

EXECUTIVE SUMMARY OF WESTERN PACIFIC PANEL MTG, JAN 18-20, 1985

Our major accomplishment was to agree on a preliminary list of priorities for drilling in the western Pacific region. Shown below are all regions receiving 20 votes or more (each panelist had 100 votes, but could give no more than 10 votes to each region. (A,B,C: Marginal Basins; D,E: Forearcs; F: Collision Zones). The full vote appears in the complete minutes.

REGION	TABLE #	POINTS	RANK
SOUTH CHINA SEA	B	61	1
NANKAI TROUGH	E	58	2
BANDA SEA	C	55	3
OKINAWA TROUGH	B	54	4
SULU SEA	C	50	5
JAPAN SEA	B	45	6
BONIN TRENCH (TOE)	E	43	7
SUMBA REGION, TRENCH TOE	E	38	8
BONIN TROUGH	A	38	8
CORIOLIS TROUGH	A	37	10
BONIN FOREARC	D	34	11
D'ENTRECASTEAU RIDGE	F	28	12
LAU BASIN	A	25	13
SOUTH OF TAIWAN	E	22	14
PALAWAN TOE	E	22	14
OZBORN SMT/LOUISVILLE RIDGE	F	20	16

The panel expects a firmer ranking to result from the August meeting, because we will restrict our voting from then on to those proposals that have been officially logged-in with JOIDES.

Site surveys needed to better define the high priority regions include: Banda Sea, Seismic reflection and swath mapping; Bonins: MCS lines in forearc basin, sampling of serpentine diapirs; Sumba forearc and South of Taiwan: MCS.

Panel supports workshops on arc systems (Hawkins) planned for June, 1985 in La Jolla, and Western Pacific drilling workshop planned for Singapore (Circum-Pacific Min. Resources conference) in 1986.

The panel has referred the proposal by Davy (New Zealand) to the Southern Ocean panel, because of both regional and topical similarities to their interests, and lack of connectedness to ours.

Next Meetings: Panel recommends meeting in mid-August in Stavanger to view the RESOLUTION (dates subject to vary according to changes in ship schedule); and in December 13-15 in San Francisco.

Liaison Reports

D. Buffler reported on PCOM. Of actions of direct importance to CEPAC, a decision was made to include part of the Arctic in our area responsibilities. Dick also requested that we consider membership additions to replace the UK and ESF representatives.

E. Taylor presented slides which showed the JOIDES RESOLUTION and its labs. We are impressed by the size and capability of the new ship. It was reported that the ship will accommodate 50 non-Sedco people. The exact ratio of technicians to scientists is variable, depending on the cruise complexity and scientific requirements. Weekly summaries of the operations and science status will be available on a Telemail bulletin board.

D. Cowan reported that the Tectonics Panel meets next week, they are presently concentrating on the Indian Ocean.

J. Sinton reported on the Lithospheric Panel. Of particular interest to CEPAC, is the effort to get the major EPR proponents together to determine the best position for hydrothermal drilling in the the 9-13°N area.

B. Embley reviewed the SOPH objectives and passed out an abbreviated list of major SOPH objectives. It appears that the lack of sites in the Pacific for the first 5 year program does not represent lack of interest, just that SOPH has not yet considered the Pacific, except for the short two-year time period.

Status of efforts to stimulate workshops, proposals, etc.

NE Pacific- An INPAC workshop was held in mid-February.

North Pacific- Scholl is organizing a workshop for this fall.

Old Pacific- Ralph Moberly is heading a group which will promote old Pacific problems in a workshop, possibly before the end of the year. Winterer plans a workshop on guyots and carbonate plateaus worldwide. This will certainly include a subset of the Old Pacific problems.

South Pacific- J. Mammerickx and E. Okal are working to form a core group to stimulate interest in this area.

Preliminary INPAC Workshop Results

At the request of CEPAC D. Chase, P. Johnson, and D. Rea reviewed the INPAC workshop results. A document is being prepared by the INPAC group and will be distributed later.

North Pacific

H. Okada presented some problems that are of interest to the Japanese. These are:

1. Paleoceanography - particularly the history of the interaction of the Oyashio and Kuroshio surface currents; and the north flowing AABW history. Also of interest is to track the history of arc volcanism recorded on the Pacific plate.

Another paleoceanography problem is the ~60 my hiatus observed on the Pacific plate. What is its origin and extent?

2. Another major interest is in the Shikoku basin, particularly sedimentological and tectonics problem associated with the Nankai Trough. This area is being considered by the Western Pacific panel.

3. Okada reiterated the Japanese interest in the 'old pacific' paleoceanography and indicated that detailed proposals are being developed.

