NanTroSEIZE J-CORES Test and VCD/Lithology Discussion

hosted at the

Yokohama Institute for Earth Sciences

Miyoshi Memorial Auditorium (Conference Bldg, 2F)

Yokohama, Japan

February 5-7, 2007*

Draft Agenda

(comments welcome)

Participants

Host		
Matsuda, Shigemi	JAMSTEC/CDEX	matsudas@jamstec.go.jp
Meeting Chair		
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Observers/Guests		
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* February 7 will only be half day.

Background

As part of the NanTroSEIZE planning, IODP-MI wants to ensure that the USIO and CDEX VCD process, software and handling of lithologic classifications will meet all the expectations of the scientists. There is also a need to discuss publication issues related to VCD output. This involves agreeing across all platforms on uniform graphic representations of lithology and single template for VCD publication quality output.

CDEX agreed to host a J-CORES VCD test and discussion with the participation of key NanTroSEIZE scientists.

Goals and Agenda Items

- Define NanTroSEIZE lithology schema and test its implementation through J-CORES
- Discussion of the VCD process and uniform observable parameters and graphical representation of VCDs across platforms
- Review of data parameters/formats needed for database and publication purposes
    - Use a common software to produce publication quality VCD output
    - Come up with a plan

Preparation

- Requirements for the NanTroSEIZE lithology schema to defined in advance of meeting (**Underwood/Kimura/Kinoshita**)
- Legacy data from previous Nankai drilling be ready for test purposes (**CDEX/Underwood/Kimura**)
- Simulation of shipboard environment for core description and VCD process (**CDEX**)

Resources

- Meeting documents:
    - http://campanian.iodp-mi-sapporo.org/Meetings/J_CORES_CDEX/
- J-CORES: http://sio7.jamstec.go.jp/j-cores/
- CDEX/J-DESC lithologic classification and graphical representation
    - http://campanian.iodp-mi-sapporo.org/Meetings/J_CORES_CDEX/CDEX_J_DESC_VCD_scheme_V1_5.pdf
    - http://campanian.iodp-mi-sapporo.org/Meetings/J_CORES_CDEX/CDEX_VCD_Appendix04_J_CORES_selectee.pdf
- USIO DESCINFO: http://millstone.iodp.tamu.edu/wiki/index.php/DESCINFO_project
- Observable parameters inter-IO comparison:
    - http://campanian.iodp-mi-sapporo.org/Meetings/J_CORES_CDEX/20061120_param_comparison.xls
- Strater software for publication quality VCD output
    - http://www.goldensoftware.com/products/strater/strater.shtml
- USGS Lithology name graphical representations for Strater:
    - http://campanian.iodp-mi-sapporo.org/Meetings/J_CORES_CDEX/Strater_USGS_Fill_Patterns.pdf
- Borehole Geology and Geophysics Plot (BGG_PLOT) – Written by Philippe Gaillot using GMT for plotting, data and VCD output:
    - http://campanian.iodp-mi-sapporo.org/Meetings/J_CORES_CDEX/BGG_plot.pdf

Logistics

- Complete logistics information were provided earlier by Matsuda-san
  - http://campanian.iodp-mi-sapporo.org/Meetings/J_CORES_CDEX/Lithology_VCD_logistic.doc
- Meeting location:
  - Miyoshi Memorial Auditorium (Conference Bldg, 2F)
  - Yokohama Institute for Earth Sciences
  - 3173-25 Showa-machi, Kanazawa-ku, Yokohama Kanagawa, Japan
  - Map: http://www.jamstec.go.jp/jamstec-e/access/yokohama/index.html
- Hotel: Yokohama Bay Sheraton Hotel & Towers (Deadline, January 15)
  - See logistics document for details on how to reserve
  - 1-3-23 Kitasaiwai Nishi-ku Yokohama 220-85001, Japan
  - http://www.starwoodhotels.com/sheraton/property/overview/index.html?propertyID=1134&language=en_US
- Logistics contact: Yuki Yoshioka
  - E-mail: yyoshioka@iodp-mi-sapporo.org
  - Phone: +81-11-738-1076

Agenda Schedule - Preliminary

Day 1: February 5, 2007 – Monday – (10h00-18h00)

Morning: 10h00 – 12h00

- Introduction and Logistics (Miville/Matsuda-san/Underwood)
- VCD process issues – an introduction (Miville)
  - Observable parameters: IOs differences
  - Lithology names and classifications
  - Graphical Representations of lithology
  - VCD publication output
- J-DESC meeting report: Lithology – 25 min - (Sakamoto-san/Ujiie-san)
- Lithology classification for NanTroSEIZE – 25 min - (Underwood)

