

OCEAN DRILLING PROGRAM
SITE SURVEY PANEL MINUTES
Pacific Geoscience Centre
Sidney, B.C., Canada
22-25 April, 1986

Present: *John Peirce (Chairman, Canada)
*Fred Duennebier (USA)
*John Jones (UK)
*Marcus Langseth (USA)
*Alain Mauffret (France)
*Wilfred Weigel (Germany)
*Kiyoshi Suyehiro (Japan)
Carl Brenner (ODP Data Bank)
Tim Francis (PCOM Liaison)
Rob Kidd (TAMU)
Tony Mayer (JOIDES Office)

Guests: Roy Hyndman (PGC)
Earl Davis (PGC)
Mark Brandon (PGC)
Ron Clowes (UBC)
Chris Yorath (PGC)

Absent: None

1. Preliminary Matters

Roy Hyndman welcomed all to the Pacific Geoscience Centre
The minutes from the Tokyo meeting were approved without changes.

2. Report from PCOM (Tim Francis)

ESF will sign MOU at EXCOM. Nordic countries are 50%. Others include Italy, Switzerland, Netherlands, Belgium, Spain, Turkey, Greece.
Bernard Munsch in Strasbourg is the coordinator for ESF.

The Indian Ocean schedule is still very uncertain due to site survey deficiencies and clearance problems, particular in the Red Sea. An MCS site survey cruise on SUROIT was cancelled because of clearance problems. TECP and SOHP have been asked to comment on their priorities for various alternatives for the Indian Ocean schedule if currently planned legs have to drop out.

Panel structure was debated at length at PCOM and at a meeting of panel chairman. No changes planned to structure, but proposal flow changed somewhat to give thematic panels more input and to attempt to have one synthesized recommendation of drilling plans go to PCOM.

The COSOD II meeting will be in Strasbourg, July 6-8, 1987.

3. JOIDES Report (Tony Mayer)

The new JOIDES Journal Safety Guidelines was distributed.

The JOI Performance Evaluation Committee report has been sent to JOI.

Nick Piasias (OSU) will be next PCOM Chairman, starting in October.

Tony's replacement not yet appointed, but there is a short list of candidates.

ESF membership will generate some extra funds but much of these are likely to be used to build up the drilling consumable supplies which had been drawn down to very low levels. FY-87 budget will be approx. \$36 million.

USSR membership moving ahead, but still politically uncertain.

Part A publications are proceeding on schedule for 12 months post-cruise, although early legs are behind. Part B publication still uncertain.

Site chapters to be included in Part A.

NSF deadline is June 1, 1986 for proposals for site surveys for the Pacific for calendar year 1987 ship time in order to make the August UNOLS meeting.

4. Science Operator's Report (Rob Kidd)

Leg 107 obtained good results detailing the southeasterly migration of back arc crustal development in the Tyrrhenian Sea.

Leg 108 tested successfully the mini-re-entry cone and the sidewall-sub for logging. All sites planned by the Co-Chiefs were drilled.

Co-Chief Scientists named are:

Leg 111 Becker/Sakai
Leg 112 von Huene/Suess
Leg 113 Barker/Kennett
Leg 114 La Brecque/Ciesielski

A memo from Elliot Taylor regarding geotechnical work on piston cores taken for re-entry was discussed.

The Site Survey Data Standards matrix was revised and amplifying language added to support it.

Principal changes include:

- (a) Details regarding geotechnical work on piston cores.
- (b)
- (c)
- (d)
- (e)

The revised matrix is attached as Appendix A. It will be published in the June JOIDES Journal.

Action: Peirce send copy of new matrix to Brass at NSF and ask that it be sent to reviewers for information when site survey proposals are sent out. Mayer to arrange publication.

There was considerable discussion on this topic. ODP policy is to publish the site survey results in Part A. Interpretations using the drilling results must be deferred to Part B, but two manuscripts may be submitted at the same time. Once a manuscript is accepted, an author is free to publish elsewhere.

Action: (Langseth/Duenebier)

The SSP recommends that scientists chiefly responsible for site surveys normally be invited to post-cruise meetings in order to encourage collaboration between site survey and drilling scientific activities.

The SSP reiterates its support for the inclusion of a synthesis of site survey data within Part A of the ODP Proceedings. Part A manuscripts on site survey work should be submitted pre-cruise whenever possible. Interpretation of the survey data in light of the drilling results should be included in Part B.

Passed 6 for, 1 abstention.

The video from Leg 106 was shown.

5. ODP Data Bank (Carl Brenner)

Activity for the first half of FY-86 is continuing at the same level as in 1985. (Appendix B).