North Pacific Review

D. Rea and J. Mammerickx reviewed the North Pacific plate history and presented different models for the evolution of the N. Pacific. These were first discussed at our meeting in Austin. D. Scholl followed with a discussion of the Aleutian Trench and the state of knowledge in this region. H. Ryan presented several alternate interpretations of the trench structure in an area where major sediment input began perhaps 5 my ago. What effect did this have on the growth of this arc? J. McCarthy illustrated the structures developing farther to the west where the margin is almost pure strike-slip. A. Stevenson presented some interesting problems related to the origin of terrigenous sediment bodies (fans) in the NE Pacific and emphasized that some Neogene paleoceanographic objectives could easily be combined with a few holes which would at the same time penetrate these sedimentary bodies. This would allow for provenance studies and if we get to basement, the latitude at the time of plate generation.

Next Meeting

The next meeting is tentatively scheduled to be at Lake Wilderness, near Seattle, Washington, 25-26 September. It will be hosted by P. Johnson and D. Cowan.

**MINUTES OF THE WESTERN PACIFIC PANEL OF ODP
January 18 to 20, 1985**

Sheraton Makaha Resort and Country Club, Hawaii

List of persons present:

Panel Members:

Eli Silver (Chair)
Reinhard Hesse
James Ingle
Marc Langseth
Kazuaki Nakamura (TECP)

Claude Rangin
Jacques Recy
Hans Schluter
Brian Taylor (Rapporteur)

Liason

Ralph Moberly (PCOM)

Invited Observer:

Keith Crook (Australia)

Absent:

Michael Audley-Charles
Margaret Leinen (LITHP)
Derk Jongsma

Audrey Wright-Meyer(TAMU)
Hideo Kagami
James Natland

FRIDAY, 18 January 1985

Correction to last meetings minutes: J. Charcot Cruise '85; D'Entrecasteaux, Coriolis Trough, N. Fiji Basin, Louisville Ridge, Lau Basin

MORNING SESSION I

The chairman introduced the meeting, explaining its scope and proposed agenda. He emphasized the need for making priorities.

Results of PCOM Meeting (Moberly)

JOIDES RESOLUTION currently on shakedown leg.
Due to leave on Leg 101 on January 30 - 1 month late
Germany, France, Canada full partners
Britain committed to join very soon
Japan will join October 1, 1985
ESF has 60% - looking for 40% from Australia

Delayed ship start, a Baffin Bay optimum weather window, required some lowest priority item to be removed from first four legs.

Legs 111-113 still EPR, Peru, Chile. Still require site surveys, and EPR dependent on bare rock drilling.

Tentative schedule:	January 1, 1987	Weddell Sea
	January 1988	Kerguelen
	September 1988	Island Arc Boundary
(dependent on Southern Ocean priorities to be discussed in April)	July 1989	off Japan
	July 1990	N. E. Pacific
	January 1991	Panama

It seems reasonable to plan for at least 18 months Western Pacific drilling

* Indian O. P. charged to plan an optimum ship schedule for March 1987 - September 1988 (18 months) - to include January 1988 Kerguelen - from 19 priority areas.

*** In order to plan timely site surveys and to heighten the competition we can expect a similar charge this summer to rank and justify WPP proposals.

* Next PCOM meeting in April, Norfolk Virginia, after Leg 102, followed by June 25 in Hanover.

* Hayes, Kobayashi and Moberly will be replaced in PCOM sometime this year. Therefore our PCOM liaison is uncertain (possibly Kobayashi's replacement).

* Panelists, appointed hereafter, will serve 3 years, with one-third replaced every year.

* Reminder to consider strongly the COSOD priorities in our deliberations.

* (Back-burner consideration): After 1991 there may be a year of riser drilling. Costs high with only 2-3 holes per year:

* Consider workshops, ads in EOS/Geotimes, etc. to solicit more proposals, and get wider input on WP drilling. (There followed discussion on workshops June 1985 Arc/BA Hawkins conference, and August 1986 Circum-Pacific meeting, Singapore - deferred as subsequent agenda item.)

Moberly reminded us of the highest interests of the three thematic panels for the Western Pacific region (These are not their highest priority items)

LITHP: Long term laboratory in typical, zero age, back-arc spreading

SOHP: Sea of Japan, South China Sea, and Sulu Sea as isolated basins

Philippine Sea: ribbon cherts in open ocean
: Neogene Kuroshio/Oyashio confluence

Sunda/Arafura Shelf: carbonate deposition

Closing of Paleo-tethys

TECP: has not yet considered the western Pacific, though they have stated their potential high interest.

