iTAP Minutes
July 14 - 16 2003
Graduate School of Oceanography
University of Rhode Island

Participants

iTAP Members
Yusei Arai (Japan)
Dave Huey (US)
Masahiro Kamata (Japan)
Yoshihiro Masuda (Japan; Co-chair)
Vincent Maury (sent regrets)
Kate Moran (US; Co-chair)
Frank Schuh (US)
Axel Sperber (Germany)
Sigmund Stokka (sent regrets)
Brian Taylor (Canada)

iTAP Liaisons
Jamie Austin (IMI)
Tim Byrne (iSSEP)
Hisao Ito (iPC)
Yoshiro Kawamura (IODP/CDEX)
Ted Moore (iPC)
Alister Skinner (IODP/MSP)

ITAP Guests
iSCIMP Members
Tony Bamford
Keir Becker (ODP SCICOM Chair)
Marvin Gearhart
Jack Germaine (MIT)
Dave Goldberg (ODP/LDEO
Ron Grout (ODP/TAMU)
Greg Myers (ODP/LDEO)
Peter Rona (IODP proponent)
Howard Shatto

Introduction & Reports (Joint with iSCIMP)
See iSCIMP minutes.

Joint Panel Issues (Joint with iSCIMP)
See iSCIMP minutes.

Project Management (Joint with iSCIMP)
See iSCIMP minutes.

Business arising from iTAP meeting #2

Project Task Group Status. At the first iTAP meeting, a recommendation was made and accepted by iPC to form a project task group for beginning the plans of Complex Drilling Programs. A meeting of the first group, titled Project Scoping Group, is planned for early August

Legacy Project Report. Elspeth Urquhart from the JOIDES office compiled a spreadsheet of all of the sites and holes in ODP to kick off this project. **ACTION: TAP members will review the spreadsheet before the next meeting and identify sites/holes that we should include as part of the legacy project**. The spreadsheet is attached (Attachment A).

Prioritize & Recommend Technical Challenges from ISP
Under major categories in the Initial Science Plan (ISP), members of iTAP prepared and summarized technical challenges IODP faces. Climate History challenges were summarized by Taylor, Gas Hydrates by Masuda, Hydrogeology had been presented at the first iTAP meeting and summarized here by Becker, and Huey summarized Zero-age Crust challenges that were consistent with the TAGII discussions (see below). The challenges are summarized in Attachment B. **ACTION: TAP members will review and complete the spreadsheet (in their area of expertise) for setting priorities at the next meeting.**

Other Important Technical Challenges

TAGII Presentation. Rona (proponent) presented the TAGII science objectives and technical challenges iTAP discussed the challenges (with input from liaisons and guests). iTAP considers that the drilling and logging plan of the TAG II proposal is feasible with existing ODP technology and recommends consideration of enhancements to maximize scientific returns, as follows:

- 1. Starting hole in rubbly basalt and hydrothermal deposits: Use of the HRRS (Hard Rock Re-entry System) with the true DIC system (Drill-in-Casing system without under-reamer). Also consider monobore (expandable tubular) casing for extending casing downward (Enventure, Inc.).
- 2. Penetration to 100 mbsf at 4 sites and 250 mbsf at 1 site: Review and select the best bits for the job including bicenter bit technology. Consider all feasible means to remove high-density sulfide cuttings from holes including mud properties (polymer), hole cleaning to remove cuttings, and borehole wall stabilization procedures.
- 3. Core recovery sufficient to meet scientific objectives: Provide for flexible coring operations with MDCB (Motor Driven Core Barrel), RCB (Rotary Core Barrel), and ADCP (Advanced Diamond Core Barrel), and chip cutting catcher.
- 4. Maintain stable hole for drilling, casing, and logging: Consider all means to limit lost circulation, clean hole, pump at suitable rates, etc.
- 5. Maximize data recovery: iTAP endorses TAG II proposal plan for 3 holes at each of 5 sites, as follows: (1) pilot hole with RCB spud-in to 100 mbsf to recover core in upper section and to determine conditions in hole; (2) DIC (Drill-in-Casing) to 30 mbsf, coring (MDCB, RCB, ADCB, as appropriate) to 100 mbsf in 4 holes and to 250 mbsf in 1 hole (active high-temperature sulfide mound), followed by wireline logging, as feasible; (3) Normal bit (tricone) hole to 100 mbsf with LWD/RAB (Logging While Drilling/Resistivity at Bit).

Difficulties in Deep Drilling. Arai presented a summary of the challenges we face related to deep drilling. This presentation opened up discussion on how best IODP should address these challenges – particularly at depths where extreme high temperatures will be encountered. One option would be for IODP to invoke a high temperature task team to assist in the development of technologies for deep, high temperature drilling.

Long-term Monitoring under High Temperature. Kamata presented innovative concepts on the development of high temperature concepts. Innovative developments such as those developed from cell phone technologies.

MSP Technical Needs. Skinner reported that BGS would most likely be named as one of the lead groups in the European Science Operator (ESO) group and therefore would be responsible for delivery of Mission Specific Platforms (MSP) in IODP. Their strategy would be to contract services on a case-by-case basis and would primarily lease any needed technology. One area that his group has experience in and would like to advance technology is related to improvements in coring practices and gas analyses for safety.

Other Technical Needs: ROV. Based on the science goals of IODP, it is clear that the IODP will continue to use increasingly more complex seafloor installations. These types of installations require remote intervention, and maintenance for successful operations, normally achieved using remotely operated vehicles (ROV). ROV technology has evolved to the stage where it is routinely by industry used in deep water applications.

***iTAP Recommendation 2003-05: ROVs.* The iTAP recommends that both full-time (non-riser and riser) platforms be outfitted with ROVs.**

Other Technical Issues: Complex Drilling Projects (CDPs). SSEPs asked that iTAP discuss and clarify their perspective of CDPs. iTAP's view is that riser drilling, when required to meet science objectives, is not necessarily a CDP. CDPs are defined by the need to conduct multiple expeditions to achieve a proposed science goal and are therefore NOT driven by technological "complexities." Riser wells are commonly conducted by industry (in water depths up to 3000 m) and methods to conduct these are well established. The design of a riser program does not require non-riser drilling (aka JOIDES Resolution). Operators, however, may need to gather other information (e.g., safety, hazard, pore pressure prediction) for well planning purposes.

Future Structure & Role of iTAP

iTAP discussed the potential "merger" with iSCIMP as a future panel and agreed that TAP should remain independent. Panel members reviewed the current SAS general purpose, mandate, and membership. iTAP agreed on the following wording for each:

General Purpose. The Technology Advisory Panel (TAP) will advise the SPC on matters related to the technological developments necessary to meet the scientific objectives of the IODP Initial Science Plan.

Mandate. The TAP will identify technical needs and recommend ways to meet those needs. Appropriate topics of concern may include:

- Advice and recommendations on performance requirements for specific technological needs.
- Assessment of whether commercial "off-the-shelf" technology can most optimally meet those needs or whether they require research and development within IODP.
- Recommendations concerning the appropriate mode for pursuing such (i.e., through IODP, universities, industry, or joint ventures).
- Advice and recommendations on the process and procedures for developing and evaluating program contracts in support of technical design and innovation.
- Regular review of the progress made by SAS and the science community in planning for the technological needs of IODP.

Membership. The TAP will consist of fifteen to eighteen members, with a nominal term of three to five years for individual members. Membership will be representative of the balance of member nations and selected by member nations. Members of TAP should specialize in the fields of marine operations on a variety of platforms, down-hole logging and instrumentation, drilling technology (including mining technology and drilling under extreme conditions), geotechnics and other disciplines as necessary. The TAP may recommend the establishment of working groups to address specific technological issues that require an added breadth of expertise. TAP will recommend to SPC the name(s) of new TAP co-chairs for their approval.

iTAP also discussed the potential continued interaction with proponents. At the first Panel Chairs meeting, it was agreed that any interaction between panels and proponents should be recommended by the SSEPs or SPC. All communication to proponents should originate from SSEPs. iTAP views the interaction with proponents as productive for both: it keeps the panel abreast of technology needs in the program and provides proponents with technical advice. In future, TAP should continue this interaction, but only when requested by either the SSEPs or SPC.

In terms of other interactions with the science community, TAP members should begin developing written technical briefs that would assist proponents on the technologies that are available to the community. **ACTION: TAP members will identify briefing topics and begin drafting one or two for discussion at the next meeting.**

Cross-platform technical issues

iTAP Recommendation 2003-06: Logging Policy. **The iTAP recommends that SPPOC reformulate the existing ODP policy regarding mandatory rules for continuous coring and interval logging in all drilled holes. Some scientific drilling objectives, especially within Complex Drilling Programs, could best be served using other protocols for drilling, coring and logging.**

For example, in approaching some deep targets in difficult drilling terrain, better chances of achieving optimal drilling AND scientific success may be achieved by drilling without coring directly to the deep target objective, perhaps using LWD technology. In this example, a second hole might then be drilled with either full coring or coring only in targeted zones of highest scientific interest. A new policy formulated for IODP into the future should encompass more flexibility, within the constraints of HSE, to allow use of improved drilling, coring and logging technologies and, thus, enhance scientific results.

See also iSCIMP minutes.

Membership

iTAP agreed that the panel would work best, with members with the following expertise:

- Geotechnical Engineer
- Completion Expert
- Monitoring
- DP Expert
- Riser/Wellhead Expert
- ROV Expert
- Seismics with respect to well design
- Mud Engineer
- LWD/MWD Expert
- Project Management
- High Temperature Expert
- Rock Mechanics
- Drilling Engineer
- Coring Expert

Members discussed the expertise not currently among iTAP and made a list of nominations that were forwarded to the Japanese and US national offices. iTAP agreed that additional expertise (e.g., Cementing Specialist; Logging; HSE expert) would be brought to the panel as guests when needed for special discussions.

Next Meetings

iTAP agreed that the next meeting should be held in Japan at the location of ***Chikyu*** in early March. iTAP also agreed that a fall video conference meeting would be a good idea with two video locations: one in Houston and one in Tokyo.

Attachments

A: TAP Technical Challenges.xls
B: TAP_legacy_all_sites.xls

	Challenges	Recommendation	Evaluation (A,B,C)		
			Number & Importance	Time & Cost	Chance of Success
Climate Change	Ice management	Specail case and no need to consider			
	Sampling sand	Adapt geotechnical sampling strategies (shorter cores, seabed frame, mud programs)			
	coral reef + coring	Adapt geotechnical practices for non-riser/MSP drilling (e.g. seabed frame)			
	Sallow water coring	Adapt geotechnical practices for non-riser/MSP drilling (e.g. seabed frame)			
	modifying ODP tools for MSP	Design tools in preparation for MSPs			
Gas Hydrates	borehole stability in sallow formation	Adapt geotechnical practices for non-riser/MSP drilling (e.g. Seabed frame)			
	coring at in-situ conditions	Work with JNOC (Japan National Oil Corporation)/others * to improve on ODP tools and adapt new tools * to develop methods to extract fluid from PTS			
	handling/preservation/transportation of core for labo analysis	Work with JNOC (Japan National Oil Corporation)/others to check the capability of current technology to develop a new container if necessary			
	temperature measurement	Apply DTS in IODP + develop inexpensive long-term tempeature monitoring system			
	measurement of methane flux	Modify CORK technology to measure methane hydrate over time			
Hard Rock	bare rock spud	"Start over" with the hammer drill-in casing - write specifications & build to those specifications			
	coring in "rubble"	Use Rona Recommendation			
	hole stability related to temperature change and stress field	model (for example sites) stress induced by temperature change Assessment on high temperature			
Hydrogeology	recovery of fluid samples	PCS* Improve CORK sampling devices Initiate conceptual design study to develop options for fluid sampling in rock			
	in-situ measurement of fluid properties, pressure & temperature	develop "cheap" temperature long-term OBS purcahse low-flow-rate pumps develop multiple port pressure momory tools ofr different formations purhcase Geotech resistivity device comceptual design for "quick" packer measurements			