Data Bank has started to put together a world scale map showing swath bathymetry (SEABEAM) coverage. After discussion, Data Bank is encouraged to complete this map and extend the project to include Gloria and SeaMARC II coverage.

Action: Brenner write to ODP members and JOIDES institutions asking them to supply index maps of above data coverage at specified scale.

6. Panel Membership (Peirce)

At the request of PCOM a panel membership rotation plan was discussed. As both US members are new to the panel they were not included. The following changes are planned.

W. Weigel to be replaced by K. Wong (Hamburg) in the summer of 1986. Weigel will continue to be watchdog for the drilling packages assigned to him.

J. Jones will be replaced by R. Kidd in December, 1986 after the fall SSP meeting.

A. Mauffret will be replaced in summer, 1987.

Action: Mauffret find replacement for himself as of summer, 1987.

The new Japanese alternate member is Kensaku Tamaki (ORI, Tokyo), who is also on the WPAC panel.

No US alternatives have been named.

Action: Langseth get USSAC to appoint SSP alternates.

Peirce write Munsch to encourage early appointment of ESF member and alternative.

7. PANCHM Meeting (Mayer/Peirce)

The minutes of the meeting were reviewed.

Of particular interest to SSP was the comment about the SSP assuming oversight responsibility for the underway geophysics lab on the RESOLUTION.

Current underway geophysics is noise limited by ship's hull turbulence to site approaches at low speed. TAMU investigating towed 3.5 kHz fish and has consultant trying to find better hull locations for transducers.

Several people expressed strong support for serious consideration of an underway seismic system as many of RESOLUTION tracks will cover sparsely tracked areas. Collette at Utrecht has experience with seismic from freighters. The French have a special high speed streamer.

Action: Duennebier and Jones will form an Underway Geophysics Committee to work with TAMU to investigate the current underway geophysics capability on the RESOLUTION, the options for solving problems identified and make recommendations for or against upgrading equipment. An initial report shall be made at our next meeting.

8. Ship Schedule

Modified ship schedules are attached as Appendices C, D, E, and F.

France: Mascereene Fossil Ridge survey cancelled. Red Sea cruises on standby pending clearance resolution. Two additional MCS cruises in WPAC planned for 1987 (Sulu Sea and Vanuatu), but final funding not yet approved. Also possible MCS cruise in Nauru Basin.

Germany: The new METEOR will be in northern Indian Ocean for non-geophysical work from March - July, 1987. Some 3.5 kHz, gravity and SEABEAM coverage could be obtained if critical needs identified.

UK: New DARWIN and other NERC ship schedules attached.

USA: New CONRAD schedule attached. Dick cruise to SWIR now funded for Sept./Oct., 1986. La Brecque will do eastern Sub Antarctic immediately following on CONRAD. Western Sub Antarctic will be done on POLAR DUKE prior to that.

The Sclater add-on proposals for Bengal Fan bottom navigated heat flow and southern Ninetyeast Ridge are still being considered at NSF. Decision due by next PCOM meeting.

9. IOP (Peirce)

Briefly reviewed IOP planning and safety problems on Exmouth Plateau.

ACTION: Peirce write to Schlich to have Mauffret invited to Strasbourg meeting as liaison. Jones is alternative choice if Mauffret can't attend.

10. SOHP (Mayer)

Larry Mayer (Dalhousie) is new chairman. Briefly reviewed items discussed at SOHP meeting. Their priorities for Indian Ocean alternatives are Somali deep hole, Argo/Exmouth deep hole, followed by targets in the Pacific. SOHP would support Neogene II, should the ship remain in the Indian Ocean for its present allotted time.

11. WPAC (Langseth)

Brief overview of reduced list of drilling proposals. See further discussion below.

WPAC will assign individuals as contacts for each drilling package to work with our watchdogs on site survey assessments. WPAC responsive to the need to get data into Data Bank.

SSP watchdogs were assigned to the WPAC drilling packages. These are as follows:

Lau Basin	Duennebier
Bonin - Mariana	Duennebier
Vanuatu	Mauffret
Sulu Sea	Mauffret
Bandu Sea	Langseth
Great Barrier Reef	Jones
Japan Sea	Tamaki
S. China Sea	Peirce
Nankai	Suyehiro
Sunda	Wong
Manila Trench	Langseth
Zenisu	Mauffret
Sulu Transect	Mauffret
Tonga Transect	Wong
Downhole Experiments	Jones

Action: Brenner send relevant proposals to all SSP watchdogs. Watchdogs prepare brief synopsis for discussion at next meeting. Bring overhead and handouts of site locations being considered.

