

DAILY LOG BOOK

MISSION
NUMBER

2005-30

DATE:

From:

OCT 1 / 05

to:

OCT 9 / 05

VESSEL:

VECTOR

PROJECT:

BROUGHTON OCEANOGRAPHY & CIRCULATION

INSTITUTE OF OCEAN SCIENCES
OCEAN SCIENCES AND PRODUCTIVITY DIVISION
SIDNEY, BC, CANADA

Captain: BRIAN PENNEL First Officer: MARK MEESTER

Second Officer: STEVE SEKULICH Third Officer:

Mission Participants / Agencies: 1,05

[illegible][illegible]

Data logging computer: n/a

Data acquisition program: N/A

CTD deck unit make: N/A model: N/A serial number: —

Primary CTD

Make: SCARAB model: 25 serial number:

Primary temperature serial number: 4054 14-Oct-64

Primary conductivity serial number: 2754 15-Oct-04

Secondary temperature serial number: $\sim/A$ Secondary conductivity serial number: ν/A

Transmissometer: N/A Model: — s/n: —

Fluorometer: Model	N/A	Cable gain:		s/n:
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Oxygen sensor: _____ Model: SBE 43 s/n: _____

PAR sensor: _____ Model: _____ s/n: _____

Other sensors: Pressure Sensor S/N 290544 13-Nov-05 S/n: _____

Other sensors:	
s/n:	

Other sensors: _____ s/n: _____

Other sensors: _____
s/n: _____

Secondary CTD

Make: _____ model: _____ serial number: _____

Primary temperature serial number:

Primary conductivity serial number: _____

Secondary temperature serial number: _____

Secondary conductivity serial number: _____

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model _____ s/n: _____
Cable gain: _____

Oxygen sensor: _____ Model: _____ s/n: _____

PAR sensor:	Model:	s/n:

Other sensors: _____ s/n: _____

Other sensors: s/n:

Other sensors: _____ s/n: _____

Other sensors: _____ s/n: _____

CTD calibration bottle location (height above CTD in metres):

DAILY LOG

Ocean Sciences and Productivity Division

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Month <u>October</u>				Year <u>2005</u>			Ship <u>VECTOR</u>				Cruise ID <u>2005-30</u>				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
2	SOG-00	0231	m	CTD/BOT	Mess	001	49° 11.27	123° 38.8	302	250	1,2	2	DS+HM	✓	Test Cast + 2 sal samples 2005-30-001.hey Cast #3 in 58E 25
2	Kn2	2045	(PDT) 1345	CTD/BOT	Mess	002	50° 39.28	126° 11.25	188		3-11	9			2005-30-002.hey
2	TrC0.5	2112		CTD		003	50° 40.864'	126° 14.564	160	—	—	—			2005-30-003.hey
2	TrC1	2148		CTD		004	50 43.612'	126 10.808	274	250	12	1	Sal/sample		2005-30-004.hey
2	TS1	2244		CTD		005	50° 47.162	126° 02.388	176		—	—			2005-30-005.hey
2	TrC1.5	2318		CTD		006	50° 45.652	126° 08.968	203						2005-30-006.hey
2	TrC2	2355		CTD/BOT	Mess	007	50° 49.27	126° 12.74	205		13-22	10			2005-30-007.hey
3	BoS	0102		CTD		008	50° 51.806	126° 10.899	120						2005-30-008.hey
3	TrC2.5	0150		CTD		009	50° 50.39	126° 19.83	304	290	23	1	Sal/sample		2005-30-009.hey

Cast type:

BOT = bottle cast, no CTD
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USW = sea water loop
 MOR = mooring
 NET = net haul
 DRF = drifter

bottle firing method:
 US = up/stop
 UN = up/no stop
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Daily_log_book.doc

SeaTorn

Connect

> DS

Upload

Note. After cast 004 WTSI noticed that SBE internal clock is fast by ~2 minutes.

General Comment: Almost all hex files have transmission errors (1 - 12 per cast) which appear as spikes in the plots. We don't know why this is happening, but spikes can be easily detected and edited in the xcom files.

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Cruise ID

Month				Year			Ship				Cruise ID				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
3	TrC3	0237		CTD/BOT	Mess	010	50° 48.98	126° 25.53	229		24-33	10			2005-30-010.hex
3	PP1	0315		CTD		011	50° 48.82	126° 31.65	150						2005-30-011.hex
3	Kin0	0358		CTD/BOT	Mess	012	50° 51.67	126° 37.15	394		34-45	12			2005-30-012.hex
3	Kin3	1436		CTD/BOT	Mess	013	50° 55.04	126° 15.32	216		46-55	10	0736 (PP1) 0740 Mess		2005-30-013.hex
3	Kin2	1529		CTD		014	50° 55.53	126° 23.26	376				0829		2005-30-014.hex
3	Kin1.5	1620		CTD		015	50° 56.21	126° 28.96	480		56	1	Sal sample above CTD		2005-30-015.hex
3	WS1	1718		CTD/BOT	Mess	016	50° 01.03	126° 31.41	199		57-66			1018 1020 M	2005-30-016.hex
3	WS0.5	1759		CTD		017	50° 58.59	126° 30.42	436		67 Sal sample	1	1059		2005-30-017.hex
3	Kin1	1902		CTD		018	50° 53.59	126° 34.68	476		68 Sal sample	1	1202		2005-30-018.hex

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Note

Cast 015+016: DO does not turn on until ~50m, suspect pump is not turning on because of low salinity surface layer. Also note that salinity is curious for first 50m on downcast. Probably pump has not turned on.