Lunch: 12h00- 13h00: In Cafeteria

Afternoon: 13h00 – 18h00

- J-CORES test (Matsuda-san, Takahashi-san)
  - Demonstration of J-CORES VCD
  - NanTroSEIZE Lithology Classification implementation
  - Observable parameters in J-CORES
  - Participants test J-CORES VCD

Day 2: February 6, 2007 – Tuesday – (9h00-17h30)

Morning: 9h00 – 12h00

J-CORES Test:
- Continued as needed
- Conclusion

Discussion: VCD Process (as needed)
- Introduction (Miville)
- Observable parameters name, definition and units
  - Uniform use of observable parameters across all platforms, software and database
- Graphical Representation of lithologic names
  - Uniform graphics across all platforms for software and publication
- VCD data stored in database
  - Search and download capability

Lunch: 12h00 – 13h00: In Cafeteria

Afternoon: 13h00 – 17h30

13h00- 14h00: Morning discussion conclusion

14h00-17h30: VCD and Data in IODP Publication
- Introduction
  - IODP Publication (Soeding)
  - Current VCD publication process – 20 min - (Partain/Blum/McInroy)
- VCD and Data Plotting software
  - Borehole Geology and Geophysics Plot (BGG_PLOT) – 20 min - (Gaillot)
  - ESO experience with Strater – 20 min - (McInroy)
  - J-CORES VCD publication output capability - 20 min - (Matsuda-san)
  - Other options
  - Other data output (e.g. x-y plots) (Partain/All)
- Define requirements for VCD output for publication
  - Graphic representations, Colors (CDEX, USIO)
  - Source and format of data input for publication

- Common VCD graphic output format?
  - Common VCD data format?

Day 3: February 7, 2007 – Wednesday – (9h00-12h30)

Morning: 9h00 – 12h30

- Continue the discussion about topics from previous day. A more specific agenda will be developed during the meeting based on the results of the discussions.
- Action items
- Conclusion

12h30: Meeting over

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Meeting Summary

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J-CORES test

Comments from participants (in order of priority)

1. One interval can be referred to a pre-described interval
    - Major concern as all referred interval can be modified at the same time
    - It is important to let users understand the behavior of the system.
2. When a number needs to be entered, it should allow for a range of values (min/max) not only a single value
3. Option to have VCD paper version available on the Chikyu and enter the description manually into J-CORES at a later stage. J-CORES should not be the only option for capture the initial core description.
4. Comments can not be attached to specific interval, however, comments can be entered into speudo-structures for each interval.
5. Rough classification meets the need to NanTroSEIZE and any missing lithology name can be easily added
6. Scientist that will use J-CORES needs to become familiar with the software as soon as possible and if possible remote access should be provided for scientist to gain experience. J-CORES is not a difficult software to learn, however proper training is required.
    - Sufficient training will need to be provided long before the start of an expedition
        i. Training could be a budget issue for CDEX
    - Scientist using their own computer might have to upgrade their software and hardware to be capable to use J-CORES (adding cost for them)

Action Items

- CDEX needs to verify implication of implementing the modifications needed to improve J-CORES based on the comments listed above and report back to IODP-MI
    - Already in the improvement/modification for Japan fiscal year 2007.
- IODP-MI is requesting that at least point 1 and 2 be implemented before NanTroSEIZE stage 1.

VCD Publication

- After the presentations from each IO it was agreed that:
    - There will be a base template to produce the publication quality output from the VCD
        - **The IODP publication department will finalize the template and distribute it to all the IOs for approval.**
        - **The IODP publication department will be the maintainer of the base template and subsequently produced templates.**
        - **staff scientist may add columns to the base template to plot the relevant data for their expedition. This will be done before the cruise and in editorial coordination with the publication department.**
        - **the initial template may be changed during the cruise. Changes should be coordinated by the Staff Scientist along with the Publication Specialist to include editorial review of the modified template.**
    - The base template will contain as a minimum:
        - Depth
        - Sections
        - Core Images
        - Graphic lithologic column
        - Description
    - The final data package for VCD graphics submitted to the publicaiton department comprises a PDF file with the publication ready graphics, and together with the used template file, and the data used in the native format of the application (for archiving), the VCD was produced with. Should it be necessary to plot revised data, the publication department will contact the staff scientst / IO of that expedition to do this. It means, that the responsibility to update data and replot the VCDs lies with the expedition scientists and the expedition operating IO.