LEG	PRECRUISE NAME	SITE PRIORITY	SITE	HOLE	SUCCESS	# Holes	OPS	Depth	Logged	Objective	SITE_COMMENT
100	FLA-1	Primary					APC/XCB	550	NO	High quality continuous sequence through the entire Neogene	
100	FLA-2	Primary					APC/XCB	750	NO	Good quality Paleogene pelagic record	
100	MFAN	Primary					APC/XCB	600	NO	Extent of widespread mass movement, sediment characteristics	
101	BAH-7A	Primary-1	629				APC/XCB	200	NO	Sedimentary record of an upper slope and contributions of pelagic/hemipelagic deposition	
101	LBB-05xLBB-10	Added	630				APC/XCB	200	NO	Sedimentary record of an upper slope and contributions of pelagic/hemipelagic deposition	
101	BAH-8A	Primary-1	628				APC/XCB	200	NO	Sedimentary record of the lower slope in accretionary setting. Diagenetic vs. sea level effects.	
101	BAH-9A	Primary-1 (1)					APC/XCB	200	NO	Document record of distal turbidites and response to sea level fluctuations	
101	BAH-9A	Primary-1 (2)	627				APC/XCB/RCB	600	YES	Document record of distal turbidites and response to sea level fluctuations; date and define nature of the seismic facies	
101	BAH-1A	Primary-1						1500	YES	Tectonic vs environmental controls on platform growth	
101	BAH-1B	Alternate						1500	YES	Tectonic vs environmental controls on platform growth	
101	BAH-1C	Alternate	626					1500	YES	Tectonic vs environmental controls on platform growth	
101	BAH-1D	Alternate						1500	YES	Tectonic vs environmental controls on platform growth	
101	BAH-11A	Primary-1	631				APC/XCB	200	NO	Sedimentary record of a steep bypass slope, contributions fo pelagic/hemipelagic and sediment gravity flows.	
101	BAH-11B	Primary-1	633				APC/XCB	200	NO	Evaluate lower slope, and diagenetic vs sea level effects.	
101	BAH-11C	Primary-1	632				RCB	1300	YES	Sample velocity discontinuity	
101	BAH-3A	Primary-2	635				RCB	200-300	NO	Sample target horizon if Exuma Sound not successful.	
101	BAH-3B	Alternate					RCB	200-300	NO	Sample target horizon if Exuma Sound not successful.	
101	BAH-3C	Alternate					RCB	200-300	NO	Sample target horizon if Exuma Sound not successful.	
101	BAH-5A	Primary-3					APC/XCB	1000	YES	Document interplay of carbonate fan and contourite deposition with effects of sea level fluctuation	
101	DSDP-98	Alternate	634				RCB	200-300	NO	Sample target horizon if Exuma Sound not successful.	
101	SL334	Added	636				RCB	200-300	NO	Sample target horizon if Exuma Sound not successful.	
102	418A	Primary	418A						YES	Re-entry, fish logging tool from hole, deepen if time available	
102	417D	Alternate								If 418A tool recovery not successful, re-enter and log	
102	603	Alternate				1	Drill	1500	YES	Logging and vertical seismic profiling	
102	NJ-8	Alternate				1		750+	YES	Sample basement of buried seamount in Jurassic; determint the spreading rate and subsidence history	
102	NJ-6	Alternate				1		1000	YES	Determine Oligocene to recent sedimentation history of upper continental rise off New Jersey	
103	GAL-1A	Alternate									
103	GAL-1B	Alternate									
103	GAL-2A	Primary-2				1	RCB	300	NO	Obtain fresh ultramafic rocks from the lherzolite ridge.	
103	GAL-2B	Primary-1	637			1	RCB	300	NO	Obtain fresh ultramafic rocks from the lherzolite ridge.	
103	GAL-2C	Alternate									
103	GAL-3A	Primary-2				1		400	YES	Continuous coring through 300m (sed) and 100m (basement) - information about earliest history of margin.	
103	GAL-3B	Alternate									
103	GAL-4A	Alternate						1000	YES	Target - pre-rift sediments.	
103	GAL-4B	Primary-1	638			1		1750	YES	Syn-rift and pre-rift sediments of the subsident continental margin.	
103		Added ?	639								
103		Added ?	641								
103		Added ?	640								
103	GAL-4C	Alternate									
103	GAL-4D	Alternate									
103	GAL-4E	Alternate									
104	VOR 2A	Primary-1	642				APC/reentry	1000	YES		
104	VOR 1	Alternate					APC/reentry	1250	YES		
104	VOR 2B	Primary-1					APC/reentry	1000	YES		
104	VOR 4	Primary-2	643				APC/XCB	refusal or 1100	YES		
104	VOR 5	Primary-3	644				APC	200	NO		
104	VOR 3A	Alternate					APC/reentry	1300	YES		
104	VOR 3B	Alternate					APC/reentry	500	YES		
105	BB-3B	Primary-1	645			2	APC/XCB RCB re-entry	700 / 2000	YES	Sample sedimentary section for high-latitude Eocene-Oligocene, early post-rift sediments.	
105	LA-5	Primary-1				2	APC/XCB/RCB	250/450/1486	YES	Sample sedimentary section for Eocene-Oligocene. Sample basement for age calibration of magnetic anomalies	
105	LA-5A	Alternate	646			2	APC/XCB/RCB	250/410/709	YES	date drift deposits of Eirik Ridge. Sample sedimentary section for high-latitude Eocene-Oligocene.	
105	LA-9	Alternate	647			2	APC/XCB/RCB	250/450/800	YES	Date drift deposits of Gloria Drift. Sample basement for age calibration of magnetic anomalies.	
105	LA-2A	Alternate				2	APC/XCB/RCB	250/450/903	YES	Sample sedimentary section for E-W paleoceanographic transect.	
106	Site 1	Primary-1C					RCB	ADAP		Origin, evolution and nature of oceanic crust at slow spreading ridge. Processes of magma generation and crustal accretion.	
106	Site 2	Primary-1A	648				RCB	ADAP		Origin, evolution and nature of oceanic crust at slow spreading ridge. Processes of magma generation and crustal accretion.	
106	Site 3	Primary-1B	649				RCB	ADAP		Origin, evolution and nature of oceanic crust at slow spreading ridge. Processes of magma generation and crustal accretion.	
106	Site 4	Alternate					RCB	ADAP		Deep as possible into basement beneath the E nodal basin of Kane Fracture Zone.	
106	Site 5	Alternate					RCB	ADAP		Deep as possible into basement beneath the E non-transform section of the fracture zone valley.	
107	TYR-1B	Primary-1	654			1	RCB	800	YES	Lithology, stratigraphy and age of pre-, syn-, and post-rift series, document pre-Messinian sediments, date regional stretching.	
107	TYR-2	Primary-1	653				APC	200	YES	Establish deep-sea stratigraphic type-section	
107	TYR-3A	Primary-1	652				RCB	900+	YES	Nature of pre-, syn-, and post-rift sediments on continental thinned crust, compare.	
107	TYR-5B	Primary-1	651				RCB	550	YES	Nature of oceanic crust in central part of basin, hydrothermal deposits at sediment/basement contact	
107	TYR-5B'	Alternate					RCB	550	YES	Nature of oceanic crust in central part of basin, hydrothermal deposits at sediment/basement contact	
107	TYR-7B	Primary-1	650				APC/XCB	420	YES	Nature and age of the seismic sequences covering the whole central Marsiki basin, study the tephrachronology of this area.	
107	TYR-4	Primary-2	656				RCB	869	YES	Sample the prerift/synrift contact, if Site 3 fails objective.	
107	TYR-5A	Primary-2	655				RCB	100	NO	Nature of highly magnetic N-S trending ridge at the boundary between continental and oceanic crust.	
107	TYR-6	Primary-2					APC/XCB	600	YES	Document age of contact between pre-and syn-rift sediments and the pre-rift series. Compare timing of rifting in Marsili Basin with Vavilov Basin.	
107	TYR-8	Primary-2					APC/XCB	400	YES	SE Tyrrhenian volcanic activity, to determine youngest Cenozoic paleomagnetic stratigraphy and tephrachronology.	
107	TYR-1A	Alternate				1	RCB	850	YES	Sample pre-, syn-, and post-rift sediments on tilted block to decipher the multirifting evolution of Sardinian margin.	
107	TYR-1B'	Alternate				1	RCB	550	YES	Lithology, stratigraphy and age of pre-rift sequences.	
107	TYR-3C	Alternate					RCB	900+	YES	Nature of pre-, syn-, and post-rift sediments on continental thinned crust, compare.	

LEG	PRECRUISE NAME	SITE PRIORITY	SITE	HOLE	SUCCESS	# Holes	OPS	Depth	Logged	Objective	SITE_COMMENT
107	TYR-7A	Alternate					APC/XCB	520	YES	Nature and age of the seismic sequences covering the whole central Marsiki basin, study the tephrachronology of this area.	
108	139R	Primary-10					APC/XCB	refusal/350		High resolution record of the Neogene evolution of the Canary Current; variation of eolian-dust discharge; calibrate a sequence of hiatuses with phases of enhanced contour-current activity.	
108	MAU-4	Primary-3	659				APC/XCB	refusal/300		Deep water paleoceanography and circulation history of Saharan air layer.	
108	MAU-5	Primary-1	657				APC/XCB	refusal/250		Document non-upwelling paleoceanography and pelo-productivity of Canary Current off Cape Blanc and compare with upwelling cell at MAU-6.	
108	MAU-6	Primary-2	658				APC/XCB	refusal/300		High resolution hemipelagic sediment record of the Late Neogene. Compare with MAU-5	
108	SLR-1	Primary-8	660				APC/XCB	refusal/300		Monitor exchange of bottom water betwewen southern and northern parts of E Atlantic through the key passage of Kane Gap.	
108	SLR-1	Added ?	661								
108	EQ-3	Primary-5	668				APC/XCB	refusal/~400 Eocene		Reconstruction of bathymetric profiles of sediment parameters which record the history of deep water circulation	
108	EQ-4a	Primary-7	667				APC	150		Reconstruction of bathymetric profiles of sediment parameters which record the history of deep water circulation	
108	EQ-5	Primary-6	666				APC	150		Reconstruction of bathymetric profiles of sediment parameters which record the history of deep water circulation	
108	EQ-6	Primary-11	665				APC	150		Reconstruction of bathymetric profiles of sediment parameters which record the history of deep water circulation	
108	EQ-7	Primary-9	662				APC	150		Investigate the history of the divergence in Equatorial Altantic and tne Benguela Current, trace development during and prior to N hemisphere glaciation.	
108			663								
108	EQ-9	Primary-4	664				APC	180		Tract the 23000-year rhythm found in late Quaternary core back into earlier Quaternary and pre-Quaternary time to determine ice-volume effect.	
109	648B	Primary-1	648				RCB	reentry/ADAP	YES	Origin, evolution and nature of oceanic crust at slow spreading ridge. Processes of magma generation and crustal accretion.	
109	395A	Primary-2	395					reentry	YES	Establish a baseline set of logs for basaltic crust near a slow spreading mid-ocean ridge.	
109	KFZ	Primary-2	669				RCB	ADAP	NO	Drill as deep as possible into oceanic basement / major fracture zone.	
109	KFZ	Added ?	670								
109	649	Primary-4				multiple	RCB		NO	Study an active hydrothermal system and associated sulfide deposits; hydrothermal alteration of mid-ocean ridge basalts.	
109	418A	Primary-2					RCB	reentry / ADAP	YES	Nature, structure and history of hydrothermal alteration in old oceanic crust.	
110	LAF-0	Primary-1					wash	900	YES	Establish reference hole in oceanic sediment to measure physical and hydrological properties prior to apparent deformation.	
110	LAF-1	Primary-1	671			3	APC/XCB; RCB/wash; reentry/RCB	420 420 860	YES	Measure characteristics above and below decollment. Complete penetration of lithologic section of accretionary toe. Determine sequence of structural features related to accretionary processes.	
110	LAF-2	Primary-1	675			2	APC/XCB; RCB/WASH	850 850	YES	Measure characteristic in offscraped sequence above and at decollement. With LAF-1 establish lateral gradients.	
110	LAF-3	Primary-1	674			2	APC/XCB; RCB/WASH	500 500	YES	Same as LAF-2. Test for fluid migration.	
110	LAF-3A	Alternate	673			2	APC/XCB; RCB/WASH	600 600	YES	Same as LAF-3	
110	LAF-4	Alternate					APC/XCB or RCB	600	YES	Study hydrogeology and structural characteristics of accretionary wedge. Determine amount of displacement on decollement. Estimate quantity of last material.	
110	LAF-5	Alternate					APC/XCB or RCB	400	YES	Thrust studies. Determine sedimentary character of fold infill. Calibrate seismic stratigraphy.	
110	LAF-6	Alternate					APC/XCB or RCB	700	YES	Study hydrogeology, structural geology, history of deformation in forearc basin.	
111	504B	Primary-1	504B				reentry/RCB	500	YES	Deepen penetration of Layer 2B. Log deep section	
111	MM-1	Primary-1	678				APC/XCB	refusal/~300	YES	Biostratigraphy, hydrology, heat flow.	
111		Added ?	677								
111	MM-2	Alternate					APC/XCB	325	YES	Hydrology, chemistry, PP, lateral P gradients in basement	
111	MM-3	Alternate					APC/XCB	325	YES	Hydrology, chemistry, PP, lateral P gradients in basement	
112	PER-1	Primary-P2	681			2	APC, 1 oriented	200	NO	Neogene to Quaternary upwelling deposits at landward site of E-W transect	
112	PER-2	Primary-P4				2	APC, 1 oriented	200	NO	Quaternary upwelling deposits and reconstruct paleoenvironmental conditions of deposition. Distribution of dolomites and their formation in organic C-rich muds.	
112	PER-2A	Alternate				2	APC, 1 oriented	200	NO	Same as PER-2	
112	PER-2C	Alternate				2	APC, 1 oriented	200	NO	Same as PER-2	
112	PER-2D	Alternate	687			2	APC, 1 oriented	200	NO	Same as PER-2	
112	PER-3	Primary-P1	679			2	APC/XCB	600	YES	Seaward site of transect across upper slope mud lens. Recover Quaternary upwelling sediments and drill to major Mesozoic/Paleozoic unconformity	
112	PER-3A	Alternate	680			2	APC/XCB	700	YES	Seaward site of transect across upper slope mud lens. Recover Quaternary upwelling sediments and drill to major Mesozoic/Paleozoic unconformity	
112	PER-4A	Primary				2	APC	200	NO	Southern site in lateral transect across upper slope mud lens. Recover Quaternary upwelling sediments and investigate dolomite generation.	
112	PER-4C	Primary	686			2	APC	200	NO	Same as PER-4A	
112	PER-4B	Alternate				2	APC	200	NO	Same as PER-4A	
112	PER-4D	Alternate				2	APC	200	NO	Same as PER-4A	
112	PER-5	Primary-P1				2	APC	200	YES	Center of transect and star pattern across upper slope mud lens. Recover Quaternary upwelling sediments and investigate dolomitization processes.	
112	PER-6	Primary-T1					APC/XCB	1100	YES	Neogene subsidence and sediment accumulation rates . Investigate tectonic and metamorphic history of underlying basement rock. Reconstruct paleoenvironment.	
112	PER-7	Primary-T1					APC/XCB RCB?	1100	YES	Complete Neogene sequence (0-600), penetration into deep Paleogene and Mesozoic sediments, possibly sample metamorphic basement.	
112	PER-7A	Alternate					APC/XCB RCB?	1100	YES	Same as PER-7	
		Added ?	688								Between PER-7A and PER-8?
112	PER-8	Primary-T2	682				RCB	600	YES	Determine age and nature of leading edge of metamorphic block in trasition zone - foundation of Peru margin. Date metamorphic stages. Ascertain record of vertical movement of sediments.	
112	PER-9A	Primary-P6	684			2	APC	200	NO	Recover Neogene and Quaternayr upwelling sediments, prcesses of dolomitization in organic carbon-rich sediments.	
112	PER-10	Primary-P5				2	APC	200	NO	Seaward shallow hole of transect in upper slope mud wedge and patches.	

