Meeting Minutes – 14th EPSP Meeting

Hyatt Place College Station Hotel

College Station, TX

April 8-9, 2013

Meeting was called to order by Barry Katz, EPSP Chair at 8:30 in the Hyatt Place College Station Hotel, College Station, TX.

Mitch Malone, meeting host, provided a brief overview of meeting logistics.

All attendees conducted self introductions.

> Panel members present: Earl Doyle, Brandon Dugan, Jennifer Henderson, Martin Hovland, Chiaki Kato, Barry Katz (Chair), Philippe Lapointe, Nobuo Morita, Sadao Nagakubo, Shigemi Naganawa, Yoshifuni Nogi, Kyosuke Onishi, Craig Shipp, Dieter Strack, Toshiki Watanabe, and Bill Winters
>
> Guests present: Jamie Allen (NSF), Thomas Andrén (Proposal 672), Kan Aoike (CDEX), Philip Barnes (Proposal 781), Peter Blum (IODP-TAMU), Kara Bogus (IODP-TAMU) George Claypool (TAMU SP), Brad Clement (IODP-TAMU), Neil DeSilva (TAMU SP), Sean Gulick (Proposal APL 809), Stuart Henrys (Proposal 781), Yoshi Kawamura (IODP-MI), Adam Klaus (IODP-TAMU), Denise Kulhanek (IODP-TAMU), Chun-Feng Li (Proposal 735CPP), Jian Lin (Proposal 735CPP), David Mallinson (SCP), Mitch Malone (IODP-TAMU), Shigemi Matsuda (CDEX), Tim McHargue (TAMU SP), Stephen Midgley (IODP-TAMU), Kyaw Moe (CDEX), Katerina Petronotis (IODP-TAMU), Leah Schneider (IODP-TAMU), Yoshihiko Tamura (JAMSETC), Mikiya Yamashita (JAMSETC), and Carlos Alvarez Zarikian (IODP-TAMU)

Meeting agenda was reviewed and no modifications were requested.

No additional changes were suggested for the 13th EPSP Meeting Minutes and minutes were approved as final.

Barry Katz discussed changes to the operations of EPSP with the new phase of drilling. It was noted that the panel's primary responsibility will be to the operations of the *JOIDES Resolution* and that the panel will report to the JR Facility Board. Panel representation will change as a result of changes in participation. Other operators may request the assistance of EPSP. Specifics will be established by each Facility Board. Jamie Allen contributed to the discussion. Noting that the next fiscal year will be a transitional year from current operations to the new operational scheme.

Review – Proposal 781 - Unlocking the secrets of slow slip by drilling at the Hikurangi subduction margin, New Zealand

Stuart Henrys presented an overview of the scientific objectives of the proposal: 1) characterize the *state* and *composition* of the incoming plate and shallow plate boundary fault near the trench, which comprise the protolith and initial conditions for fault zone rock at greater depth in the SSE slip zone; 2)

Characterize material properties, thermal regime, and stress conditions in the upper plate above the SSE source region; and 3) install borehole observatory instruments at a subset of the drill sites to monitor a transect of holes above the SSE source, to measure temporal variations in deformation, fluid flow, and seismicity. This was followed by a site-by-site review.

The panel raised the question as to what would happen to the science objectives if the depths were severely limited on a several sites.

Site	Latitude	Longitude	Depth	Recommendation
HSM-01A	38°43.637'S	178°36.854'E	---	Not approved. Panel was concerned with the potential and magnitude of overpressure. As proposed the panel felt that LWD would be a requirement and that the appropriate drilling protocol would need to be outlined.
HSM-04A	38°51.299'S	178°53.187'E	---	Not approved. Panel recommended the development of alternate sites with a simpler subsurface geology (i.e., away from a complex fault network).
HSM-10A	38°52.658'S	178°56.105'E	---	Not approved. Panel recommends the repositioning of the site.
HSM-05A	38°58.164'S	179°7.935'E	1400	Approved.
HSM-06A	38°39.318'S	178°27.720'E	---	Not approved. Panel requested a deeper water site be considered. Current site would require a shallow hazards assessment and would require handling as if overpressure was present.
HSB-07A	38°47.526'S	178°45.120'E	---	Not approved. Site needs to be relocated away from a bright spot.
HSB-08A	39°1.32'S	179°14.76'E	400	Approved.
HSM-09A	38°58.918'S	178°27.72'E	---	Not approved. Would require handling as if overpressure was present.

