWI-20100117, shot point range approved: 16800-17050; min -71.6689 / -120.872 to max -71.7053 / -120.6681

## EPSP Proposal Summary

## Proposed Sites - Continued

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
ASRW-02A (Alternate)	-71.4093 -125.3260	3331	1200	1200	Approved	Line AWI-20100117, CDP range: 15481-16514 requested, 15481-16220 approved; min -71.409 / -125.403 to max -71.4232 / -124.89
ASSE-01C (Primary)	-72.8946 -107.8143	612	900	900	Approved	Already approved at site location; AWI-20100134 shot points 2700-2800; min -72.8737 / -107.828 to max -72.9016 / -107.809
ASSE-02C (Primary)	-72.848 -106.347	576	900	900	Approved	Already approved at site location; Seismic line AWI-20100122 shot point range 1150-1340; min -72.8233 / -106.352 to max -72.8774 / -106.341
ASSE-03B (Primary)	-72.582 -108.002	578	850	1000	Approved	Already approved at site location; Seismic line AWI-20100134 shot point 1450-1750 N-S; min -72.5154 / -108.025 to max -72.6049 / -107.994 and seismic line AWI-20100121 shot point 2100-2350; min -72.5843 / -108.12 to -72.5807 / -107.864
ASSE-04B (Alternate)	-72.558 -106.448	538	900	900	Approved	Already approved at site location; range approved: AWI-20100122 shot point 220-400; min -72.5503 / -106.442 to max -72.6025 / -106.438 and seismic line AWI-20100121 shot points 3670-3750; min -72.5612 / -106.525 to max -72.56 / -106.447
ASSE-05C (Alternate)	-72.149 -108.436	582	800	800	Approved	Already approved at site location; Seismic line AWI-20100134, shot point range 75-260; min -72.1243 / -108.441 to max -72.1839 / -108.433
ASSE-06B (Alternate)	-71.893 -105.552	514	950	950	Approved	Already approved at site location; range approved: Seismic line AWI-20060001 shot points 50-175; min -71.9065 / -105.573 to max -71.8732 / -105.524 and seismic line AWI-20100133 shot points 42-25; min -71.8893 / -105.468 and -71.8933 / -105.551
ASSE-07B (Alternate)	-71.287 -104.750	540	600	600	Approved	Already approved at site location; AWI-94042 shot point 4880-4700; min -71.2496 / -104.743 to max -71.3167 / -104.787 and seismic line BAS056-S114 shot points 13310-13850; min -71.29 / -104.864 to max -71.286 / -104.644
ASSE-08C (Alternate)	-71.5966 -113.2551	644	950	950	Approved	Already approved at site location; Seismic line AWI-20100139 shot point range approved: 2200-2100; min -71.5966 / -113.2551 to max -71.5724 / -113.316
ASSE-09A (Alternate)	-72.910 -107.307	690	900	900	Approved	Already approved at site location; Seismic line AWI-20100126 shot points 1470-1690 W-E; min -72.9092 / -107.437 to max -72.9101 / -107.211 and seismic line NBP9902-11 5050-4550; min -72.965 / -107.244 to max -72.88 / -107.374
ASSE-10A (Alternate)	-72.572 -107.267	733	900	900	Approved	Already approved at site location; Seismic line AWI-20100121 shot points 2800-3050; min -72.5742 / -107.401 to max -72.5701 / -107.145 and seismic line line NBP9902-11 shot points 7250-6625 min -72.6165 / -107.255 to max -72.5095 / -107.316
ASSE-11A (Primary)	-72.022 -107.588	585	700	700	Approved	Already approved at site location; Seismic line AWI-20100133 shot points 400 - 475; min -72.0104 / -107.401 to max -72.0322 / -107.749 and seismic line NBP9902-11 shot points 10450-9750; min -72.0819 / -107.52 to max -72.0037 / -107.602
ASSE-12A (Alternate)	-71.332 -108.365	495	600	600	Approved	Already approved at site location; Seismic line BAS056-S114 shot points 4570-5060; min -71.332 / -108.453 to max -71.332 / -108.262 and seismic line NBP9902-11 shot points 14200-14700; min -71.3728 / -108.302 to max -71.2871 / -108.397
ASSW-01B (Alternate)	-72.993 -115.792	710	600	700	Approved	Already approved at site location; BAS056-S110 shot point range range approved: 2410-2605 W-E; min -73.003 / -115.875 to max -72.993 / -115.792 and Seismic line AWI-20100119 shot points 5515-5750 NW-SE; min -72.9768 / -115.862 to max -73.0134 / -115.704
ASSW-02B (Alternate)	-72.817 -116.583	654	900	900	Approved	Already approved at site location; Seismic line AWI-20100119 shot points 4380-4650; min -72.7966 / -116.64 to max -72.8469 / -116.469

