Sea-Bird Scientific
13431 NE 20th Street
Bellevue, WA 98005
USA

+1 425-643-9866
seabird@seabird.com
www.seabird.com

SENSOR SERIAL NUMBER: 9432
CALIBRATION DATE: 19-Feb-20

Slocum Payload CTD CONDUCTIVITY CALIBRATION DATA
PSS 1978: C(35,15,0) = 4.2914 Siemens/meter

COEFFICIENTS:

```
g = -1.002532e+000
h =  1.299470e-001
i = -3.780420e-005
j =  1.886373e-005

CPcor = -9.5700e-008
CTcor =  3.2500e-006
WBOTC =  1.5002e-007
```

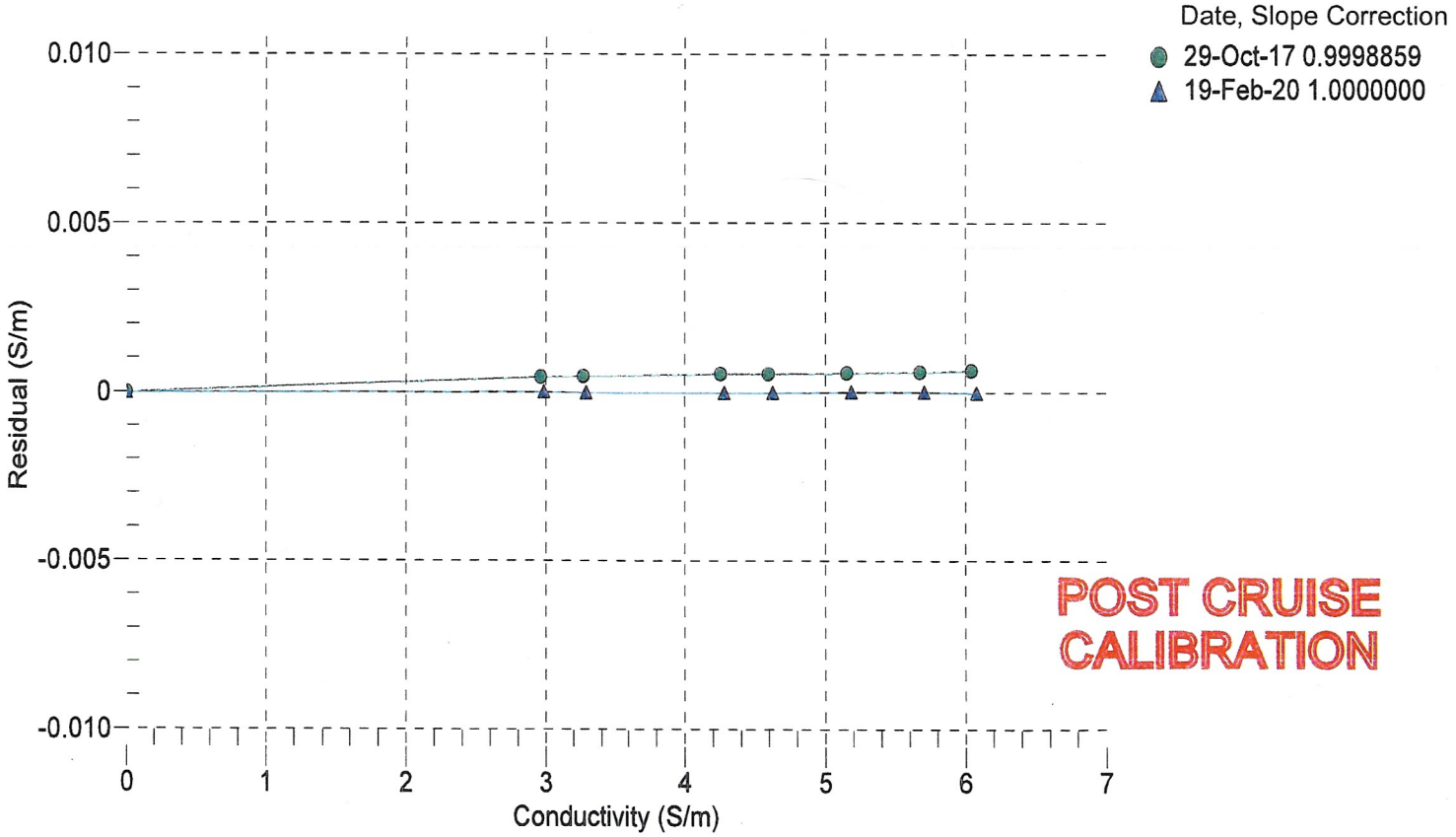
BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
22.0000	0.0000	0.00000	2777.14	0.00000	0.00000
1.0000	34.9350	2.98514	5531.77	2.98516	0.00002
4.5000	34.9147	3.29309	5740.59	3.29308	-0.00001
15.0000	34.8706	4.27757	6361.71	4.27756	-0.00001
18.5000	34.8604	4.62359	6565.82	4.62357	-0.00002
24.0000	34.8489	5.18294	6882.74	5.18296	0.00002
29.0000	34.8413	5.70595	7166.10	5.70597	0.00002
32.5000	34.8353	6.07893	7361.34	6.07891	-0.00002

