2009 - 19, 21, 20
LSSL TSG Log

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Description	Page
LSSL TSG Log 2009	

Date

July 20/09	
1600 UTC	Turn on TSG, case cooler
	- chlorophyll test sample filter was full of black junk - pump had been running clean seawater for ~ 2 hours
	Seawater pump running OK
	set point 18.0 psi
	PV 18.03 I
1713	GTD recording, COM 4, com 6 green com1 red.
	TSG recording - salinity signal odd
	SBE 48 updating, recording
	Pump SP 18, PV 17.95 I
July 21	
0044	TSG, GTD, SBE48 OK, logging
	Pump SP 18, PV 18
0235	TSG, GTD, SBE48 ✓ Pump SP 18, PV 18.
0518	TSG GTD SBE48 ✓ Pump SP 18 PV ~~18~~ 17.9
0932	TSG GTD SBE48 - BAD DATES PUMP 1800 PV 1800

Date

Date

July 21

1556 – 1602 Change SBE48 ~~time~~ date
Was reading July 30 2007, time correct.
Changed to July 21 2009
File capture continued

TSG, GTD, SBE48 logging OK
Pump SP 18, PV 18

1952 TSG, GTD, SBE 40 good. pump good.

2115 Loop 1 Salt, Chl
└ 211804 UTC GPS Time

2221 TSG, GTD, SBE48 Logging OK.
Pump SP18 PV18

July 22

0312 TSG, GTD, SBE48 logging OK
Pump SP18 PV18.

1000 TSG GTD SBE48 logging OK
Pump SP18 PV18

2 fluorescence values < 0 Is this OK = ?

cabling issues or
if not, bad instruments, but likely cables.

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Date

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Date

1305	Loop sal2 taken at stn LS9-04 at ~ 1120 UTC
1347	SBE48, GTD, TSG logging OK SP 18 SV 18.
1940	All OK
2153	Loop 3 @ LS9-05 Time 21:54:10 GPS.
July 23 0238	All OK
0908	All OK except Shop's GPS Hyperterminal stalled?
	Loop 4 @ LS9-06 12:21:45
1346	GPS feed restored - problem was serial-ethernet converter in Seismic Lab - power glitch. Techs are moving it onto UPS.
1512	Noticed TSG temps high, pump was stopped. Started OK.
~1700	Pump shut down due to strainer needing cleaning. Meanwhile, recabled CDOM + Fluorometer, now have signals
1735	Restarted all, values coming into range.

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Date

Jul 23 Date 2009

19:13 Fluorometer / CDOM neg values?, GPS ok,

2057 Pump was stopped, restarted OK. Chief Ron will monitor.

Adjusted offset voltages for CDOM, fluor to give 0 readings at small, steady voltages seen, instead of negative readings

2158 2158:50 Loop Sta #5 @ first try at LS9-07
23:02:55 Loop Ctd #1 61 27.76 N, 58 30.25 W

Flow rates TSG ~ 6 l/min
fluor ~ 1.5 l/min
gascooler ~ 3 l/min, speed up to 5 l/min

00:49 fluor reading pretty spiky.
everything else good.

2:28 all OK... Fluoro v. low.

05:07 ALL OK CDOM 2009-3

0859 EVERYTHING WORKING CDOM 2009-4 @ 0900

1226 * 12:26:00 Loop Sta 6 @ LS9-07

Date

Date

July 24

Aftn LSS-07, diverted toward Iqaluit to get crewmember off.

1533 Pump stopped, may be ice in strainer as we are making 17kts in 5/10 rotten ice.

17:14 ALL GOOD

18:30 OK.

1923 Pump died – MCR called, restarted with lcl control.

2151 Pump died, restarted. Odd thing abt readout – reads pump output of 35% when pump is off.

*22:24:40 Loop SAL #7 63° 40.644 N
22:23:10 Loop Chl a #2 62° 1.960 W

23:30 Pump died, restarted.

July 25

252 pump running, bilges good.

