

SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 0139
CALIBRATION DATE: 15-May-09

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

COEFFICIENTS:

g = -9.947719e-001
h = 1.191152e-001
i = -1.014475e-004
j = 2.401693e-005

CPcor = -9.5700e-008
CTcor = 3.2500e-006
WBOTC = -5.1874e-006

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	2891.16	0.00000	0.00000
1.0000	34.8210	2.97633	5768.78	2.97633	0.00001
4.4999	34.8017	3.28347	5986.81	3.28347	-0.00000
15.0000	34.7596	4.26539	6635.01	4.26538	-0.00002
18.4999	34.7507	4.61059	6848.02	4.61060	0.00001
23.9999	34.7403	5.16856	7178.59	5.16857	0.00001
29.0001	34.7342	5.69039	7474.15	5.69040	0.00000
32.5000	34.7307	6.06275	7677.87	6.06274	-0.00001

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

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

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

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

