

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 0041

CALIBRATION DATE: 01-Oct-13

SBE GLIDER PAYLOAD CTD

CONDUCTIVITY CALIBRATION DATA

PSS 1978: $C(35,15,0) = 4.2914$ Siemens/meter

COEFFICIENTS:

$g = -9.782797e-001$

$h = 1.501187e-001$

$i = -2.879137e-004$

$j = 4.747390e-005$

$CP_{cor} = -9.5700e-008$

$CT_{cor} = 3.2500e-006$

$WBOTC = 1.9558e-007$

| 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 | 2556.41 | 0.00000 | 0.00000 |
| 1.0000 | 34.7830 | 2.97339 | 5134.54 | 2.97339 | -0.00000 |
| 4.5000 | 34.7625 | 3.28015 | 5329.41 | 3.28015 | 0.00000 |
| 15.0000 | 34.7183 | 4.26086 | 5908.60 | 4.26087 | 0.00001 |
| 18.5000 | 34.7091 | 4.60568 | 6098.87 | 4.60568 | -0.00000 |
| 24.0000 | 34.6990 | 5.16310 | 6394.17 | 5.16310 | -0.00001 |
| 29.0000 | 34.6938 | 5.68451 | 6658.18 | 5.68451 | 0.00000 |

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

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

$t = \text{temperature}[^{\circ}\text{C}]$; $p = \text{pressure}[\text{decibars}]$; $\delta = CT_{cor}$; $\epsilon = CP_{cor}$;

Residual = instrument conductivity - bath conductivity