Eli Silver charged to make available (through JOIDES) to the WPP members the following:

"How to compute drilling time booklet" (Sent to panel by A. Meyer, 11 February)

"How to write drilling proposals" (Sent to panel 15 March)

"Minimum site survey requirements" (Sent to panel 5 Feb.)

10AM Break and pass-out proposals

Proposals distributed between panel meetings

1) Banda Sea: Silver et al (UCSC)

JOIDES Proposals distributed at this meeting:

1) Eastern Sunda Arc and N.W. Australia Collision: Reed et al. (UCSC)

2) Australian region: Cook et al (Australia)

3) Bounty Trough: Davey (New Zealand)

- 4) North of New Zealand: Eade (New Zealand)
(to be modified)
- 5) Okinawa Trough: Letouzey et al (France) - update of French blue book
- 6) Active collision off Hokkaido: Seno et al (Japan)
- 7) Japan T-T-T triple junction: Nakamura (Japan)

MORNING SESSION II

Discussions Concerning the Manner of Setting Priorities for Drilling Proposals

The chairman introduced two questions for discussion:

- 1) What do we consider a proposal (must it be logged with JOIDES?, must we receive it before the meeting?)
- 2) How shall we set priorities?

The consensus that resulted from this discussion, which occupied the rest of the morning, was that:

- 1) We are required to consider all WP proposals logged with JOIDES.

At our discretion, we may or may not consider other proposals. By the next panel meeting we will only consider WP proposals logged with JOIDES!

- 2) We shall set priorities based on the following factors:
 - a) the importance of the topic/theme;
 - b) the regional framework, with some consideration for
 - c) both the current state of knowledge and the expectation of future data/analysis.

The consensus following extended discussions on regional vs. thematic interests was for a "TOPICAL FOCUS, IN THE BEST REGIONAL FRAMEWORK".

- 3) We shall develop a matrix of themes vs. areas, the elements of which will be discussed in panel but voted on by secret ballot. The vote will be made at this meeting, allowing time for discussion of its implications. The results will be distributed to panel members not present at the meeting for their comments, which will be summarized for our submission to PCOM.

AFTERNOON SESSION

The afternoon was spent developing the theme vs. area matrix. For the purposes of pigeon-holing and summarizing the wide thematic interests in the WP, three broad categories with 2 to 3 subdivisions were recognized:

1) MARGINAL BASINS

- a) ARC: rifting of oceanic island arcs and back-arc spreading
- b) CONTINENT: rifting of continental crust, followed by spreading; development of passive margins
- c) OTHERS: not fitting into the above categories, or of uncertain origin

2) FOREARC TECTONICS

- a) VERTICAL TECTONICS: forearc basin and basement evolution
- b) TOE PROCESSES: toe kinematics, processes and materials (rock, H₂O, sediment) in the outer forearc

3) COLLISION TECTONICS

- a) WHAT IS COLLIDING: arc, continent, plateau, seamount, ridge
- b) ARC REVERSALL and intra-arc basins

Another theme from the Australian proposals was the post-subduction history of former (i.e. extinct) convergent margins.

Various "enhancers" were also flagged relating to the interests of the LITHP (long-term zero-age lab; ophiolites, hydrothermal) and the SOHP (surface water, deep water, gateways, sediment facies).

Other regional/more encompassing themes such as terrane accretion and the temporal relation between arc/back arc/forearc development were also noted.

SATURDAY, January 19

The day was spent reviewing the proposals represented by the individual elements in the theme vs. area matrix.

To date, no proposals have been logged with JOIDES dealing with drilling in the actively spreading back-arc basins. The panel was unanimous in preferring a number of holes to be drilled 50-100m into basement in a number of basins, rather than just one "natural

laboratory" deep hole to be drilled at a "typical" zero-age back-arc site. It was noted that there is no "typical" site: spreading rates vary from slow to fast (1 to 10 cm/yr) in different basins. The panel expressed the strong desire to drill a number of back-arc sites with the improved hard rock drilling and recovery capabilities predicted for the RESOLUTION, and to use this information to choose the site for the "ultimate hole" to be drilled in the second phase.

Ingle noted the trade-off between some SOHP and TP objectives: SOHP being more interested in the Yamato Bank, while TP may be more interested in the Japan Basin, for example.

The panel recognized the significant difference between the older basins of the northwest and southwest Pacific. This may be of fundamental tectonic significance, but a synthesis of the SW Pacific problem is needed together with better definition as to how it could be best addressed with the drill.

The panel referred the Bounty Trough proposal (Davey, NZ) to the Southern Ocean Panel for two reasons: the area is much farther south and the themes are quite different from other proposals submitted to our panel.

