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Objet : a future for the InterRidge Deep Earth Sampling Working Group ?

Dear working group members and supporters,

I attended the InterRidge Steering Committee ~2 weeks ago, and reported on the Deep Earth Working Group activity; now I need some comments/feedback from you on what our working group should do (or not do) in the future.

We have fulfilled one of our objectives (international crustal penetration drilling project) with the Mission Moho workshop and proposal (although the WG was actually not very instrumental in implementing the workshop and developing the proposal). A series of questions arises now, regarding the mandate and the future of the working group :

1 - In the context of IODP missions being an aborted concept, Mission Moho still provides a common scientific and strategic basis for the individual drilling proposals that were the various components of the mission proposal. This will hopefully help all proposals to be as strong as possible in the near future. What we now miss from not having a mission designated, is the technology planning activity, which are essential to the future of very deep drilling in the crust.

Can the DES Working Group be proactive in triggering/developping this planning activity, and how?

2 - Other objectives in our mandate were : Drilling of Active Hydrothermal Systems, Zero-age Ocean Crust and Axial Mantle, The Deep Biosphere, Drilling in Ophiolites.

We conducted no activity and took no action on these. The questions are :

Do you feel that the working group can be proactive on one or several of these objectives? If yes, How?

Should we redefine the mandate of the working group?

Alternatively, should InterRidge disband the working group at this stage?

3 - The main difficulty for me as a chairman has been to try to gather the working group at a meeting somewhere, in the absence of funding to support travel. I've tried twice at AGU. I gave up the first time (3 years ago), as only 4 people could be around at the proposed date. We had a meeting on the Sunday before AGU 2 years ago to discuss the organization of the Mission Moho workshop, attended by 11 persons (including 7 WG members or associated scientists).

Do you think that, if we continue (see previous point) we can be productive by using primarily electronic communication?

Is there a need for meeting physically?

With your answers to these questions, plus any other comment that you may have on the usefulness (or lack of ...) of our working group, and on the way we should operate, I'll be able to report back to the InterRidge steering committee.

I'll be at AGU next week, and I hope to see many of you there.

Best regards

Benoit

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**D. Christie (Nov 30, 2007) :**

Greetings all,

I will not be at AGU this year and will be sorry not to see many of you. I hope that the holidays and New Year will be kind to you.

1. I believe that IR working groups should have a limited mandate and a limited life span. If a deep-earth WG is to continue, it needs to have a clear purpose and a possibility of progress. While this group was not formally involved in the Mission Moho workshop and proposal, it did help to lay the groundwork, and many of the members were active participants in the Mission Moho activities. Even though there will not be a formal IODP

mission, our Moho objectives have largely been included in the limited objectives set for IODP for the next few years. The group and the workshop participants can take credit for this as a significant success.

As Benoit points out, there is a clear need for active community support of technology/engineering development for deep crustal drilling, and this is where this WG (or a successor) could have an important role. I suggest that IR might be more effective if there could be a joint IR-IODP working group focused on this issue. I do not know if there is precedent for this or exactly how such a group would be set up, but it is worth exploring with IODP management and with the advisory structure.

2. Active hydrothermal and zero-age objectives seem to me to encompass a different set of problems. If they need a WG, perhaps it should be a separate group. I am not sure that the time is right for such a group as it seems unlikely that IODP will be able to tackle these problems in the next few years.

Near-axis mantle exposures are included in the Moho objectives, as is the biosphere - they do not seem to need special attention at the moment.

Ophiolite drilling is an area where a WG might make progress - in this case, a formal connection to continental drilling might be helpful.

3. In summary, I suggest that the WG become more focused with two mandates, deep drilling technology and ophiolite drilling. This would require some changes in membership - the group would need more engineering expertise. There may be some who have a lesser interest in these objectives and want to withdraw. Having a tighter focus might help the communication issue - prospective members should agree to commit to responding to email within a few days.

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**J. Natland (Jan 3, 2008) :**

DEAR BENOIT AND CO-CONSPIRATORS:

I'LL INTERSPERSE COMMENTS IN BOLD. HAPPY NEW YEAR TO ONE AND ALL, AND MAY WE HAVE MORE SUCCESS THIS YEAR THAN WE DID LAST YEAR.

I will not be at AGU this year and will be sorry not to see many of you. I hope that the holidays and New Year will be kind to you.

