

## A Cruise Report: SR01

### A.1 Cruise Narrative

#### A.1.1 Highlights

WOCE Line **SR01**  
Expocode **20VDSR0198\_1**  
Chief Scientist: Ximena Jara U.  
Servicio Hidrográfico y Oceanográfico de la Armada (SHOA).  
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Valparaíso, Chile.  
Teléfono: 56-032-266666  
Fax: 56-032-266542  
Ship AGOR60 - Vidal Gormaz.  
Ports of call Punta Arenas, Chile  
Cruise Dates November 28 — December 13, 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 15 hydrographic stations were performed using a CTD sealogger 25.

*Sampling:*

continuous profiles of temperature and salinity were made using a CTD.

*Floats, Drifters, and Moorings:*

(None)

#### A.1.3 List of principal Investigators

NAME	RESPONSIBILITY	INSTITUTION
EaC. Sra. Ximena Jara	Chief of watch 1, computer operator	SHOA
EaC. Sra. Wanda García	Chief of watch 2, computer operator	SHOA
Sr. Raul Estrada	SHIP messages sender	SHOA

#### **A.1.4 Scientific Programme and methods**

*The principal objectives of the cruise were:*

To collect necessary information to increase the scientific knowledge of the dynamic of the Antarctic Circumpolar Current at Drake Passage in order to contribute to international WOCE program.

*Preliminary Results*

#### **A.1.5 Major Problems Encountered on the Cruise**

Major problems during the realisation of the cruise, were the continuous passing of weather fronts through the study area, making difficult the sampling and damaging the instruments.

#### **A.1.6 Other Observations of Note**

#### **A.1.7 List Of Cruise Participants**

<b>NAME</b>	<b>RESPONSIBILITY</b>	<b>INST.</b>
EaC. Sra. Ximena Jara	Chief of watch 1, computer operator.	SHOA
EaC. Sra. Wanda García	Chief of watch 2, computer operator.	SHOA
S1° M. Placencia	Winch operator, XBT launcher	SHOA
S2° R. Castro	Seabeam & CTD manoeuvre	SHOA
C1° J. Bravo	CTD & rosette manoeuvre, METEO/SHIP sender	SHOA
C1° J. Freire	CTD & Rosette assistant	SHOA
M. P. Bizama	CTD & XBT launches	SHOA
Sr. R. Estrada	SHIP messages	SHOA
S1° P. Urz a	CTD assistant	SHOA
C1° J. Caro	Winch operator	SHOA
C2° A. Martinez	Seabeam operator	SHOA
M° C. Saavedra	CTD and XBT launches	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 17 XBT launches (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**

Salinity water samples were obtained at stations 3 and 8 at 5, 550, 1000, 1500 and 2000 m. These samples were analysed in situ through a PORTASAL salinometer model 8410.

### **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 CTD used was a Sealogger-19 model 1240 bought by SHOA in 1992, whose first calibration was made in 1995.

### A.3.7 CTD Data collection and processing

#### Data Registry

Date	STATION
11/30/1996	1, 2, 3
12/01/1996	4,5,6
12/02/1996	7,8,9,10
12/03//1996	11,12,13,14
12/04//1996	15

#### CTD SBE-25

It was bought by SHOA in 1995 and its first calibration was made in 1997. Therefore, the calibration coefficients used were the ones from the 1995 with the slope and offset calculated from the lineal time drift.

#### Temperature

G =	4.84362130E-03	Slope = 1
H =	6.77464130E-04	Offset = 0.0118
I =	2.72222137E-05	
D =	2.21258685E-06	
F0 =	1000.000	

Day	B	n	Post-delta(t)	b / n	offset
30	521	773	-0.01746	0.6739974	-0.0118
1	521	773	-0.01746	0.6752910	-0.0118
2	521	773	-0.01746	0.6765847	-0.0118
3	521	773	-0.01746	0.6778784	-0.0118
4	521	773	-0.01746	0.6791720	-0.0118

b: number of days between calibration and the day of CTD cast.

n: number of days between calibrations.

Post-delta (T): temperature-drift value according calibration certificate.

#### Conductivity:

M =	4.5	Offset = 0
A =	7.19611919E-06	Slope = 1
B =	5.41883750E-01	
C =	-4.14061857E+00	
D =	1.34395405E-04	
		Cpcor = -9.57E-08

## Pressure

A0 =	5327.7010
A1 =	-1.379409E+00
A2 =	-4.139641E-09

Therefore, one \*.con configuration files was created (SR1-96.con)

According to the chemical salinity analysis to water samples from this cruise and two others performed in a row (CIMAR FIORDO and Bransfield Cruises performed just before and after SR1-96), a constant difference between salinity bottle values and salinity values obtained by the CTD (just corrected by temperature) were observed . The CTD salinity values were 0.05 PSU lower than bottle values. Therefore , CTD was just corrected by temperature and a value of 0.05 PSU were added to the salinity values.