The panel recognized the exciting tectonic regimes surrounding the Solomon Sea (ridge subduction, rift propagation into a continent, arc-continent collision) but noted the need for much better regional surveys before drilling proposals in this region could be properly evaluated.

SUNDAY, January 20

The voting on the theme vs area matrix was collected and collated. The results were presented to the panel (see tables) and discussed.

All areas, and all but one theme, were represented in the highest priority categories. The one exception was the exciting tectonic process of arc reversal. All the panel members gave these boxes low votes because of the absence of proposals clearly outlining how this process could be addressed with the drill.

One page executive summaries of the last meetings of PCOM, IOP, LP, as well as a Site Survey Requirements and LDGO logging activities summary were distributed.

Given the high priority of "toe processes" drilling in the Nankai Trough and Sumba area the panel expressed the need for a workshop to address the scientific and technical aspects of where, why and how to drill such holes.

Site Surveys

Taking due consideration of the known programs in the western Pacific scheduled for this year, the panel reviewed the site survey requirements for the high priority drilling targets. In this regard the panel noted the absolute necessity to the drilling proposals of the J. Charcot program in the SW Pacific next fall (in order to provide seabeam data for the Coriolis Trough and the D'Entrecasteaux Ridge and Osborne (or Osbourne) Seamount collisions).

Several high priority areas do not need further site surveying beyond the programs to be carried out this year or next. These include the South China Basin, Nankai Trough and Sulu Sea/Palawan. The same is true for the Lau Basin, Manus Basin, and Mariana Trough if drilling in these actively spreading areas involves only shallow exploration. Much more detailed site surveys would be required for a zero-age long-term lab site. Several regions have the multichannel seismic data necessary for site selection but these remain proprietary or otherwise unavailable at this time. Such high priority areas include the Japan Sea, Okinawa Trough and Bonins, as well as the Ryukyu and Kurile forearcs. K. Nakamura was directed by the panel to inquire concerning the possible release of Japanese MCS data in these regions. Data from the USGS in support of drilling proposals in the Lau-Tonga-Osbourne Seamount region and the D'Entrecasteaux region is requested. The French are requested to process AVS 112 and any other MCS lines crossing the Coriolis Trough. All panel members were directed to collate available site survey information and to request relevant data release prior to our next meeting. Detailed site survey priorities will be assigned at the next meeting. Only drilling proposals logged with JOIDES and containing the data sheets will be considered.

Known additional site survey requirements include:

- 1) Banda Sea: digital single channel, swath mapping of ridges
- 2) Bonins: crossing MCS lines in rift and forearc basins; dredging and coring of serpentine diapirs
- 3) Sumba: MCS
- 4) S. Taiwan: MCS

NEXT MEETING

Because many of our panel members will be at sea this year, finding a mutually acceptable time for our next meetings was difficult. Despite the desirability of meeting before the June 15 PCOM meeting, our panel wanted the chairman to be present, and Silver is at sea from late April through May. The panel also recognized the need to visit the JOIDES RESOLUTION and to invite a representative of TEDCOM and the Down Hole Instruments Panel to our next meeting. Furthermore, as our next meeting will only consider proposals logged with JOIDES, will prioritize site surveys, and would like input from Hawkin's proposed arc-trench-

backarc workshop, a relatively late date for our second (and third) meetings was proposed. The panel noted PCOM's decision to have the RESOLUTION leave Stavanger for Baffin Bay no later than August 15th. The next meeting is proposed for August 14-16 in Stavanger (or Oslo), Norway with a visit to the RESOLUTION in Stavanger on August 13th (or later if schedule changes).

The third meeting this year will be in San Francisco on December 13-15, following AGU.

The preliminary minutes of this meeting will be mailed February 1st to panel members and, following revision, to other panels and PCOM on March 15th.

APPENDIX

RESULTS OF THE VOTING ON PRIORITIES OF DRILLING TARGETS

The list of regions considered for voting at the meeting and their total vote count is shown in Table 1. Each voting member was given this list and 100 points to distribute among the competing regions. No one region could be given more than 10 points per voter. The results should be considered as **PRELIMINARY**. Not all of the regions considered have formal proposals associated with them (e.g. the Lau basin); in some cases, no distinction was made between separate proposals for the same region (e.g. Sulu sea has both tectonic [Schluter, Rangin] and paleoceanographic [Thunnel] proposals); in some cases proposals were broken in a number of separate aspects (e.g. Bonins), while in others numerous proposals and problems were lumped together into one category (e.g. South China Sea).

A ranked listing is given in Table 2. The results of these tabulations can be interpreted in a number of ways, although they should be taken most simply as they appear on Table 2. Moberly has prepared a map (Fig. 2) to depict the regions of strength.