*Cast # 16: Latitude should be $51^{\circ}01'03''N$ & Galien

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							Latitude	Longitude							
3	Kn 0	1937		CTD/BOT	Moss	019	50° 51.63	126° 37.07	400		69-80	12	1235 Moss		2005-30-019.hex
3	Sc	2046		CTD		020	50° 53.53	126° 45.76	170	160					2005-30-20.hex
3	WP 0.5	2130		CTD/BOT	Moss	021	50° 52.80	126° 53.31	163		81-89	9	1430 Moss		2005-30-021.hex
3	WP	2208		CTD		022	50° 50.82	126° 56.50	180						2005-30-022.hex
3	QCS2	2249		CTD/BOT	Moss	023	50° 46.58	126° 02.36	226		90-99	10	1601 Moss		2005-30-023.hex
3	QCS1.5	2349		CTD		024	50° 42.85	126° 55.55	146				1649		2005-30-024.hex
4	QCS1	0040		CTD/BOT	Moss	025	50° 40.11	126° 46.36	155		100-108	9	1740 Moss		2005-30-025.hex
4	Kn2	1436		CTD		026	50° 39.31	126° 11.04	185				0736		2005-30-026.hex ✓
4	Kn1	1540		CTD/BOT	Moss	027	50° 38.09	126° 25.31	257		109-118	10	0840 Moss		2005-30-027.hex ✓

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*should be 127° 02.36

Note ① K₁₂ O bottle 8m above CTD

② After K₁₂ O we ran the SBE 25 configuration command "CC" and left all settings unchanged except for the "min. conductivity freq. for pump turn on" which we changed from 4000 to 3000 Hz.

x Before cast 026 reset data pointers in SBE 25 using "IL" command, followed by "QS" command

DAILY LOG

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
4	PE-7km	1622		CTD/BOT	Mess	028	50° 39.32	126° 25.24	130	100	119-126	8	0922 0929nm		2005-30-028.hex ✓
4	PE-6km	1647		CTD		029	50° 39.61	126° 25.87	128		—		0942		2005-30-029.hex ✓
4	PE-5km	1705		CTD /BOT	Mess	030*	50° 39.89	126° 26.61	133		127-134	8	1005 1011nm		2005-30-030.hex no CTD data
4	PE-4km	1731		CTD		031	50° 40.11	126° 27.43	115				1031		2005-30-031.hex ✓
4	PE-3km	1751		CTD/BOT	Mess	032	50° 40.33	126° 28.29	64		135-140	6	1051 1055nm		2005-30-032.hex ✓
4	PE-2km	1856		CTD/BOT	Mess	033	50° 40.09	126° 29.87	32		141-143	3	1156		2005-30-033.hex ✓
4	PE-2km	1907		CTD		034	50° 40.35	126° 29.11	45				1207		2005-30-034.hex ✓
4	PE-5km	1930		CTD		035	50° 39.88	126° 26.72	125				1230		2005-30-035.hex repeat because no data in 030
4	CC1	2019		CTD/BOT	Mess	036	50° 36.26	126° 21.44	117		144-150	7	1319 1324nm		2005-30-036.hex ✓

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* Cons# 030 SBE not turned on - no data file 2005-30-030.hex.
Did CTD only at this station on the way out of PE. See cons# 035.
Oxygen samples collected will have cons# 030.

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
4	CC2	2104		CTD		037	50° 34.21	126° 29.28	71				1404		2005-30-037.hev ¹⁰
4	Kn0	2245		CTD		038	50° 38.33	126° 35.22	63				1545		2005-30-038.hev ¹¹
4	Sw1	2310		CTD/BOT	Mess	039	50° 38.10	126° 41.15	80	50	151-155	5	1610 1617 mss		2005-30-039.hev ¹²
5	Kn11*	1434		CTD/BOT	Mess	040	51° 02.48	125° 33.97	223		156-165	10	0734 0743 m		2005-30-040.hev ¹³
5	Kn10*	1523		CTD		041	50° 58.58	125° 33.53	336				0823		2005-30-041.hev ¹⁴
5	Kn9	1607		CTD		042	50° 54.25	125° 32.86	425		166 salsap.	1	0907		2005-30-042.hev ¹⁵
5	Kn8*	1700		CTD/BOT	Mess	043	50° 52.30	125° 38.72	490		167-178	12	1000 1017 m		2005-30-043.hev ¹⁶
5	Kn7	1805		CTD		044	50° 48.05	125° 37.30	520		179 sal	1	1105		2005-30-044.hev ¹⁷
5	Kn6	1859		CTD		045	50° 45.27	125° 41.15	523	510	180 sal.	1	1155		2005-30-045.hev

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Daily_log_book.doc

* Const#040 : lowered CTD to 5m + held for 2 min to start pumps but it did not start as sal was ~8psu.
pump started ~48m when sal was ~30psu.