LEG	PRECRUISE NAME	SITE PRIORITY	SITE	HOLE	SUCC ESS	# Holes	OPS	Depth	Logged	Objective	SITE_COMMENT
112	PER-14	Primary-T1	683				APC/XCB	850	YES	Neogene sediments at seaward edge of Yaquina Basin. Determine age and nature of leading edge of metamorphic block in transition zone-foundation of Peru margin.	
112	PER-15	Alternate					APC/XCB	900	YES	Determine age and nature of leading edge of metamorphic block in trasition zone - foundation of Peru margin. Date metamorphic stages. Ascertain record of vertical movement of sediments.	
112	PER-16	Alternate					APC/XCB	1300	YES	Same as PER-14, PER17A	
112	PER-16A	Alternate					APC/XCB	790	YES	Same as PER-14, PER17A	
112	PER-17	Alternate	685				APC/XCB	1012	YES	Same as PER-17A	
112	PER-17A	Primary-T1					APC/XCB	1190	YES	Determine age of accretionary prism immediately adjacent to metamorphic block which is foundation of the Peru margin. Reconstruct truncation history of margin - drill transition zone. Determine the vertical motion history of sedimentary basins.	
112	PER-18B	Alternate					APC/XCB	1000	YES	Same as PER-14, PER17A	
112	PER-18C	Alternate					APC/XCB	960	YES	Same as PER-14, PER17A	
112	PER-18D	Alternate					APC/XCB	1250	YES	Same as PER-14, PER17A	
113	W1A	Primary-I				2	APC/XCB	425	NO	Early Cenozoic - Late Mesozoic paleoenvironmental record and age of Maud Rise	
113	W1B	Primary-I	689			2	APC/XCB	365	NO	Early Cenozoic - Late Mesozoic paleoenvironmental record and age of Maud Rise	
113	W2A	Primary-I	690			2	APC/XCB	370	NO	Maud Rise as "dipstick" into paleo-ocean, away from terrigenous sediment sources and unstable sediments.	
113	W2B	Primary-I				2	APC/XCB	490	NO	Maud Rise as "dipstick" into paleo-ocean, away from terrigenous sediment sources and unstable sediments.	
113	W4/1	Primary-I	691				RCB	1100	YES	Date dipping reflectors. Examine the record of Antarctic terrestrial vegetation in overlying pre-glacial terrigenous sediments to understand early stages of climatic deterioration.	
113	W4/1Alt	Alternate	692				RCB	1170	YES	Same as W4/1	
113	W4/2	Primary-I					APC/XCB	300	NO	Same as W4/1	
113	W4-I/1	Alternate	693				APC/XCB/RCB	520	NO	Age of ocean-dipping reflector. Unknown Antarctic terrestrial environment through Late Mesozoic and Cenozoic, from overlying sediments.	
113	W4-I/2	Alternate					RCB	400	NO	Same as W4-I/1	
113	W4-I/3	Alternate					RCB	390	NO	Same as W4-I/1	
113	W4-I/4	Alternate					RCB	1000	YES	Same as W4-I/1	
113	W4-II/7	Alternate					APC/XCB/RCB	500	YES	Neogene paleoenvironmental history of the Antarctic margin.	
113	W4-II/8	Alternate					RCB	600	YES	Cretacous to Miocene paleoenvironmental history of Gondwanaland. Drill to penetrate reflector U5.	
113	W4-II/2	Alternate					RCB	350	NO	Late Jurassic to Oligocene paleoenvironmental history of the Antarctic margin, age and composition of dipping reflectors.	
113	W5	Primary-I	694				APC/XCB/RCB	900	YES	Examine the history of bottom water production. Provide a more continuous record of continental glaciation and pre-glacial vegetation.	
113	W5A	Alternate					APC/XCB/RCB	900	YES	Same as W5	
113	W5B	Alternate					APC/XCB/RCB	800	YES	Same as W5	
113	W5C	Alternate					APC/XCB	250	YES	Same as W5	
113	W5D	Alternate					APC/XCB/RCB	600	YES	Same as W5	
113	W5E	Alternate					APC/XCB/RCB	600	YES	Same as W5	
113	W5F	Alternate					APC/XCB/RCB	850	YES	Same as W5	
113	W6	Primary-I	697			2	APC/XCB	500	YES	Examine deep-water circulation history of the region.	
113	W7	Primary-I	695			2	APC/XCB	500	YES	Determination of Antarctic vertical water mass structure; glacial history of region.	
113	W8	Primary-I	696			2	APC/XCB	500	YES	Determination of Antarctic vertical water mass structure; glacial history of region.	
113	W8A	Alternate				2	APC/XCB	500	NO	Sample the essentially pelagic section above the 'break-up unconformity' on the eastern margin, but drill to the unconformity at least once to improve tectonic constraints on paleo-depth calculations.	
113	W10	Alternate				2	APC	200	NO	Sedimentation and geochemistry of a high-latitude backarc basin.	
113	W11	Alternate					APC/XCB/RCB	950	YES	Paleoceanography and sediment history related to Drake Passage opening in Middle Cenozoic. Siliceous biogenic record.	
113	W12	Alternate				2	APC	180	NO	Sample a high-resolution record of sea ice and paleoceanography based on assemblage and lithologic variations	
113	W13	Alternate				2	APC/XCB	300	NO	Save as W12.	
114	SA2A	Alternate				2	APC/XCB	650	YES	Provide a pre- to post-gateway record with which to interpret the influence of gateway formation on Southern Ocean and South Atlantic paleoceanography.	
114	SA2B	Alternate				2	APC/XCB	650	YES	Same as SA2A	
114	SA2C	Alternate				2	APC/XCB	650	YES	Same as SA2A	
114	SA2D	Alternate				2	APC/XCB	650	YES	Same as SA2A	
114	SA2ALT-A	Primary	699			2	APC/XCB	750	YES	Same as SA2A	
114	SA2ALT-B	Alternate	700			2	APC/XCB	400	YES	Same as SA2A	
114	SA3A	Primary	701			2	APC/XCB	650	YES	Obtain a sedimentary record of the oceanic gateway between the South Atlantic and Weddell Basin. Provide a history of deep water circulation ghrough the gateway as a result of its growth and subsidence of surrounding relief.	
114	SA3B	Alternate				2	APC/XCB	650	YES	Same as SA3A.	
114	SA3C	Alternate				2	APC/XCB	650	YES	Same as SA3A.	
114	SA3D	Alternate				2	APC/XCB	300	YES	Same as SA3A.	
114	SA5A	Alternate				3	APC/XCB	850	YES	Same as SA5C	
114	SA5B	Alternate				3	APC/XCB	750	YES	Same as SA5C	
114	SA5C	Primary				3	APC/XCB	500	YES	Northeast Georgia Rise, oceanic plateau of mid-Cretaceous to Paleocene age - fossil arc massif at a convergent boundary of Malvinas plate and South America?	
	SA5C-ALT		698								
114	SA5D	Alternate				3	APC/XCB	870	YES	Same as SA5C	
114	SA6A	Alternate	702			3	APC/XCB	750	YES	Determine age, nature and subsidence history of Islas Orcadas Rise. Interpret the influence of Islas Orcadas Rise, Meteor Rise and adjacent fracture zones on the oceanic communication between Weddell Sea and South Atlantic.	
114	SA6B	Alternate				3	APC/XCB	600	YES	Same as SA6A.	
114	SA6C	Alternate				3	APC/XCB	500	YES	Same as SA6A.	
114	SA6D	Alternate				3	APC/XCB	650	YES	Same as SA6A.	
114	SA6E	Alternate				3	APC/XCB	800	YES	Same as SA6A.	
114	SA7A	Alternate				3	APC/XCB	850	YES	Obtain sedimetary record of oceanic gateway (west of Meteor Rise) between the South Atlantic and Southern Ocean	
114	SA7B	Alternate				3	APC/XCB	750	YES	Same as SA7A.	
114	SA7C	Alternate				3	APC/XCB	450	YES	Same as SA7A.	
114	SA7D	Alternate				3	APC/XCB	350	YES	Same as SA7A.	
114	SA7E	Alternate				3	APC/XCB	560	YES	Same as SA7A.	
114	SA8A	Alternate				3	APC/XCB	900	YES	Same as SA8C.	
114	SA8B	Alternate				3	APC/XCB	850	YES	Same as SA8C.	
114	SA8C	Primary	704			3	APC/XCB	800	YES	Determine age, nature and subsidence history of Meteor Rise. Interpret the influence of Islas Orcadas Rise, Meteor Rise and adjacent fracture zones on the oceanic communication between Weddell Sea and South Atlantic.	
114	SA8D	Alternate				3	APC/XCB	850	YES	Same as SA8C.	