0326 pump restart

0450 pump restart

506 PUMP RESTART 2X

529 PUMP OK BLOCK

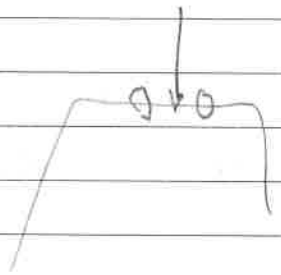
647 PUMP RESTART +1 earlier

712 RESTART

1008 RESTART

10

Date



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Date

1122	Pump Restart I believe the theory that some ice and the pump goes out (sometimes)! CGH
1204	All ok (no ice bits)
	Loop 9 taken
1259	Pump off - restarted
1343	" "
	ADCP & Sonar turned off later - instrument had been on deck for 1+ hours
14:34	Pump off - restarted
15:56	All OK
2015	Inlet & TSG temps up at 12-13°C even though pump is running - started happening ~ 1915 UTC 1615 Local.
2059	Valve changed in engine room - T back down
2152	21:52:00 Loop 10 @ BBT-01 SAL
	21:54:05 Loop 3 @ BBT-01 CHL-S
00:30	All ok
345	All ok
834	All ok
1127	All ok

Date

1. Pump losing power at irregular intervals was due to a loose circuit board. See note Aug 7 2007 but basic message is a loose circuit board in Flow switch at the pump

2. Warm temperatures were due to a valve opened to let steam into the Seabay through which the TSG plumbing runs.

July 26 Date

*	13:18 to Loop Sal #11 @ BBT-02
	1354 Loop Sample CDOM #11
1603	TSG, SBE48, GPS, Optode Logging OK Pump running 16% output for 18.4 PSI
	- Issues yesterday: some kind of electrical problem was causing shutdowns : Temperature anomaly was due to a change in valve setup —
←	more details will be requested.
18:06	All OK
20:07	All OK - temp ~6...
2110	Restarted all logging files - regular Sunday protocol
2125	Flow rates adjusted to send more water through TSG, Set point PSI increased to 20 - less flow through gas-cooler. 3l/min. - increased flow through Fluorometers - may have signal on Chl Floor for the first time.

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Date

July 26

23:07:05 LOOP SAL # 12 @ BB9-03

23:21:11 LOOP Chla # 4 @ BB9-03

July 27

0241 Surface Temp 9.5! All OK.

0616 All OK Inlet Temp ~ 10.2

0752 CDOM #14

1218 CDOM #15 ALL OK

1508 No loop sample for BB9-04
Restarted TSG logging so could get files for processing/display

19:18 OK

21:04 Loop Sal # 13 @ 22:40:40 BBS-06
Chl # 5 @ 22:42:20

July 28

0347 All OK

0453 ALL OK PUMP = 2000 SET AT = 15.5

16

Date

0900	CDom ± 20 ALL OK P = 1995 SP = 15.3 →

Date July 28

0800	CDOM #20 All OK P 1995 SP 15.3
1400	No loop sample at BBS-08
1800	No loop sample at BBS-09 (this is not intentional!)
July 29 7:29	OK.
1220	SBE48, GPS, TSG, Optode OK Pump 15.5% output for 20PSI
July 30 5:47	all OK.
7:22	loop ~~&~~ for chl & sal @ 7:22 #14 chl @ 7:23 #6
1419	Stopped TSG to get data, restarted
0353	CDOM # 23 ALL OK PUMP - 1989 S.P. - 16.2
0755	CDOM # 24 ALL OK PUMP 1920 S.P. 16.3
	1238:50 Loop Sal #15 @ PSG-01
2105	Pump cannot keep set point pressure, Output 35, PSI 13, but water still flowing.

Date

Date

July 31

Loop Sal #16 @ 22:07:25 PSS-03
Chl #7 @ 22:08:50 PSS-03

Aug 1

0046 Pump back to easier working
24.5% out for 20 PSI.

Stopped in ice until ~ 1000 UTC

12:37:30 Loop Sal #17 @ FSS-01

1830 Tough ice - pump @ 35% for PSI = 6.

Loop Sal #18 @ LarS-01 22:10:55
Chl #8 @ LarS-01 22:12:10

Aug 2

0204 Pump 25% for 20 PSI slow progress in 9+ ice
all logging OK, Optode reports O2 sat > 100%.

AUG 2/09

1324 LOOP #19 @ VSS-01 ALL OK PUMP: 1999 SP. 256

1700 All OK, ice getting easier
Normal Sunday restart of all logging.

Loop 20 Sal @ VSS-03 - 23:27:20
9 Chl @ VSS-03 - 23:28.40

Date

Aug 3 Date

0232 Out of the ice, all OK.

0510 CDOM # 33 ALL OK PUMPS - 2003 SP - 247

0900 CDOM # 34 ALL OK PUMPS - 2001 SP - 244

1324 Loop #21 Sal @ CTD - 01

0455 CDOM # 36 ALL OK PUMPS - 1999 SP - 230

1326 Aug 4 Loop #22 Sal @ CTD - 01

tim 1327

2053 Aug 4 Shut down for stay at Kugluktuk
CDOM sensor removed →

Aug 7 2009-21 Wetlabs for changing range

0130 Restart system on leaving Kugluktuk

GPS, SBE48 TSG Optode new fils.
temperatures on startup are warm as
system cools down again

Pump set point 20 PSI
output 20 - 21 %.

