

## A Cruise Report: SR01

### A.1 Cruise Narrative

#### A.1.1 Highlights

WOCE Line **SR01**  
Expocode **20VDSR0194\_1**  
Chief Scientist: **Capit n de Corbeta Jorge Maturana Lavin.**  
Servicio Hidrogr fico y Oceanogr fico de la Armada (SHOA).  
Err zuriz 232, Playa Ancha.  
Valpara so, Chile.  
Tel fono: 56-032-266666  
Fax: 56-032-266542  
Ship AGOR60- Vidal Gormaz.  
Ports of call Punta Arenas, Chile  
Cruise Dates November 08 — December 09 1994

#### A.1.2 Cruise Summary

##### *Cruise Track*

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

##### *Number of stations*

A total of 18 hydrographic stations were performed using a CTD sealogger model 1064 (first three stations) and a CTD sealogger model 1240 (the remaining stations).

##### *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	INSTITUTION
CC. Sr. J. Maturana L	Chief Scientist.	SHOA
EaC. Sr. D. Gutierrez	Chief of watch 1,computer operator.	SHOA
EaC. Srta. Y. Guerrero	Chief of watch 2,computer operator.	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

- The Rosette sampler was lost due to a winch operation problem.
- Many problems with the XBT probes made unsuccessful launches.
- Iceberg drifting and ice debris in the area of study and also poor visibility made difficult conditions to accomplish the hydrographic stations.

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

Due to the lost of the CTD 19 model 1064 the first three stations could not be corrected.

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

NAME	RESPONSABILITY	INST.
CC. Sr. J. Maturana	Chief Scientist	SHOA
C1° (Met) J. Bravo	Meteorologist	SHOA
EaC. Sr. D. Gutierrez	Chief of watch 1	SHOA
S2° Serv. (Oc) P. Urz a	Winch operator and Rosette meneuver	SHOA
C1° Serv. (Oc) R. Montecinos	Winch operator and Rosette meneuver	SHOA
M° Serv. (Oc) D. Meza	Oxygen an lisis	SHOA
M° Serv. (Oc) C. Saavedra M.	XBT launcher , salinity sampler.	SHOA
EaC. Srta. Y. Guerrero A.	Chief of watch 2	SHOA
S2° Serv. (Oc) A. Sanchez R	Winch operator, XBT launcher	SHOA
C1° Serv. (Db.C) J. Freire .	Water sampler	SHOA
M° Serv. (Oc) P. Altamirano F.	Rosette manoeuvre , oxygen analysis	SHOA
M° Serv. (Oc) M. Higuera M.	XBT launcher , salinity 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 18 XBT launches (T5 and T7) were performed.

### **A.2.6 Meteorological Measurements**

Meteorological data measured were: wind speed and direction, air temp., 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 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/ 19/1994	1, 2, 3, 4
11/ 20/1994	5,6,7,8,9
11/21/1994	10, 11, 12, 13, 14, 15, 16
11/22/1994	17, 18

#### CTD SBE-19 model 1240

It was bought by SHOA in 1992 and its first calibration was made in 1995. Therefore, the calibration coefficients used were the ones from the 1992 with the slope and offset calculated from the lineal time drift.

#### Temperature:

A = 3.67439294E-03	Slope = 1
B = 5.79923710E-04	Offset = -0.0011
C = 8.23609887E-06	
D = -1.55263735E-06	
FO = 2408.120	

Day	B	n	b/n	post-delta(t)	offset
19	750	850	0.8823529	0.00129	-0.0011
20	751	850	0.8835294	0.00129	-0.0011
21	752	850	0.8847059	0.00129	-0.0011
22	753	850	0.8858824	0.00129	-0.0011

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 = 2.6	Offset = 0
A = 2.33127200E-03	slope1 = 0.999783
B = 4.91763158E-01	slope2 = 0.999782
C = -4.12966273E+00	
D = 5.64959638E-04	
E = -9.5700E-08	

Day	B	n	b/n	(Pre-slope)-1	Slope
19	750	850	0.8823529	-0.000246	0.999783
20	751	850	0.8835294	-0.000246	0.999783
21	752	850	0.8847059	-0.000246	0.999782
22	753	850	0.8858824	-0.000246	0.999782

