



Date: August 3, 2001  
To: Kier Becker, SCICOM Chair – JOIDES Office  
From: George E. Claypool, Chair, JOIDES PPSP  
Subject: PPSP Meeting June 21-22, 2001

A Joint meeting of the JOIDES/TAMU Pollution Prevention and Safety Panels was held on 21-22 June 2001 in the Aurora Borealis Room of the Clarion Hotel Bryggen, Tromsø, Norway.

**Panel Members present:**

(JOIDES):

Andreassen, Karin  
Claypool, George  
DeSilva, Niel  
Francis, Tim  
Juvkam-Wold, Hans  
Katz, Barry  
Lowell, Jim

MacKenzie, Dave  
Purdy, Ed  
Strack, Dieter  
Suzuki, Uko  
Verdier, M. Pierre  
Watkins, Joel

(TAMU):

Baldauf, Jack  
Burke, Kevin

Hovland, Martin  
Thompson, Tom

**Liason:**

Bruce, Bob  
Coffin, Mike  
Giarratano, Millie  
Hashimoto, Tsukuru

Morris, Julie  
Ninnemann, Ulysses  
Sager, Will  
Trehu, Ann

**Apologies:**

Ball, Mahlon  
Becker, Keir

Flemings, Peter  
Green, Art

George Claypool opened the meeting requesting self-introductions and circulating a signature list. Minutes of the last meeting were approved. Meeting host Karin Andreassen welcomed attendees to Tromsø and discussed logistics and meals.

Jack Baldauf reviewed drilling results for legs 193-196, and outlined some schedule changes for Legs 197-205.

Mike Coffin reported on the SCICOM meeting in Shanghai. No developments involving PPSP were reported. A question was raised about safety reviews for mission-specific platform legs.

Millie Giarratano led a discussion about distribution of safety packages from the ODP databank. In general, PPSP members appreciated being able to access electronic PDF versions of the safety packages, but still preferred to get receive them by mail. A continuing problem is failure to receive safety packages until arrival at the meeting, which limits panel members preparation for safety reviews. Suggestions were made for the Databank to set earlier deadlines for receipt of safety materials from proponents, and send reminders prior to deadlines.

Julie Morris described science objectives and discussed sites proposed for Leg 203 (Costa Rica margin). All sites were previously drilled on Leg 170. The plan for Leg 203 is for intermittent coring of sediments and basement penetration with installation of CORKS. The following sites were approved:

**LEG 203 Costa Rica Margin**

Site	Latitude	Longitude	Water Depth (m)	Penetration (mbsf)
1039R	9° 38.4'N	86° 12'W	4352	780 (wash to 340 mbsf)
1040R	9° 39.7'N	86° 10.7'W	4177	920 (wash to 620 mbsf)
1043R	9° 39.3'N	86° 11.2'W	4313	200 (OK to wash if desired)

Note: Location coordinates are for Leg 170 sites. Leg 203 Sites will be located at the same sites within a distance equal to 1% of water depth of the Leg 170 sites.

Jack Baldauf presented drilling plans for Leg 205, Equatorial Pacific ION (International Ocean Network). Proposed is a cased, cemented hole fitted with a reentry cone to support a seismic observatory. The hole will be drilled through 116 m of sediment and at least 100 m into underlying basement. The following site was approved:

**LEG 205 Equatorial Pacific ION**

Site	Latitude	Longitude	Water Depth (m)	Penetration (mbsf)
OSN-2	5° 17.566'N	110° 4.579'W	3860	300

Anne Trehu had previewed the Hydrate Ridge proposal at the December 9-10, 1999 PPSP meeting, and returned to present the formal safety review for Leg 204 in Tromsø. The Leg 204 proponents requested PPSP approval for (1) a series of logging-while-drilling (LWD) holes prior to coring at the same sites, and (2) approval for coring anywhere within the 3-D seismic survey except at areas specified by PPSP as unsafe. In the ensuing discussion, PPSP recommended that coring be done prior to the LWD holes, and that specific sites be reviewed. Ulysses Ninnemann from the Lamont Borehole Research Group attended the PPSP meeting to facilitate discussion of LWD capabilities, in addition to providing a written description of LWD gas detection systems, which was distributed with the safety package. The following sites were approved:

<b>LEG 204 Hydrate Ridge</b>					
<b>Site</b>	<b>3-D Line</b>	<b>3-D Trace</b>	<b>Water Depth(m)</b>	<b>Penetration(mbsf)</b>	
HR-3	240	278	844	350	
HR-1a	230	465	935	300	
HR-2	300	742	1200	400	
HR-4b	300	283	762	60	
HR-4a	308	272	792	100	
HR-4c	268	268	784	240	
HR-6	283	250	850	60	