f = Instrument Output(Hz) * sqrt(1.0 + WBOTC * t) / 1000.0

t = temperature (°C); p = pressure (decibars); δ = CTcor; ε = CPcor;

Conductivity (S/m) = $(g + h * f^2 + i * f^3 + j * f^4) / (1 + \delta * t + \varepsilon * p)$

Residual (Siemens/meter) = instrument conductivity - bath conductivity



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SENSOR SERIAL NUMBER: 9432
CALIBRATION DATE: 19-Feb-20

Slocum Payload CTD TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

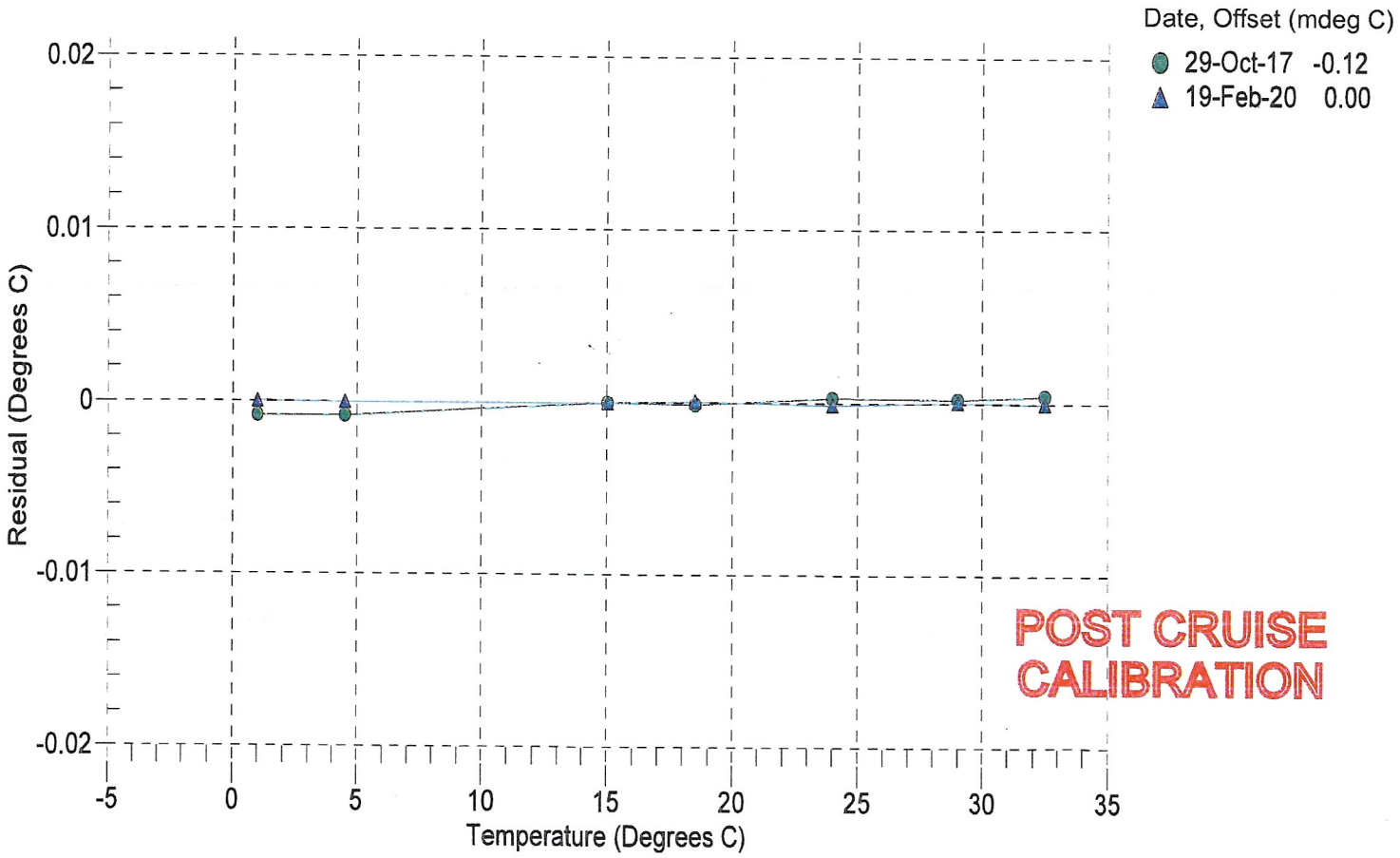
a0 = -1.171679e-004
a1 = 3.036537e-004
a2 = -3.947685e-006
a3 = 1.884617e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
1.0000	560613.9	1.0000	0.0000
4.5000	480371.9	4.5000	-0.0000
15.0000	308162.0	15.0000	-0.0000
18.5000	267423.4	18.5001	0.0001
24.0000	215283.5	23.9999	-0.0001
29.0000	177830.9	29.0001	0.0001
32.5000	156078.4	32.5000	-0.0000