## EPSP Proposal Summary

## Proposed Sites - Continued

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
ASSW-03B (Alternate)	-72.502 -117.972	538	850	850	Approved	Already approved at site location; Seismic line AWI-2010019 shot points 2200-2500; min -72.4817 / --118.059 to max -72.5202 / -117.871

Additional Remarks (optional)

## EPSP Proposal Summary

Proposal Review
<p>Reykjanes Mantle Convection</p> <p>Dr. Ross Parnell-Turner provided a scientific overview of the proposal. Three major objectives were identified.</p> <p>1 - Understanding V-shaped ridges and crustal formation  2 - High resolution ocean circulation and climate  3 - Hydrothermal alteration through time</p> <p>A site-by-site review followed.</p> <p>Proponents requested approval to drill ~130m into basement at each location</p>

## Proposed Sites

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
REYK-10A (Alternate)	60.1667 -27.4726	1689	355	355	Approved (to revised depth)	Approved to sediment depth + 200m of basement if sediment is thicker than originally estimated.
REYK-11A (Primary)	60.2000 -28.0000	1415	540	540	Approved (to revised depth)	[Requested drilling depth 470m] Approved to sediment depth + 200m of basement if sediment is thicker than originally estimated.
REYK-13A (Primary)	60.2281 -28.5004	1520	410	410	Approved (to revised depth)	Approved to sediment depth + 200m of basement if sediment is thicker than originally estimated.
REYK-1A (Alternate)	59.8496 -23.2473	2209	1155	1155	Approved (to revised depth)	Approved to sediment depth + 200m of basement if sediment is thicker than originally estimated.
REYK-2A (Primary)	59.8506 -23.2664	2206	1170	1170	Approved (to revised depth)	Approved up to 200m of basement to cover any possible contingencies if sediment is thicker than originally estimated. No sedimentary section concerns
REYK-3B (Alternate)	60.10501 -26.50174	2110	405	665	Approved (to revised depth)	[Requested drilling depth 595m] approved to sediment depth + 200m of basement if sediment is thicker than originally estimated.
REYK-4B (Primary)	60.10094 -26.46111	2110	385	615	Approved (to revised depth)	Original requested penetration 545m approved to sediment depth + 200m of basement
REYK-5A (Alternate)	60.1264 -26.7516	1894	875	875	Approved (to revised depth)	Approved to sediment depth + 200m of basement if sediment is thicker than originally estimated.
REYK-6A (Primary)	60.1251 -26.7016	1871	905	905	Approved (to revised depth)	Approved to sediment depth + 200m of basement if sediment is thicker than originally estimated.

## EPSP Proposal Summary

## Proposed Sites - Continued

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
REYK-7A (Alternate)	60.1507 -27.1698	1735	530	530	Approved (to revised depth)	[Requested 470m] approved to sediment depth + 200m of basement if sediment is thicker than originally estimated.
REYK-8A (Alternate)	60.1491 -27.1370	1695	520	520	Approved (to revised depth)	Approved to sediment depth + 200m of basement if sediment is thicker than originally estimated.
REYK-9A (Alternate)	60.1702 -27.5310	1701	510	510	Approved (to revised depth)	Approved to sediment depth + 200m of basement (wherever basement is, uncertain at this location) if sediment is thicker than originally estimated.

Additional Remarks (optional)

## EPSP Proposal Summary

Proposal Review
<p>Equatorial Atlantic Gateway</p> <p>Dr. Tom Dunkley Jones provided a scientific overview of the proposal. Four key objective were identified.</p> <p>1 - Examine the early rift history of the Equatorial Atlantic.            2 - Examine the biogeochemistry of hydrographically restricted equatorial South Atlantic - life in low oxygen and high temperature oceans            3 - Examine the long-term paleoceanography of Equatorial Atlantic Gateway            4 - Examine limits of tropical climates and ecosystems under conditions of extreme warmth</p> <p>Following the science review a site-by-site review. Regional seismic survey data from ION.</p>

## Proposed Sites

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
PER-04A (Primary)	-9.3160 -33.8728	4441	999	1200	Approved (to revised depth)	No sediment issues, matter of how much (what is inferred to be) basement
PER-05A (Alternate)	-7.5799 -33.5767	4413	947	1150	Approved (to revised depth)	No problems within the sediments
PER-06A (Alternate)	-8.4580 -33.9700	1857	1228		Declined	Move to shot point 11050 on GB1-2500 - See Site PER-06B.
PER-07A (Alternate)	-9.2317 -33.8136	4412	1015	1100	Approved (to revised depth)	
PER-08A (Alternate)	-8.5625 -33.9904	2003	400	400	Approved	
PER-09B (Primary)	-8.5627 -33.9211	2288	600	650	Approved (to revised depth)	
PER-11A (Alternate)	-9.5413 -33.3834	4704	1000	1000	Approved	
PER-12B (Primary)	-8.5600 -33.9738	2047	400	400	Approved	
PER-13A (Alternate)	-8.5654 -33.9349	2139	500	500	Approved	