LEG	PRECRUISE NAME	SITE PRIORITY	SITE	HOLE	SUCCESS	# Holes	OPS	Depth	Logged	Objective	SITE_COMMENT
114	SA8E	Primary				3	APC/XCB	850	YES	Same as SA8C.	
114	SA8F	Primary				3	APC/XCB	850	YES	Same as SA8C.	
114	SA8G	Primary				3	APC/XCB	850	YES	Same as SA8C.	
114	SA8H	Added	703								
115	MP-1	Primary-1				1	APC/RCB	220	NO	Geochemical analyses and dating of basaltic rocks for comparison with other oceanic hotspots and determine paleolatitudes. High resolution magnetostratigraphy, biostratigraphy and dissolution studies of the carbonate system.	
115	MP-2	Primary-1				1	APC/RCB	300	YES	Same as MP-1	
115	MP-3	Primary-1	705			1	APC/RCB	330	YES	Same as MP-1	
		Added?	706								
115	MP-3A	Alternate				1	APC/RCB	350	YES	Same as MP-1	
115	CARB-1	Primary-1				2	APC/XCB/RCB	330	YES	High resolution magnetostratigraphy, biostratigraphy and dissolution studies of the carbonate system. Geochemical analyses and dating of basaltic rocks for comparison with other oceanic hotspots and determine paleolatitudes.	
115	CARB-1A	Alternate				2	APC/XCB/RCB	450	YES	Same as CARB-1	
115	CARB-1B	Added	707								
115	CARB-2	Primary-1				2	APC/XCB	250	NO	High resolution magnetostratigraphy, biostratigraphy and dissolution studies of the carbonate system.	
115	CARB-2A	Alternate	709			2	APC/XCB	250	NO	Same as CARB-2	
115	CARB-3	Primary-1	710			2	APC/XCB	250	NO	Same as CARB-2	
115	CARB-4	Primary-1	708			2	APC/XCB	250	NO	Same as CARB-2	
115	CARB-4A	Alternate				2	APC/XCB	250	NO	Same as CARB-2	
115	CARB-4B	Alternate	711			2	APC/XCB	250	NO	Same as CARB-2	
115	CARB-4C	Alternate				2	APC/XCB	250	NO	Same as CARB-2	
115	MLD-1	Alternate	716			2	APC/XCB	200	NO	Record of climatically induced changes in carbonate saturation levels as recorded in aragonite sediments; for comparison with Pleistocene aragonite cycles in Bahamas.	
115	MLD-2	Primary-2	714			2	APC/XCB	200	NO	Same as MLD-1	
115	MLD-4		715								
115	CB-1	Added	712								
115		Added	713								
116	ID-1	Primary-1	717			2	APC/XCB/RCB	775	YES	To calibrate regional seismic stratigraphy; to establish a reference hole in sediment section; to measure physical and hydrological properties in an area without deformation.	
116	ID-1A	Alternate				2	APC/XCB/RCB	775	YES	Same as ID-1	
116	ID-2	Primary-1	719				APC/XCB/RCB	800	YES	To calibrate regional seismic stratigraphy; compare sediment section with ID-1 to establish history of deformation; to measure physical and hydrological properties in an area with gentle deformation.	
116	ID-6	Primary-1	718			2	APC/XCB/RCB	600	YES	Measure physical properties, pressure, temperature and pore fluid characteristics in an area of heat flow anomaly.	
116	ID-6B	Alternate				2	APC/XCB/RCB	600	YES	Same as ID-6	
117	IN-1	Primary-1	720			2	APC/XCB	500	YES	Determine history of uplift and erosion of the Tibet/Himalayan Complex by investigating depositional rates of the distal Indus Fan and intercalated pelagic sediments.	
117	IN-2	Alternate				2	APC/XCB	500	YES	Same as IN-1	
117	OR-1	Primary-1	721			2	APC/XCB	425	YES	Recover continuous and undisturbed Neogene pelagic sequence deposited under the influence of monsoon-driven upwelling and eolian transport over Owen Ridge.	
117	OR-2	Primary-1	722			2	APC/XCB	550	YES	Same as OR-1	
117	OR-3	Primary-1				2	APC/XCB	425	YES	Same as OR-1	
117	OR-4	Primary-1	731			1	RCB	1150	YES	Recover a continuous sequence of reflectors onlapping on the Owen Ridge to date the uplift history of the ridge and relate the uplift to age of the Oman Basin. Recover basement.	
117	OM-1	Primary-1	723			2-3	APC/XCB	700	YES	Recover continuous, high-resolution, undisturbed Plio-Pleistocene sequence of organic-rich sediment deposited under the proximal monsoon-driven coastal upwelling on the Oman Margin.	
117	OM-2	Primary-2				2	APC/XCB	340	YES	Same as OM-1	
117	OM-3	Primary-2	724			2	APC/XCB	270	YES	Same as OM-1	
117	OM-4	Primary-1	725			2	APC/XCB	250	YES	Same as OM-1	
117	OM-5	Primary-1	726			2	APC/XCB/RCB	200	YES	Recover shallow sediments overlying shallow basement (ophiolite thrusts). Obtain section of ophiolite series.	
117	OM-6	Primary-2	727			2	APC/XCB	300	YES	Same as OM-1	
117	OM-8	Primary-1	728			2	APC/XCB	340	YES	Recover continuous and undisturbed late Neogene sequence deposited on deeper part of margin under the proximal monsoon-driven coastal upwelling over Oman Margin.	
117	OM-9	Alternate				2	APC/XCB	400	YES	Same as OM-8	
117	OM-10	Primary-1	729			1	RCB	340	YES	Recover sediment sequence deposited on the outer basement structure thought to be an ophiolite thrust.	
117	OM-11	Added	730								
118	SWIR I	Primary-1	732			several	RCB	500	YES	Determine petrology, alteration state and deformational fabric of mantle peridotite in a major fracture zone.	
118	SWIR II	Primary-2	733			several	RCB	500	YES	Same as SWIR I	
118	SWIR III	Primary-3				4-5	XCB	500 in basement	YES	Determine nature and deformational characteristics of basement rocks across the floor of a major fracture zone. Same as SWIR I for deep hole.	
118	SWIR IV	Primary-4				Same as SWIR I		200		Determine the nature and deformational characteristics of the basement in an active nodal basin.	
118	SWIR V	Primary-5				1		100+	YES	Determine the nature and deformational characteristics of the basement in a fossil nodal basin in the inactive fracture zone.	
118		Added ?	734								
118		Added ?	735								
119	KHP-1	Primary-1	736				APC/XCB/RCB	910	YES	Obtain complete stratigraphic record from Oligocene to Holocene. Date the major unconformity. Document tectonic and susidence hstory of Eocene to Holocene. Determine age and evolution of Kerguelen Island.	
119	KHP-3	Primary-3	737				APC/RCB		YES	Obtain complete stratigraphic record from Eocene to Upper Cretaceous. Sample, date the major unconformity. Determine age and nature of basement underlying plateau. Study tectonic and subsidence history from Late Cretaceous to Eocene.	
119	SKP-6A	Primary-1	738				APC/RCB	550	YES	Obtain continuous Neogene and Paleogene stratigraphic section from Southern Kerguelen Plateau. Determine nature and age of basement from SKP. Determine Paleogene and Mesozoic history of changing ocean conditions, rifting and subsidence.	
119	PB-1	Primary-1	740				APC/XCB	500	YES	Document preglacial and glacial history of East Antarctica; timing of glacial erosion; breakup and paleoenvironmental history of continental margin, and ocean response.	
119	PB-2	Primary-1					APC/XCB	500	YES		
119	PB-3	Primary-1	741				APC/XCB	500	YES		
119	PB-4	Primary-1					APC/XCB	500	YES		
119	PB-5	Primary-1					APC/XCB	500	YES		
119	PB-6	Primary-1	739				APC/XCB	500	YES		
119	PB-7	Primary-1					APC/XCB	500	YES		

LEG	PRECRUISE NAME	SITE PRIORITY	SITE	HOLE	SUCCESS	# Holes	OPS	Depth	Logged	Objective	SITE_COMMENT
119	PB-8	Primary-1					APC/XCB	500	YES		
119		Added ?	742				APC/XCB	500	YES		
119		Added ?	743				APC/XCB	500	YES		
119	SKP-6B	Alternate	744				APC/XCB/RCB	1000	YES	Determine nature of sedimentary units, shift of polar front, and evolution and tectonic history of the Southern Kerguelen Plateau.	
119	SKP-8	Primary-2					APC/RCB		YES	Sample sediment ridge close to southeastern limit of plateau. Document the paleoceanographic history of the SKP - initiation and development of Circumpolar and Antarctic Bottom Water circulation.	
119	SKP-8A	Primary-2	745				APC/RCB		YES	Same as SKP-8	
119		Added ?	746								
120	SKP-1	Primary-1	747				APC/XCB RCB	200 450	YES	Recover basement from the northern region of the Kerguelen Plateau.	
120	SKP-2	Primary-1					APC APC/XCB RCB	150 200 1100	YES	Obtain high-resolution Neogene and Paleogene stratigraphic section from the southern Kerguelen Plateau.	
120	SKP-2C		751								
120	SKP-3	Primary-2				2	APC RCB	150 800	YES	Recover expanded section of Paleogene sediments reflecting earlier history of the southern Kerguelen Plateau.	
120	SKP-3C		748								
120	SKP-3D		750								
120	SKP-4A	Primary-1	749			2	APC/XCB RCB	250 450	YES	Recover basement from the southern Kerguelen Plateau.	
120	KHP-1	Primary-4						1400	YES	Depends on Leg 119 KHP-1 program.	
120	KHP-3	Primary-3				2	APC/XCB RCB	250 1700	YES	Same as Leg 119 KHP-3	
121	BR-1	Primary-1	753				APC/XCB	450	YES	Determine age, sedimentary facies, paleodepth of dipping, truncated sedimentary sequence at Broken Ridge as a test of rifting mechanisms.	
121	BR-2	Primary-1	752				APC/XCB	450	YES	Same as BR-1	
121	BR-3	Primary-1	754				APC/XCB	450	YES	Recover sedimentary sequence (Neogene ooze and lagoonal facies deposits) above unconformity. Determine age, facies, paleodepth of dipping and truncated units.	
121	BR-4	Primary-2	755				RCB	450	YES	Determine age, facies, and paleodepth of dipping and truncated units at Broken Ridge.	
121	NER-5A	Primary-3	756				RCB	300	YES	Basalt geochemistry at position between Sties 253, 254. Secondary objective is site at southern end of N-S paleoceanographic/climatic transect.	
121	NER-5B (SNR-3)	Alternate					RCB	300	YES	Same as NER-5A	
121	NER-2A (CNR-2)	Primary-1				2	APC/XCB/1NCB RCB	340 440	YES	Basalt geochemistry between Sites 253 and 214, vertical changes in basement section. Northward motion curve from paleomagnetic studies. Central site N-S paleoceanographic/climatic transect.	
121	NER-2B (CNR-3)	Alternate				2	APC/XCB/1NCB RCB	454 554	YES	Same as NER-2A	
121	NER-2C (CNR-5)	Alternate	757			2	APC/XCB/1NCB RCB	393 493	YES	Same as NER-2A	
121	NER-1A (NNER-9)	Primary-1					APC/XCB 1NCB	425	YES	Expanded Neogene section at north end of N-S paleoceanographic/climatic transect. Date presumed mid-Eocene unconformity.	
121	NER-1B (NNER-10)	Primary-1					Wash RCB	240 335	YES	Basalt geochemistry at N end of Ridge. Sample expanded Paleogene-Cretaceous section at N end of N-S paleoceanographic/climatic transect.	
121	NER-1C	Added	758								
122	EP-10A		759								
122	EP-10A"		760								
122	EP-9E		761								
122	EP-9F		764								
122	EP-12P		762								
122	EP-7V		763								
123	AAP-1B		765								
123	EP-2A		766								
124	SS-1	Alternate					APC/XCB/RCB	1300	YES	Same as SS-3	
124	SS-2	Alternate	768				APC/XCB/RCB	1200	YES	Same as SS-3	
124	SS-3	Primary-1					APC/XCB/RCB	1350	YES	Nature and age of oceanic basement. Nature and age of regional seismic horizons. Paleoenvironment and sedimentation in restricted ocean basin.	
124	SS-4	Primary-2					APC/XCB/RCB	1200	YES	Nature and age of a crustal slab.	
124	SS-5 (Sulu-4)	Primary-2	769				APC/XCB	400	YES	Neogene sediments and paleoenvironment in a restricted ocean basin.	
124	SS-5A	added	771								
124	CS-1	Primary-1	767				APC/RCB	1050	YES	Nature and age of oceanic basement. Nature and age of regional seismic horizons. Paleoenvironment and sedimentation in restricted ocean basin.	
124	CS-1A	Added	770								
124	BANDA-2	Primary-1					APC/XCB/RCB	1050	YES	Stratigraphic history and age of north Banda Basin. Tectonic history of Banda Sea and regional collisions.	
124E	ENG-1		773								
124E	ENG-1A		772								
124E	ENG-1B		774								
124E	ENG-1C		775								
124E	ENG-2		776								
124E	ENG-3		777								
124E	ENG-4										
125	MAR3A	Primary-1	780				APC/XCB/RCB	700 + refusal	YES	Penetrate the neck of a rising serpentinite diapir.	
125	MAR3B	Primary-1	778				APC/XCB/RCB	700 + refusal	YES	Penetrate through flank flows of sedimentary serpentinite into underlying sediments and crystalline basement if possible.	
125	MAR3B	Primary-1	779								
125	MAR3C		781								
125	BON-1	Alternate				2	APC/XCB RCB	400 1050	YES	Same as BON-1A	
125	BON-1A	Primary-1				2	APC/XCB RCB	300 1050	YES	Nature and age of syn-rift and pre-rift sedimentation and volcanism. History of vertical motion. Nature of fluids and mineralization.	
125	BON-2	Primary-1					RCB	1200	YES	Nature of arc volcanism and sedimentation. History of vertical motion.	
125	BON-3	Primary-2					RCB	900	YES	Determine history of vertical motion, sedimentation, variations in intensity and chemistry of arc volcanism and the paleo Kuroshio current. Nature of frontal arc basement high.	
125	BON-4	Primary-1					RCB	900	YES	Determine history of vertical motion, sedimentation, variations in intensity and chemistry of arc volcanism. Nature and age of forearc basin basement and overlying unconformity.	
125	BON-5A	Primary-2				2	APC/XCB RCB	200 925	YES	Determine history of vertical motion, sedimentation, variations in intensity and chemistry of arc volcanism. Style of microstructural deformation and amount of large-scale forearc rotation/translation.	
125	BON-5B	Primary-1					RCB	800	YES	Determine history of vertical motion, sedimentation, variations in intensity and chemistry of arc volcanism. Nature and age of forearc basin basement. Style of microstructural deformation and amount of large-scale forearc rotation/translation.	
125	BON-6	Alternate				2	APC/XCB RCB	500 1100	YES	Same as BON-5B	