A new Japanese "Telephone Book" of proposals will be out this summer containing revisions to the existing proposals. ORI is continuing to negotiate with JNOC for access to selected MCS.

12. Site Survey Assessments

(a) Barbados North (Brenner/Lanseth)

The Data Bank has synthesized French and US SEABEAM data into one map with integrated track chart overlays.

Final navigation of Line 128 moved the line about 1.5 miles relative to earlier plots of its location. Sites originally proposed an oblique crossings are no longer exactly on crossings. PPSP has been asked to review the new information.

A heat flow profile near the prime sites shows an increase in heat flow over the accretionary wedge and evidence for water flow. A similar southern profile near the alternate sites shows a decrease in heat flow over the accretionary wedge and no evidence of water flow. There is also a BSR near the alternate sites.

There is no high resolution SCS in the area but this deficiency is not considered critical in light of the previous drilling data available.

The site survey data are adequate for Leg 110.

(b) 504B

The site survey data for Leg 111 are adequate.

(c) Peru Margin

The positions of the paleo-environmental (PE) sites have all been adjusted to have at least 40-60 m of sediments above a presumed dolomitic limestone reflector.

Shallow water depths and currents will be an operational problem. TAMU engineers feel that they can position the ship adequately in shallow water but they are concerned that piston coring in shallow water may not work properly. They will have a report ready by the next PCOM.

SOHP priorities on this leg are, in descending order: 3, 1, 5, 3A, 2, 2A (slightly deeper than 2), 4A, and 4B (at 300 and 400m), 10, 11, 9.

TECP priorities in this leg are, in descending order: 3, 6 or 7, 14, 17.

There is no high resolution SCS seismic in the area. No one has seen the existing SCS which is at OSU.

Recommendation: The data package available to SSP supporting the PE sites is totally unsatisfactory.

The SSP contacted Todd Thornberg at OSU and invited him to bring the OSU SCS to the meeting for assessment.

The data supporting the tectonic objectives arrived at the Data Bank late and in disarray, making assessment difficult, time consuming and frustrating. However, SSP believes that all necessary data are now available.

ACTION: Brenner prepare ASAP a complete package for final assessment by Mauffret. Mauffret to telex Peirce/Larson with his conclusions in mid-May, prior to the PCOM meeting.

Recommendation: The data at Site 3 are adequate for PE objectives but are not adequate for tectonic objectives. A crossing MCS line is needed for safety considerations in order to see through a water bottom multiple which occurs at the level of the Paleozoic/Mesozoic unconformity. A crossing SCS by Charcot (only analog SCS on board) would be very useful; but is unlikely to resolve closure question because of the water bottom multiple.

Sites 6 and 7 appear to be near a canyon, which could cause drilling problems. TAMU and the Co-Chiefs need to consider how this circumstance will affect recovery.

Site 8: Line 13 is now migrated. There is a crossing line.

Action: Mauffret check for BSR on migrated section for final assessment.

Sites 14, 15, 16, & 17:

Action: Duennebier send HIG bathymetric overlays to Data Bank ASAP. Mauffret assess severity of slumping seen at sites 15, 16 & 17 on SeaMARC data.

The bathymetry maps from the HIG SeaMARC are completed and are reported to be excellent. Apparently there is no need for French SEABEAM data on Lines 1 and 2.

The alternate sites on Line 3 can not be adequately documented without crossing MCS or an MCS survey. Good swath bathymetry also needed.

(d) Weddell Sea

W1, W2, W4: Adequate data available once POLARSTERN data processed. Weigel will complete assessment once these data are available.

W3: POLARSTERN did not collect additional data. Present data are not adequate for drilling.

W5, W6, W7, W8: Barker expected to deliver final MCS to the Data Bank next week. Expect adequate data available then.

W9: Present data are not adequate for drilling.

W10: Prime alternate site and SOHP priority. Adequacy of data unclear until we know site locations(s) relative to available data. No heat flow was done on POLAR DUKE.

Recommendation: SSP recommends that heat flow measurements be added to the shipboard science program at W10 as young volcanics are visible on SCS.

W11: SCS data from Barker have excellent penetration but poor resolution. Data quality is adequate for site objectives except that no velocities are apparently available to estimate sediment thickness. A crossing line on site approach is necessary to improve stratigraphic resolution.

Action: Brenner telex Peirce/Mayer/Weigel with status after Barker visit. Brenner will ask Barker whether velocity data available at W11 and clarify status of W10. Send new data to Weigel ASAP.

Weigel attend SOP meeting, obtain copies of POLARSTERN data, complete final assessment, and telex final conclusions to Peirce/Larson, before PCOM meeting if possible.