White caps, ship is pitching and rolling
slightly.

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Date

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Date	
Aug 7	Loop #1 01:44.00 Leaving Kuglukotuk
Aug 8	Loop #2 16:28:50 off Tuk
	All logging OK Pump 20PSI @ 20% out.
2052	heavy ice lots of bubbles. - shut pump down
2056	until ice improves ☹
2328	Easier ice restart pump, lower set point pressure to 18 PSI. ☺
Aug 9.	Pump OK 18 PSI @ 20% output restart all logs - normal Sunday?
Aug 10	Loop Sn#3 @ 0301:35
Aug 11	Loop Sn #4 @ 18:47:40
Aug 12	Loop Sn #5 @ 15:53:20 All logging OK pump 20% out for 18 PSI
Aug 13	All logging OK pump 20% out for 18 PSI Loop Sn #6 @ 14:30:30
Aug 14	Loop Sn #7 @ 14:05:00
15	0733 debubbling problems - ice under pressure. Adjust waste valve but still some bubbles.

Date

2009-21 UnClos

Date

Aug 15

1416 Still debubbling problems - ice under pressure. Increase set point PSI to 19.2, pump out @ 28%.

Loop Sol #8 @ 14:18:35

Aug 16

Loop Sol #9 @ 14:00:20

1844 Regular Sunday restart of all logs.

Aug 17 Loop Sol #10 @ 14:05:10

Aug 18 Loop Sol #11 @ 14:51:20

Aug 19 Loop Sol #12 @ 14:00:10

Aug 20 Loop Sol #13 @ 14:00:00

Aug 21 Loop Sol #14 @ 19:40:00
All loggings Ok, pump 30% out for 19 PSI

Aug 22 Loop Sol #15 @ 14:14:20

Aug 23 Loop Sol #16 @ 13:55:00
Logging stopped and restarted
Pump 27% out for 19 PSI

Date

2009-21 UNALOS

Date

Aug 24 Loop Sol #17 @ 14:44:20
Aug 25 Loop Sol #18 @ 15 23 35

Aug 26 1659 Pump output 20% for 19 PSI (why?)
- waste valve adjusted...
Loop Sol #19 @ 17:02:30

Aug 27 Loop Sol #20 @ 15:08:00
Pump 22% out for 19 PSI

2332 Bad ice - salt spikes frequent.

Aug 28 Pump turned off @ ~ 0712 UTC

1648 Turn pump on
Loop Sol #21 @ 16:54:15
Lower set point pressure to 17 PSI to try and improve bubble situation

1728 Pump stopped, restarted

1911 Pump having trouble with ice - shut down

Aug 30 Turn pump on in easier ice
1320 Start TSG @ 1328

Loop Sol #22 @ 14:57:25

Aug 31 Loop Sol #23 @ 14:00:10
restart logging for GPS SBE 48
Pump @ 17.4 PSI, 26% out.

Date

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2009-21 UnCLOS

Date	
Aug31	Note: since start up after 2 day ice shutdown, Fluorometer appears to have shifted. Now travelling in Healy track again.
Sept 1	Loop Sal #24 @ 15:10:50
Sept 2	Loop Sal #25 @ 14:18:15
Sept 3	Loop Sal #26 @ 16:34:20
4	Loop Sal #27 @ 15:49:50
5	Loop Sal #28 @ 14:21:50 Pump 24% out for 17.1 PSI All logging OK.
1957	Shutdown - alongside Healy
6	
0439	Start pump. Fluorometer removed - found shards of glass or quartz in flow tube while flushing it with Triton-X to clean.
1424	Loop Sal #29 @ 14:26:15 Logs restarted (except TSG done last night) Pump 24.8% out for 17 PSI

Date

Sept 7 2009-21 Date

AK5 Loop Sal #30 @ 14:47:00
Open water, Swells, a bit of loose ice
Pump 17% out for 17 PSI
Increase set point to 19 PSI