Taylor noted a natural grouping of 10 strong areas which accounted for over 80% of the votes. From north to south these were: Japan Sea, Nankai, Bonins, Okinawa, South China Sea, Sulu-Palawan, Banda, Sumba, New Hebrides, Lau-Tonga. Another five areas of lesser priority accounted for nearly all the remaining votes: the forearcs of Kurile-Japan, Taiwan-Manila, Sunda; the Solomons-PNG, and Coral Sea-Great Barrier Reef).

Silver notes that of the top 20 priority regions, all are either marginal basins or forearcs, with marginal basins showing a somewhat larger total vote.

NOTE:

[Audley-Charles, who was not present and is not now an active member, supports the vote but would rank Tanimbar higher].

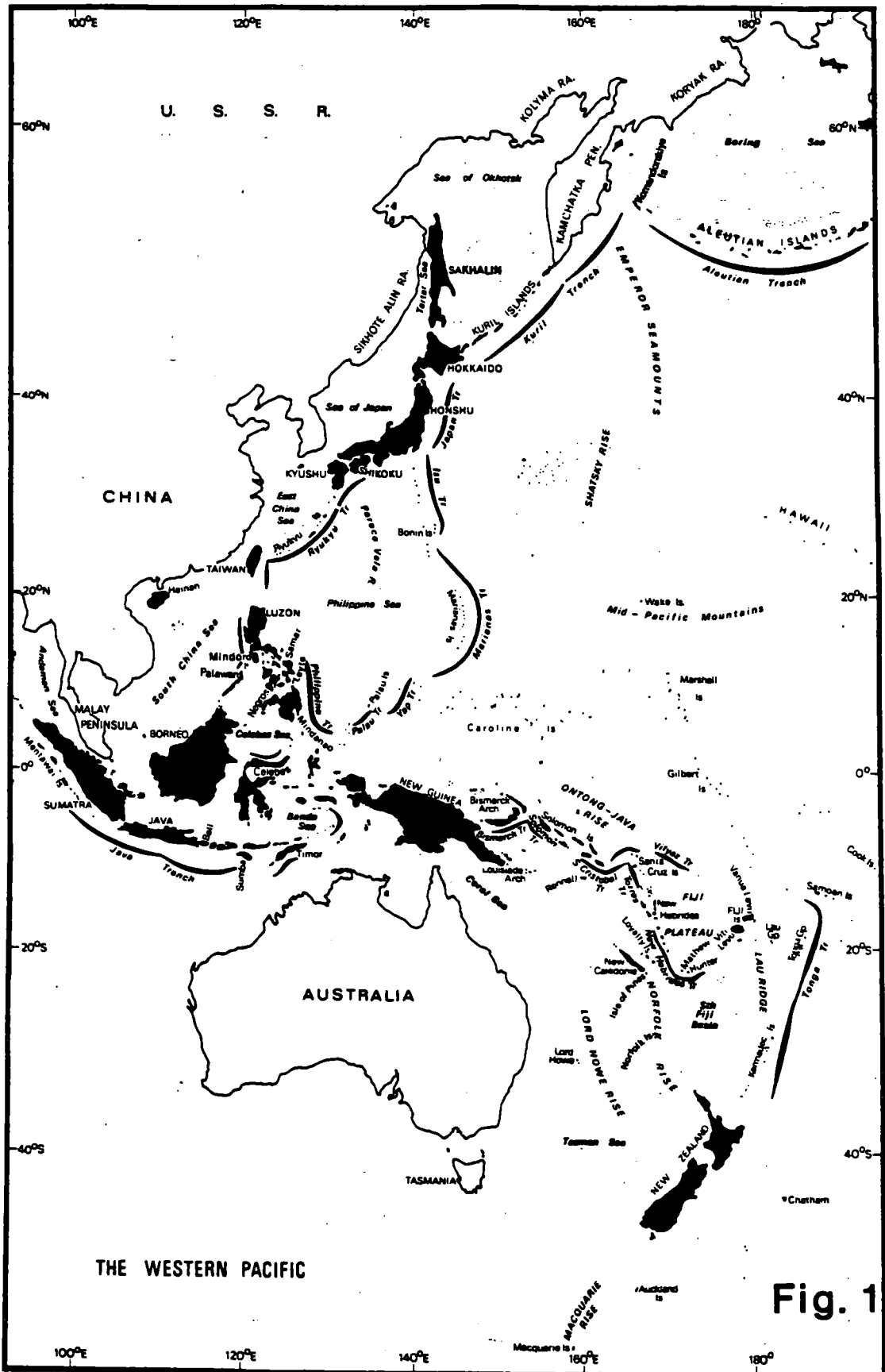
MARGINAL BASINS			FOREARC TECTONICS			COLLISION TECTONICS			OTHER
(A) ARC	(B) CONTINENT	(C) OTHER	(D) VERT. TECT.	(E) TOE PROCESS	(F) TYPE	(G) ARC REV./FOSSIL	(H)		
Lau 25	Coral 9	Banda 55	Tonga 19	Nankai/Zenisu 58	Tanimbar 9	N. Am-Eur. Bdry 0	Arafura/Sunda 10		
Mariana 0	South China 61	Woodlark 10	Mariana 7	Sumba 38	Timor 5	New Hebrides 9	Lord Howe 0		
North Fiji 2	Japan 45	Sulu 50	Bonin 34	Sumatra/Java 16	Osborn 20	New Ireland 0	G.B. Reef 5		
Manus 14	Okinawa 54	Solomon 5	Japan 10	Bonin Serp. 43	D'Entrecasteaux 28	Solomon 0	Fryer 5		
Bonin 38	Tasman 0	Norfolk 0	Kurile 18	S. Taiwan 22	Ogasawara 0	Cape Vogel B. 0	20		
Coriolis 37	169	120	Ryukyu 16	Manila 9	Palawan 0	Loyalty B. 3			
South Fiji 0			Manila 12	Japan Sea 1	NE Japan/Kurile 12	12			
W. Philippine 3			Japan Sea 13	Palawan 22	Solomon-Huon 6				
119			Palawan 5	209	Ontong-Java P. 2				
			Sunda Strait 8		Philippine-Negros 12				
			Weber 4		94				
			New Hebrides 11						
			157						

