

# SEA-BIRD ELECTRONICS, INC.

13431 NE 20th Street, Bellevue, Washington, 98005-2010 USA

Phone: (425) 643 - 9866 Fax (425) 643 - 9954 Email: seabird@seabird.com

SENSOR SERIAL NUMBER: 0473  
CALIBRATION DATE: 07-Jul-10

SBE 37 CONDUCTIVITY CALIBRATION DATA  
PSS 1978: C(35,15,0) = 4.2914 Siemens/meter

## COEFFICIENTS:

g = -1.086891e+000  
h = 1.491181e-001  
i = -4.278313e-004  
j = 5.367465e-005

CPcor = -9.5700e-008  
CTcor = 3.2500e-006  
WBOTC = -6.9823e-005

| BATH TEMP<br>(ITS-90) | BATH SAL<br>(PSU) | BATH COND<br>(Siemens/m) | INST FREQ<br>(Hz) | INST COND<br>(Siemens/m) | RESIDUAL<br>(Siemens/m) |
|-----------------------|-------------------|--------------------------|-------------------|--------------------------|-------------------------|
| 22.0000               | 0.0000            | 0.00000                  | 2708.81           | 0.00000                  | 0.00000                 |
| 0.9999                | 34.6588           | 2.96377                  | 5225.61           | 2.96376                  | -0.00002                |
| 4.5000                | 34.6390           | 3.26964                  | 5419.52           | 3.26967                  | 0.00003                 |
| 15.0000               | 34.5960           | 4.24744                  | 5997.05           | 4.24741                  | -0.00003                |
| 18.5000               | 34.5867           | 4.59119                  | 6187.18           | 4.59120                  | 0.00001                 |
| 24.0000               | 34.5767           | 5.14691                  | 6482.57           | 5.14692                  | 0.00001                 |
| 29.0000               | 34.5708           | 5.66662                  | 6746.93           | 5.66662                  | 0.00000                 |
| 32.5000               | 34.5676           | 6.03751                  | 6929.31           | 6.03750                  | -0.00000                |

$$f = \text{INST FREQ} * \sqrt{1.0 + \text{WBOTC} * t} / 1000.0$$

$$\text{Conductivity} = (g + hf^2 + if^3 + jf^4) / (1 + \delta t + \epsilon p) \text{ Siemens/meter}$$

$$t = \text{temperature}[^{\circ}\text{C}]; p = \text{pressure}[\text{decibars}]; \delta = \text{CTcor}; \epsilon = \text{CPcor};$$

$$\text{Residual} = \text{instrument conductivity} - \text{bath conductivity}$$