## New Sites

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
PER-06B	-8.45523 -33.9862	1857	1228	1230	Approved (to revised location)	Line GB1-2500 Shot point 11050



## EPSP Proposal Summary

Additional Remarks (optional)

## EPSP Proposal Summary

Proposal Review
<p>South Atlantic Transect</p> <p>Dr. Bobby Reece presented the scientific overview for Proposal 853. There are three primary drilling objectives:</p> <ol style="list-style-type: none"> <li>1- Quantify timing, duration, and extent of ridge-flank hydrothermal fluid exchange.</li> <li>2- Investigate sediment and basement-host microbial community variation with substrate composition and age.</li> <li>3- Investigate the responses of Atlantic Ocean circulation patterns and the Earth's climate system to rapid climate change including elevated atmospheric CO<sub>2</sub> during the Cenozoic.</li> </ol> <p>A site-by-site review followed.</p>

## Proposed Sites

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
SATL-11B (Alternate)	-30.22233 -15.03817	3057	269	354	Approved (to revised depth)	Depth changed as result of modification to the drilling plan. If needed, approval granted to 250 meters below basement.
SATL-12A (Alternate)	-30.10376 -15.04832	3373	261	346	Approved (to revised depth)	Depth changed as result of modification to the drilling plan. If needed, approval granted to 250 meters below basement.
SATL-13A (Primary)	-30.26056 -15.03490	3047	215	300	Approved (to revised depth)	Depth changed as result of modification to the drilling plan. If needed, approval granted to 250 meters below basement.
SATL-23A (Alternate)	-30.39535 -16.87974	3819	327	412	Approved (to revised depth)	Depth changed as result of modification to the drilling plan. If needed, approval granted to 250 meters below basement.
SATL-24A (Alternate)	-30.40021 -16.93053	3676	259	344	Approved (to revised depth)	Depth changed as result of modification to the drilling plan. If needed, approval granted to 250 meters below basement.
SATL-25A (Primary)	-30.40344 -16.92282	3691	269	350	Approved (to revised depth)	Depth changed as result of modification to the drilling plan. If needed, approval granted to 250 meters below basement.
SATL-31A (Alternate)	-30.76406 -20.43255	4188	348	433	Approved (to revised depth)	Depth changed as result of modification to the drilling plan. If needed, approval granted to 250 meters below basement.
SATL-33B (Primary)	-30.71029 -20.43390	4193	303	388	Approved (to revised depth)	Depth changed as result of modification to the drilling plan. If needed, approval granted to 250 meters below basement.
SATL-35A (Alternate)	-30.63251 -20.43586	4157	258	343	Approved (to revised depth)	Depth changed as result of modification to the drilling plan. If needed, approval granted to 250 meters below basement.

## EPSP Proposal Summary

## Proposed Sites - Continued

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
SATL-41A (Alternate)	-31.00332 -24.81913	4408	368	453	Approved (to revised depth)	Depth changed as result of modification to the drilling plan. If needed, approval granted to 250 meters below basement.
SATL-43A (Primary)	-30.89618 -24.84162	4323	313	398	Approved (to revised depth)	Depth changed as result of modification to the drilling plan. If needed, approval granted to 250 meters below basement.
SATL-44A (Alternate)	-30.89703 -24.86951	4283	341	426	Approved (to revised depth)	Depth changed as result of modification to the drilling plan. If needed, approval granted to 250 meters below basement.
SATL-53B (Primary)	-30.94207 -26.69912	4985	345	430	Approved (to revised depth)	Depth changed as result of modification to the drilling plan. If needed, approval granted to 250 meters below basement.
SATL-54A (Primary)	-30.94242 -26.72188	4991	804	880	Approved (to revised depth)	Depth changed as result of modification to the drilling plan. If needed, approval granted to 250 meters below basement.
SATL-55A (Alternate)	-30.72151 -26.69525	4857	291	376	Approved (to revised depth)	Depth changed as result of modification to the drilling plan. If needed, approval granted to 250 meters below basement.
SATL-56A (Alternate)	-30.94091 -26.62983	4998	675	750	Approved (to revised depth)	Depth changed as result of modification to the drilling plan. If needed, approval granted to 250 meters below basement.

## Additional Remarks (optional)

## EPSP Proposal Summary

## Proposal Review

Continental Margin Methane Cycling: Rio Grande

Dr. Jerry Dickens presented an overview of the science and objectives of Proposal 910.