1. I believe that IR working groups should have a limited mandate and a limited life span. THEY SHOULD LAST AS LONG AS THEY ARE NEEDED, BUT NO LONGER. If a deep-earth WG is to continue, it needs to have a clear purpose and a possibility of progress. While this group was not formally involved in the Mission Moho workshop and proposal, it did help to lay the groundwork, and many of the members were active participants in the Mission Moho activities. THE IDEA WAS THAT AN INTER-RIDGE WG WOULD BE THE BEST WAY TO ENLIST THE COMMUNITY IN GETTING A PROPOSAL ORGANIZED. A PROPOSAL OF SORTS WAS WRITTEN, BUT IT WAS NOT AN ACTUAL DRILLING PROPOSAL. THAT STILL NEEDS DOING, OR RATHER, IT IS PARTLY DONE IN BITS AND PIECES, BUT WITHOUT THE NECESSARY COORDINATION AND OVERSIGHT. THE MISSION MOHO PROPOSAL IS BASICALLY AT THIS STAGE ONLY A BACKDROP, A FAILED FIRST-CUT AT PROVIDING THE OVERSIGHT, AND PERHAPS MERELY AN HISTORICAL FOOTNOTE. Even though there will not be a formal IODP mission, our Moho objectives have largely been included in the limited objectives set for IODP for the next few years. BUT IT GOT NO COMMITMENT. IT WILL STILL BE SUBJECT TO THE LEG-BY-LEG, PROGRAM-BY-PROGRAM APPROVAL PROCESS THAT HAS RETARDED, IMPEDED, AND ESSENTIALLY COMPLETELY STOPPED PROGRESS ON THIS PROBLEM FOR SEVERAL DECADES. The group and the workshop participants can take credit for this as a significant success. I READ IT AS VERY LIMITED SUCCESS. THE SPC RULING WAS ONLY A SUCCESS FOR THOSE WHO PREFER A PROGRAM MADE UP OF LOTS OF INDIVIDUAL, SHORT-TERM PROJECTS, IN SHORT, DRILLING AS USUAL. SOME PROGRAM, IDEALLY THIS ONE, NEEDS TO BE IDENTIFIED AS THE FLAGSHIP VENTURE FOR THE NEXT PHASE OF DRILLING (DRILLING RENEWAL). WE ARE AS BIG NOW AS SOMETHING LIKE THE HUBBLE TELESCOPE, AND SHOULD ACT ACCORDINGLY. WE SHOULD IDENTIFY A VISION ON THAT SCALE AND GO FOR IT. IT WILL BE A SHAME TO HAVE TWO SPLENDID PLATFORMS AND PROPOSE NOTHING TO DO WITH THEM BUT PISTON CORE AND MAYBE A LITTLE BIT MORE.

As Benoit points out, there is a clear need for active community support of technology/engineering development for deep crustal drilling, and this is where this WG (or a successor) could have an important role. I suggest that IR might be more effective if there could be a joint IR-IODP working group focused on this issue. I do not know if there is precedent for this or exactly how such a group would be set up, but it is worth exploring with IODP management and with the advisory structure.

WHAT IS NEEDED IS SOME SORT OF BODY TO INTEGRATE SCIENTIFIC OBJECTIVES AND PROGRESS WITH ASSESSMENT OF TECHNOLOGICAL POSSIBILITIES AND LIMITATIONS AS DRILLING PROCEEDS, AND TO PREPARE THE STAGES OF PROPOSALS BASED ON SUCCESSIVE MILESTONES THAT WILL CARRY THE PROGRAM THROUGH TO COMPLETION OVER WHAT NOW APPEARS WILL BE A LONG TIME. THAT MEANS THE GROUP WILL HAVE TO BE LONG-TERM. I SUSPECT IT WILL HAVE TO BE MAINLY AN IODP ENTITY, AND THAT THE IODP PLANNING STRUCTURE WILL MANDATE IT ONCE THEY ACTUALLY ACCEPT SOME SIGNIFICANT CHUNK OF THIS SORT OF DRILLING AND INTEND TO SCHEDULE IT. IN THE MEANTIME, PROPOSALS NEED PREPARING, ORGANIZING, PRIORITIZING, AND EVALUATING. HERE IS WHERE AN INTER-RIDGE WG

PRESENTLY FITS IN, GIVEN THAT THERE IS PRESENTLY NO PART OF THE IODP PLANNING STRUCTURE SET UP TO DO IT.