Table 1.

TABLE 2

List of regions considered by the panel for Western Pacific Drilling, in order of vote totals. Those with fewer than 9 points were not included, but all regions considered are shown on Table 1.

REGION	TABLE #	POINTS	RANK
SOUTH CHINA SEA	B	61	1
NANKAI TROUGH	E	58	2
BANDA SEA	C	55	3
OKINAWA TROUGH	B	54	4
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JAPAN SEA	B	45	6
BONIN TRENCH (TOE)	E	43	7
SUMBA REGION, TRENCH TOE	E	38	8
BONIN TROUGH	A	38	8
CORIOLIS TROUGH	A	37	10
BONIN FOREARC	D	34	11
D'ENTRECASTEAU RIDGE	F	28	12
LAU BASIN	A	25	13
SOUTH OF TAIWAN	E	22	14
PALAWAN TOE	E	22	14
OZBORN SMT/LOUISVILLE RIDGE	F	20	16
TONGA FOREARC	D	19	17
KURILE FOREARC	D	18	18
RYUKYU FOREARC	D	16	19
SUMATRA/JAVA	E	16	19
MANUS BASIN	A	14	21
JAPAN SEA THRUST	D	13	22
MANILA TRENCH FOREARC	D	13	22
CENTRAL PHILIPPINE COLLAGE	F	12	24
NE JAPAN/KURILES	F	12	24
NEW HEBRIDES FOREARC	D	11	26
JAPAN FOREARC	D	10	27
WOODLARK BASIN	C	10	27
ARAFURA SEA/SUNDA SHELF	H	10	27
CORAL SEA	B	9	30
TANIMBAR	F	9	30
MANILA TRENCH TOE	E	9	30
NEW HEBRIDES ARC REVERSAL	G	9	30