Specifically, the program was developed to answer a series of specific questions on microbial methanogenesis:

- 1 What are the methanogenesis pathways (CO<sub>2</sub> reduction, acetate fermentation, molecular pathways)?
- 2- How does temperature, age and composition of organic matter affect methanogenesis?
- 3- What is the balance between in situ methane generation versus transport from deeper sources?
- 4- How does microbial activity vary with depth below the seafloor?
- 5-What are overall rates of microbial methanogenesis?
- 6- How do faults and permeable horizons affect flow and storage of methane?
- 7- How do methane fluxes couple to the global C cycle?

Discussion followed on what information will need to be made available and how it should be presented at the next EPSP meeting.

## Proposed Sites

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
RGC-01B (Primary)	-32.94981 -49.87912	1160	500		Other	
RGC-02B (Primary)	-33.21634 -49.66456	1368	500		Other	
RGC-03B (Primary)	-33.6287 -50.1884	1362	500		Other	
RGC-04B (Primary)	-33.53671 -50.36834	920	500		Other	
RGC-05B (Primary)	-33.43984 -50.45104	620	200		Other	
RGC-06B (Primary)	-32.78087 -49.8900	1240	500		Other	
RGC-07B (Primary)	-33.55713 -49.10038	3001	800		Other	
RGC-08B (Alternate)	-33.92642 -49.81667	2710	800		Other	
RGC-09A (Alternate)	-33.01202 -49.80832	1218	500		Other	
RGC-10A (Alternate)	-32.77521 -49.85084	1290	500		Other	

## EPSP Proposal Summary

## Additional Remarks (optional)

The panel has requested a number of actions be taken to prepare for the February EPSP review.

Lithology as identified in nearby exploration wells need to be provided.

Detailed bathymetric maps should be provided to display surface expressions.

Side-scan/multi-beam data should be provided, if available.

Depth sections should be provided. Both a wide and tight display need to be provided, so that the regional context and the details can be provided.

The polarity of the data need to be provided.

Positioning at crossing points would be preferred.

Backscatter data would also be helpful.

## EPSP Proposal Summary

Proposal Review
<p>Amazon Margin Drilling</p> <p>Dr. Cleverson Silva presented the scientific overview of Proposal 859. The scientific objectives are:</p> <ol style="list-style-type: none"> <li>1- Examine the Amazon Cenozoic climatic evolution</li> <li>2- Study the origins and evolution of the neo-tropical rain forest and its incomparable biodiversity</li> <li>3- Examine the paleoceanography of the western equatorial Atlantic</li> <li>4- Gain an understanding of the origins of the transcontinental Amazon River and the Amazon deep-sea fan.</li> </ol> <p>A site-by-site review was attempted.</p>

## Proposed Sites

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
AM-03B (Primary)	4.661765639 -50.025231	441	1631		Declined	
AM-04B (Alternate)	4.628938222 -50.08949344	227	2176		Other	
AM-05B (Alternate)	4.6808 -50.0437	406	1753		Other	
AM-06A (Alternate)	4.620270472 -50.00417692	383	1705		Other	
AM-07A (Primary)	5.073426194 -50.40431625	373	2203		Other	
AM-08A (Alternate)	4.68465323 -50.09770589	291	1605		Other	
AM-10B (Alternate)	4.9423 -50.2637	431	1069		Other	
AM-11A (Primary)	4.76049915 -50.18515796	289	1995		Other	
AM-12B (Alternate)	4.7304 -50.1162	345	1691		Other	
AM-13A (Alternate)	4.69819453 -50.11117101	312	1519		Other	

## New Sites

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
AM-3C	4.663771 -50.023482	441	1631		Approved (to revised location)	Repositioning of AM-3B to line 11775 x XL1457.

## EPSP Proposal Summary

## Additional Remarks (optional)

After the review of the first location it was determined that the review of the remaining sites will be deferred until the February 2019 panel meeting.

The following requests have been made by the panel.

- 1- Rectify extreme water depth differences between 2D and 3D data shown.
- 2- All seismic sections should be in depth with the best time-depth interpretation.
- 3- Provide coordinate reference system (CRS) for both 2D and 3D data.
- 4- For all bathymetry maps, select a more typical, less confusing contour interval (presently at 70 m should be changed to 25 or 50 m).
- 5- Polarity and phase of data displayed should be understood and labeled on each seismic section (important to understand the seismic signature of potential gas on 3D data sets).
- 6- Time slices (or horizon slices) and interval amplitude maps of suspicious seismic signatures should be provided (e.g., amplitude below cyan horizon in Site AM-7A as discussed).