2. Active hydrothermal and zero-age objectives seem to me to encompass a different set of problems. THEY ARE NOT MISSION MOHO OBJECTIVES. If they need a WG, perhaps it should be a separate group. I am not sure that the time is right for such a group as it seems unlikely that IODP will be able to tackle these problems in the next few years. DEPENDS ON WHAT THE COMMUNITY, NOT IODP, WANTS TO DO. NOTHING WILL HAPPEN WITHOUT SOME SORT OF FORMAL OR INFORMAL WG'S.

Near-axis mantle exposures are included in the Moho objectives, as is the biosphere - they do not seem to need special attention at the moment. AGAIN, THIS IS PROCEEDING ON A PROPOSAL-BY-PROPOSAL, LEG-BY-LEG BASIS, NOT ANYTHING LONG-TERM. IF YOU WANT TO BUILD ON MILESTONES AND A BROAD RANGE OF OBJECTIVES, THEN SOME OF THIS STUFF NEEDS TO BE ENCOMPASSED BY A DEEP-DRILLING WG AND IDEALLY AFTER SOME SORT OF LONG-TERM COMMITMENT IS ACCEPTED BY IODP.

Ophiolite drilling is an area where a WG might make progress - in this case, a formal connection to continental drilling might be helpful. KEEPING ONE'S EYE ON THE BALL SHOULD BE THE MODUS OPERANDI. OPHIOLITE DRILLING IS NOT DEEP DRILLING IN THE OCEAN CRUST. OPHIOLITES NOT BEING IN SITU, DRILLING THEM DOES NOT GET AT IN SITU PROPERTIES OF ACTUAL OCEAN CRUST. EVEN AT THAT, MOST OPHIOLITES ARE ARGUABLY (PETROLOGICALLY) SOMETHING OTHER THAN OCEAN CRUST SENSU STRICTO. SO THIS IS EITHER SOMETHING FOR A SEPARATE GROUP, OR A SUBCOMMITTEE OF THE OVERALL WG.

3. In summary, I suggest that the WG become more focused with two mandates, deep drilling technology and ophiolite drilling.

I THINK INSTEAD THAT WE SHOULD PROCEED AS IF MISSION MOHO IS STILL THE BEST WAY TO GO (THE CONSENSUS OF OUR COMMUNITY, NOT THE POLYGLOT AND WEAK-KNEED SPC), AND BEGIN TO PREPARE A SERIES OF INTEGRATED, SITE-SPECIFIC DRILLING PROPOSALS THAT WILL BE PRESENTED AS A COORDINATED PACKAGE. IN OTHER WORDS, IGNORE THE SPC FAILURE TO ENDORSE MISSIONS, ANY OF THEM, AND PROCEED TO ORGANIZE THIS DRILLING ANYWAY.

IN THE PAST, WHEN THERE WERE POTENTIALLY COMPETING PLACES FOR SIMILAR OBJECTIVES, THE PLANNING STRUCTURE ORGANIZED WORKING GROUPS TO SHAKE THEM DOWN AND SELECT THE BEST TARGETS. THEN THEY SET UP SEPARATE DETAILED PLANNING GROUPS TO WORK OUT WHAT ACTUALLY NEEDED DOING. A PROBLEM WITH THE MISSION MOHO PROPOSAL AS IT WAS PERCEIVED IS THAT, APART FROM THE VERY DEEP HOLE IN FAST-SPREAD CRUST, THE PROCESS OF

"SHAKING DOWN" DID NOT OCCUR. ALL THE SLOW-SPREAD PLACES LOOKED MORE OR LESS THE SAME. SO THAT SHOULD BE DONE.

This would require some changes in membership - the group would need more engineering expertise. THERE'S ALMOST NO POINT TO THIS UNLESS THERE IS SOME COMMITMENT FROM IODP. IN ANY EVENT, SHOULD IODP GET TO THE POINT OF ACCEPTING VERY DEEP DRILLING IN THE OCEAN CRUST EVEN ON THE BASIS OF A SINGLE PROPOSAL OR IN PRINCIPLE, THEY SHOULD ORGANIZE THIS WITHIN IODP. THIS IS SOMETHING TO DO AFTER SOMETHING, ANYTHING, GETS PAST STEP ONE IN THE OFFICIAL PROPOSAL PROCESS. There may be some who have a lesser interest in these objectives and want to withdraw. Having a tighter focus might help the communication issue - prospective members should agree to commit to responding to email within a few days.

