

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 0453
CALIBRATION DATE: 11-May-13

SBE 45 CONDUCTIVITY CALIBRATION DATA
PSS 1978: C(35,15,0) = 4.2914 Siemens/meter

COEFFICIENTS:

| | |
|--------------------|----------------------|
| g = -9.830753e-001 | CPcor = -9.5700e-008 |
| h = 1.319816e-001 | CTcor = 3.2500e-006 |
| i = -3.352640e-004 | WBOTC = 4.5697e-007 |
| j = 4.402611e-005 | |

| BATH TEMP (ITS-90) | BATH SAL (PSU) | BATH COND (Siemens/m) | INST FREQ (Hz) | INST COND (Siemens/m) | RESIDUAL (Siemens/m) |
|-----------------------|-------------------|--------------------------|-------------------|--------------------------|-------------------------|
| 22.0000 | 0.0000 | 0.00000 | 2735.29 | 0.00000 | 0.00000 |
| 1.0000 | 34.8465 | 2.97830 | 5489.27 | 2.97832 | 0.00002 |
| 4.5000 | 34.8265 | 3.28559 | 5697.49 | 3.28557 | -0.00002 |
| 15.0000 | 34.7828 | 4.26794 | 6316.36 | 4.26794 | -0.00000 |
| 18.4999 | 34.7727 | 4.61320 | 6519.59 | 4.61320 | 0.00001 |
| 24.0000 | 34.7610 | 5.17131 | 6834.93 | 5.17132 | 0.00001 |
| 29.0000 | 34.7538 | 5.69323 | 7116.77 | 5.69323 | -0.00000 |

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

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

t = temperature[°C]; p = pressure[decibars]; δ = CTcor; ϵ = CPcor;

Residual = instrument conductivity - bath conductivity