## EPSP Proposal Summary

Proposal Review
<p>Newfoundland Neogene Sediment Drifts</p> <p>Dr. Brian Romans presented a brief overview of the science plan for Proposal 874. Drilling was planned to address three primary science objectives:</p> <p>1- Do the CCD fluctuations and biogenic blooms of the Oligo-Miocene reflect primarily global changes in weathering or are they driven by large-scale changes in ocean circulation and/or regional tectonics (such as gateway dynamics)?</p> <p>2- What is the role of tectonics, productivity, and North Atlantic overturning circulation as potential drivers of the Middle Miocene Climatic Optimum (MMCO)?</p> <p>3- Is the establishment of distinctive polar ecosystems linked to major changes in overturning circulation in the North Atlantic, or is it primarily driven by a decline in pCO<sub>2</sub>?</p> <p>A site-by-site review followed.</p>

## Proposed Sites

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
NFR-01A (Primary)	40.835245 -47.721541	3320	900	1050	Approved (to revised depth)	Depth request change by proponents. Representing SSR and not original proposal.
NFR-02A (Primary)	40.889215 -47.643687	3380	300	375	Approved (to revised depth)	Depth request change by proponents. Representing SSR and not original proposal.
NFR-03A (Primary)	40.926778 -47.589625	3500	300	375	Approved (to revised depth)	Depth request change by proponents. Representing SSR and not original proposal.
NFR-04A (Primary)	40.967666 -47.530591	3550	250	300	Approved (to revised depth)	Depth request change by proponents. Representing SSR and not original proposal.
NFR-05A (Primary)	41.038692 -47.516385	3550	250	370	Approved (to revised depth)	Depth request change by proponents.
NFR-06A (Primary)	40.085712 -47.745961	4250	300	475	Approved (to revised depth)	Depth request change by proponents.
NFR-07A (Primary)	40.312480 -49.670012	4420	700	850	Approved (to revised depth)	Depth request change by proponents.
NFR-08A (Primary)	40.185178 -49.834010	4925	700	800	Approved (to revised depth)	Depth request change by proponents. Representing SSR and not original proposal.
NFR-09A (Alternate)	41.099113 -47.485762	3800	250	300	Approved (to revised depth)	Depth request change by proponents. Representing SSR and not original proposal.



## EPSP Proposal Summary

## Proposed Sites - Continued

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
NFR-10A (Alternate)	40.864283 -47.880816	3280	250	300	Approved (to revised depth)	Depth request change by proponents. Representing SSR and not original proposal.
NFR-11A (Alternate)	40.875400 -47.943644	3370	400	475	Approved (to revised depth)	Depth request change by proponents. Representing SSR and not original proposal.
NFR-12A (Alternate)	40.868711 -47.601645	3400	250	300	Approved (to revised depth)	Depth request change by proponents. Representing SSR and not original proposal.
NFR-13A (Alternate)	40.978834 -47.514364	3540	250	300	Approved (to revised depth)	Depth request change by proponents. Representing SSR and not original proposal.
NFR-14A (Alternate)	40.390731 -48.763151	3830	500	600	Approved (to revised depth)	Depth request change by proponents. Representing SSR and not original proposal.
NFR-15A (Alternate)	40.653000 -46.975398	3720	250	300	Approved (to revised depth)	Depth request change by proponents. Representing SSR and not original proposal.
NFR-16A (Alternate)	40.714483 -49.503335	3750	250	400	Approved (to revised depth)	Depth request change by proponents.
NFR-17A (Alternate)	40.173750 -49.848685	5000	500		Declined	
NFR-18A (Alternate)	40.098820 -47.789333	4200	400	600	Approved (to revised depth)	Depth request change by proponents.
NFR-19A (Alternate)	40.098776 -47.680846	4260	250	300	Approved (to revised depth)	Depth request change by proponents. Representing SSR and not original proposal.
NFR-20A (Alternate)	39.968619 -48.959689	4620	500	600	Approved (to revised depth)	Depth request change by proponents. Representing SSR and not original proposal.
NFR-21A (Alternate)	40.608510 -47.032209	3600	250	300	Approved (to revised depth)	Depth request change by proponents. Representing SSR and not original proposal.
NFR-22A (Alternate)	40.301233 -47.423836	3920	250	300	Approved (to revised depth)	Depth request change by proponents. Representing SSR and not original proposal.
NFR-23A (Alternate)	40.195797 -47.557755	4120	250	300	Approved (to revised depth)	Depth request change by proponents. Representing SSR and not original proposal.

## EPSP Proposal Summary

## Proposed Sites - Continued

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
NFR-24A (Alternate)	40.269925 -49.724799	4550	500	700	Approved (to revised depth)	Depth request change by proponents.
NFR-25A (Alternate)	39.873587 -49.097721	5070	500	550	Approved (to revised depth)	Depth change requested by proponents.