Best wishes,

Dave

Dear working group members and supporters,

I attended the InterRidge Steering Committee ~2 weeks ago, and reported on the Deep Earth Working Group activity; now I need some comments/feedback from you on what our working group should do (or not do) in the future.

We have fulfilled one of our objectives (international crustal penetration drilling project) with the Mission Moho workshop and proposal (although the WG was actually not very instrumental in implementing the workshop and developing the proposal). A series of questions arises now, regarding the mandate and the future of the working group :

1 - In the context of IODP missions being an aborted concept, Mission Moho still provides a common scientific and strategic basis for the individual drilling proposals that were the various components of the mission proposal. IT WAS NOT ACCEPTED THUS IS AT BEST ONLY A GLEAM IN THE EYE, LIKE A BABY BEFORE CONCEPTION. This will hopefully help all proposals to be as strong as possible in the near future. What we now miss from not having a mission designated, is the technology planning activity, which are essential to the future of very deep drilling in the crust. MORE THAN JUST TECHNOLOGY PLANNING IS MISSING; OVERALL SCIENTIFIC INTEGRATION AND OVERSIGHT IS MISSING AS WELL.

Can the DES Working Group be proactive in triggering/developing this planning activity, and how? AS I SAID ABOVE, THE BEST WAY IS TO COORDINATE PROPOSALS AND SEE THAT THEY ARE PERCEIVED AS A PACKAGE THAT WILL BUILD TOWARD AN EVENTUAL VERY DEEP HOLE THROUGH THE ENTIRE OCEAN CRUST. AS I SEE IT, THE WG SHOULD EVALUATE ALL THE SLOW-SPREADING PROPOSALS AND EITHER SELECT ONE PLACE FOR DRILLING, OR PICK AND CHOOSE THE BEST SCIENTIFIC TARGETS FROM THE BATCH OF THEM FOR SPECIFIC SECTIONS THAT WILL ANSWER SPECIFIC SCIENTIFIC/TECHNOLOGICAL QUESTIONS AND ADVANCE THE CAUSE OF DEEP DRILLING OVERALL. THUS WE DO NOT HAVE A PLACE WHERE WE HAVE PENETRATED THE BASE OF GABBROS INTO PERIDOTITES. WE SHOULD IDENTIFY THE BEST (EASIEST?) PLACE TO DO THIS AND FIND OUT HOW WELL WE CAN DO THIS. WE HAVE NEVER DRILLED MORE THAN ABOUT 150 M INTO PERIDOTITES, PERHAPS BECAUSE OF SERPENTINIZATION AND PROBLEMS WITH HOLE STABILITY. BUT WE HAVE ALSO NEVER SPECIFIED A DEEP TARGET INTO PERIDOTITE. THUS WE NEED TO MOVE ON OBTAINING A LONG SECTION IN PERIDOTITE. WHERE IS THE BEST PLACE TO DO THIS? CAN WE DO THIS WITHOUT A RISER? WE HAVE NEVER DRILLED ANYWHERE IN OCEAN CRUST WITH A RISER. WHERE CAN WE DO THIS IN GABBROS/PERIDOTITES WITH CURRENT RISER CAPABILITY? WHAT ABOUT PROPOSING A 3-KM HOLE INTO GABBRO AND MAYBE INTO THE MANTLE USING A RISER? OR, HOW FAR CAN WE GO IN SUCH A HOLE WITHOUT ONE? SHOULD WE EVEN BOTHER? CAN WE CONSIDER USING AN ALTERNATIVE RISER PLATFORM IF THE WATER IS SUFFICIENTLY SHALLOW?

