A Cruise Report: PR14, 1996

A.1 Cruise Narrative

A.1.1 Highlights

WOCE Section **P14**
ExpoCode **20VDPR1496_1**

Chief Scientist: **Dante Gutierrez B.**
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Ship: AGOR60 - Vidal Gormaz.
Ports of call: Talcahuano, CHILE.
Cruise Date: August 5-29/1996

A.1.2 Cruise Summary

Cruise Track:
The cruise track and station locations are shown in figure 1.

Number of stations::
A total of 50 hydrographic stations were performed using a sealogger 19 CTD model 1240 and a sealogger 25.

*Sampling***:**
continuos profiles of temperature and salinity were made using a CTD.

Floats, Drifters, and Moorings:
(None)

A.1.3 List of principal Investigators

NAME	RESPONSABILITY	INST.
EaC. Dante Gutierrez B.	Chief of Watch 1, Computer Operator, Cruise Logger, Form filer.	SHOA
C1. Felipe Jaramillo G.	Chief of Watch 2, Computer and Seabeam, cruise logger, METEO/S.H.I.P message sender.	SHOA

A.1.4 Scientific Programme and methods

The principal objectives of the cruise were to collect necessary information to develop ocean circulation models to predict decade climatic changes in order to contribute to international WOCE program.

Preliminary Results

A.1.5 Major Problems Encountered on the Cruise

Major problems during the realization of the cruise, were the continuos passing of weather fronts through the study area, difficulting the sampling and damaging the instruments.

A.1.6 Other Observations of Note:

CTD 19 model 1240 had problems at the beginning of the cruise . therefore, the first station were performed with a CTD 25 (belongs to the Catholic University of Valpara so)

A.1.7 List Of Cruise Participants

NAME	RESPONSABILITY	INST.
EaC. D. Gutierrez B.	Chief of watch 1	SHOA
C1 Serv. (Oc. Bas) Sr. F. Jaramillo	Chief of watch 2	SHOA
S1. (Mec El.) R. Castro.	Seabeam controller.	SHOA
C1.Serv. (Db. Cart.) J. Freire.	Sea surface temperature sampler.	SHOA
C1. Serv. (Oc.) J. Caro.	Winche operator.	V. Gormaz
C1. (Met.) J. Bravo E.	CTD maneuver, XBT launcher, meteo-rological sampler, rossette sampler.	SHOA
S1. Serv. (Oc.) M. Placencia.	Winche operator.	V. Gormaz
C1. (Mc. S.) A. Martinez.	Seabeam controller.	SHOA
M. Serv. (Oc. Bas.) P. Bizama.	TD maneuver, XBT launcher, meteo-rological sampler, rossette sampler.	SHOA

A.2 Underway Measurements

A.2.1 Navigation:
(Not available)

A.2.2 Echosounding:
(Not available)

A.2.3 Acoustic Doppler Current Profiler (ADCP):
(None)

A.2.4 Thermosalinograph Measurements:
(None)

A.2.5 XBTs
A total of 36 XBT launches (T5 and T7) were performed.

A.2.6 Meteorological Measurements
Meteorological data measured were : wind speed and direction, air temperature, atmospheric pressure.

A.3 Hydrographic Measurement Techniques and Calibration

A.3.1 Sample Salinity Measurements:
(Not sampled)

A.3.2 Sample Oxygen Measurements:
(Not sampled)

A.3.3 Nutrients:
(Not sampled)

A.3.4 CFC:
(Not sampled)

A.3.5 Samples taken for other chemical measurements:
(None)

A.3.6 CTD Measurements
The instrument used was a CTD Sealogger-19 model 1240. This instrument had problems (malfunction) after this cruise. It was sent to USA for reparations and all its sensors was replaced . Therefore, the drift of the instrument was lost and data could not be corrected.

A.3.7 CTD Data collection and processing

Data registry

Date	STATION
08/14/96	1,2,3,4
08/15/96	5, 6, 7, 8
08/16/96	9, 10, 11, 12
08/17/96	13, 14
08/18/96	15, 16
08/19/96	17, 18
08/20/96	19, 20, 21
08/21/96	22, 23, 24, 25
08/22/96	26, 27, 28, 29, 30, 31
08/23/96	32, 33, 34
08/24/96	35, 36, 37, 38, 39, 40
08/25/96	41, 42, 43
08/26/96	44, 45, 46, 47, 48, 49
08/27/96	50

CTD-Seabird 25 (belongs to the Catholic University of Valparaiso,UCV)
This instrument was never calibrated , therefore, there is no lineal drift in time. The data processing was made assuming no correction to the instrument. Calibration coefficients are

Temperature:

A =	3.68019763E-03	Offset = 0
B =	6.02138651E-04	Slope = 1
C =	1.53464870-05	
D =	2.39807954E-06	

Conductivity:

M =	4.4	Offset = 0
A =	1.12073634E-05	Slope = 1
B =	5.62493696E-01	
C =	-4.10873301E+00	
D =	-1.67289063E-05	
Cpcor =	-9.5700E-08	

Pressure

A0 =	5338.009	Offset = 0
A1 =	-1.379122E+00	
A2 =	9.064474E-08	

CTD-Seabird 19

This CTD was calibrated on February 16/1996, after the cruise the sensors were replaced so the time drift were lost. CTD data were made assuming first sensors no affected by time drift. The calibration coefficients were:

Temperature:

A =	3.67473865E-03	offset =	0
B =	5.80221837E-04	slope =	1
C =	9.17287476E-06		
D =	-6.71372608E-07		

Conductivity:

M =	3.9	offset =	0
A =	4.56297616E-05	slope =	1
B =	4.97796218E-01		
C =	-4.14651601E+00		
D =	5.67587208E-04		
CPcor =	-9.5700E-08		

Pressure

A0 =	4967.345	Offset =	0
A1 =	-1.301226E+00		
A2 =	4.343377E-08		

Processing

Step1

1. Convert data from *.hex to *.cnv format using DATCNV program and *.con configuration file.
2. Deleting negatives velocities using the leewoce.bas program
3. Checking and cleaning the header files.
4. Computing the average down velocity value (X).
5. e) to apply the AlingCTD program to correct temperature and conductivity time response shift from the CTD sensors.

