

5/3/11

- 715 arrive at ship
finish stowing gear
800 safety meeting
900 depart, start CTD logging (5 min)
1130 start apparatus

- ~~A~~ missing data logger for
Quibit ~~A~~ - will log values
periodically as possible.

Fresh ~~A~~ mer. k, full 1.5 N And bottle
pCO₂ system (AFT) and
AFT-pH both operating. Values
seen reasonable (pH 8.2, CO₂ 400)

Ideally will be able to run both
machines off one laptop. Not
enough room on WBZ for all
systems.

1330 Take WB-5-1 water sample

Take water sample every 2-3
hours on out band transit.

1500 Equip running OK

Take WB-5-2

1700 WSS-3

Check Quibit, running adequately

5/3/11

1805 Checked AFT pH/CO₂
functioning, Scatterplot
Values w/in range & display
broadly similar trends

~1830 Zero Qubit w/Soda Lime
reads = 13

1837 Qubit reads 1296 (sample)

1900 WS 5-4

~1855

1901 Try Dickson DIC standard
w/ Qubit.

1901 1201 ppm

1906 1150

1911 1133

1920 1165 (used ~200ml
of standard)

Qubit reads: Flowrate (gcs) 200
Pump 50

Drierite is still >50% blue
No leaks

1922 pH ~2
1140

Numbers for Qubit fluctuate
rapidly between ~1100 & ~1200.
Changes occur at rate of
1-2/sec. Jumps from one number
to another, then hovers at new
'stable' number for 5-10sec, then
rapidly jumps up or down
to new number 'stable' number.

2000 Check AFT pH 2 CO₂
Values are all reasonable,
no outliers

Will sample at 2100, 2300,
0100, 0300, 0600. Will record
Qubit values at those ~~points~~ times.
Refill acid bottle, Change drierite
(acid ~60% full, drierite 30% blue)

CTD logging, Save file and
start new logging file ("2")

0455 Flow through system off
0755 Flow through system on
Crew shut down flow through
b/c of rough weather for
3 hours. Waves > 5 to 7'.
Rear deck of ship swamped
with water.

1115 Backup pH & CO₂ to
thumbdrive. Verify AFT flow
& restart system. (System
~~must~~ can't run while
d/l data).

1200-1700 Flow through systems operating
sporadically. CTD/sampling
valve plugged by sediment. Clear
obstruction. Take water sample
and refill Qubit acid reservoir

1730 and dicerite. Near coastal
waters (Cape San Blas) now,
hugging coastline to avoid
6-8' waves w/would prevent
deck work. Waves at our
loc. 2-3'. Windy but clear.

1800 Attach DIC standard
Batch 96

Standard is stable after
~40 min (see attached sheet).
Reattach sample and zero with
Soda Lime. (-19 @ plus 1119 @ stable)
Small peak of acidified water
(based on pH) - quarter sized
puddle accumulation in lower left
corner. Dry & monitor recurrence.

0800 PCB-1 (4 Samples)
Flow through (spec for CTD)
seemed inoperational somewhere
between 4-lean, check data later.
1100 Check rear fittings on Qubit,
no apparent leak. Put Kimwipes
over all fittings to ID leak.
Restart units.

1300 PCB-2 (3 Samples)
Change Dicerite (100% spent)
Refill Acid (30% full).

1415 Backup AFT data
1630 PCB3 (3 DIC + 2 isotopes)
1835 Use DIC (Batch 96) Std on
1845 Qubit, Sample w/BS-16 w/duplicate
1945 Qubit ranging over 100 ppm of
standard. Turn off Qubit.

2100 PCB04 (3 samples)
 0100 Flow Good on AFT System & CTD
 0130 PCB05 (3 samples)
 0500 WBS-17
 0740 PCB12 (3 samples)
 1540 WBS-18
 1830 PCB14 (6 samples)

- multicore # not functioning
 + increase profile sampling
 frequency from 3 (top,
 middle, bottom) to 6

TOP
 Above Chlorophyll max
 Chlorophyll max
 Below Chlorophyll max
 middle
 bottom

Stow Qubit as per third standard was
 producing erratic results, unable to
 trace source of acid leak - maybe
 at filter?

CTD & AFT systems functioning
 properly w/ proper flow rates
 AFT - 2-4 l/min, pH is > CO₂
 CTD refilling bucket at ~20min
 intervals.

5/7/11

0025 WBS-19
 0600 DSH9 (6 samples + 3 isotopes) ¹³⁴³
 1700 DSH10 (6 samples) _{WBS-20}
 0030 DSH8 (6 samples + 2 isotopes)
 0430 WBS-21
 0650 WBS-22
 0852 WBS-23
 1058 WBS-24
 1300 WBS-25 (+1 isotope)
 1450 WBS-26
 1700 WBS-27
 1833 WBS-28 (+1 isotope)
 2102 WBS-29
 0056 WBS-30 (+1 isotope)
 0257 WBS-31
 0704 WBS-32
 0851 WBS-33
 1108 WBS-34
 1115 shut off flow - thru 2
 stow equipment