LEG	PRECRUISE NAME	SITE PRIORITY	SITE	HOLE	SUCCESS	# Holes	OPS	Depth	Logged	Objective	SITE_COMMENT
125	BON-6A	Primary-1	785				RCB	750	YES	Same as BON-5B	
125	BON-6B	Primary-1	782				RCB	550	YES	Same as BON-5B	
125	BON-6C	Primary-2	786				RCB	200	YES	Same as BON-5B	
125	BON-7	Primary-1	783			2	APC/XCB RCB	refusal 500	YES	Age and mechansm of serpentinite emplacement. Nature of fluids. Nature of lower crustal rocks emplaced with the serpentinite.	
125	BON-7	Primary-1	784			2	APC/XCB RCB	refusal 500	YES	Age and mechansm of serpentinite emplacement. Nature of fluids. Nature of lower crustal rocks emplaced with the serpentinite.	
126	MAR3A	Primary-1					APC/XCB/RCB	700 + refusal	YES	Penetrate the neck of a rising serpentinite diapir.	
126	MAR3B	Primary-1					APC/XCB/RCB	700 + refusal	YES	Penetrate through flank flows of sedimentary serpentinite into underlying sediments and crystalline basement if possible.	
126	MAR3C	Added									
126	BON-1	Alternate				2	APC/XCB RCB	400 1050	YES	Same as BON-1A	
126	BON-1A	Primary-1	790 791			2	APC/XCB RCB	300 1050	YES	Nature and age of syn-rift and pre-rift sedimentation and volcanism. History of vertical motion. Nature of fluids and mineralization.	
126	BON-2	Primary-1	788 789				RCB	1200	YES	Nature of arc volcanism and sedimentation. History of vertical motion.	
126	BON-3	Primary-2					RCB	900	YES	Determine history of vertical motion, sedimentation, variations in intensity and chemistry of arc volcanism and the paleo Kuroshio current. Nature of frontal arc basement high.	
126	BON-4	Primary-1	792				RCB	900	YES	Determine history of vertical motion, sedimentation, variations in intensity and chemistry of arc volcanism. Nature and age of forearc basin basement and overlying unconformity.	
126	BON-5A	Primary-2				2	APC/XCB RCB	200 925	YES	Determine history of vertical motion, sedimentation, variations in intensity and chemistry of arc volcanism. Style of microstructural deformation and amount of large-scale forearc rotation/translation.	
126	BON-5B	Primary-1					RCB	800	YES	Determine history of vertical motion, sedimentation, variations in intensity and chemistry of arc volcanism. Nature and age of forearc basin basement. Style of microstructural deformation and amount of large-scale forearc rotation/translation.	
126	BON-5C		787								
126	BON-6	Alternate				2	APC/XCB RCB	500 1100	YES	Same as BON-5B	
126	BON-6A	Primary-1					RCB	750	YES	Same as BON-5B	
126	BON-6B	Primary-1					RCB	550	YES	Same as BON-5B	
126	BON-6C	Primary-2					RCB	200	YES	Same as BON-5B	
126	BON-7	Primary-1				2	APC/XCB RCB	refusal 500	YES	Age and mechansm of serpentinite emplacement. Nature of fluids. Nature of lower crustal rocks emplaced with the serpentinite.	
126		Added	793								
127	J1b-1	Primary-1				4	APC/XCB RCB RCB RCB	300 620 720 ADAP	YES	Nature and age of basement rocks. Style and evolution of sedimentation at Yamato Basin.	
127	J1d-1	Primary-1					APC/XCB/RCB	680	YES	Penetrate remnant spreading ridge. Nature and age of basement rocks. Style of multiple rifting. Style and evolution of sedimentation at Japan Basin.	
127	J3b-1	Primary-1					APC/XCB/RCB	610	YES	Penetrate Okushiri Ridge. Timing of uplift and compressional tectonics. Nature and age of the uplifted basement. Paleoceanography.	
127	J1e-1	Primary-1					APC/XCB/RCB	720	YES	Nature and age of basement rocks Style of multiple rifting. Style and evolution of sedimentation of Yamato Basin.	
127	J1b-2	Alternate				4	APC/XCB RCB RCB RCB	300 710 710 ADAP	YES	Same as J1b-1	
127	J1b-3	Alternate				4	APC/XCB RCB RCB RCB	300 590 590 ADAP	YES	Same as J1b-1	
127	J3b-2	Alternate					APC/XCB/RCB	970	YES	Same as J3b-1	
127	J3b-3	Alternate					APC/XCB	250	NO	Paleoceanography	
127	J3c	Alternate				2	APC/XCB RCB	246 346	YES	Same as J3b-1	
127	J1d-2	Alternate				2	APC/XCB RCB	760 810	YES	Same as J1d-1	
127	J1a	Alternate				4	APC/XCB RCB RCB RCB	300 580 680 ADAP	YES	Same as J1b-1	
127	J1c	Primary-2				4	APC/XCB RCB RCB RCB	300 720 820 ADAP		Same as J1b-1	
127	JS2	Primary-1				3	APC/XCB APC APC	refusal 120 80	YES	Penetrate Oki Ridge. Neogene paleoceanographic history. Bacterial activity.	
127	J2a-1	Primary-1				2	APC/XCB RCB	600 1430	YES	Penetrate Kita-Yamato Trough. Metallogeny. Style and nature of sedimentation in failed rift. Paleoceanographic history.	
127	J2a-2	Alternate				2	APC/XCB RCB	600 980	YES	Same as J2a-1.	
128	J1b-1	Primary-1				4	APC/XCB RCB RCB RCB	300 620 720 ADAP	YES	Nature and age of basement rocks. Style and evolution of sedimentation at Yamato Basin.	
128	J1d-1	Primary-1					APC/XCB/RCB	680	YES	Penetrate remnant spreading ridge. Nature and age of basement rocks. Style of multiple rifting. Style and evolution of sedimentation at Japan Basin.	
128	J3b-1	Primary-1					APC/XCB/RCB	610	YES	Penetrate Okushiri Ridge. Timing of uplift and compressional tectonics. Nature and age of the uplifted basement. Paleoceanography.	
128	J1e-1	Primary-1					APC/XCB/RCB	720	YES	Nature and age of basement rocks Style of multiple rifting. Style and evolution of sedimentation of Yamato Basin.	
128	J1b-2	Alternate				4	APC/XCB RCB RCB RCB	300 710 710 ADAP	YES	Same as J1b-1	
128	J1b-3	Alternate				4	APC/XCB RCB RCB RCB	300 590 590 ADAP	YES	Same as J1b-1	
128	J3b-2	Alternate					APC/XCB/RCB	970	YES	Same as J3b-1	
128	J3b-3	Alternate					APC/XCB	250	NO	Paleoceanography	
128	J3c	Alternate				2	APC/XCB RCB	246 346	YES	Same as J3b-1	
128	J1d-2	Alternate				2	APC/XCB RCB	760 810	YES	Same as J1d-1	

LEG	PRECRUISE NAME	SITE PRIORITY	SITE	HOLE	SUCC ESS	# Holes	OPS	Depth	Logge d	Objective	SITE_COMMENT
128	J1a	Alternate				4	APC/XCB RCB RCB RCB	300 580 680 ADAP	YES	Same as J1b-1	
128	J1c	Primary-2				4	APC/XCB RCB RCB RCB	300 720 820 ADAP		Same as J1b-1	
128	JS2	Primary-1				3	APC/XCB APC APC	refusal 120 80	YES	Penetrate Oki Ridge. Neogene paleoceanographic history. Bacterial activity.	
128	J2a-1	Primary-1				2	APC/XCB RCB	600 1430	YES	Penetrate Kita-Yamato Trough. Metallogeny. Style and nature of sedimentation in failed rift. Paleoceanographic history.	
128	J2a-2	Alternate				2	APC/XCB RCB	600 980	YES	Same as J2a-1.	
129	PIG-1	Primary-1					RCB	445	YES	Age calibration of Late Jurassic magnetic anomalies. Characterization of Jurassic sediments and paleoenvironment of superocean. Geochemical reference and physical properties of sediment and crust.	
129	PIG-2	Alternate					RCB	445	YES	Same as PIG-1	
129	PIG-3	Primary-1					RCB	751	YES	Age calibration and characterization of Jurassic Quiet Zone. Characterization of Jurassic sediments and paleoenvironment of superocean. Geochemical reference and physical properties of sediment and crust.	
129	PIG-4	Primary-1					RCB	471	YES	Age calibration and characterization of original Pacific microplate. Characterization of Jurassic sediments and paleoenvironment of superocean. Geochemical reference and physical properties of sediment and crust. Characterization of middle Cretaceous volcanic complex.	
129	EMB-1	Alternate					RCB	600	YES	Same as PIG-1, middle Jurassic.	
130	OJP-1	Primary-1				3	APC APC APC/XCB	250 250 650	YES	4th site in Neogene transect to obtain high-resolution sediment record for dissolution and biostratigraphic studies of Neogene and Quaternary carbonate system.	
130	OJP-1a	Alternate				3	APC APC APC/XCB	250 250 650	YES	Same as OJP-1	
130	OJP-2	Primary-1				3	APC APC APC/XCB	250 250 500	YES	3rd site	
130	OJP-3	Primary-1				3	APC APC APC	250 250 50	YES	2nd site	
130	OJP-3a	Alternate				3	APC APC APC	250 250 50	YES	2nd site	
130	OJP-4	Primary-1				3	APC APC APC/XCB/RCB	250 250 50/500/79 0	YES	1st site. Recover Paleogene and Cretaceous sediments and basement rock to determine pre-Neogene paleoceanography and origin of the OJP.	
130	OJP-4a	Primary-2				1	Wash RCB	250 260	NO	Determine nature and composition of 'basement' high at this location.	
130	OJP-4b	Alternate				3	APC APC APC/XCB/RCB	250 250 50/500/79 0	YES	Same as OJP-4	
130	OJP-5	Primary-1					APC/XCB/RCB	220/600/1 400	YES	Neogene transect to obtain a high-resolution sediment record for dissolution and biostratigraphic studies of Neogene and Quaternary carbonate system. Recover sediments and basement rock to determine pre-Neogene paleoceanography and origin of the OJP.	
130	OJP-5a	Alternate					APC/XCB/RCB	220/600/1 400	YES	Same as OJP-5	
130	OHP-6	Alternate					APC APC APC	250 250 50	YES	Same as OJP-3	
131	NKT-1	Primary-1					APC/XCB/NCB	refusal- 950?	YES	Reference measurements of physical properties and stratigraphy for comparison to NKT-2.	
131	NKT-2	Primary-1				4	APC/XCB RCB RCB RCB	refusal 900 900 1300	YES	Characterize section. Determine sequence of deformation features. Correlate deformational styles to sedimentary facies.	
131	NKT-2A	Alternate				4	APC/XCB RCB RCB RCB	refusal 1100 1100 1500	YES	Same as NKT-2	
131	NKT-10	Alternate				4	APC/XCB RCB RCB RCB	refusal 850 850 1150	YES	Same as NKT-2	
131	NKT-3	Primary-3				1	APC/XCB	refusal- 900?	YES	Same as NKT-2	
132	ENG-5	Primary-1				2	drill/DCS	?/150	NO	ENG - Deploy and test HRB. Test new bare rock spudding techniques. Evaluate Phase II 4500m DCS. SCI - Characteristics of very young pillow basalts.	
132	ENG-6	Primary-1				2	jet-in/DCS	?/150	NO	ENG - test new reentry cone. Drill-in BHA/back-off concept. DCS evaluation. SCI - Paleoceanographic studies of organic -carbon-rich sedments in anceint Pacific Ocean.	
132	ENG-6A	Alternate				2	jet-in/DCS	?/150	NO	Same as ENG-6	
132	ENG-7	Primary-1				2	drill/DCS	?/150	NO	ENG - deploy and test HRB. Evaluation of bare rock spudding techniques. SCI - Characterize shallow-water limestones, dissolution/diagenetic effects, surface phosphatization.	
132	ENG-7A	Primary-2				2	drill/DCS	?/150	NO	Same as ENG-7.	
132	ENG-7B	Primary-2				2	drill/DCS	?/150	NO	Same as ENG-7.	
133	NEA-1	Primary-1					APC/XCB	400	YES	Determine age and facies of proximal portions in front of present day Great Barrier Reef. Determine relationship between sea level and depositional facies. Determine timing and factors controlling initiation of reef growth on central GBR. Understand factors controlling transition from progradative to aggradative depositional geometries.	
133	NEA-2	Primary-1					APC/XCB	400	YES	Same as NEA-1 except central portions in front of GBR.	
133	NEA-3	Primary-1					APC/XCB	400	YES	Same as NEA-1 except distal portions in front of GBR.	
133	NEA-4	Primary-1					APC/XCB	400	YES	Determine age and facies of a lower slope fan in front of present day GBR. Compare with NEA-1-3, to determine sea-level signature preserved in lower slope facies. Examine fan processes on lower slope in mixed siliciclastic/carbonate depositional system.	
133	NEA-4alt	Alternate					APC/XCB	400	YES	Same as NEA-4	
133	NEA-5	Primary-1				2	APC APC/XCB/RCB	100 400/ 1011	YES	Age and facies of basinal sediments. Derive sea-level signature in deep-basin setting, relate to NEA-1-4. High-resolution paleoceanographic record reflecting Late Cenozoic climatic variation.	
133	NEA-6	Primary-1					APC/XCB/RCB	266/390	YES	Determine age and facies of upper slope deposits adjacent to plateau-margin reefal buildup. Determine paleoceanographic, paleoclimatic signal. Understand slope processes in exclusively carbonate depositional system. Determine composition, age of basement.	
133	NEA-8	Primary-1					APC/XCB	400	YES	Same as NEA-6.	