8 Loop Sal #31 @ 17:44:35

9 Loop Sal #32 @ 14:29:50

10 Loop Sal #33 @ 14:32:15

11 Loop Sal #34 15:08:20

12 Loop Sal #35 @ 19:48:25

13 Loop Sal #36 @ 14:34:45
restart TSG, SBE 48 GPS logging
Pump 19% output for 19 PSI

14 Loop Sal #37 @ 14:01:20

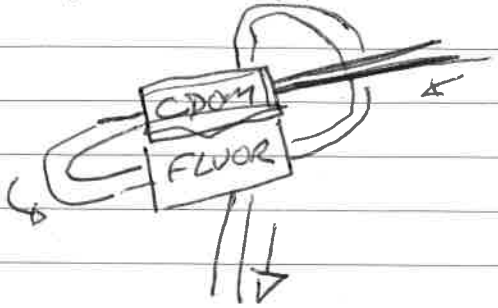
15 Loop Sal #38 @ 19:41:20

16 Loop Sal #39 @ 13:19:45

1323 Shutdown system - at Kugluktuk

Date

2009-09-17 Reinstalled Wetlabs Fluorometer & CDOM Wetstar



serial # on Fluor unknown
CDOM Wetstar s/N WSCD 1281

New CDOM cal & scaling input into CON file
3297_2009-09-17.CON

old V_{blank} = 0.061 V
scale Factor 66.0 ppb/V

new V_{blank} = 0.065 V
scale Factor = 18.50 ppb/V.

Date

1525 Local 18 Sept start pings
we are at 68 53.2067, 114 41.9905W

GTD

$GPRMC	15
$GPGGA ⇒	1

GPSGate Direct

Disabled TSG check on com 16 to Free up For

Com

1
2
3
4 } GTD [illegible] in to pc
5
6 } keyspan optodes (in)
7
8
9 } keyspan NAVDATA (in to PC)
10
11 } NMEA to interface (out from PC) (not used)
12 } Navitel
13 } 3V lin } SBE
14 } SBE

34

Date

GPS data now coming from ship through NAVDAT #1 box. - checked on MD laptop

Date

1832 TSG log started 2009091832.tsg
SBE48 log started.

1900 GTD + optode log started 2009091919.GTD
— no GPS in data
log ship's GPS

1918:27 Re-set Acer time to GPS
(~ 30s Fast).

~~AB~~

2009-09-20 UTC

001257 ship's GPS feed died
(Furuno GPS died at 1207 2009-09-20)

0300 GPS still down for ship's GPS but
working with TSG

0420 GPS crash. — Re-port, Franson...?
0445 no GPS on feed from NAVDATA #1

0520 disconnected battery (~~hot~~ cold cold
re boot) in Acer
gr. lights on Re-span #2 (9, 10, 11)
— start seasave without GPS
— start GTD & DO
still no GPS on 9 — ship NAVDATA #1

Date	
1441	GPS back started new TSG log file
1442	Ship's GPS running well. capture file opened.
2009-09-21	
0109	GPS observed off on TSG
0200	GPS observed off on ADCP sounder – ship's GPS stopped at 0059 UTC – ET officer notified. – Borden's contacted?
0237	GPS observed good on all logging computers.
0427	GPS ✓ TSG ✓ GTD ✓
2009-09-22	PUMP + Software stopped
~1500	We are off Tuk Grey seawater has been pumping "Mud" through ~~B~~ Seawater loop. ~~and~~ Blue cooler + TSG full of silty water. Pump turned off + software stopped.

Date

We will be ~~on~~ ~~at~~ here for a while

FYI: to check system:

Record Pump PSI and OUTPUT
check GPS, TSG (seasave acq.)
~~GTD~~ (GTD + optode)

⇓ At TUK - Fouled system - turned off!

1625 TSG drained, Flushed w/ FW, drained, Filled back up w/ FW
TSG is ready to go - valves all set back to right config

OPTODE wiped window cleaned

~~A~~ Blue Box drained, ~~needs cleaning~~

~~B~~ Fluor + CDOM ~~need flushing~~
Flushed w/ DI

2300 Restarted as we're leaving Tuk

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Date

@ Pump PSI: , SP:

FLOW rates

	TSG	Coolw	CDOM/FL
vol / sec			

Pum See new Underway Sys checklist

1435 Re-start pump from lab

PV 19.99

out 2.36

8div= 604667

593900

.011167 JD.

