Processing Notes

SS 8/2005

13:30 28-september-2005 Fremantle - 09:00 20-October-2005 Fremantle

(Local times)

Data processing completed by
Bernadette Heaney, December 2005

(wind speed and direction reprocessed Feb 2006)

1. Summary

These notes relate to the production of quality controlled (QC-ed), position, depth and metero-logical and thermosalinograph data from RV Southern Surveyor voyage 8/2005.

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

"Characterising benthic habitats and sedimentary processes of southwest Australian margin, including developing an understanding of the petroleum potential of the East Mentelle Basin"
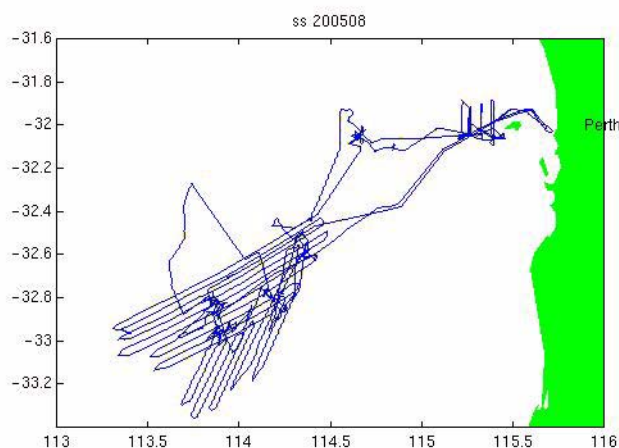
2.1 Principal Investigator

Dr Andrew Heap

Geoscience Australia, Canberra

3. Processing Notes

3.1 Background Information

A combined underway file for the entire voyage, consisting of 10 second values of position, depth, meterological and thermosalinograph variables was remade on 1 Nov 2005 - by reading data from hourly files returned from the voyage and modified. (Time range 05:51:00 28-Sep-2005 - 23:14:40 19-October-2005).

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.

(Feb 2006 - Lindsay Pender's uwyLogger had not been correcting the wind speed and direction data. processWind reprocessed the wind speed and direction values from uncorrWindSpeed,

uncorrWinddir, speedOG, courseOG and gyroHeading values in the netcdf file. The maximum wind gust was set to NaN and flagged as bad.)

The thermosalinograph (TSG) data consists of water temperature and water salinity. The thermosalinograph salinity data is calibrated against CTD data (Sea Bird conductivity, temperature and depth sensor) by running the water from the thermosalinograph through the CTD in the wetlab. Data from the CTD is recorded for about 30 minutes; data from the TSG is continuously logged while at sea. The CTD conductivity data was calibrated with values derived from bottle data on ss 7/2005. The TSG data was then compared to the processed CTD data.

A scale (0.9998) was applied to the TSG conductivity data and the salinity data was re-computed.

The gps data from the Seapath MRU unit gave no problems.

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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