

# SEA-BIRD ELECTRONICS, INC.

1808 136th Place N.E., Bellevue, Washington, 98005 USA

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

SENSOR SERIAL NUMBER: 0829  
CALIBRATION DATE: 31-May-07

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

## COEFFICIENTS:

g = -1.046705e+000  
h = 1.583134e-001  
i = -1.604109e-004  
j = 4.292147e-005

CPcor = -9.5700e-008  
CTcor = 3.2500e-006  
WBOTC = -2.8423e-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                  | 2573.15           | 0.00000                  | 0.00000                 |
| 1.0001                | 34.7923           | 2.97412                  | 5035.28           | 2.97417                  | 0.00005                 |
| 4.5000                | 34.7718           | 3.28094                  | 5223.23           | 3.28091                  | -0.00003                |
| 15.0000               | 34.7279           | 4.26192                  | 5782.77           | 4.26186                  | -0.00006                |
| 24.0000               | 34.7087           | 5.16439                  | 6252.66           | 5.16440                  | 0.00001                 |
| 29.0000               | 34.7036           | 5.68593                  | 6508.43           | 5.68605                  | 0.00012                 |
| 32.5000               | 34.7011           | 6.05817                  | 6684.70           | 6.05809                  | -0.00008                |

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

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

t = temperature[°C]; p = pressure[decibars];  $\delta$  = CTcor;  $\epsilon$  = CPcor;

Residual = instrument conductivity - bath conductivity