## Processing

### Step 1

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. to apply the Aling CTD program to correct temperature and conductivity time response shift from the CTD sensors.

### Step 2

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

### Step 3

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. Once finished they have been sent to the WOCE Hydrographic Program Office at the Scripps Institution of Oceanography for archival. For major information write to:

**Ricardo Rojas**  
Chief of CENDOC  
Casilla 324  
Valparaiso  
CHILE  
e-mail [rrojas@shoa.cl](mailto:rrojas@shoa.cl)

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

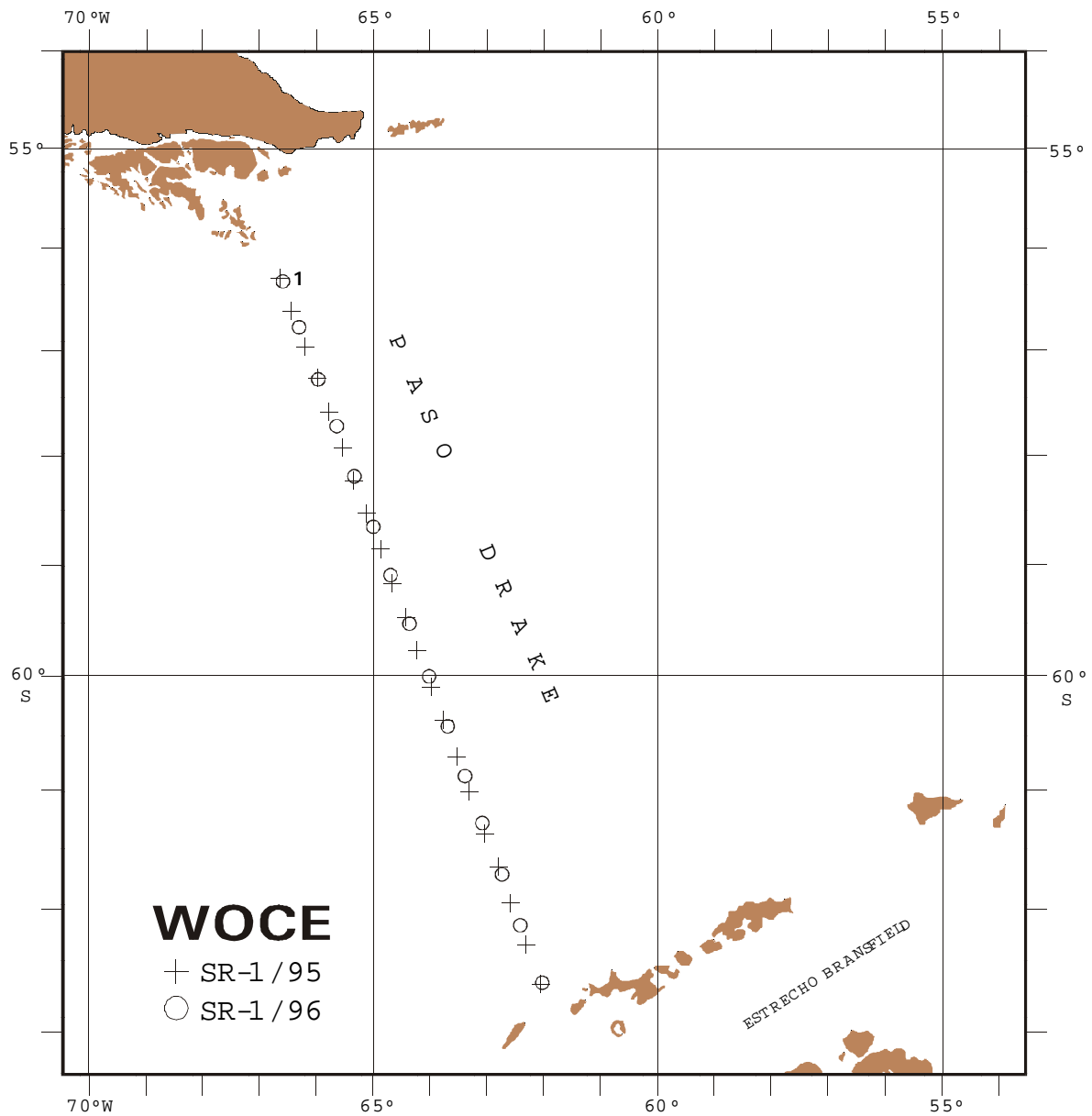


Figura 1.- Posición de estaciones oceanográficas durante Cruceros WOCE SR1-95 y 96.

Figure 1.- Position of stations during WOCE SR1-95 and 96.

Figure 1. Position of stations during WOCE SR1 1996.