THE GENERAL DIFFICULTY WITH DEEP CRUSTAL DRILLING IS THAT WE HAVE NEVER GIVEN MUCH PRIORITY TO MAXIMIZING SUCCESS. WHY HAVE WE ALWAYS DRILLED OCEAN CRUST IN THE WINTER, WHEN THERE ARE CLEARLY BETTER (LONGER) WEATHER WINDOWS DURING THE REST OF THE YEAR AT ALMOST ALL LATITUDES? BECAUSE SOMEONE ELSE WANTS TO DO HIGH-LATITUDE PISTON CORING IN THE SUMMER. WELL, WE HAVE TO STOP THINKING LIKE THAT. IF SOME PLACE IS TRULY SIMPLE AND EASY TO DRILL, AND IS EVEN BETTER IN THE SUMMER, AND WE KNOW SOME SUCH PLACES, WHY SHOULD WE GO SOMEWHERE HARDER OR AT A DIFFERENT TIME OF YEAR? THUS AT THIS STAGE, FROM LONG EXPERIENCE, I GIVE EASE OF DRILLING (COMBINATION OF EASE OF EMPLACING A GUIDE BASE, SUITABILITY OF SPECIFIC TARGETS, SUITABILITY OF BACKUP TARGETS, SHALLOW WATER, WEATHER WINDOW, TRACK RECORD, ETC.) PRIDE OF PLACE LOGISTICALLY; AND CERTAINLY PLACE SUCH CONSIDERATIONS WELL ABOVE SIMPLE LOCATION (OCEAN BASIN). ONLY AN OBVIOUSLY BETTER SCIENTIFIC OBJECTIVE CAN OVERTHROW THESE LOGISTICAL CONSIDERATIONS IN MY THINKING. WHAT IF WE WERE TO SAY, LET'S PLANT THREE GUIDE BASES CLOSELY SPACED (A FEW HUNDRED M TO SEVERAL KM APART) ON ONE STRUCTURE, THUS BEING ABLE TO MOVE FROM ONE TO THE OTHER WITH EASE OR AS NECESSITY DICTATES, AND IF ALL GOES WELL THEN DESIGN A LOGGING AND HOLE-TO-HOLE SHOOTING EXPERIMENT REALLY TO NAIL DOWN THE LOWER CRUSTAL SEISMIC STRUCTURE? ALL THE BETTER IF ONE OF THEM IS MAINLY IN PERIDOTITE, ANOTHER IN GABBRO, AND THE THIRD ACROSS THE GABBRO-PERIDOTITE TRANSITION. NO ONE HAS PROPOSED THAT...YET. BUT IT IS AN OBVIOUS THING TO CONSIDER. AGAIN, THOUGH, THIS KIND OF THING PROBABLY

CAN BE DONE AT SOME BEST CHOICE OF A LOCATION, AND WE DON'T NEED TO CONSIDER IT FOR EACH AND EVERY PLACE THAT HAS BEEN GENERICALLY PROPOSED FOR DEEP DRILLING. OBVIOUSLY, CHOICES HAVE TO BE MADE. THAT'S WHAT A WG OR DETAILED PLANNING GROUP IS FOR. SPC FORGOT ABOUT THE NECESSITY FOR DOING THIS IN MAKING THEIR CRITICISM OF THE MISSION MOHO PROPOSAL. IT SEEMS THEY WANTED THIS DONE BEFORE HAND. BUT THEY, RATHER THAN THE MISSION MOHO WORKSHOP, ARE THE ONES THAT SHOULD SET THESE PARTICULAR WHEELS IN MOTION, AND IT REQUIRES EVALUATION OF A CAREFUL TECHNICAL PROSPECTUS FOR EACH PLACE, AND A STRUCTURE TO HANDLE SUCH AN EVALUATION, THAT WE DID NOT HAVE IN PORTLAND. BUT SPC HAS ALMOST NO ONE ON BOARD WHO KNOWS ABOUT THESE THINGS. IT IS A DIVERSE ASSEMBLAGE OF MAINLY INEXPERIENCED PEOPLE (CERTAINLY IN DEEP CRUSTAL DRILLING) WHO ARE IN TRUTH FAIRLY IGNORANT ABOUT HOW BEST TO PROCEED IN THESE MATTERS. I THINK THEY ACTUALLY HAD THE ONE GUY WITH SOME OF THIS EXPERIENCE (ECORD'S PEDERSEN) OUT OF THE VOTING POOL FOR THE MISSION MOHO PROPOSAL

THUS THERE IS A TECHNOLOGICAL ASPECT TO ALMOST EVERY DEEP DRILLING OBJECTIVE WE CAN SPECIFY. THIS IS WHY THE SLOW- AND FAST-SPREADING OBJECTIVES ARE LINKED, AND WHY WE CANNOT DIVORCE TECHNOLOGY FROM SCIENCE PLANNING. THE SLOW-SPREADING PLACES ARE WHERE WE CAN EVALUATE TECHNOLOGICAL AND SCIENTIFIC MILESTONES IN PREPARATION FOR THE FULL MONTY DOWN THE ROAD.

2 - Other objectives in our mandate were : Drilling of Active Hydrothermal Systems, Zero-age Ocean Crust and Axial Mantle, The Deep Biosphere, Drilling in Ophiolites.