## New Sites

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
NFR-17B	40.156097 -49.871490	5000	500	500	Approved (to revised location)	Line KNR-39 CDP1620

Additional Remarks (optional)

## EPSP Proposal Summary

Proposal Review
<p>Walvis Ridge Hotspot</p> <p>The scientific rationale and site-by-site summary of Proposal 890 by Drs. Volkard Spiess and William. Sager.</p> <p>The planned program is designed to:</p> <ol style="list-style-type: none"> <li>1- Sample along a plate flow line at 100-110 Ma, 85 Ma, 50-60 Ma</li> <li>2- Sample volcanic rocks from Walvis Ridge hot spot</li> <li>3- Sample from sites positioned on different guyot tracks (50% of coring) and the Valdivia Bank (other 50% coring)</li> <li>4- Basaltic unit sampling should represent sufficient long time periods and originate from hot spot volcanism</li> </ol>

## Proposed Sites

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
CT-01B (Alternate)	-32.4912 -0.1419	1934	586	613	Approved (to revised depth)	Depth deviates from the original request. Depth in basement may be extended by the shipboard party as deemed necessary. It has been noted that there may be some deviation from the original sediment thickness estimate.
CT-04A (Primary)	-32.1310 -0.5927	4425	499	628	Approved (to revised depth)	Depth deviates from the original request. Depth in basement may be extended by the shipboard party as deemed necessary
FR-1B (Primary)	-21.8661 6.5906	3258	421	521	Approved (to revised depth)	Depth deviates from the original request. Depth in basement may be extended by the shipboard party as deemed necessary.
FR-2B (Alternate)	-21.7073 6.7620	3008	663	812	Approved (to revised depth)	Depth deviates from the original request. Depth in basement may be extended by the shipboard party as deemed necessary. It has been noted that there may be some deviation from the original sediment thickness estimate.
GT-04A (Primary)	-31.3444 2.8470	2359	402	652	Approved (to revised depth)	Depth deviates from the original request. Depth in basement may be extended by the shipboard party as deemed necessary
GT-05A (Alternate)	-31.4671 3.0720	4890	362	612	Approved (to revised depth)	Depth deviates from the original request. Depth in basement may be extended by the shipboard party as deemed necessary
TT-1A (Primary)	-30.3808 1.0894	1864	422	498	Approved (to revised depth)	Depth deviates from the original request. Depth in basement may be extended by the shipboard party as deemed necessary. It has been noted that there may be some deviation from the original sediment thickness estimate.
TT-2A (Alternate)	-30.2467 0.8392	2356	639	739	Approved (to revised depth)	Depth deviates from the original request. Depth in basement may be extended by the shipboard party as deemed necessary
VB-1B (Primary)	-23.4176 4.9078	2831	222	485	Approved (to revised depth)	Depth deviates from the original request. Depth in basement may be extended by the shipboard party as deemed necessary. It has been noted that there may be some deviation from the original sediment thickness estimate.

## EPSP Proposal Summary

## Proposed Sites - Continued

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
VB-2B (Alternate)	-23.2812 5.0573	2818	226	812	Approved (to revised depth)	Depth deviates from the original request. Depth in basement may be extended by the shipboard party as deemed necessary,
VB-3B (Alternate)	-24.6027 4.6676	4050	293	543	Approved (to revised depth)	Depth deviates from the original request. Depth in basement may be extended by the shipboard party as deemed necessary.
VB-4B (Primary)	-24.5848 4.6609	3959	399	631	Approved (to revised depth)	Depth deviates from the original request. Depth in basement may be extended by the shipboard party as deemed necessary. It has been noted that there may be some deviation from the original sediment thickness estimate.
VB-5A (Alternate)	-23.3719 4.9579	2809	265	515	Approved (to revised depth)	Depth deviates from the original request. Depth in basement may be extended by the shipboard party as deemed necessary. It has been noted that there may be some deviation from the original sediment thickness estimate.
VB-6A (Alternate)	-23.1767 5.1703	2610	552	813	Approved (to revised depth)	Depth deviates from the original request. Depth in basement may be extended by the shipboard party as deemed necessary. It has been noted that there may be some deviation from the original sediment thickness estimate.

Additional Remarks (optional)

## EPSP Proposal Summary

## Proposal Review

## Iceberg Alley Paleocyanography

Dr. Trevor Williams presented the request by proponents to deepen previously approved sites to the panel. Changes were requested to account for greater seismic velocities than originally assumed.

A site-by-site review was conducted.

