3/2/2015 ATTACHMENT 2

Seismic Acquisition Issues

Below is an e-mail message from Tom Shipley to Bob Knox regarding seismic acquisition issues.

Dear Bob,

I have an agenda item for the next UNOLS meeting. I just had a Seismic Acquisition Workshop at IGPP where a number of issues arose related to UNOLS.

I would like 20-30 minutes if possible to review some issues:

For example:

- 1. How should standards of quality and deliverables for seismic programs be set (both seismic and navigation, including the EWING and other single channel digital operations)?
- 2. EWING refit opportunities, multi-streamers (?).
- 3. How will PI's access commercially available high resolution systems and 3-D systems (e.g., the Academic Fleet Review)? There are some problems here with different 'flavors' of what otherwise appear to be similar systems. It is not going to be a big help to 'certify' contractors if they don't have the most appropriate equipment. You may already have figured out a response to the AFR.
- 4. What seismic capabilities will be needed when the EWING retires in the next 10-15 years? The next decade will probably see a move away from surface towed cables to bottom cables which will open the opportunity to a ship with modest cable laying technology. Right now industry is working in 300 m water depth and planning on 3000 m soon. So called 4-C technology (3-component plus hydrophone) with long cables perhaps 10's of km long will be deployed in deep water.

Regards, Tom Shipley.