ZERO-AGE AND ACTIVE HYDROTHERMAL DRILLING REQUIRE SOMETHING LIKE HIGH-SPEED DIAMOND CORING (DCS) TO DO PROPERLY. DCS DRILLING IS A SEPARATE TECHNOLOGY, VERY DIFFICULT IN AN ENGINEERING SENSE, AND IT NEEDS A SEPARATE GROUP TO PLAN FOR IT. IT WAS PUSHED HARD FOR AWHILE, AND NOT JUST FOR THE SAKE OF CRUSTAL DRILLING. HOWEVER, IT HAS BEEN ON THE SHELF FOR SOME YEARS, NOW, SUPPLANTED BY SO-CALLED ACTIVE HEAVE COMPENSATION. THE VIRTUES OF THAT TECHNOLOGY FOR ZERO-AGE AND HYDROTHERMAL DRILLING HAVE NOT BEEN REVIEWED BY A TECHNICALLY COMPETENT GROUP, BUT IT SHOULD BE DONE ASAP. I DON'T EVEN KNOW WHAT EQUIPMENT LIKE THIS WE ARE CURRENTLY USING. INDEED, I DON'T KNOW WHETHER IT HAS EVER WORKED (IMPROVED RECOVERY) IN ANY OF THE HARD/SOFT LITHOLOGIES WE SPECIFIED FOR DCS TESTING DURING, E.G., ENGINEERING LEG 132.

FINALLY, THE ONLY OPHIOLITE TO GET BEHIND IS OMAN. IT MORE CLOSELY RESEMBLES FAST-SPREAD CRUST THAN ANY OF THE OTHERS. BUT UNLESS OPHIOLITE DRILLING CAN DO SOMETHING LIKE DOWNHOLE EXPERIMENTS TO

ESTABLISH AN ACTUAL SIMILARITY TO, E.G., THE SEISMIC STRUCTURE OF GENUINE OCEAN CRUST, IT WILL NOT ACTUALLY GET AT THE MAIN PROBLEM.

We conducted no activity and took no action on these. The questions are :

Do you feel that the working group can be proactive on one or several of these objectives? If yes, How? DESIGNATE A SUBCOMMITTEE.

Should we redefine the mandate of the working group? NO. JUST GET ON WITH ACTIVE PROPOSAL PREPARATION AND MOST SPECIFICALLY COORDINATION.

Alternatively, should InterRidge disband the working group at this stage? NO. BUT HAVE IODP RECOGNIZE IT AS ONE OF ITS OWN COMMITTEES SO THAT MONEY CAN BE OBTAINED FOR ITS MEETINGS. THE STAFFING WILL HAVE TO BE DONE OVER, REVIEWED BY THE VARIOUS NATIONAL COMMITTEES, ETC., SO THAT IT WILL CONFORM TO IODP STRUCTURE AND MOU'S. I SUGGEST HAVING IODP RECOGNIZE THE PRESENT GROUP FOR A YEAR OR SO AS AN INTERIM COMMITTEE, TO BE REPLACED BY A FORMAL IODP COMMITTEE ONCE THOSE DETAILS ARE WORKED OUT. A LETTER TO JIM MORI SHOULD COME FROM INTER-RIDGE AND/OR BENOIT PLUS OTHER COMMITTEE MEMBERS REQUESTING THIS RECOGNITION (AND FUNDING FOR A MEETING). AFTER A BONA FIDE IODP COMMITTEE IS SET UP, THE FUNDING WILL FOLLOW.

3 - The main difficulty for me as a chairman has been to try to gather the working group at a meeting somewhere, in the absence of funding to support travel. I've tried twice at AGU. I gave up the first time (3 years ago), as only 4 people could be around at the proposed date. We had a meeting on the Sunday before AGU 2 years ago to discuss the organization of the Mission Moho workshop, attended by 11 persons (including 7 WG members or associated scientists).

SEE ITEM JUST ABOVE FOR GETTING TRAVEL SUPPORT.

Do you think that, if we continue (see previous point) we can be productive by using primarily electronic communication?

Is there a need for meeting physically?

AGAIN, SEE THE ABOVE. WE DID SURPRISINGLY WELL UNDER OTHERWISE HARRIED CIRCUMSTANCES, SO THERE IS ACTUALLY A RATIONALE AND PRECEDENT FOR DOING A LOT OF GOOD WORK VIA E-MAIL.