n = Instrument Output (counts)

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

Residual (°C) = instrument temperature - bath temperature



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SENSOR SERIAL NUMBER: 9432
CALIBRATION DATE: 17-Feb-20

Slocum Payload CTD PRESSURE CALIBRATION DATA
1450 psia S/N 10712104

COEFFICIENTS:

PA0 =	5.856539e-001	PTCA0 =	5.240659e+005
PA1 =	4.491912e-003	PTCA1 =	9.752344e+000
PA2 =	-1.874387e-011	PTCA2 =	-1.792002e-001
PTEMPA0 =	-7.142194e+001	PTCB0 =	2.508912e+001
PTEMPA1 =	5.007902e-002	PTCB1 =	-5.750000e-004
PTEMPA2 =	-3.203412e-007	PTCB2 =	0.000000e+000

PRESSURE SPAN CALIBRATION

PRESSURE (PSIA)	INSTRUMENT OUTPUT (counts)	THERMISTOR OUTPUT (volts)	COMPUTED PRESSURE (PSIA)	RESIDUAL (%FSR)
14.71	527355.5	1938.3	14.78	0.01
301.53	591132.5	1937.5	301.34	-0.01
588.70	655148.5	1937.8	588.81	0.01
875.94	719127.7	1937.7	875.97	0.00
1163.18	783160.8	1937.8	1163.22	0.00
1450.52	847227.1	1937.1	1450.46	-0.00
1163.37	783185.6	1936.6	1163.33	-0.00
876.01	719163.6	1935.8	876.13	0.01
588.79	655138.1	1935.3	588.77	-0.00
301.54	591139.2	1935.2	301.37	-0.01
14.70	527360.5	1935.1	14.80	0.01

THERMAL CORRECTION

TEMP (°C)	THERMISTOR OUTPUT (volts)	INSTRUMENT OUTPUT (counts)
32.50	2103	527356.80
29.00	2032	527363.90
24.00	1929	527369.40
18.50	1817	527347.30
15.00	1745	527333.80
4.50	1531	527274.50
1.00	1460	527240.10

TEMPERATURE (°C)	SPAN
-5.00	25.09
35.00	25.07

y = thermistor output (counts)

