CSIRO MARINE RESEARCH

Processing Notes

SS 6/2004

18:00 2 June 2004 Noumea- 08:00 27 June 2004 Sydney

(Local times)

Data processing completed by
Bernadette Heaney, July 2004
Wind Speed and Direction corrected by
Bernadette Heaney, June 2006

1. Summary

These notes relate to the production of quality controlled (QC-ed), position, depth and meterological and thermosalinograph data from RV Southern Surveyor voyage 6/2004.

Position data was acquired using the Seapath 200 position and motion reference unit. Depth data was acquired with the Simrad EA500. The Divisional Data Librarian can assist with information regarding all other sensors.

2. Voyage details

"Submarine volcanic and hydrothermal activity in the New Hebrides arc-backarc system"

2.1 Principal Investigators

Professor Richard Arculus, Australian National University

Dr Timothy McConachy, CSIRO Division of Exploration and Mining

3. Processing Notes

3.1 Background Information

Thermosalinograph raw files were modified to interpolate across spikes in temperature values.

A combined underway file for the entire voyage, consisting of 10 second values of position, depth, meterological and thermosalinograph variables was remade on 30 June 2004 - by reading data from hourly files returned from the voyage and modified .tsr files. (Time range 07:22:10 02-Jun-2004 02:32:00 26-June-2004).

The water depth was “repicked” using echoview software. The depth data was interpolated to 10 second values. The new depths were read back into the netcdf file.

The meteorological data consists of air temperature, humidity, light, atmospheric pressure, wind speed and direction and maximum wind gust.

It was noticed in January 2006 that the uwyLogger progam had not been correcting the wind speed and wind direction data for ships motion. The wind speed and wind direction data were recorrected in June 2006; the data was flagged good, manually adjusted (48). MaxWindGust was set to NaN, and flagged as bad data.

The thermosalinograph data consists of water temperature and water salinity. Temperature data was rejected due to the temperature probe being tested from 00:00 07-Jun-2004 - 04:00 07-Jun-2004. Temperature and salinity data were rejected 03:55 25-Jun-2004 - 09:55 26-Jun-2004 as the pump was off because of the the power failure, and this was not noticed till the next day.

CTD stations, 1, 14 and 17 were recorded onboard to compare the salinity data from the CTD with the thermosalinograph readings. Results from station 1 could be considered unreliable; results from stations 14 and 17 (-.01 and -.004 difference) indicate the variance is in the noise range and that the thermosalinograph salinity readings are reliable. No bottle samples were taken.

4. Other

The navigation, depth, meteorological and thermosalinograph data will be entered into the data warehouse. Position, depth and meteorological and thermosalinograph data extracted from the underway file is available online.

5. References

Pender, L., 2000: Data Quality Control Flags. http://www.csiro.marine.au/datacentre/ext_docs/DataQualityControlFlags.pdf

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