With you answers to these questions, plus any other comment that you may have on the usefulness (or lack of ...) of our working group, and on the way we should operate, I'll be able to report back to the InterRidge steering committee.

HOPE THIS IS HELPFUL.

-JIM

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**H. Dick (Jan 3, 2008) :**

The working group should become more focused - particularly in view of the likely demise of any deep riser system for the Pacific in the future. It should be very focused on forcing progress on the other MOHO objectives in the Atlantic and Indian Ocean. Right now Atlantis Bank is the ONLY place where we can reasonable expect to drill the crust mantle boundary and determine the nature of Moho in the time frame of the next ten years - which may be the life of the ocean drilling program. If that does not happen, then this working group will truly have failed. There is nothing to stop the community from getting a full lower crust section and the crust mantle boundary there other than excuses and will power. This group need to push for the BIG objectives that are possible and fight off the leg at a time science.

Henry

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**K. Edwards (Jan 3, 2008) :**

benoit and group:

I address the "other objectives and mandate" question:

*I attended the InterRidge Steering Committee ~2 weeks ago, and reported on the Deep Earth Working Group activity; now I need some comments/feedback from you on what our working group should do (or not do) in the future.*

*We have fulfilled one of our objectives (international crustal penetration drilling project) with the Mission Moho workshop and proposal (although the WG was actually not very*

*instrumental in implementing the workshop and developing the proposal). A series of questions arises now, regarding the mandate and the future of the working group :*

*1 - In the context of IODP missions being an aborted concept, Mission Moho still provides a common scientific and strategic basis for the individual drilling proposals that were the various components of the mission proposal. This will hopefully help all proposals to be as strong as possible in the near future. What we now miss from not having a mission designated, is the technology planning activity, which are essential to the future of very deep drilling in the crust.*

*Can the DES Working Group be proactive in triggering/developing this planning activity, and how?*

*2 - Other objectives in our mandate were : Drilling of Active Hydrothermal Systems, Zero-age Ocean Crust and Axial Mantle, The Deep Biosphere, Drilling in Ophiolites.*

*We conducted no activity and took no action on these. The questions are :*

*Do you feel that the working group can be proactive on one or several of these objectives? If yes, How?*

*Should we redefine the mandate of the working group?*

*Alternatively, should InterRidge disband the working group at this stage?*

I do think this group could be proactive and effective on these fronts but think there is a disconnect between the moho objectives and some of these #2 listed objectives. i am quite active in the deep biosphere community, which is growing in size, activity level, and sense of "common purpose" as a community in terms of the critical science objectives. but largely, the activities of this community are independent of "us" - the Interridge deep earth sampling working group, and "we" as a group are not doing alot in the way of coherent progress. Independently, however, some of us have been been very active outside of the formal constructs of the working group. for example, at the september interr ridge theoretical institute meeting in woods hole (biogeochemical interactions at deep sea vents), which was attended by a few of us, we had very good discussion and some planning for deep biosphere targets at active hydrothermal settings and young ocean crust, and i think made good, effective progress. but in a way, these discussions and this group was a bit of a disconnect from the rest of the topics covered.

i think perhaps it would be better to have smaller, more targeted working groups with very well defined objectives and more limited group members that could perhaps more nimbly promote and guide a more targeted mandate. in short, i am not sure if i can be very effective as helping steer the community towards very deep crustal sampling, but think i have a very good idea of how i could aid on this front on deep biosphere topics.

this is a common problem i sense with this group and if there is any way that it need major restructuring, it is in this way. that said, i am not sure how best to go about such restructuring. right now, the "deep biosphere" people are split between the vents and the deep earth groups and this is making them overall less effective for that community, and being perhaps a bit of a '5th wheel' in the vent/moho groups.

*3 - The main difficulty for me as a chairman has been to try to gather the working group at a meeting somewhere, in the absence of funding to support travel. I've tried twice at AGU. I gave up the first time (3 years ago), as only 4 people could be around at the proposed date. We had a meeting on the sunday before AGU 2 years ago to discuss the organization of the Mission Moho workshop, attended by 11 persons (including 7 WG members or associated scientists).*

*Do you think that, if we continue (see previous point) we can be productive by using primarily electronic communication?*

*Is there a need for meeting physically?*

i do not think that a group can as effective only by email. meetings could be better arranged if the working groups are more coherent because this increases the likelihood for members are attending the same functions.