Step 2

a) To apply DATCNV program to average observed values meter by meter.

Step 3

a) To apply Winfilter program to filter data after step 2 , using a flexible windows determined by the user.

A.3.8 Satellite image acquisition and processing.
(None)

A.3.9 Shipboard computing:
(None)

Note : All data from WOCE PR14 and SR1 cruises, have been passed to the National Oceanographic Data Center of Chile (CENDOC) for data management purposes and to be quality controlled according to normal WHPO procedures. For major information write to:

Ricardo Rojas
Chief of CENDOC
Casilla 324
Valparaiso
CHILE
e-mail rrojas@shoa.cl

who can direct your request to the appropriate decision channels. Do not write directly to Principal Investigators.

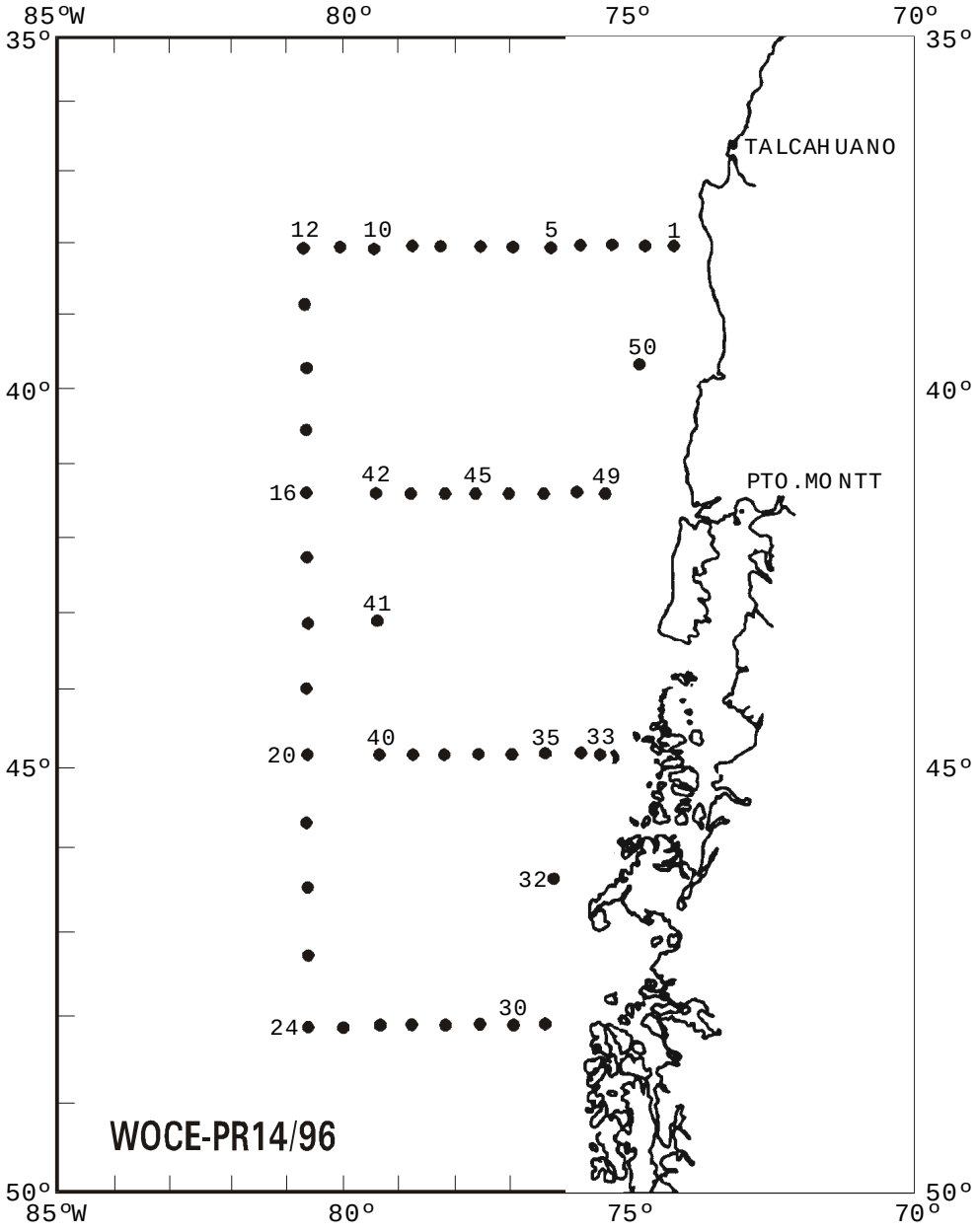

Figure 1. Location of hydrographic stations during PR14-96