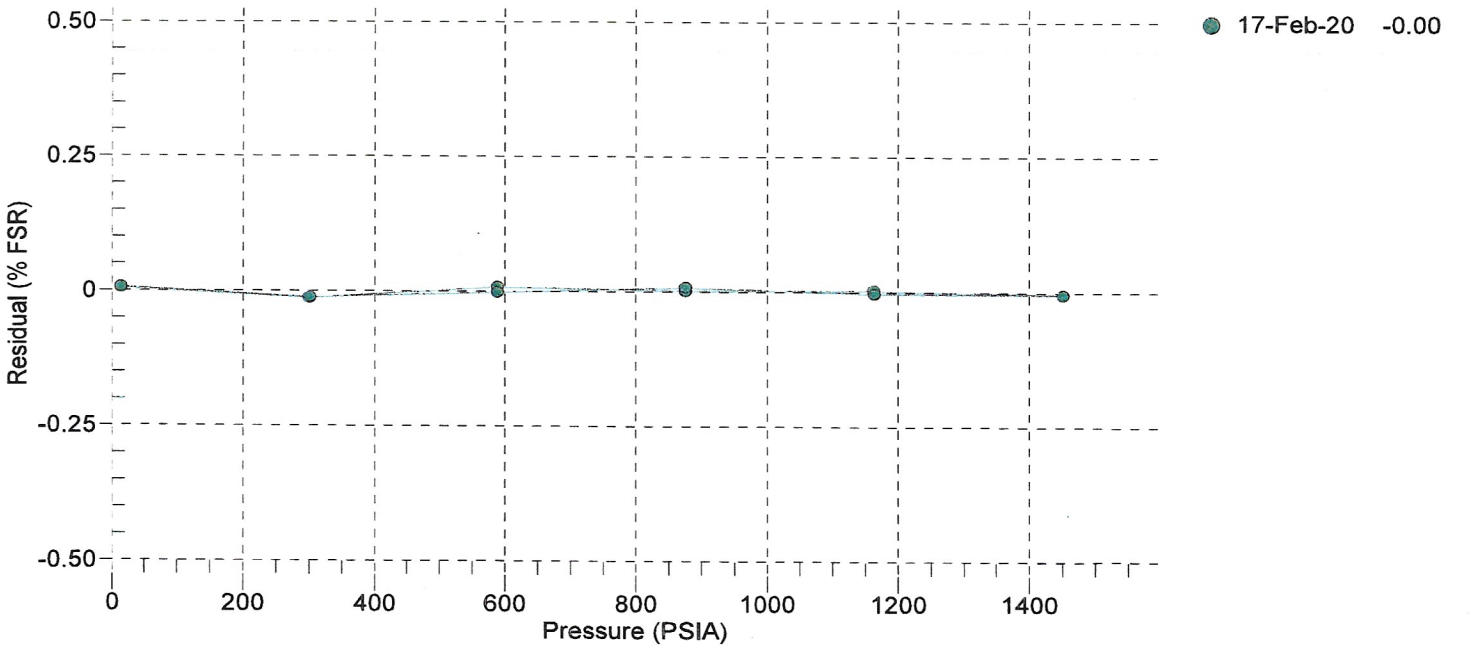
$t = PTEMPA0 + PTEMPA1 * y + PTEMPA2 * y^2$

$x = \text{instrument output} - PTCA0 - PTCA1 * t - PTCA2 * t^2$

$n = x * PTCB0 / (PTCB0 + PTCB1 * t + PTCB2 * t^2)$

$\text{pressure (PSIA)} = PA0 + PA1 * n + PA2 * n^2$

Residual (%FSR) = (computed pressure - true pressure) * 100 / Full Scale Range



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SERVICE REPORT

Service Request 1005510252
Date 18-MAR-2020
Sales Order 315933200

PRODUCT INFORMATION

Item: SLOCUM.50
Item Description: SLOCUM GLIDER CTD, 1000 dBar, DIRECT GROUND
Serial: 712-9432

Special Notes
Services Requested:
Standard Service

Services Performed:
Perform initial diagnostic evaluation.
Performed pressure calibration.
Performed "POST" cruise calibration.
Installed NEW AF24173 Anti-foulant cylinder(s).

Item	Item Description	Qty
CAL_SLOCUM	Calibrate SLOCUM conductivity and temperature sensors	1
CNCRTSLOCUM	Confirm & Re-certify Webb SLOCUM Glider CTD	1
REPLACEAF	Extra charge to install one antifoulant device, includes one 801542.1.	1
PCAL_SLOCUM	Calibrate SLOCUM pressure sensor	1

Unbilled Items

Item	Item Description	Qty
801542.1	AF24173 ANTI-FOULANT, SINGLE CYLINDER, V2	1