Review – APL 809 - A Holocene record of submarine landslides, seismic shaking, and climate change: Port Valdez, Alaska

The scientific background for the program was presented by Sean Gulick. Three goals were noted: 1) identify and date a Holocene-Late Pleistocene (?) record of submarine landslides and inter-slide deposits to determine failure times, evaluate synchroneity with terrestrial paleoseismic records, and evaluate the completeness of a marine paleoseismic record; 2) evaluate linkages between climate variation and both the timing and size of submarine landslides; and 3) constrain the rhelogical, geomechanical, and geometric characteristics of the landslide deposits to better understand the role of the landslides in generation of locally devastating tsunamis and provide input for improved modeling of such events. After summarizing the scientific background a site-by-site review was conducted.

Site	Latitude	Longitude	Depth	Recommendation
VAL-1A	61.1147°N	146.4419°W	To basement	Approve
VAL-2A	61.1124°N	146.4608°W	To basement	Approve (alternate)
VAL-3A	61.0967°N	146.5547°W	To basement	Approve

Review – Expedition 350 (Proposal 697) - Izu-Bonin-Mariana Rear Arc (IBM-3)

Yoshihko Tamura presented the scientific goals and justification for the program. The proposal aims to develop a comprehensive understanding of intra-oceanic arc evolution and continental crust formation through drilling in the Izu-Bonin-Mariana (IBM) rear arc. This drilling will be a significant complement to the studies that have been done in the IBM frontal-arc, thereby allowing one to reach a comprehensive understanding of the magmatic evolution of Izu-Bonin arc system. This overview was followed by a site-by-site review.

Site	Latitude	Longitude	Depth (m)	Recommendation
IBM-3C	31°47.3874'N	139°01.5786'E	2100	Approve
IBM-3D	31.8020470°N	139.0138310°E	2100	Approve (alternate)
IBM-3E	31.7914910°N	138.9982780°E	2100	Approve (alternate)

EPSP has requested that the proponents and/or confirm the positions of submarine cables prior to the start of the leg and submit alternate sites for approval if there are positioning issues.

Review – Expedition 351 - Izu-Bonin-Mariana Arc Origins (IBM-1)

Yoshihko Tamura presented the scientific goals and justification for the expedition. The drilling aims to: 1) determine the lithology and composition of Layer 2 of the oceanic crustal basement on which the Izu-Bonin-Mariana (IBM) arc was initiated; and 2) determine the nature of the petrological and geochemical evolution of the first 30 million years of Arc history from the pyroclastic record of Layer 1**.**

Site	Latitude	Longitude	Depth	Recommendation
IBM-1	27.3°N	134.3°E	1600	Approve
IBM-1A	27.469769°N	134.28768°E	1600	Approve (alternate)
IBM-1B	27.459276°N	134.508459°E	1600	Approve (alternate)

Proponents need to reconfirm the latitude/longitude of IBM-1 multiple positions appear in the various documents and they are consistent with the map provided.

Review – Proposal IBM-4 Geotechnical hole

This was a request for a geotechnical hole in preparation for the drilling of deep hole by *Chikyu*. This was presented as a redrill of Site 792.

Site	Latitude	Longitude	Depth	Recommendation
IBM-4	32°24.00'N	140°23.00'E	---	Following the original approval of this site additional information was brought forward to the panel concerning the position of a submarine cable. Permission was withdrawn and an alternate location was brought to the panel.

Review – Proposal 735CPP – Opening of the South China Sea and its implications for Southeast Asian tectonics, climates, and deep mantle processes since the Late Mesozoic

Chun-Feng Li presented to scientific goals of the program: 1) Cenozoic mechanisms, timings, sequences, and affiliations of seafloor spreading; 2) oceanic crustal accretion and mantle evolution; 3) paleoceanographic and sedimentary responses to tectonic evolution of the South China Sea; and 4) Late Mesozoic and Early Cenozoic pre-rifting tectonic transitions and driving forces leading to continental margin break-up and seafloor spreading. This was followed by a site-by-site review.

