SEA-BIRD ELECTRONICS, INC.

1808 136th Place N.E., Bellevue, Washington 98005 USA
Phone: (425) 643 - 9866 Fax: (425) 643 - 9954 Internet: seabird@seabird.com

SENSOR SERIAL NUMBER = 2399
CALIBRATION DATE: 10-Apr-02

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

COEFFICIENTS:

```
g = -1.017678e+00
h =  1.441281e-01
i = -1.644948e-04
j =  3.466994e-05

CPcor = -9.5700e-08
CTcor =  3.2500e-06
WBOTC =  2.4757e-06
```

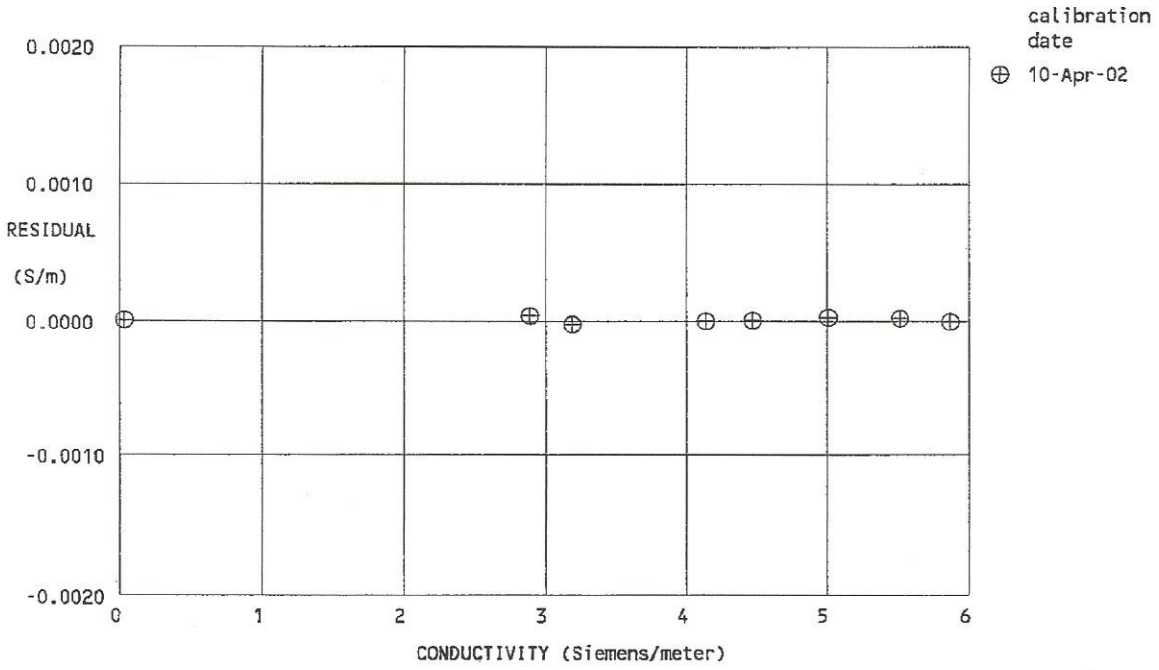
BATH TEMP (ITS-90 °C)	BATH SAL (PSU)	BATH COND (Siemens/m)	INST FREQ (Hz)	INST COND (Siemens/m)	RESIDUAL (Siemens/m)
22.0000	0.0000	0.00000	2658.94	-0.00000	-0.00000
0.9999	33.3289	2.86060	5185.94	2.86063	0.00003
4.5000	33.3268	3.15766	5380.11	3.15763	-0.00003
15.0001	33.3201	4.10697	5957.73	4.10696	-0.00001
18.5000	33.3181	4.44048	6147.51	4.44048	-0.00000
23.9999	33.3149	4.97930	6442.04	4.97931	0.00002
29.0002	33.3102	5.48266	6705.18	5.48268	0.00001
32.5000	33.3034	5.84119	6886.27	5.84117	-0.00002

f = INST FREQ * sqrt(1.0 + WBOTC * t) / 1000.0

t = temperaure [deg C]; p = pressure [decibars]; δ = CTcor; ϵ = CPcor;

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

Residual = (instrument conductivity - bath conductivity)



