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Event #(s): G-436-E	E-mail: kirschvink@caltech.edu	Cruise #: LMG09-02

Required fields are highlighted in yellow. Click in the gray text box to enter comments.

Send completed outbrief form to marine.super@usap.gov

Planning Services	
Yes	SIP Process Met Expectations?
<p>Comments:</p> <p>We were novices at this; but John Evans guided us through the process nicely. Eric Steig had experience in McMurdo and in the deep field in West and East Antarctica, and found that the Special Projects SIP was confusing because it was so different from the Continental based SIP format. He recommends that providing a list of available field gear earlier in the process would be helpful.</p>	
Yes	RSP helpful and timely?
<p>Comments:</p> <p>Joe Kirschvink shared the RSP with the entire field team and all felt it was timely and helpful in coordinating those final weeks before the deployment.</p>	
Yes	POC Responsive?
<p>Comments:</p> <p>John Evans and Melissa Rider were both superb at handling things, requiring only minor edits from us.</p>	

Medical Services	
Yes	Kits received on time?
<p>Comments:</p> <p>Kits were received on time; however, the format was very challenging to decipher as there was so much information making it very easy to miss important details. The organization of the document has room for improvement. For example, unimportant advertisements for sunglasses seem to be grouped similarly with very important information on mandatory stress tests. One suggestion would be to organize the kit in sections that identify what one's doctor will need, what one's dentist will need, and what a participant must do.</p> <p>The University of Washington component has experienced problems getting reimbursed for medical exam expenses by their institution.</p>	
Yes	Questions answered?
<p>Comments:</p> <p>Yes.</p>	

Travel Services

Yes	TRW available and understandable?
Comments: TRW is fine, but the field team believes a note on the form indicating that teams travelling together should coordinate their travel prior to submission to RPSC Travel would be helpful.	
Yes	Ticketing completed easily?
Comments: The only hassle was American Airlines canceling our flight from Dallas to Santiago; but the Raytheon Travel group rebooked things in an eyeblink and we arrived at Punta in time.	
Yes	Meet and assist service met requirements?
Comments: Jimmy and his crew were wonderful in the Santiago airport, as were the folks that met us in Punta Arenas.	

Environmental Services

	Sample permits received okay?
Comments: N/A	
	ACA permits received okay?
Comments: N/A	
Yes	Waste handling needs met?
Comments: Everything but the human waste was perfect. The group recommends that a 'back-up' biodegradable bag be used for lining the toilet bucket in case an individual biobag fails. Additionally, the team recommends four biobags/person/day in case of illness, bag damage, and visitors.	

Equipment Availability

Yes	Requested equipment available?
Comments: The ATV and the trailer were essential, given the distances that we needed to traverse each day. The ATV was driven for 175 miles on the island in 23 days. Each field team member had a private tent and this was appreciated by all. One tent zipper failed, but Melissa repaired that in a snap.	
No	Damaged?
Comments: The ATV needs a tune-up, as it was sometimes difficult to start on cold mornings.	
No	Late?

Equipment Availability	
Comments: Nothing late.	
No	ECW gear in good condition?
Comments: Several of the clothing items (including one gortex bib and one of the big red jackets) were unservicable and potentially dangerous. Equipment that is so worn out that some of the essential velcro strips are missing should never be offered to anyone. The Red Parkas in Punta Arenas are so worn out that they should either not be offered at all or replaced with better quality garments. Gortex gloves were requested to improve dexterity in addition to the rubber Atlas gloves. Peter Ward used only his personal clothing. The field team wants an HF radio for future seasons.	
	Lab space adequate?
Comments: N/A	
No	Remote sensing support needs met? (TeraScan, RadarSat)
Comments: Weather reports are a part of remote sensing, and there seems to have been virtually no attempt to make realistic forecasts from professionally-trained meteorologists for the field locality on JRI. We eventually consulted with the IAA base on Seymour (Mariambo) via Iridium phone, and started making our own predictions. In the future, this field team would like to have professional forecasts from the Charleston Forecasting Center. The field team is willing to have a field team member come to Denver to attend a Meteorological Training (offered by Mike Carmody in past seasons) and they are willing to pass local weather conditions to Charleston provided the equipment (weather kit) is made available. The team feels strongly that this it should be standard USAP protocol to make weather forecasts available for all field teams, not just the ship. Some field time was lost due to our predicting -- based on limited information from the Gould - - of a large storm coming into our region. The storm never came, but it prevented the group from going to the more distant outcrops for fear of a large storm event. Review of the forecast plots available on the Gould, after the fact, made it clear that there was a ridge of high pressure in the area and that a storm was not in fact en route. A professional forecast from Charleston would have given us a much more accurate picture and would have allowed for more productive (and safer) work.	
Hotel Services	
Yes	Cabins clean and neat?

Hotel Services

Comments:

Cabins were clean and neat, though in one case a greatly oversized blanket (apparently for a double bed) was provided, which was too bulky to use comfortably in the bunk.