Based on discussion the panel is recommending the following drilling order SCS-3G (relocated SCS-3B) followed by SCS-6A followed by SCS-4B and then SCS-2C. Alternates may be substituted but the panel requires that a successful drilling of a Site SCS-3 hole be completed and seismically tied to the Site SCS-6 location prior to the drilling of the SCS-6 location.

Site	Latitude	Longitude	Depth	Recommendation
SCS-6A	18° 21.117'N	116° 23.45'E	Basement plus 100 m	Approve. Drilling plan (washing down to 900 meters without coring) is contingent upon the completion and submittal to EPSP of a seismic fence diagram successfully tying the drilling sites to SCS-3, which would be drilled first, and that drilling at SCS-3 is incident free.
SCS-6B	18° 20.167'N	116° 42.28'E	Basement plus 100 m	Approve. Drilling plan (washing down to 900 meters without coring) is contingent upon the completion and submittal to EPSP of a seismic fence diagram successfully tying the drilling sites to SCS-3 localities, which would be drilled first, and that drilling at SCS-3 is incident free.
SCS-6C	18° 33.384'N	116° 36.576'E	110 m	Approve
SCS-3B	15°23.214'N	116°59.976'E	---	Not approved – Relocated to SCS-3G

SCS-3C	14°26.766'N	116°48.618'E	---	Not approved – Relocated to SCS-3H (alternate)
SCS-3D	14°39.168'N	116°59.988'E	---	Not approved – Relocated to SCS-3I (alternate)
SCS-3E	14°50.202'N	117°19.956'E	To basement plus 100 meters	Approve (alternate)
SCS-3F	14°50.195'N	117°10.08'E	To basement plus 100 meters	Approve (alternate)
SCS-3G	To be provided by proponents	To be provided by proponents	To basement plus 100 meters	Approve at CDP trace number 59300 on line 973SCS1001e (alternate)
SCS-3H	To be provided by proponents	To be provided by proponents	To basement plus 100 meters	Approve at CDP trace number 15625 on line BGR081123 (alternate)
SCS-3I	To be provided by proponents	To be provided by proponents	To basement plus 100 meters	Approve at CDP trace number 6550 on line 973SCS1001e (alternate)

Meeting recessed 17:10

Meeting reconvened 8:30 April 9, 2013

Site	Latitude	Longitude	Depth	Recommendation
SCS-4B	12°55.137'N	115°2.8326'E	Basement plus 100 meters	Approve
SCS-4C	12°59.033'N	115°9.40'E	Basement plus 100 meters	Approve (alternate)
SCS-4D	12°59.994'N	115°0.744'E	Basement plus 100 meters	Approve (alternate)
SCS-4E	13°11.508'N	114°55.398'E	Basement plus 100 meters	Approve (alternate)
SCS-4F	13°33.606'N	114°36.414'E	Basement plus 100 meters	Approve (alternate)
SCS-2C	17°20.472'N	116°47.802'E	Basement plus 100 meters	Approve
SCS-2D	17°20.652'N	116°38.718'E	Basement plus 100 meters	Approve
SCS-1C	21°0.15'N	119°47.10'E	Basement plus 100	Approve

meters

The proponents are required to submit the following to the panel for review: 1-seismic fence diagram successfully tying the sites SCS6a/6B to SCS-3 localities; and 2-Site summary sheets including latitude/longitude for SCS-3G, SCS-3H and SCS-3I.

Review – Proposal 672 – Paleoenvironmental evolution of the Baltic Sea basin through the last glacial cycle.

Thomas Andrén presented a summary of the scientific objectives of the proposed drilling: 1) the examination of a high resolution climatic record to aid in the understanding of the transitions between glacial and inter-glacial periods; 2) the internal complexities of the last glacial period; an examination of deglacial forcing mechanisms; and 3) an examination of responses of the deep biosphere to changes between glacial and interglacial periods. This was followed by a site-by-site review presented by Volkhard Speiss. It was noted that as a result of the shallow depths no gas accumulations are present and that much of the gas in consumed rather than concentrated.