## Proposed Sites

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
SCO-01 (Alternate)	-57.4333 -43.4500	3101	648	648	Approved	
SCO-11 (Primary)	-57.4421 -43.3578	3110	676	676	Approved	
SCO-12 (Alternate)	-57.6466 -43.5000	3092	634	634	Approved	
SCO-13 (Primary)	-59.4410 -41.0610	3255	959	959	Approved	Panel provides recommended approval to deepen hole until basement if not reached at the approved depth.
SCO-14 (Primary)	-59.8000 -41.7600	3833	676	676	Approved	
SCO-15 (Alternate)	-59.8520 -41.4530	3486	555	555	Approved	
SCO-16 (Alternate)	-57.7055 -43.5001	3134	923	923	Approved	
SCO-17 (Primary)	-57.7055 -43.3620	3253	847	847	Approved	
SCO-18 (Alternate)	-59.1108 -40.9062	3734	652	652	Approved	
SCO-19 (Alternate)	-57.4285 -43.5000	3131	519	519	Approved	
SCO-21B (Alternate)	-61.7709 -40.2749	3480	533	533	Approved	

## Additional Remarks (optional)

## EPSP Proposal Summary

Proposal Review
<p>Drake Passage Paleoceanography</p> <p>Dr. Carlos Alvarez Zarikian to the panel a request to approve ten additional locations. He briefly reviewed the objectives:</p> <p>1- Improve understanding of the Plio/Pleistocene atmospheric-ocean-ice-sheet dynamics of the Pacific ACC and implication for regional and global climate and atmospheric CO<sub>2</sub>.</p> <p>2- Use the Southern Ocean to constrain how ice sheet changes are linked to ocean and global climate.</p> <p>3- Focus on sites at latitudes and water depths where sediments will application of a wide range of siliciclastic, carbonate, and opal-based proxies with unprecedented stratigraphic detail.</p> <p>A site-by-site followed.</p>

## Proposed Sites

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
CHI-01B (Primary)	-55.50250 -71.60222	2080	300	300	Approved	Previously approved.
CHI-04B (Primary)	-52.7048 -75.5965	1110	500	500	Approved	Previously approved.
CHI-5A (Alternate)	-52.7227 -75.6077	1170	500	500	Approved	Previously approved.
CSP-02B (Primary)	-56.1510 -115.1341	4110	300	300	Approved	Previously approved.
CSP-05A (Alternate)	-60.7786 -116.0000	5130	300	300	Approved	Added as new site below.
CSP-07A (Alternate)	-55.1411 -114.8420	3540	150	150	Approved	Added as new site below.
CSP-1A (Primary)	-54.2126 -125.4258	3610	180	230	Approved	Previously approved.
CSP-3A (Primary)	-60.7361 -115.9063	5130	300	300	Approved	Previously approved.
ESP-01B (Primary)	-54.5844 -76.6765	3870	400	400	Approved	Previously approved.

## New Sites

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
CHI-01C	-55.5367 -71.6022	2080	300	500	Approved	Proponents will need to complete new forms for the site.
CHI-06A	-55.6036 -71.4647	1110	500	300	Approved	Proponents will need to complete new forms for the site.
CHI-07A	-52.7448 -75.6232	1170	500	500	Approved	Proponents will need to complete new forms for the site.
ESP-02A	-54.5534 -76.5213	3870	400	400	Approved	Proponents will need to complete new forms for the site.

## EPSP Proposal Summary

## New Sites - Continued

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
CHI-08A	-52.6929 -75.5882	3610	180	200	Approved	Proponents will need to complete new forms for the site.
CSP-04A	-56.1859 -115.192	4110	300	300	Approved	Proponents will need to complete new forms for the site.
CSP-06A	-55.1582 -114.7887	5130	300	125	Approved	Proponents will need to complete new forms for the site.
CSP-07A	-55.1411 -114.8420	3540	150	150	Approved	Proponents will need to complete new forms for the site.
CSP-05A	-60.7786 -116	5130	300	300	Approved	Proponents will need to complete new forms for the site.

## Additional Remarks (optional)

For final site approval proponents will need to complete site forms the new sites.

## EPSP Proposal Summary

## Proposal Review

## NW Greenland Glaciated Margin

Proposal 909 was presented as a preview to determine whether there were any issues that may impact final the final recommendations of the panel.

Dr. Calvin Campbell presented the scientific overview and drilling plans. The drilling objectives are:

- 1- Establish the regional glaciation chronologies.
- 2- Establish why the ice sheet formed? – Controlling factors?
- 3- How has the Greenland Ice Sheet behaved dynamically in the past, e.g. across the Mid-Pleistocene transition?
- 4- What controlled The Greenland Ice Sheet's long-term variability?
- 5- How has the Greenland Ice Sheet Interacted or influenced on ocean circulation

Site-by-site overview was provided.