LEG	PRECRUISE NAME	SITE PRIORITY	SITE	HOLE	SUCCESS	# Holes	OPS	Depth	Logged	Objective	SITE_COMMENT
133	NEA-9A	Primary-2					APC/XCB/RCB	265 / 500	YES	Determine age and facies of periplatform and fore-reef sequences on margin of carbonate platofrm complex. Characterize.	
133	NEA-10A/1	Primary-1					APC/XCB/RCB	200 / 300	YES	Same as NEA-9A	
133	NEA-10A/2	Primary-1					APC/XCB/RCB	120 / 500	YES	Same as NEA-9A	
133	NEA-11	Primary-1				2	APC/XCB APC/XCB/RCB	200 405 700	YES	Determine age and facies of lower slope sequence adjacent to Queensland Plateau. Understand interaction between platform and trough processes. High resolution paleoceanographic record reflecting late Cenozoic climatic variation.	
133	NEA-13	Primary-1					APC/XCB/RCB	110 / 250	NO	Determine position and timing of middle Miocene eustatic highstand. Determine nature of 2 phases of carbonate platform growth. Determine the cause and timing of demise of 2 phases of carbonate platform accretion. Determine nature of sequence overlying the carbonate platforms.	
133	NEA-14	Primary-1				2	APC APC/XCB/RCB	55 295 400	YES	Determine cause and timing of demise of oldest phase of carbonate platform accretion. Determine age, nature of periplatform sequence deposited throught Neogene, during and between carbonate platform growth periods.	
134	DEZ-1	Primary-1					APC/XCB	300	YES	Penetrate through thin cover of sedimentary rocks into basement rock.	
134	DEZ-2	Primary-1				2	APC/XCB wash/RCB	refusal 500/800	YES	Determine age, lithologies and deformation of forearc. Penetrate tuffs and decollement, recover basement rock from subducted NDR.	
134	DEZ-4	Primary-1				2	APC/XCB wash/RCB	refusal 500/800	YES	Determine age, lithologies and deformation of imbricated forearc rocks in collision zone of Bougainville Guyot.	
134	DEZ-5	Primary-1					RCB	750	YES	Drill through shallow parallel-bedded sequence to determine age, lithologies, physcial properties of rocks forming the colliding guyot.	
134	IAB-1	Primary-1				2	APC/XCB wash/RCB	refusal 500/700	YES	Determine age lithologies and physical properties of rocks forming recent intra-arc basin.	
134	IAB-2	Primary-1				2	APC/XCB wash/RCB	refusal 300/1000	YES	Sample deep fill in Aoba Baisn to provide composite stratigraphic section that straddles chronologically the arc-ridge collision and flip in subduction polarity.	
135	LG-1	Primary-2				2	APC RCB	50 175	YES	Penetrate feather edge of young oceanic crust generated at propagator. Combine an understanding of early petrologic character of propagator with precise assessment of time hiatus between it and pre-existing backarc crust.	
135	LG-1A	Alternate				2	APC RCB	50 175	YES	Same as LG-1	
135	LG-2	Primary-1				3	APC/XCB RCB RCB	150/300 350 500	YES	Sample crust formed in first 0.5my of crustal dilation. Nature and age of basal sediment to identify magnetic anomaly. Understand compositional changes in context of backarc spreading center.	
135	LG-3	Primary-1				2	APC/XCB RCB	150/400 800	YES	Penetrate shallow platformal sequence of Tonga Ridge to sample a regional seismic unconformity. Accurate dating to assess uplift and subsidence history. Correlation of basin and regional tectonics.	
135	LG-6A	Primary-1				2	APC/XCB RCB	150/350 550	YES	High recovery to characterize basement, assign age of basement. Understand volcanic history of Tofua Arc and uplift/subsidence history of the forearc.	
135	LG-7	Primary-1				2	APC RCB	100 150	YES	Assess nature and extent of hydrothermal activity, metallogenesis and igneous basement rock chemistry. Same as LG-2.	
135	LG-9	Primary-2				2	APC/XCB RCB	150/300 350	YES	Same as LG-2 and LG-7.	
135	LG-9A	Primary-2				2	APC/XCB RCB	150/300 350	YES	Same as LG-2 and LG-7.	
135	LG-10	Primary-1				3	APC/XCB RCB RCB	100 150 300	YES	Same as LG-2 and LG-7.	
135	LG-10A	Primary-2				3	APC/XCB RCB RCB	100 150 300	YES	Same as LG-2 and LG-7.	
136	OSN-1	Primary				2	APC/XCB RCB	240+2 c 340	YES		
137	504B	Primary					remedial	no deep- ening	YES		
138	WEQ-2	Primary-2				3	APC w/XCP to basement	27	YES		
138	WEQ-3	Primary-1				3	APC w/XCP to basement	120	YES		
138	WEQ-4	Primary-1				3	APC w/XCP to basement	312	YES		
138	WEG-5	Primary-1				3	APC w/XCP to basement	93	YES		
138	WEQ-6	Primary-1				3	APC w/XCP to basement	312	NO		
138	WEQ-7	Primary-1				3	APC w/XCP to basement	65	YES		
138	EEQ-1	Primary-1				2	APC w/XCP to basement	283	YES		
138	EEQ-2	Primary-1				2	APC w/XCP to basement	271	YES		
138	EEQ-3	Primary-1				2	APC w/XCP to basement	295	YES		
138	EEQ-4	Primary-1				2	APC w/XCP to basement	411	YES		
138	EEQ-4A	Primary-2				2	APC w/XCP to basement	181	YES		
138	EEQ-5	Primary-2				2	APC w/XCP to basement	212	YES		
139	MV-1	Primary-1									
140	504B	Primary-1					RCB	300-400	YES		
140	Hess Deep	Alternate					RCB	ADAP	YES		
141	SC-1	Primary-1				3	APC/XCB wash/PCS wash/RCB	150/600 150/4 C 600/1200	YES		
141	SC-2	Primary-1				3	APC/XCB wash/PCS wash/RCB	150/600 150/4 C 600/900	YES		
141	SC-3	Primary-1				3	APC/XCB wash/PCS wash/RCB	150/400 150/4 C 150/650	YES		
141	SC-4	Alternate				1	APC/XCB	150/600	YES		
141	SC-5	Primary-1				1	APC/PCS/XCB	140/4 C/ 700	YES		
141	SC-6	Alternate				1	RCB	150	YES		
141	SC-7	Alternate				2	APC/XCB wash/RCB	150/500 500/650	YES		
141	SC-7'	Alternate				2	APC/XCB wash/RCB	1150	YES		
141	SC-8	Alternate						1200			
141	SC-9	Alternate						400			
141	SC-9'	Alternate						550			
143	ALL-A	Primary-1					RCB	500	YES		
143	HUE-A	Primary-1					RCB	1160	YES		
143	HUE-B	Primary-1					RCB	300	YES		

LEG	PRECRUISE NAME	SITE PRIORITY	SITE	HOLE	SUCCESS	# Holes	OPS	Depth	Logged	Objective	SITE_COMMENT
143	SYL-3	Primary-1					RCB	850	YES		
143	ANE-1	Primary-1						50	NO		
144	HAR-1	Primary-1					RCB	550	YES		
144	HAR-2	Primary-1				2 1	APC/XCB APC	430 <170	YES		
144	PEL-3	Primary-1				1 2	RCB APC	505 <180	YES		
144	SYL-1	Primary-1				1 2	RCB APC	250 <80	YES		
144	SYL-2A	Primary-1					APC/XCB APC	200	YES		
144	MIT-1(E)	Primary-1					RCB	850	YES		
144	SEIKO-1	Primary-1					RCB	175	YES		
144	SYL-4	Primary-2					RCB	200	YES		
144	801C	Primary-2							YES		
144	SEIKO-2	Primary-2					RCB	300	YES		
145	NW-1A	Primary-1				2 1	APC XCB	refusal 360	YES		
145	NW-4A	Primary-1				2 1	APC XCB	refusal 150	NO		
145	DSM-1	Primary-1				2 1	APC XCB/RCB	refusal 800	YES		
145	DSM-2	Alternate				2 1	APC XCB	refusal 300	NO		
145	DSM-2A	Alternate				2 1	APC XCB	refusal 300	NO		
145	DSM-3	Primary-1				2 1	APC XCB	refusal 300	NO		
145	DSM-4	Primary-1				2 1	APC XCB/RCB	refusal 800	YES		
145	PM-1A	Primary-1				2 1	APC XCB/RCB	refusal 350	YES		
145	PM-1B	Alternate				2 1	APC XCB/RCB	refusal 350	YES		
145	PM-1C	Alternate				2 1	APC XCB/RCB	refusal 400	YES		
146	VI-5	Primary-1				3	APC/XCB CORK/RCB XCB	400 400 220-320	YES		
146	VI-2	Primary-1					APC/XCB	600	YES		
146	VI-1	Primary-1					APC/XCB	600	YES		
146	OM-3	Primary-1				2	APC/XCB CORK/RCB	540 540	YES		
146	OM-7	Primary-1					APC/XCB	300	YES		
146	OM-2a	Primary-1					APC/XCB	500	YES		
146	Santa Barbara	Primary-1					APC/XCB	200	YES		
146	VI-2a	Alternate					APC/XCB	600	YES		
146	VI-3	Primary-2					APC/XCB	600	YES		
146	VI-3a	Alternate					APC/XCB	600	YES		
146	VI-5b	Alternate				3	APC/XCB CORK/RCB XCB	400 400 220-320	YES		
146	VI-5c	Alternate				2	APC/XCB CORK/RCB	400 400	YES		
146	OM-2b	Alternate					APC/XCB	500	YES		
146	OM-3a	Alternate				2	APC/XCB CORK/RCB	585 585	YES		
146	OM-4	Primary-2					APC/XCB	600	YES		
146	OM-7b	Primary-2					APC/XCB	300	YES		
146	OM-8	Primary-2					APC/XCB	660	YES		
146	OM-8a	Alternate					APC/XCB	500	YES		
146	OM-10	Primary-2					APC/XCB	500	YES		
147	HD-3	Primary-1					RCB	1000	YES		
147	HD-2	Alternate					RCB	1000	YES		
147	HD-4	Alternate					RCB	1000	YES		
148	504B	Primary-1					RCB	400	YES		
149	IAP-2	Primary-1				3	RCB/APC	850+/refusal	YES	Sample crust within the OCT to establish nature of upper crust. Determine history of turbidite sedimentation. Date Cenozoic deformation.	
149	IAP-3C	Primary-2				3	RCB/APC	830+/refusal	YES	Sample crust within the OCT to establish nature of upper crust. Determine history of turbidite sedimentation. Date Cenozoic deformation.	
149	IAP-4	Primary-1				3	RCB/APC	680+/refusal	YES	Sample crust within the OCT to establish nature of upper crust. Determine history of turbidite sedimentation. Date Cenozoic deformation.	
149	IAP-5	Primary-2				3	RCB/APC	980+/refusal	YES	Sample crust within the OCT to establish nature of upper crust. Determine history of turbidite sedimentation. Date Cenozoic deformation.	
149	GAL-1	Primary-3					RCB	650	YES	Determine lithologic composition of terrane above S' reflector	
150	MAT-10	Primary-1					APC/XCB	908	YES		
150	MAT-11	Primary-1					APC/XCB/RCB	1271	YES		
150	MAT-12	Primary-2					APC/XCB/RCB	477	YES		
150	MAT-13	Primary-2					APC/XCB/RCB	937	YES		
150	MAT-14	Primary-2					APC/XCB/RCB	1300	YES		
151	YERM 1	Primary-1				3	APC/XCB/RCB	680+	YES		
151	YERM 2A	Alternate				3	APC/XCB/RCB	>1400	YES		
151	YERM 3	Primary-1				3	APC/XCB	?	YES		
151	YERM 4	Primary-2				3	APC/XCB	?	YES		
151	YERM 5	Primary-1				3	APC/XCB	?	YES		
151	FRAM 1A	Primary-1				3	APC/XCB	?	YES		
151	FRAM 1B	Primary-1				3	APC/XCB/RCB	?	YES		
151	FRAM 2	Primary-2				3	APC/XCB	?			
151	EGM 1	Primary-2				3	APC/XCB/RCB	?	YES		
151	EGM 2	Primary-1				3	APC/XCB	?	YES		
151	EGM 3	Primary-2				3	APC/XCB/RCB	?	YES		
151	EGM 4	Primary-1				3	APC/XCB/RCB	?	YES		
151	ICEP 1	Primary-1				3	APC/XCB	?			
151	ICEP 2	Primary-3				3	APC/XCB	?	YES		
151	ICEP 3	Primary-1				3	APC/XCB	?			
151	ICEP 4	Primary-3				3	APC/XCB	?	YES		
151	NIFR 1	Primary-3				3	APC/XCB	?			
151	SIFR	Primary-3				3	APC/XCB	?			
152	EG63-1	Primary-1				2	APCXCB drill/RCB	50/100 100/840	YES		
152	EG63-2	Primary-1				2	APCXCB drill/RCB	50/150 150/1620	YES		
152	EG63-3	Primary-2				2	APC/XCB drill/RCB	200/250 250/1570	YES		
152	EG63-4	Primary-2				2	APC/XCB drill/RCB	200/250 250/1330	YES		
153	MK-1	Primary-1					RCB	>200-400	YES		
153	MK-2	Primary-1					RCB	>200-400	YES		
154	CR-1	Primary-1				3	APC - APC APC/XCB/RCB	250 - 250 250/600/1 300	YES		
154	CR-2	Primary-1				3	APC	250	YES		