It is essential that both berthing vans are set up with a toilet system. Moving from the berthing vans to a distant toilet (either in the other berthing van or up stairwells) can be very hazardous in heavy sea conditions - especially at night. Using one berthing van for toilet services for all berthing van residents is not acceptable because having up to 9 people using one head is very disruptive for sleeping. Additionally, the berthing van residents felt a briefing about toilet facilities prior to leaving the dock would have been helpful.

Yes Linens clean and in good condition?

Comments:

Yes Food quality and variety was good?

Comments:

LMG food was good.

At the field camp, we ate extremely well, although we will pay more attention to the breakfast cereals next time (the field team wanted more granola type breakfast cereal).

Research Objectives

Yes All accomplished? If not, please explain (weather, ice, equipment, personnel, etc.)

Comments:

Yes! Most important year-one objectives were accomplished, including several unanticipated discoveries of fossils.

Future Cruises

Yes If returning for another cruise, are there any additional equipment or support needs your group anticipates?

Future Cruises

Comments:

We are planning to discuss this directly with NSF

Timing for future field work is critical. December planned cruises often have a great potential for failure due to heavy sea ice preventing the ship from accessing the desired field locations. Late February and March settings reduce the sea ice constraint, but then present a greater chance of snowfall which also eliminates the possibility of conducting field work. January is the optimal time to conduct field work and this group would like to work at this time of year.

Barring the availability of a January timeframe and given an option between a late-November & December or a late-February & March field season, the late-February-March timeframe is preferred. Earlier in February to mid-March (as this year) is preferred still more.

For future work, the following objectives have been determined (order could be changed if forced by weather, sea ice, or other conditions):

2009-10: Objective: Complete bio and magnetic stratigraphic sampling work begun this season at the Santa Marta Cove, JRI localities (2008-09) at the following locations:

A. Cape Hamilton, James Ross Island - 8 days to conduct work (plus weather contingency needed)

Goal: to fill in the many missing areas in the sampled timescale due to rock cover on the Santa Marta and Brandy Bay measured sections

Justification: The Brandy-Santa Marta Cove sections were increasingly covered as we worked up the section. Section F16, critical to our work, had rock showing on only 40% of its nearly 300m. Section D8 was worse - only about 20% usable rock. The Cape Hamilton section should fill in some of these important gaps

B. Cape Lamb, Vega Island - 8 days to conduct work (plus weather contingency needed)

Goal - to sample from time intervals caused by the non-overlapping of sections on Seymour and JRI.

Justification: Without this sampling there will be a time gap that will never be sampled.

2010-11: Objective: Complete paleontology and chemo stratigraphy work at Seymour Island. ~21 days needed for field work which can be conducted from one basecamp location.

Goal: To begin sampling for chemostratigraphy and biomarkers: essentially, all of the mass extinction work called out in the original proposal, work that was deemed essential by NSF and reviewers.

Justification. While PI Kirschvink was able to collect some hand samples from Seymour in 2007-08, none of the sampling for chemostratigraphy or biomarkers was undertaken, largely because of a lack of manpower. Also, his magnetostratigraphic sampling was spotty, again because of the short time in the field (less than 10 field days) and lack of manpower.

While the LMG is a suitable platform to conduct field work, much of this work could be completed more efficiently by using helicopters.

Future Cruises

Yes Anything you would like to see changed?

Comments:

For the next season, we will need to move between two or more other islands in the course of a single deployment (e.g.: Capes Hamilton and Lamb or Cape Hamilton and Seymour Island).

On equipment, the team wants to have an HF radio next season and up to 2 ATV's (depending on field site visited). It would extremely helpful if ATV's could carry at least one passenger. Any ways that commutes could be reduced from the basecamp to field site would greatly improve productivity.

Personnel Issues/Concerns

No ECO

Comments:

Superb crew.

No RPSC

Comments:

Wonderful group of professionals.

Other Issues

No Diving, Zodiac, E-mail support, interaction with stations, etc.?

Comments:

General Comments: Given the constraints of the timing of the LMG, and the need to accommodate as many projects as possible, this season went fairly smoothly. We are concerned about the next two years.

Email at the field camp was very time consuming this year. It often took up to 1.5 hours of download and upload around 100 kb of email. It was eventually determined that this was likely due to both the iridium satellite network and a faulty iridium handset that failed to hold a satellite signal.

Excellent interaction with Marambio and IAA. The IAA group, Eduardo Olivero and Alvar Sobral, hosted three team members for four nights at their camp which was close to one of the first outcrops the field team worked. Having three of the six science team members nearer the field site greatly increased the efficiency and sharply reduced the commute time (a two hour walk from the basecamp in Santa Marta Cove to the field site). Additionally, Marambio provided weather forecast information for the local area. They eventually allowed our Argentinian student, Tjommie Wegener, to call via Iridium phone for daily updates that were incredibly helpful.