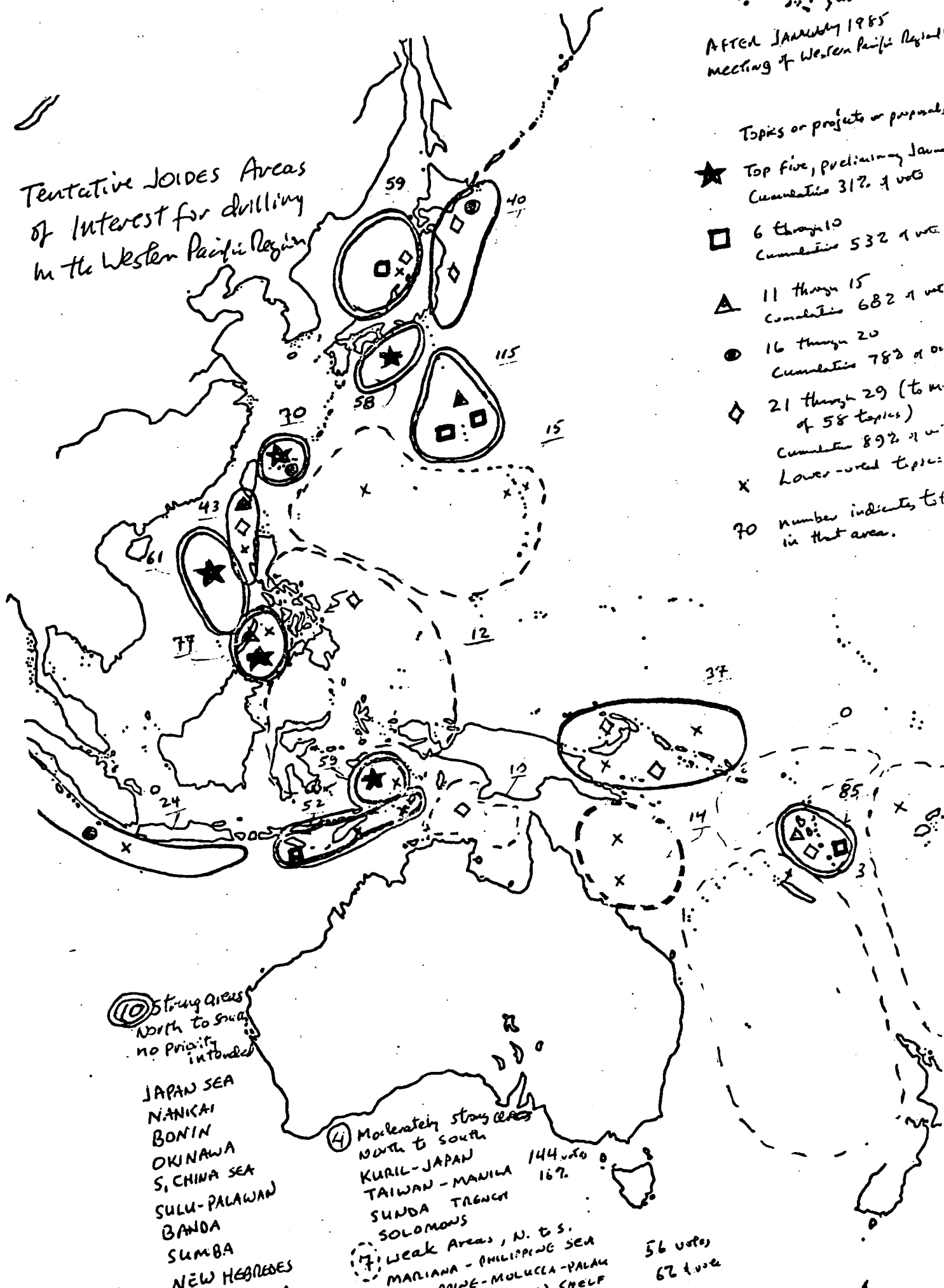


THE WESTERN PACIFIC

Fig. 1

After January 1985 meeting of Western Pacific Regional

Tentative JOIDES Areas of Interest for drilling in the Western Pacific Region



- Topics or projects or proposals
- ★ Top five, preliminary Jaim Cumulative 31% of votes
 - 6 through 10 Cumulative 53% of votes
 - ▲ 11 through 15 Cumulative 68% of votes
 - 16 through 20 Cumulative 78% of votes
 - ◇ 21 through 29 (to include 58 topics) Cumulative 89% of votes
 - x Lower-voted topics
 - 70 Number indicates total in that area.