LEG	PRECRUISE NAME	SITE PRIORITY	SITE	HOLE	SUCCESS	# Holes	OPS	Depth	Logged	Objective	SITE_COMMENT
154	CR-3	Primary-1				3	APC APC/XCB	250 250/600	YES		
154	CR-4	Primary-1				3	APC	250	YES		
154	CR-5	Primary-1				1 2 1	 drill/RCB APC APC/XCB	400/950 250 250/400	YES		
154	CR-6	Primary-2				3	APC	250	YES		
154	CR-7	Primary-2				3	APC	250	YES		
155	AF-1	Primary-2				1-2	APC/XCB RCB	724	YES		
155	AF-2	Primary-1				2	APC/XCB APC/XCB	350 125	YES		
155	AF-3	Primary-1				2	APC/XCB APC/XCB	225 143	YES		
155	AF-4	Primary-1				2	APC/XCB APC/XCB	179 50	NO		
155	AF-5	Primary-1				2	APC/XCB APC/XCB	225 160	YES		
155	AF-6	Primary-1				2	APC/XCB APC/XCB	275 143	YES		
155	AF-7	Primary-2				1-2	APC/XCB RCB	568	YES		
155	AF-8	Primary-2					APC/XCB	273	YES		
155	AF-9	Primary-1				2	APC/XCB APC/XCB	275 225	NO		
155	AF-10	Primary-1				2-3	APC/XCB APC/XCB APC/XCB	420 50 50	YES		
155	AF-11	Primary-1				2	APC/XCB APC/XCB	275 50	YES		
155	AF-12	Primary-1				2	APC/XCB APC/XCB	100/640 100	NO/Y ES		
155	AF-13	Primary-1				1	APC/XCB	125 (273)	NO		
155	AF-14	Primary-1				1	APC/XCB	370	YES		
155	AF-15	Primary-1				2	APC/XCB	100	YES		
155	AF-16	Primary-1				1-2	APC/XCB	273 200-273	YES		
155	AF-17	Primary-1				2-3	APC/XCB	133	NO		
155	AF-18	Primary-3				2	APC/XCB	179	YES		
155	AF-19	Primary-2				2	APC/XCB	133-273 133	YES		
155	AF-20	Primary-1				2-3	APC/XCB	180/40 40	NO		
155	AF-21	Primary-1				2	APC/XCB	250 143	NO		
155	AF-22	Primary-1				2	APC/XCB	225	YES		
156	NBR-0	Primary-3					XCB/RCB	691	NO		
156	NBR-1	Primary-2					XCB/RCB	342	COR K		
156	NBR-2	Primary-1					XCB/RCB	590	COR K		
156	NBR-3	Primary-1					XCB/RCB	723	COR K		
156	NBR-4	Primary-3					XCB/RCB	568	COR K		
156	NBR-5	Primary-3					XCB/RCB	497	COR K		
156	NBR-6	Primary-3					XCB/RCB	801	NO		
157	MAP-1	Primary-1					APC/XCB	500	YES		
157	MAP-2	Primary-2					APC/XCB	300	YES		
157	MAP-3	Primary-1					APC/XCB	300	YES		
157	MAP-4	Primary-1					APC/XCB	300	NO		
157	VICAP-1a	Primary-1					APC/XCB/RCB	1050	YES		
157	VICAP-1	Alternate					APC/XCB/RCB	1000	YES		
157	VICAP-2a	Primary-1					APC/XCB/RCB	580	YES		
157	VICAP-2	Alternate					APC/XCB/RCB	800	YES		
157	VICAP-3	Primary-2					APC/XCB/RCB	700	YES		
157	VICAP-4	Primary-1					APC/XCB/RCB	600	YES		
157	VICAP-5	Primary-2					APC/XCB/RCB	300	YES		
157	VICAP-7	Primary-1					APC/XCB/RCB	700	YES		
157	VICAP-8	Primary-2					APC/XCB/RCB	1300	YES		
158	TAG-1	Primary-2					RCB	>140	YES		
158	TAG-2	Primary-1					RCB	>450	YES		
158	TAG-3	Primary-2					RCB	>180	YES		
158	TAG-4	Primary-4					RCB	>140	YES		
159	IG-1	Primary-1					RCB/drill	800/1600	YES		
159	IG-2	Primary-1					RCB	800	YES		
159	IG-3	Primary-1					RCB	800	YES		
159	IG-1bis	Alternate					RCB	1000	YES		
159	IG-2B	Alternate					RCB	500	YES		
159	IG-2C	Alternate					RCB	500	YES		
159	IG-3bis	Primary-2					RCB	800	YES		
160	ESM-1A / MEDSAP-1D	Primary-1				4	 APC/XCB APC APC APC/RCB	150/170 150 150 150/350	YES		
160	ESM-1 / MEDSAP-1D	Primary-2				4	 APC/XCB APC APC APC/RCB	100/120 100 100 100/ 350	YES		
160	ESM-2A	Primary-1				3	APC APC/XCB drill/RCB	50 50/70 50/250	YES		
160	ESM-3A	Primary-1				3	APC APC/XCB drill/RCB	135 135/155 135/300	YES		
160	ESM-4A	Primary-1				2	APC APC/XCB	200 200/300	YES		
160	MR-1	Primary-1				1-2	APC/XCB APC	200/300 200	NO		
160	MR-1B	Primary-2				1-2	APC/XCB APC	refusal/35 0 refusal	NO		
160	MR-2	Primary-1				1-2	APC	200	NO		
160	MR-3	Primary-1				1-2	APC	200	NO		
160	MEDSAP-2B	Primary-1				4	APC	refusal	NO		
160	MEDSAP-3	Primary-1				4	APC	100	NO		
160	MEDSAP-4A	Primary-1				4	APC	200	NO		
160	MEDSAP-4C	Primary-2				4	APC	200	NO		
160	MV-1/1, MV-1/2	Primary-1				3	APC	200	YES		
160	MV-2	Primary-2				4	APC	3-200 1-50	YES		

LEG	PRECRUISE NAME	SITE PRIORITY	SITE	HOLE	SUCCESS	# Holes	OPS	Depth	Logged	Objective	SITE_COMMENT
162	BJORN-1		984								
162	FENI-1		980								
162	FENI-2		981								
162	GARDAR-1		983								
162	ICEP-1		907								
162	ICEP-3		985								
162	NAMD-1		982								
164	BRD-1		996								
164	BRH-1A		997								
164	BRH-4		994								
164	BRH-6		995								
164	CFD-5		991								
164	CFD-6		993								
164	CFD-7		992								
168	HT-2A		1023								
168	HT-3A		1024								
168	HT-4A		1025								
168	HT-5A		1028								
168	HT-ALT		1029								
168	LH-2A		1032								
168	PP-4A		1027								
168	PP-5A		1026								
169	BH-2		1035	D							
169	BH-3		1035	A, G							
169	BH-7		1035	B, C, E, F							
169	BH-8		1035	H							
169	Bent Hill		856	H							
169	DD-1		1036	A							
169	DD-2		1036	B							
169	DD-3		1036	C							
169	Dead Dog		858	G							
169	ET-1		1038	A							
169	ET-10		1038	I							
169	ET-2		1038	B							
169	ET-3		1038	C							
169	ET-4		1038	D							
169	ET-5		1038	E							
169	ET-6		1038	F							
169	ET-7		1037	A, B							
169	ET-8		1038	G							
169	ET-9		1038	H							
169	Middle Valley		857	D							
181	SWPAC-10B	Alternate									
181	SWPAC-16A	Alternate									
181	SWPAC-1C	Primary	1119								
181	SWPAC-2B	Primary			NO						
181	SWPAC-3A	Added	1125								
181	SWPAC-5B	Primary	1123								
181	SWPAC-6B	Primary	1120								
181	SWPAC-7B	Primary	1121								
181	SWPAC-8A	Primary	1122								
181	SWPAC-9B	Primary	1124								
182	GAB-01C	Primary	1128								
182	GAB-02B	Primary	1133								
182	GAB-03B	Primary	1134								
182	GAB-04B	Primary	1126								
182	GAB-05B	Primary	1130								
182	GAB-06B	Primary	1132								
182	GAB-07A	Primary	1127								
182	GAB-08A	Alternate	1131								
182	GAB-09A	Primary	1129								
182	GAB-13B	Alternate									
183	KIP-10C	Alternate									
183	KIP-10D	Alternate									
183	KIP-13A	Alternate									
183	KIP-13B	Primary	1135		NO						Drilling problems/substituted by site KIP-13C. KIP-13C added in attempt to reach basement.
183	KIP-13C	Added	1136		PARTIAL						Allowed time expired/other-slow ROP. Basement recovered/dated but not to depth desired due to slow ROP
183	KIP-14C	Alternate									
183	KIP-1A	Alternate									
183	KIP-1B	Alternate									
183	KIP-1D	Alternate	1139		YES						Logging compromised by weather/sea state
183	KIP-1E	Alternate									
183	KIP-2C	Alternate									
183	KIP-2E	Primary	1140		YES						Logging objectives also achieved.
183	KIP-3C	Alternate									
183	KIP-3F	Primary			NO						Substituted by alternate site KIP-1D.
183	KIP-6C	Primary	1137		YES						Logging compromised by weather/hole conditions
183	KIP-6D	Alternate									
183	KIP-7B	Primary	1138		YES						Logging compromised by sea state/time constraints
183	KIP-7C	Alternate									
183	KIP-9B	Primary			NO						Substituted by new site KIP-9D
183	KIP-9C	Alternate									
183	KIP-9D	Added	1141		PARTIAL						Drilling problems/Added site KIP-9E because of stuck/severed pipe.
183	KIP-9E	Added	1142		PARTIAL						Drilling problem and allowed time expired. Pipe stuck/freed, departed for port 2 hrs early.
184	SCS-1	Primary	1144		YES						
184	SCS-2	Primary	1145		PARTIAL						Stopped 250 m short of depth objective of 450 mbsf.
184	SCS-3C	Primary			NO						Substituted by Site SCS-5F
184	SCS-4	Primary	1146		YES						Exceeded depth objective of 520 mbsf by 80 m.
184	SCS-5C	Primary	1148		YES						Exceeded depth objective of 700 mbsf by 150 m.

LEG	PRECRUISE NAME	SITE PRIORITY	SITE	HOLE	SUCCESS	# Holes	OPS	Depth	Logged	Objective	SITE_COMMENT
184	SCS-5D	Alternate									
184	SCS-5E	Alternate									
184	SCS-5F	Added	1147		YES						
184	SCS-9	Primary	1143		YES						Clearance to drill this site still not received as of 2/1/99. Exceeded depth objective of 400 mbsf by 100 m.
185	801	Primary	801		YES						Deepened Hole 801C by 341.4 m
185	BON-10	Primary	1149		YES						
185	BON-8A	Primary									
185	BON-9	Alternate									
185	PIG-3B	Alternate									
186	439	Alternate									
186	JT-1C	Primary	1150		YES						First triple casing installation/first instrument emplacement
186	JT-2G	Primary			NO						JT-2L was cored instead.
186	JT-2L	Added	1151		YES						Longest open hole casing string set in ODP history
186	JT-3	Alternate									
186	JT-4	Alternate									
187	AAD-13B	Primary									Not drilled. All sites were primary sites. Actual locations were chosen after analyses were performed on ICP.
187	AAD-14C	Primary	1160		YES						
187	AAD-16A	Primary	1154		YES						
187	AAD-1B	Primary									not drilled
187	AAD-20A	Primary									not drilled
187	AAD-21A	Primary									not drilled
187	AAD-23A	Primary									not drilled
187	AAD-27A	Primary									not drilled
187	AAD-28A	Primary	1157		YES						
187	AAD-29A	Primary	1158		YES						
187	AAD-2B	Primary	1159		YES						
187	AAD-33A	Primary	1164		YES						
187	AAD-34A	Primary	1156		YES						
187	AAD-35A	Primary	1155		YES						
187	AAD-36A	Primary	1152		YES						
187	AAD-37A										Not drilled. PRS had NA on site priority
187	AAD-38A	Added	1161		YES						
187	AAD-39A	Added	1162		YES						
187	AAD-3B	Primary	1163		YES						
187	AAD-4C	Primary									not drilled
187	AAD-8C	Primary	1153		YES						
188	PBD-12B	Primary	1165		YES						Cored deeper than orginal science depth objective.
188	PBD-13A	Alternate									
188	PBD-15A	Alternate									
188	PBF-4B	Alternate									
188	PBF-5A	Alternate									
188	PBF-6A	Primary	1167		PARTIAL						Lost age control on sediments. Time expired short of depth objective. Sand/hole stability problems.
188	PBF-7B	Alternate									
188	PBS-1A	Alternate									
188	PBS-2A	Primary			NO						Substituted by Site PBS-9B. Ice pack prevented reaching Site PBS-2A.
188	PBS-3A	Alternate									
188	PBS-4A	Alternate									
188	PBS-5A	Alternate									
188	PBS-6A	Alternate									
188	PBS-7A	Alternate									
188	PBS-9B	Added	1166								Achieved operational depth objective.
189	ETP-1A	Alternate									
189	ETP-2A	Primary	1172		YES						
189	SET-1A	Alternate									
189	STR-1A	Alternate									
189	STR-2A	Primary	1171		YES						
189	WSTR-1B	Primary	1169		NO						Weather did not allow high res analysis. Stopped with one hole.
189	WSTR-2A	Primary	1170		YES						
189	WT-1A	Primary	1168		YES						Required only 3 holes instead of 4.
189	WT-2A	Alternate									
190	ENT-01A	Primary	1173		YES						
190	ENT-02A	Alternate									
190	ENT-03A	Primary	1174		YES						
190	ENT-04A	Alternate									
190	ENT-05A	Alternate									
190	ENT-06A	Primary	1176		PARTIAL						Extensive sand, and site not of scientific interest.
190	ENT-07A	Primary	1175		YES						
190	ENT-08A	Alternate									
190	ENT-09A	Alternate	1178		YES						
190	WNT-01A	Primary			NO						Substituted by Site WNT-01B
190	WNT-01B	Added	1177		YES						
190	WNT-02A	Alternate									
190	WNT-03B	Alternate									
191	MARIANA BACKARC	Added	1182		PARTIAL						Replaced Sites SR-1 and 3. HRRS spud tests. Successful test in bare rock, but ran out of time for HRRS casing installation.
191	ROTA 1A	Added	1180		PARTIAL						Replaced Sites SR-1 and 3. HRRS spud tests. Lithology was too soft for successful test.
191	ROTA 1B	Added	1181		PARTIAL						HRRS spud tests. Lithology was too soft for successful test.
191	SR-1	Primary			NO						Because of broken brakes on the drawworks, the ship sailed to Guam to pick up new brake bands shipped from Guam. This, in combination with a medivac and outrunning two typhoons, did not leave enough time to test the HRRS on Shatsky Rise.
191	SR-3	Primary			NO						The HYACE tool was not ready when the leg began. Testing of the tool was moved to Leg 194.
191	WP-2A	Primary	1179		YES						A seismic observatory was successfully installed.
192	OJ-11C	Primary	1185		YES						Depth objective of 100 m basement penetration exceeded. Total basement penetration was 216.6 m.
192	OJ-12A	Added	1186		YES						Scientific objectives attained. Basement penetration = 65.4 m.
192	OJ-14A	Added	1187		YES						Scientific objectives attained. Basement penetration = 135.8 m.
192	OJ-3B	Primary	1183		PARTIAL						Depth objective in basement not reached, but 54% of basalt (80 m penetration) was recovered. This provides abundant material for post cruise research.
192	OJ-3C	Alternate									
192	OJ-6B	Primary			NO						Substituted by site OJ-6D.
192	OJ-6C	Alternate									