## Proposed Sites

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
MB-01B (Primary)	72.9679 -63.0539	1878	450		Other	
MB-02B (Primary)	73.1184 -63.7855	1957	515		Other	
MB-03B (Primary)	73.5032 -62.4861	498	375		Other	
MB-04B (Primary)	73.8711 -62.0342	630	230		Other	
MB-05B (Primary)	74.2116 -61.3397	710	500		Other	
MB-06B (Primary)	74.1180 -60.8729	620	530		Other	
MB-07A (Primary)	74.5136 -60.6792	730	1250		Other	
MB-08A (Alternate)	73.4870 -62.2682	495	350		Other	
MB-09A (Alternate)	73.9650 -61.4959	580	250		Other	
MB-10A (Alternate)	74.4584 -61.1792	685	1300		Other	

## Additional Remarks (optional)

The panel requested that the proponents develop a set of alternatives along a second transect to avoid possible operational issues. The proponents are advised to avoid high amplitude events and pinch-outs. Sites MB-03B and MB-08 both appear to be associated with pinch-outs. The total depths need to be provided. The panel suggested that the proponents might consider alternative drilling plans to achieve their goals. Stronger than standard arguments will need to be presented to the panel to wash-down in order to save time.



## EPSP Proposal Summary

## Proposal Review

## Chatham Rise Geologic CO2 Release

This represents a preview of proposal 924.

Dr. Ingo Pecher presented a review of the science and the proposed drilling locations. The specific objectives cited in the proposal are:

- 1- Are there recurrent geochemical and sedimentological anomalies at each glacial/interglacial transition that would be indicative of a rapid release of sub-surface CO2-rich fluids?
- 2- Do pockmarks form only at glacial terminations on the Chatham Rise?
- 3- Is there evidence that the pockmarks are linked to release of sub-surface CO2-rich fluids?
- 4- Is there evidence to suggest processes related to the release of mineral bound water during silica diagenesis that may have formed pockmarks and the large depressions on the Chatham Rise?
- 5- Is there evidence for pockmark formation linked to over-pressured fluids without involvement of any gas?
- 6- Is there a link between the Southland Current and the formation or shaping of seafloor depressions and pockmarks?

Site previews followed.

## Proposed Sites

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
COSP-01A (Primary)	-44.0003 174.4760	569	30		Other	
COSP-02A (Primary)	-43.9977 174.4738	563	70		Other	
COSP-03A (Primary)	-43.9921 174.4693	563	70		Other	
COSP-04A (Primary)	-44.3250 177.0472	1017	350		Other	
COSP-05A (Primary)	-44.3031 177.0401	983	500		Other	
COSP-06A (Primary)	-44.0983 178.5927	860	300		Other	
COSP-07A (Primary)	-43.9815 178.7928	790	30		Other	
COSP-08A (Primary)	-43.9839 178.7647	750	30		Other	
COSP-09A (Primary)	-45.7576 178.1489	2502	200		Other	

## Additional Remarks (optional)

EPSP felt that there were no issues that would preclude this program from going forward in the system. The panel requested that the proponents increase the number of proposed drilling locations. It was noted that the positioning of the site will be very important regarding final approval recommendations. The proponents were reminded to ensure that sites are located away from chemosynthetic communities and away from areas of active flow. Proponents need to ensure that they understand the limitations of position of the drill site.

## EPSP Proposal Summary

## Proposal Review

## South Pacific Paleogene Climate

Dr. Debbie Thomas requested that the panel approve extending the approved depth by 190 meters or until the uppermost Cretaceous stratigraphic horizon is obtained (Key biostratigraphic markers: LAD *Abathomphalus mayaroensis* (66.35 Ma), FAD *Nephrolithus frequens* (67.84 Ma), FAD A. *mayaroensis* (69.18 Ma), FAD *Orbiculiforma renillaeformis* (~72 Ma))

## Proposed Sites

Site Name	Position (Lat, Lon)	Water Depth (m)	Requested Drilling Depth (m)	Approved Depth (m)	EPSP Decision	Remarks
DSDP-277 (Primary)	-52.2238 166.1913	1214	670	670	Approved	Panel has extended the approved depth by the requested 190 meters. The panel has also approved further drilling if required to obtain the requested uppermost Cretaceous stratigraphic horizon.

## Additional Remarks (optional)

The following information was received after the presentation.

The last appearance datum (LAD) of *Reinhardtites levis* is dated to 70.14 Ma, so the presence of this taxon in the absence of *Nephrolithus frequens* (FAD 67.84 Ma) and *Abathomphalus mayaroensis* (FAD 69.18 Ma) would be a very strong indication that the stated uppermost Cretaceous objective. Another (slightly older) datum is the LAD of *Tranolithus orionatus* at 71.01 Ma (just in case *R. levis* is absent from the section; *T. orionatus* is a ubiquitous species).