Therefore, two \*.con configuration files were created (SR1-94 A.con and SR1-94 B.con)

### Pressure

A0 =	4966.795
A1 =	-1.301054E+00
A2 =	1.217797E-08

### 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

- 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. 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 [rojas@shoa.cl](mailto:rojas@shoa.cl)

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

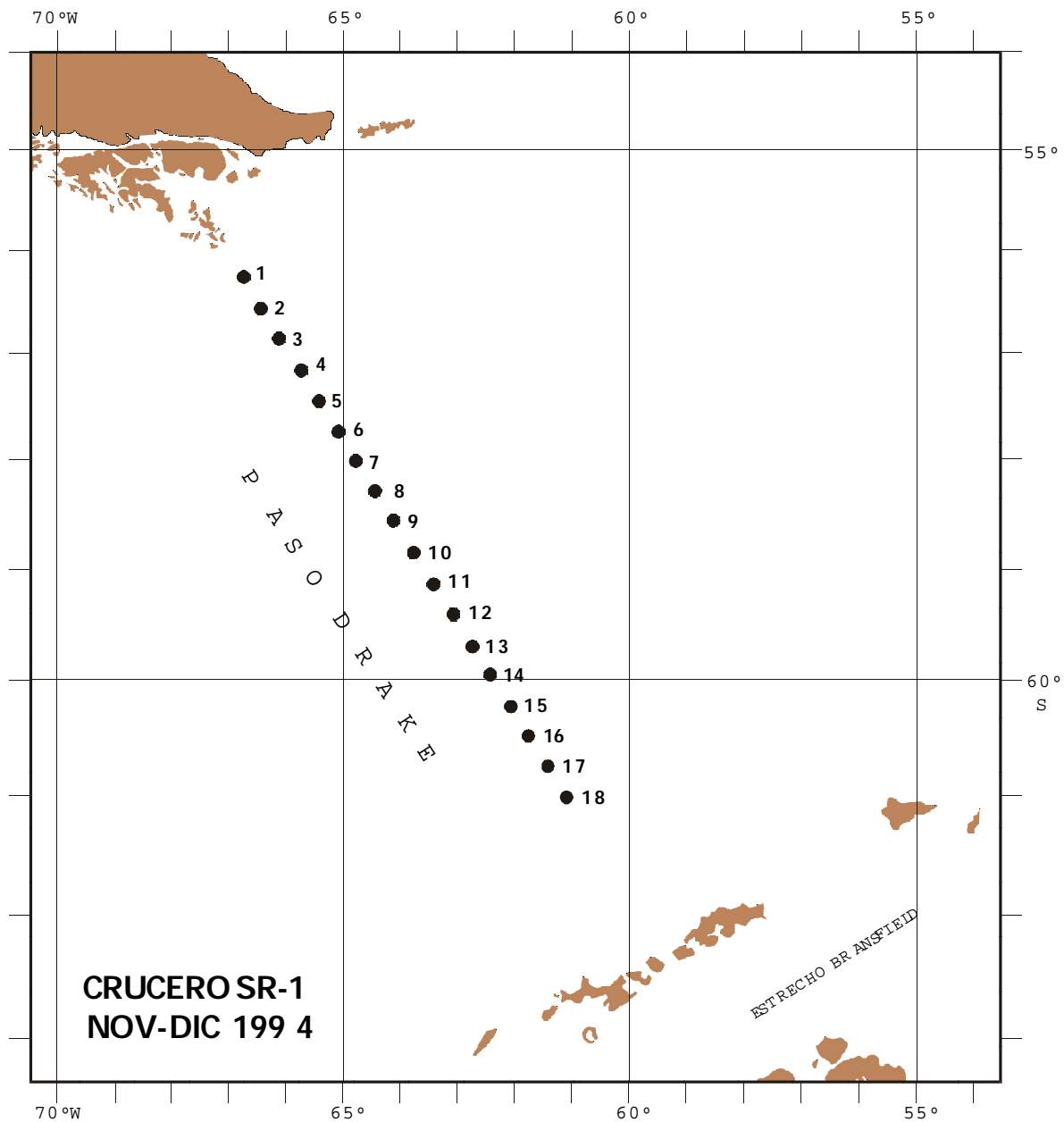


Figure 1. Position of stations during WOCE SR1 1994.