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CALIBRATION DATE: 10-Apr-02

SBE 37
TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

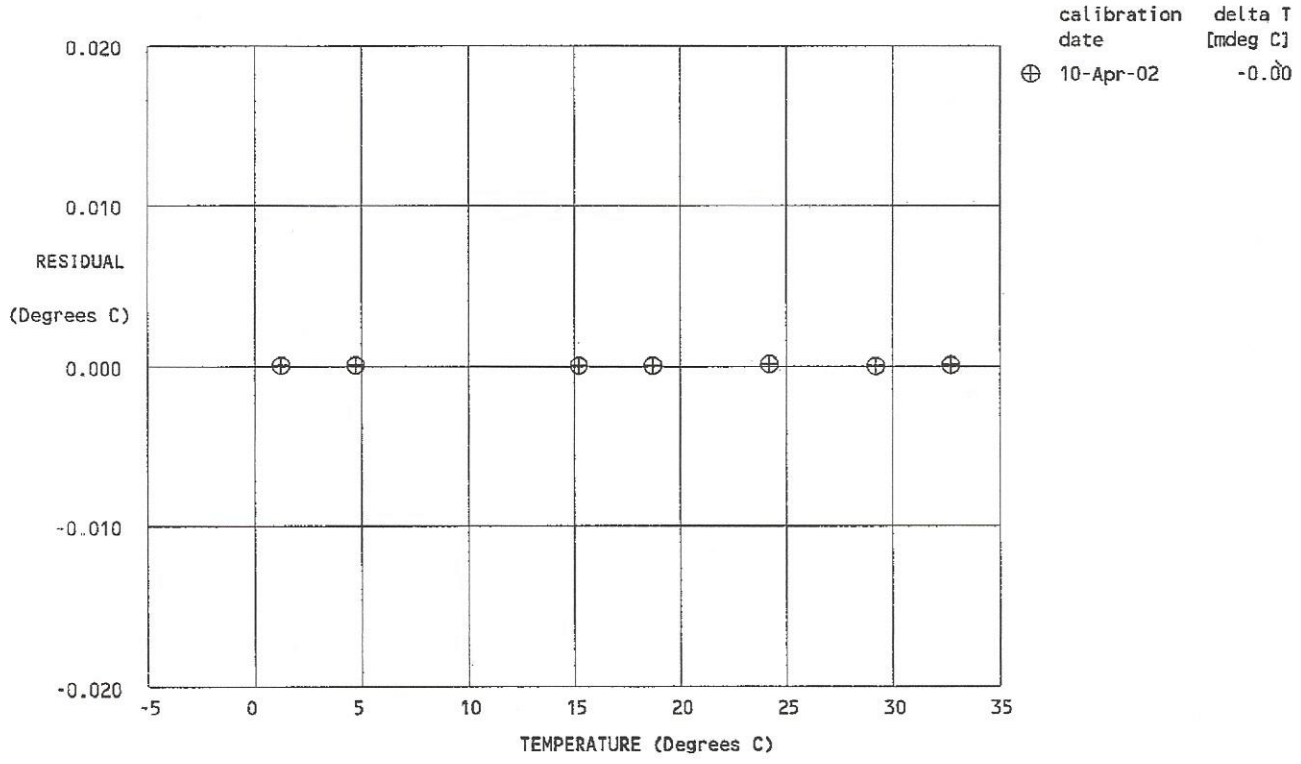
COEFFICIENTS:

a0 = -2.080964e-04
a1 = 3.342150e-04
a2 = -7.715369e-06
a3 = 3.102169e-07

BATH TEMP (ITS-90 °C)	INSTRUMENT OUTPUT: n	INST TEMP (ITS-90 °C)	RESIDUAL (ITS-90 °C)
0.9999	697315.8	0.9999	-0.0000
4.5000	596459.1	4.5000	0.0000
15.0001	380267.0	15.0001	-0.0000
18.5000	329231.8	18.5000	-0.0000
23.9999	264017.6	24.0000	0.0001
29.0002	217283.2	29.0002	-0.0000
32.5000	190197.5	32.5000	0.0000

Temperature ITS-90 $= 1 / \{ a0 + a1[\ell n(n)] + a2[\ell n^2(n)] + a3[\ell n^3(n)] \} - 273.15$ (°C)

Residual = instrument temperature - bath temperature



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SENSOR SERIAL NUMBER = 2399
CALIBRATION DATE: 10-Apr-02

RTC CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

SBE 37 COEFFICIENTS

rtca0 = 1.000000e+00
rtca1 = -1.668409e-17
rtca2 = 7.618564e-19

BATH TEMP (ITS-90 °C)	RTC FREQ	COMPUTED FREQ	RESIDUAL PPM
0.9999	1.0000000	1.0000000	-0.0
4.5000	1.0000000	1.0000000	-0.0
15.0001	1.0000000	1.0000000	-0.0
18.5000	1.0000000	1.0000000	-0.0
23.9999	1.0000000	1.0000000	-0.0
29.0002	1.0000000	1.0000000	0.0
32.5000	1.0000000	1.0000000	0.0

RTC frequency = $a0 + a1 * t + a2 * t^2$

Residual = (Computed RTC frequency - Measured RTC frequency) * 1e6