⑩ Strong Areas North to South no priority indicated

- JAPAN SEA
- NANIKAI
- BONIN
- OKINAWA
- S. CHINA SEA
- SULU-PALAWAN
- BANDA
- SUMBA
- NEW HEBRIDES

④ Moderately strong areas North to South

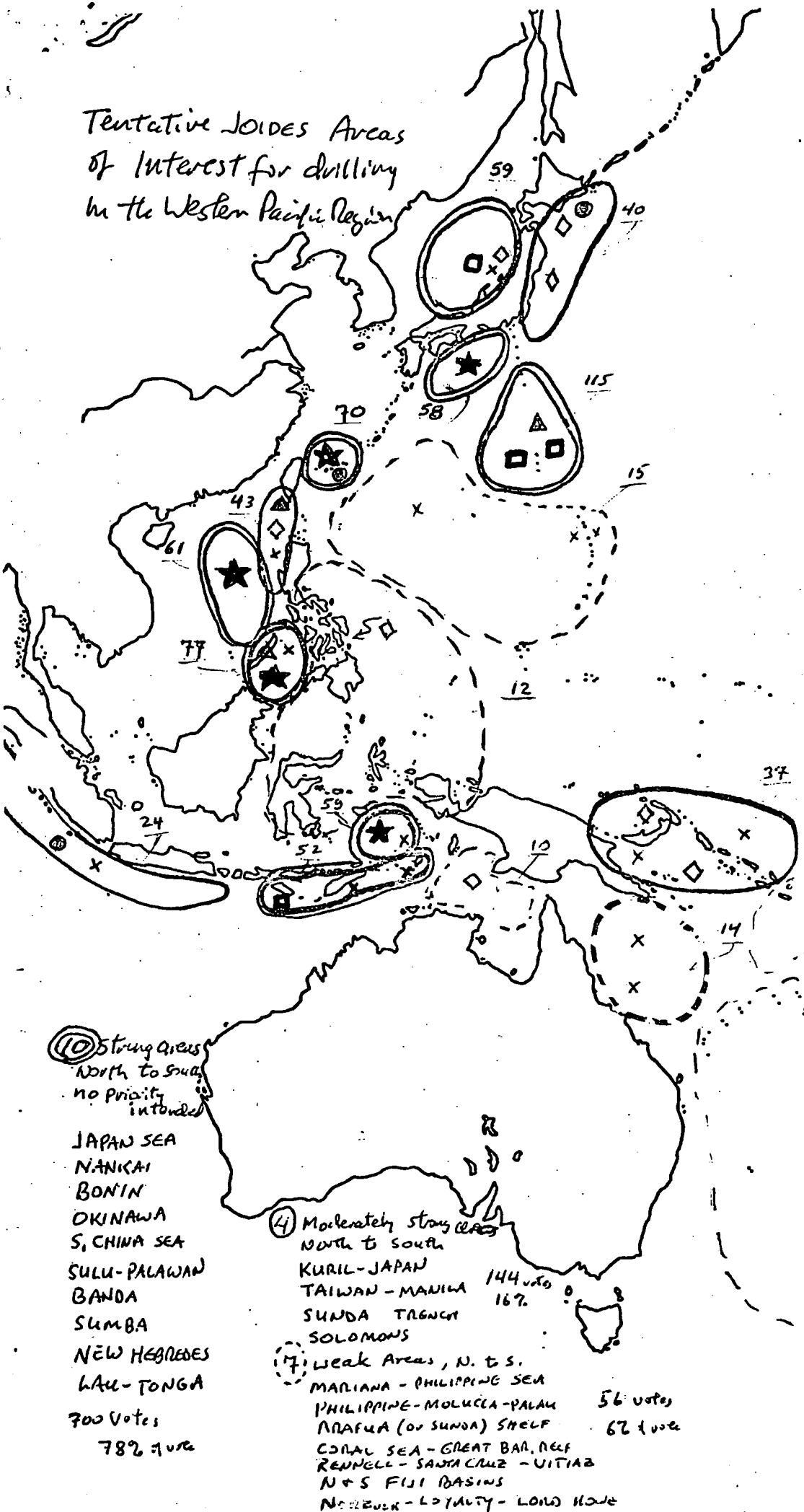
- KURIL-JAPAN 144 votes
- TAIWAN-MANILA 16%
- SUNDA TRENCH
- SOLOMONS

⑦ Weak Areas, N. to S.

- MARIANA-PHILIPPINE SEA 56 votes
- PHILIPPINE-MOLUCCA-PALAU (INDONESIA) SHELF 62 votes

After January 1985 meeting of Western Pacific Regional

Tentative Joides Areas of Interest for drilling in the Western Pacific Region



- Topics or projects or proposals
- ★ Top five, preliminary January Cumulative 31% of vote
 - 6 through 10 Cumulative 53% of vote
 - △ 11 through 15 Cumulative 68% of vote
 - ⊙ 16 through 20 Cumulative 78% of vote
 - ◇ 21 through 29 (to make an of 58 topics) Cumulative 89% of vote
 - X Lower-voted topics
 - 70 number indicates total vote in that area.

⑩ Strong Areas North to South no priority intended

JAPAN SEA
 NANKAI
 BONIN
 OKINAWA
 S. CHINA SEA
 SULU-PALAWAN
 BANDA
 SUMBA
 NEW HEBRIDES
 LAU-TONGA

700 votes
 78% of vote

④ Moderately strong areas North to South

KURIL-JAPAN
 TAIWAN-MANILA
 SUNDA TRENCH
 SOLOMONS

144 votes
 16%

⑦ Weak Areas, N. to S.

MARIANA-PHILIPPINE SEA
 PHILIPPINE-MOLUCCA-PALAU
 ARAFURA (or SUNDA) SHELF
 CORAL SEA-GREAT BARRELF
 RENNELL-SANTA CRUZ-UITIAB
 N+S FIJI BASINS
 NORFOLK-LOYALTY-LONG HOWE

56 votes
 6% of vote

Fig 2