~~=0.2~~ 16.1 mins

Pump had stopped ~1419.

Page

Date

Sept 23 01:12

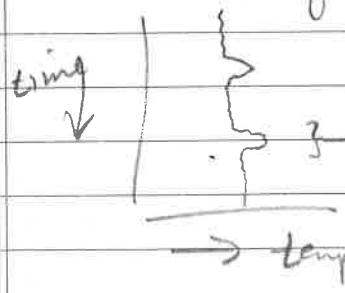
- low flow on pump, engine room stopped Pump & cleaned out strainer
- restarted @ 01:12 am Sept 23

? 0358 - Pump was still on
? 0415 Pump stopped by engine room for filters cleaning

0354 pump turned back on by engine room (0955 sept 23)

Sept 24
0259 Pump @ 1900 PSI 23.5 out

0344 Pump is sloshing up frequently. ~~As~~ and Fresher Salinity
SZ Also noticing periodic temperature increases in TSG
As pump rate went back to normal, the temperature did too.
Assume slow rate is causing intake T. to read high (water warming by ship).



Date

Sept 25 1454
Pump turned off
as we approach Tuk.
Were in < 20m wtr. SZ
TSG log closed

sept 26 1745
pump turned back on
TSG log opened

sept 27 0606 Restart GTD acquisition
GTD was not logging — TOK.

~~Sept 30~~ SZ.
Oct 1 0439
Stop + restart TSG acq.
so file could be processed
+ plotted.

oct 1 1112 new TSG file
Seapoint Fluor 2569 30x
switched in to replace suspect
wetlabs Fluor
Range now < 0,25mg/l

Date

Oct 2 13:05 Pump shut off sometime near start of CB-10
- restarted in Engine room 13:07 UTC

UTC 1636 → pump restarted after being off for how long ??
SZ

Must have been clogged - it wouldn't shut from the l-o control

Ship said they'd take care of it.

2255 UTC (4pm local) - SZ
Jason the elect. asst (?) came to check why the pump ~~cash~~ alarm in the ship's control room was saying the pump was off ~~on when it~~ but it was still running.
He checked to see if leads connected from here to control room

Oct 3 07.51 UTC Pump is not working, call engine room to clean.
PV 7.04
SP 12.9
called MCR and strainers clear but pipe frozen. They have put hot

Date

water on pipe and will try to thaw.

Oct3 13:04 pump still not working properly, but record anyway, see flow rate is much higher.

Oct4 1020 UTC

Pump control PV = 7.04
SP 12.9

increase SP to 19.0 %
PV 14.93 psi

Oct5 0837

PV 12.90 SP 19.0

Oct 8 ~~0830 ish~~ (local) 0749 (1449 UTC) (eek!)
Underway system shut down ⇒ Δ filters
- low pressure alarm
0839 back up & running
1539 (local)
UTC

Oct9 Pump stopped ~ 1530 strai
~~restarted 1536~~ strainers
cleared
restarted 1536.

Date

Oct 9 | 0936 local pump off to clean strainer
↑ back on

Oct 13 | 1023 Z strainers cleaned
DV down to 2.5 psi

↓7 +7hr → 319pm local TSG computer shut itself down...
OR at least this is when the scs file ~~stop~~ ended.

Computer ~~was~~ had power but screen was black. Edward restarted the computer while we were on CABOS A deployment.
STATION for mooring
After rested, Computer was not seeing input from Keyspan w/ com ports 8-11.
Edward confirmed keyspan was working using his own computer.

Computer restarted again (it cannot be shut off w/out rewiring) this time keyspan data ~~down~~ are seen by the computer

TSG started w/
3297_2009-09-17.con

14 Oct 2009
VTL 0340 Everything up & running

Date

0346	Stop and restart TSG w/ 3297_2009-09-20_seapoint.con
Oct 14th 2216	STOP data collection & clean out TSG, GTD puck fluorometer & computer.

For next year:

① Print out setup/operating instructions into Loop binder

② Replace laptop

③ Include GPS gate settings ~~so t~~ in instructions so they can be remade if needed

④ ~~Cover~~ Fill holes in counter

Date

(5) Build drip tray For cooler so it drain to sink
overflow will

(6) Log sheets For
A) Loop samples
B) Loop check sheet

were great. Keep ~~doing~~ using these.

(7) Replace 1" & 3/4" tubing very dirty

Book ENDS HERE

YR 2010 is where?
YR 2011+ is in different book