- Common publication software for VCD
  - In order to be able to exchange templates to maintain a uniform look of VCDs, IODP-MI recommends that all IOs use a common software to produce the publication ready VCD output.
    - Currently the software Strater has been tested and seems to be offer the best cost/benefit solution to all program partners, so IODP-MI encourages all IOs to enable their on board databases to export the data necessary to produce VCD plots with Strater. Any IO is free to use different software, as long as the look and layout of the templates is maintained, and that both have been agreed upon with the publicaiton department and IODP-MI.
    - At the meeting Strater was succesfully tested to connect to the J-CORES database. CDEX will look into the option to extract the needed data from J-CORES and import it into Strater rather than connecting directly. Strater requires the depth column in a certain format currently not supported by J-CORES (similarly problems appeared with JANUS and ESO SQLServer). An export function would overcome this issue.
    - **IODP-MI requests CDEX to further test Strater using the draft template supplied by the USIO. They should report back to IODP-MI about any problems or findings with Starter by 15 March.**
- dimensions for the VCD output will be decided on an expedition by expedition basis
  - Depends on the number of colums and measurement plots determined by the science party in coordination with the Staff Scientist and Publication Specialist.

Other discussion topics

Observable parameters

- The participants looked at every observable parameters listed in the comparison sheets provided before the meeting
- It was agreed that each IO will keep their own data model and structure in their database, meaning that each IO can call their observable parameters using their own name, but for publication there is a need to map the parameters into common names
- It was also agreed that each IO will need to compare their own list of allowed values for each observable parameters and come up with unique common lists to ensure consistency in what is being captured.
  - **IODP-MI will initiate this request.**
- We identify a few observable parameters that need to be further discussed and clarified:
  - Porosity
    - J-CORES only have porosity as a value coming form an instrument, there is no method of capturing porosity as a descriptive value.
      - **IODP-MI is requesting that there is a method to capture observation of porosity using J-CORES.**
  - Lithification vs. Consolidation
    - The USIO and CDEX do not agree on the name and definition for the Lithification and Consolidation parameters.
    - The USIO is favoring the use of lithification as the general parameter and consolidation as a state of lithification. However in expedition 307 and 308, the VCD in the proceedings is using consolidation as the name of the parameter!
      - **IODP-MI will ask the two IOs to discuss the parameters between them and come to a unified definition and terminology.**
  - Structure
    - The USIO and CDEX have a different approach regarding the capture of structure. CDEX uses different type of structure while the USIO uses only one general type. The USIO demonstrated that there could be some issues of using different type pf structure if there are not well define or depend on an assume type of sediment or rock.
      - **IODP-MI will ask the two IOs to discuss the parameters between them and come to a unified definition and terminology.**

- Lithology name
  - The USIO original plan was to have both lithology name and classification store into one field into the database. This could make it difficult to search and parse the data when needed. The USIO is now proposing to have a separate field for both lithology name and the classification and they will also have 2 separate fields for modifiers. This will make it easier for verification purposes. All the fields will be connected to a preset value list ensuring consistency in capturing the data.
  - CDEX currently uses only one free text field to enter the lithology name and one hierarchical list of rough classification.
    - **IODP-MI suggests that there be one separate capture field in J-CORES to enter the lithology classification used to describe the core. One or more classifications could be used during an expedition.**
    - **There was no agreement if the free text to capture the lithology name should be replaced by a control list to ensure consistency.**
- Unit name
  - In the comparison sheet, the Unit name and type were misunderstood by the CDEX match. The unit name is a way of grouping measurement or observation so that it can be correlated later, the type referring to either a lithological unit, logging unit, seismic unit, etc.
  - The participant presented feels that this is an important field that should be captured when needed.
    - **IODP-MI request that CDEX review the comparison sheet and add a method to capture the information (Unit Name and type) in J-CORES**

VCD data exchange format

- IODP-MI asked the NanTroSEIZE scientists if there will be a need to exchange data during the expeditions especially when drilling is done simultaneously
  - One opinion suggests that this can be done after an expedition as it should not affect the drilling operation
  - Another opinion is that both a view and the data will be needed in real time.
  - It was suggested that when data is extracted from the IOs database to import into Strater, it could be considered as the data exchange format.
    - However this would mean that it is an exchange format specific for Strater and not truly an interoperable data exchange format.
- No agreement was decided at the meeting and further discussion will be taken over by the Data Management Coordination Group.