LEG	PRECRUISE NAME	SITE PRIORITY	SITE	HOLE	SUCCESS	# Holes	OPS	Depth	Logged	Objective	SITE_COMMENT
192	OJ-6D	Added	1184		PARTIAL						Exceeded depth objective of 100 m into acoustic basement. However, acoustic basement was volcaniclastic sediment instead of basaltic lava flows. Total penetration was 337.7 m into basement.
192	OJ-7D	Primary			NO						Substituted by Site 12A because approval was not granted to drill at this site by Government of Solomon Islands.
192	OJ-7E	Alternate									
193	PCM-1A	Primary	1190		NO						Allowed time expired. PNG Customs agents required ship to leave 2 days ahead of schedule.
193	PCM-2A	Primary	1188		YES						
193	PCM-3A	Primary	1189		YES						
193	PCM-4A	Primary									why was this site not drilled?
193	PCM-5A	Alternate									
193	PCM-6A	Alternate									
193	PCM-7A	Alternate	1191								n/a under science objectives
194	CS-01A	Primary	1193		YES						ADCB testing in 1193B. Severed pipe in 1193C. Site recovery was 30.0%
194	CS-02A	Primary	1194		YES						Logged hole 1194B. APC/XCB/RCB at two holes. Site recovery was 44.2%.
194	CS-03A	Alternate									
194	CS-05A	Primary	1198		YES						Partial logging. Two hole with APC/XCB/RCB. Stuck pipe episodes. Site recovery was 56.5%.
194	CS-06A	Primary	1196		YES						RCB/ADCB in two holes. Logging. Stuck pipe episodes. Site recovery was 12.4%.
194	CS-08A	Alternate	1197		YES						No logging. Two holes. APC/XCB/RCB.Site recovery was 32.6%.
194	CS-09A	Alternate									
194	CS-10A	Primary	1195		YES						Two holes. APC/XCB. Hole 1195A aborted due parted core line.Partial logging.Recovery was 79.5%.
194	CS-11A	Alternate									
194	CS-12A	Alternate									
194	CS-13A	Alternate	1192		YES						HYACE testing site. APC/XCB. No logging. Recovery was 82.9%.
194	CS-14A	Alternate									
194	CS-15A	Alternate									
194	CS-16A	Alternate	1199		YES						One RCB hole. Partial logging. Site recovery was 22.0%.
194	CS-17A	Alternate									
195	KS-1	Alternate	1202		YES						Alternate site cored off Taiwan-bonus site! 4 x APC to refusal, XCB to TD. No wireline logging due to current induced DP vibration.
195	MAF-4B	Primary	1200		YES						Shallower hole depth deemed acceptable to meet CORK science objectives.
195	WP-1B	Primary	1201		YES						Shallower hole depth deemed acceptable to meet ION seismometer needs.
196	1173	Primary	1173		YES						ENT-01A on Leg 190. Leg 196 is the second of two legs (Leg 190 was the first) to drill in Nankai.
196	1174	Primary			NO						ENT-03A on Leg 190. Insufficient time to complete this work.
196	1175	Alternate									ENT-07A on Leg 190
196	1176	Alternate									ENT-06A on Leg 190
196	1177	Alternate									WNT-01B on Leg 190
196	1178	Alternate									ENT-09A on Leg 190
196	808	Primary	808		PARTIAL						Site numbers are used for Leg 196 precruise names because some of the sites were moved when they were drilled. The ACORK installation was not completed and the shallow LWD hole was not drilled due to time.
196	ENT-02A	Alternate									
196	ENT-04A	Alternate									
196	ENT-05A	Alternate									
196	ENT-08A	Alternate									
196	ENT-10A	Alternate									
196	WNT-01A	Alternate									
196	WNT-02A	Alternate									
196	WNT-03B	Alternate									
197	HE-1A	Alternate									
197	HE-1B	Primary									
197	HE-2	Alternate									
197	HE-2A	Alternate									
197	HE-3	Primary	1204		PARTIAL						Penetration in basement was adequate to recover the minimum number of flows required. Time expired for Detriot area and cut short drilling here.
197	HE-3A	Primary	1203		YES						Basement penetration was 452.6 m and fully satisfied recovery of needed flow units
197	HE-3B	Primary									
197	HE-4A	Primary	1205		YES						Basement penetration was 283.3 and fully satisfied recovery of needed flow units
197	HE-4B	Primary									
197	HE-5A	Alternate									
197	HE-5B	Alternate									
197	HE-5C	Primary									
197	HE-5D	Alternate									
197	HE-6A	Primary	1206		YES						Basement penetration of 278.2 m fully satisfied recovery of needed flow units.
197	HE-6B	Alternate									
198	DSDP-305	Alternate	1211		YES						Excellent record of Paleogene and upper Cretaceous.
198	DSDP-306	Alternate	1214		PARTIAL						Chert hindered recovery in Cretaceous.
198	DSDP-47.2	Alternate	1212		YES						Excellent record of Paleogene and upper Cretaceous.
198	SHAT-10	Alternate									
198	SHAT-11	Alternate									
198	SHAT-12	Alternate									
198	SHAT-13	Alternate									
198	SHAT-14	Alternate									
198	SHAT-1A	Primary	1209		YES						Excellent record of Paleogene and upper Cretaceous.
198	SHAT-2C	Primary	1210		YES						Excellent record of Paleogene and upper Cretaceous.
198	SHAT-3	Primary	1213		PARTIAL						Chert hindered recovery in Cretaceous; stormended logging early. Still recovered black shale (OAE1a).
198	SHAT-4	Primary	1208		PARTIAL						Unexpected uncomformity - most of Paleogene was missing. Outstanding Neogene recovered.
198	SHAT-5C	Primary	1207		PARTIAL						Chert hindered recovery in Cretaceous. Still recovered black shale (OAE1a).
198	SHAT-6	Alternate									
198	SHAT-7	Alternate									
198	SHAT-8	Alternate									

LEG	PRECRUISE NAME	SITE PRIORITY	SITE	HOLE	SUCCESS	# Holes	OPS	Depth	Logged	Objective	SITE_COMMENT
198	SHAT-9B	Alternate									
199	PAT-10B	Primary	1221		YES						
199	PAT-12C	Primary	1222		YES						
199	PAT-13C	Alternate									
199	PAT-14B	Alternate									
199	PAT-15D	Primary	1215		YES						
199	PAT-16A	Alternate									
199	PAT-17C	Primary	1219		YES						
199	PAT-18A	Alternate									
199	PAT-19A	Primary	1217		YES						
199	PAT-21	Alternate									
199	PAT-23A	Alternate									
199	PAT-26A	Primary	1216		PARTIAL						Chert problems caused an early departure
199	PAT-6D	Alternate									
199	PAT-8C	Primary	1218		YES						
199	PAT-9D	Primary	1220		YES						
200	H20-2	Alternate									
200	H20-3	Alternate									
200	H20-4	Alternate									
200	H2O-1	Primary			NO						Substituted by site H2O-5
200	H2O-5	Added	1224		YES						Added NE junction box, away from cable,& after PDR survey
200	NU-1	Alternate	1223		YES						Ancillary proposal after Prospectus finished, subject to leaving port early.
201	EQP-1A	Primary	1226		YES						
201	EQP-2A	Primary	1225		YES						
201	PRB-1A	Alternate									
201	PRB-2A	Primary	1231		YES						
201	PRU-1A	Primary	1229		YES						
201	PRU-2A	Primary	1228		YES						
201	PRU-3A	Primary	1227		YES						
201	PRU-4A	Primary	1230		YES						
201	SITE 679	Alternate									
201	SITE 682	Alternate									
201	SITE 683	Alternate									
201	SITE 686	Alternate									
201	SITE 687	Alternate									
201	SITE 688	Alternate									
201	SITE 844	Alternate									
201	SITE 845	Alternate									
201	SITE 847	Alternate									
201	SITE 848	Alternate									
201	SITE 850	Alternate									
201	SITE 852	Alternate									
201	SITE 853	Alternate									
202	CAR-1C	Primary	1239		YES						
202	CAR-2C	Primary	1238		YES						
202	COC-2A	Alternate	1241		YES						
202	COC-3A	Added									
202	COC-4A	Alternate	1242		YES						Recovery passed 7 kilometers at this site
202	NAZCA-10A	Primary	1236		YES						
202	NAZCA-14A	Alternate									
202	NAZCA-16A	Alternate									
202	NAZCA-17A	Primary	1237		YES						
202	PAN-2A	Primary	1240		YES						
202	SEPAC-10A	Alternate									
202	SEPAC-13B	Primary	1234		YES						
202	SEPAC-14C	Primary	1235		YES						
202	SEPAC-19A	Alternate	1233		YES						Spectacular results!
202	SEPAC-5A	Alternate									
202	SEPAC-9A	Primary	1232		PARTIAL						Turbidites reduced core quality
203	OSN-2	Primary	1243		YES						20 in. x 10-3/4 in. casing, set Cmt at 4081 mbrf, cmt bond & inclination log. Logged triple combo, FMS, and WST.
204	HR-1A	Primary	1244								
204	HR-1B	Alternate	1246								
204	HR-1C	Alternate									
204	HR-2	Alternate									
204	HR-2ALT	Primary	1251								
204	HR-2ALTB	Alternate									
204	HR-3A	Primary	1245								
204	HR-4A	Primary	1250								
204	HR-4B	Primary	1249								
204	HR-4C	Primary	1247								
204	HR-5A	Alternate	1252		YES						
204	HR-6	Alternate	1248								
205	1039R	Alternate									
205	1039R-A	Primary	1253		PARTIAL						Basement not reached, hole TD ended in thick gabbro sill, CORK-II installation completed, setting go-devil stuck in DP, packer not set, spool valves not actuated
205	1040R	Alternate									
205	1040R-A	Primary			PARTIAL						Allotted time expired. CORK-II installation successfully completed.
205	1040R-B	Primary	1254		PARTIAL						Drilling problems. Cores collected through decollement. Hole 1254A abandoned due to collapsed 10-3/4 in. casing. Hole 1254B abandoned due to CORK-II 4-1/2 in. casing parting below wellhead.
205	1040R-C	Alternate			NO						Substituted by alternate Site 1043R-A.
205	1040R-D	Alternate									
205	1043R	Alternate									
205	1043R-A	Alternate	1255		YES						CORK-II installation successfully completed.
206	GUATB-01A	Alternate									
206	GUATB-03A	Alternate									
206	GUATB-03B	Alternate									
206	GUATB-03C	Primary	1256								
207	DR-1B	Alternate									
207	DR-2	Primary			NO						
207	DR-3	Alternate									
207	DR-3C	Primary	1258		YES						
207	DR-4B	Alternate									
207	DR-5B	Primary	1259		YES						
207	DR-6B	Alternate									
207	DR-6C	Alternate									
207	DR-7B	Alternate	1261		YES						
207	DR-8B	Primary	1257		YES						
207	DR-9	Added	1260		YES						
208	WALV-10A	Alternate									
208	WALV-10B	Alternate									
208	WALV-10C	Primary									
208	WALV-10D	Alternate									
208	WALV-10F	Added	1266		YES						Substituted for WALV-10C
208	WALV-11A	Alternate									

LEG	PRECRUISE NAME	SITE PRIORITY	SITE	HOLE	SUCCESS	# Holes	OPS	Depth	Logged	Objective	SITE_COMMENT
208	WALV-11B	Primary	1267		YES						
208	WALV-11C	Alternate									
208	WALV-11D	Alternate									
208	WALV-12A	Primary	1262		YES						
208	WALV-12B	Alternate									
208	WALV-12C	Alternate									
208	WALV-13B	Alternate									
208	WALV-8A	Alternate	1264		YES						Substituted for WALV-8B
208	WALV-8B	Primary									
208	WALV-8C	Alternate									
208	WALV-8E	Added	1263		YES						
208	WALV-9A	Primary									
208	WALV-9B	Alternate	1265		YES						Substituted for WALV-9A
209	MAR-1N	Primary									
209	MAR-1S	Primary									
209	MAR-2N	Primary									
209	MAR-2S	Primary									
209	MAR-3N	Primary									
209	MAR-3S	Primary									
209	MAR-4S	Primary									
209	MAR-ALT1N	Alternate									
209	MAR-ALT1S	Alternate									
209	MAR-ALT2N	Alternate									
209	MAR-ALT2S	Alternate									
210	NNB-01A	Primary									
210	NNB-01B	Alternate									
210	NNB-01C	Alternate									
210	NNB-03A	Alternate									
210	NNB-04A	Alternate									
210	NNB-05A	Alternate									
210	NNB-06B	Alternate									