The sites approved are located by coordinates within the 3-D seismic survey grid, and should be specified by latitude and longitude. The ODP Site Description forms and Safety Sheets were not available and should be provided by proponents for Sites HR-4a, -4b, -4c, and -6. PPSP understands that HR-3 will be cored first. If no safety concerns are identified by shipboard review, then LWD could commence at Sites HR-1 and HR-2 without coring. Some of the Leg 204 sites were approved to penetration depths less than requested by proponents, because processing of seismic records was such that structural details of the deeper sediments were not visible on copies available at the meeting. JOIDES PPSP member Joel Watkins specified the type of reprocessing recommended. Deeper penetration at selected sites and two additional sites (HR-5 and a companion site to HR-1a) will be reviewed at the next meeting of PPSP.

Tim Francis presented information on the HYACE pressure sampling tool being developed by a European Consortium for use on ODP Legs.

Claypool led a discussion of PPSP policies for coring on the upper slope of the Gulf of Mexico. Proposals for study of Gulf of Mexico gas hydrates and shallow overpressures had been flagged at the last Site Survey Panel meeting as potentially having safety problems. The safety problems were of a general nature in that PPSP traditionally has avoided approving ODP holes in areas of petroleum occurrence and active exploration, or in sediments where oil seeps are known to occur. Moreover, PPSP has issued standing advice (PPSP Safety Manual, 1992) to shipboard personnel that coring should be terminated at sites where migrated petroleum hydrocarbons are observed in the cores. The sense of the discussion was that PPSP policies should evolve as we gain experience and knowledge, and that proposed coring sites should be evaluated on a case-by-case basis without regional exclusions due to known petroleum occurrence. PPSP will require much more detailed site survey information for such sites, and approval may not be possible at a single meeting. In addition, some of the traditional advice from PPSP to the ODP operator and shipboard personnel (to cease drilling operations if migrated hydrocarbons are encountered in cores) will need to be modified, and conditions specified under which drilling operations could be continued in the face of such encounters. New guidelines for offshore drilling issued by the U.S. Minerals

Management Service were mentioned. It was felt that ODP should comply with the spirit of these guidelines, but not be bound by the formal permitting procedures of MMS.

Following this discussion of PPSP policies, Will Sager presented a preview of a proposal to core gas hydrate occurrences located over hydrocarbon seeps on the upper slope of the northern Gulf of Mexico. A summary of the proposal is published as paper number OTC 12111 in the proceedings of the 2000 Offshore Technology Conference. Site survey data of adequate quality will not be available in time for this proposal to be scheduled in the remainder of the current ODP program. PPSP discussion indicated only that high quality (industry standard) site survey information would be required, and that coring would likely be limited to shallow penetrations.

Bob Bruce of BHP petroleum represented the proponents for the proposal “Overpressures and fluid flow processes in the deepwater Gulf of Mexico”. He previewed plans for coring and LWD holes of 350-600 meter penetrations at two locations in the Brazos-Trinity Basin #2 south of Galveston, and at three locations in the Ursa Basin, near the Mars and Ursa fields in the Mississippi Canyon area of the Gulf of Mexico. High quality site survey data is being released by Shell Oil for use in this project. Proposed sites are located away from (but within 3 miles of) sea-floor fluid expulsion vents. Drilling to date has not encountered hydrocarbons in the sands to be penetrated. While the shallow overpressure problem being investigated appears to be more of an economic hazard than a safety hazard, there was a feeling that both of these Gulf of Mexico proposals push the limits of the normal PPSP review process. In addition to the requirement of high-quality site survey data, they probably will require a review that is more intensive than that normally given by PPSP, possibly involving some independent geotechnical expertise not currently represented on PPSP.

Tim Francis raised the point that drilling with weighted mud with returns to the seafloor, as proposed to control the shallow overpressure, may be outside the comprehensive Environmental Impact Statement within which ODP currently operates.

The final preview was presented by Karin Andreassen, PPSP member and proponent for the Storegga Slide gas hydrate drilling proposal. A proposed drilling leg will investigate the possible link between gas hydrate dissociation and slope instability. Three holes of 400-600 meter penetration will be drilled on the Mid Norwegian continental slope adjacent to the slide scar in an area with variable BSR characteristics. Up to four holes of 260-670 meter penetration will be drilled within the slide scar and slump deposits. This proposed gas hydrate drilling was viewed by PPSP as posing lesser safety problems than the Hydrate Ridge and Gulf of Mexico gas hydrate proposals.

The Honolulu port call on December 17-18, 2001 was selected for the next PPSP meeting. (Subsequent events required a change to Miami on December 3-4, 2001). The meeting was closed by thanking Karin Andreassen for her service on PPSP and for hosting the meeting in Tromsø.