Site	Latitude	Longitude	Depth	Recommendations
BSB-11	62°57.35'N	17°47.70'E	To bedrock	Approve
BSB-10	62°46.70'N	17°02.95'E	To bedrock	Approve
BSB-9	58°37.34'N	18°15.25'E	160 m	Approve
BSB-5B	55°43.273'N	15°13.585'E	To Mesozoic bedrock	Approve
BSB-6B	55°41.517'N	15°32.348'E	To Mesozoic basement	Approve
BSB-7C	55°28.094'N	15°28.631'E	To bedrock	Approve
BSB-7D (alternate)	55°27.769'N	15°29.556'E	To bedrock	Approve
BSB-4B	55°08.141'N	09°48.030'E	To bedrock	Approve
BSB-3B	55°00.295'N	10°06.491'E	To bedrock	Approve – Panel request that real-time monitoring of the surface (visual and or sonar) be conducted during drilling to assess when there is gas release and that drilling be terminated if there is discharge.

Review – Proposal 605 – Onset and evolution of millennial-scale variability of Asian monsoon and its possible relation with Himalaya and Tibetan Plateau uplift.

Mitch Malone presented a request for deeper penetrations for Site 605B. The increase in depth was to accommodate logging tools. In addition an additional site was proposed. The proposal as aim at: 1) establishing the onset of timing and to reconstruct the evolution process of orbital and millennial-scale variabilities of East Asian monsoons, reconstruct their spatial patterns, and examine their interrelationships; and 2) reconstruct

orbital- and millennial-scale changes in surface- and deep-water circulations in the Japan Sea, and examine their relation with variabilities of East Asian monsoon and glacio-eustatic sea level changes.

New Site	Old Site	Latitude	Longitude	Depth (m)	Recommendations
YB-1	JS-10B	35° 57.92'N	134° 26.06'E	550	Approve
YB-2	JS-1 (798)	37° 02.00'N	134° 48.00'E	450	Approve
YB-3	JS-9 (797)	38° 37.00'N	134° 32.00'E	250	Approve
YR-1	JS-3B	39° 29.44'N	134° 26.55'E	500	Approve
JB-1	JS-7B (794)	40° 11.40'N	138° 13.90'E	200	Approve
JB-3	JS-5B	43° 45.99'N	138° 49.99'E	250	Approve
UB-1	JS-11C	37° 54.16'N	131° 32.25'E	355	Approve
ECS-1B		31° 40.64'N	129° 02.00'E	850	Approve
ECS-1A		31° 38.30'N	128° 56.60'E	---	Not approved
ECS-1C		---	---		EPSP proposed a new location located at the crossing of KY07-04 Line 1 and KY07-04 Line 7. Proponents will need to provide to the panel for electronic review latitude/longitude, revised depth of penetration, displays of the two seismic lines (annotated and not annotated), safety sheets, and the distance to nearest submarine cable.

Proponents are requested to consider an alternate site for ECS-1A. EPSP has provided a specific recommendation. With receipt of the requested material the panel review and make a determination.

Review of SCIMPI Sea Trials, Cascadia Margin

Mitch Malone presented three engineering test sites for SCIMPI (Simple Cabled Instrument for Measuring Parameters In-Situ. These sites represent reoccupation of Cascadia locations.

Site	Latitude	Longitude	Depth (m)	Recommendations
CAS05-CORK	48° 40.1797	126° 50.8502	**300**	**Approve**
CAS10-SCIMPI	48° 40.095425	126°51.01308	**300**	**Approve (alternate)**
CAS11-SCIMPI	48° 41.99699	126°52.0543	**300**	**Approve (alternate)**

Review – Proposal IBM-4

Overnight it was discovered that the original location for IBM-4 was unsuitable because of its proximity to a submarine cable. Approval was withdrawn by the panel when this information was made available and an alternate location for this geotechnical test was reviewed.

Site	Latitude	Longitude	Depth (m)	Recommendation
IBM-4GT	32.3969550°E	140.3921830°E	150	Approved pending receipt of the site summary sheet

Proponents will need to submit a revised site summary sheet for the approved location.

A brief discussion was held on the quality and completeness of the safety packages. It was once again stated that there is a need that these packages be reviewed prior to distribution to the panel. Jamie Allen suggested that this could be a responsibility of the Site Survey Database Administrator.

The next EPSP meeting will be held in the March-April timeframe at the USIO's in College Station.

The meeting was adjourned at 13:30.