* Const#041 : Changed pump turn on and frequency to 2600 Hz

* Const#043 : Accidentally renamed 2005-30-040.hex to 2005-30-043.hex. Downloaded hex file for this station to 2005-30-043a.hex. When I discovered the error I renamed 2005-30-043.hex to 2005-30-040.hex and also renamed 2005-30-043a.hex to 2005-30-043.hex.

DAILY LOG

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Month				Year			Ship				Cruise ID				
Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
5	Kn5	1947		CTD/BOT	Mess	046	50° 41.55	125° 47.09	400		181-192	12	1247-1259		2005-30-046.hex 18
5	Kn4	2046		CTD		047	50° 40.83	125° 56.21	440				1346		2005-30-047.hex 20
5	Kn3	2136		CTD		048	50° 40.18	126° 04.02	194				1476		2005-30-048.hex 21
5	Kn2	2214		CTD		049	50° 39.34	126° 11.18	186				1514		2005-30-049.hex 22
5	Kn1	2309		CTD/BOT	Mess	050	50° 38.07	126° 25.35	259		193-202	10	1609-1615nm		2005-30-050.hex 23
5	Kn0	2357		CTD		051	50° 38.24	126° 35.16	65				1657		2005-30-051.hex 24
*															
6	BIS	1432		CTD/BOT	Mess	052	50° 36.02	126° 43.66	145		203-209	7	0732-0739nm		2005-30-052.hex 25
6	QCS1	1515		CTD		053	50° 40.06	126° 46.32	159				08:15		2005-30-053.hex 26
6	QCS1.5	1602		CTD/BOT	Mess	054	50° 42.95	126° 55.57	141		210-217	8	0902-0909nm		2005-30-054.hex 27

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Daily_log_book.doc

* after cun#051 send "IL" command to SBE to reset data pointers & then send "DS" command
Then wake up, SBE 25 + send "DS" command. ncasts = 0, samples = 0, free = 838468 Vmain = 10.6.

DAILY LOG

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position		Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
6	QCS2	1650		CTD		055	50° 46.59	127° 02.30	224		218 sal	1	0950		2005-30-055.hex
6	QCS2.5	1729		CTD		056	50° 42.47	127° 05.22	204		219 sal	1	1029		2005-30-056.hex
6	QCS3	1820		CTD/BOT	Mess	057	50° 43.79	127° 14.90	212		220-229	10	1120 1128 min		2005-30-057.hex
6	QCS4*	1920		CTD*		058	50° 46.65	127° 24.12	435		230 sal	1	1220		2005-30-058.hex no CTD data
6	QCS5	2025		CTD/BOT	Mess	059	50° 49.37	127° 12.11	149		231-238	8	1325 1331 min		2005-30-059.hex
6	QCS6	2120		CTD		060	50° 52.45	127° 21.49	151				1420		2005-30-060.hex
6	Goch	2238		CTD/BOT	Mess	061	50° 53.86	127° 38.50	480		239-250	12	1538 1551 min		2005-30-061.hex
7	QCS4	0013		CTD		062	50° 46.67	127° 24.27	414		251	1	1713		2005-30-062.hex

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* Cms#058: H&T file not in SBE 25 don't know what happened, will repeat station if time is available later.

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							Latitude	Longitude							
7*	FISO	1442		CTD/BOT	Mess	063	50° 45.51	126° 44.15	323		252-262	11	0742 0750 hrs		2005-30-063.hxy ⁰
7	FIS	1542		CTD*		064	50° 47.03	126° 36.74	333		263 [*] a sal	1	0842		2005-30-064.hxy ¹
7	RaP*	1625		CTD/BOT	Mess	065	50° 46.48	126° 30.36	237		263-272	10	0925 0933 hrs		2005-30-065.hxy ²
7	Kino	1729		CTD/BOT	Mess	066	50° 51.72	126° 37.22	404		273-284	12	1029 1041 hrs		2005-30-066.hxy ³
7	PPI	1826		CTD		067	50° 48.78	126° 31.48	152				1126		2005-30-067.hxy ⁴
7	TRC3	1904		CTD/BOT	Mess	068	50° 48.99	126° 25.38	234		285-294	10	1204 1212 hrs		2005-30-068.hxy ⁵
7	TRC2.5	1952		CTD		069	50° 50.43	126° 19.93	305	300	294	1	1252		2005-30-069.hxy ⁶
7	BOS ₁	2053		CTD		070	50° 51.80	126° 10.82	120	115			1353		2005-30-070.hxy ⁷
7	TRC 2	2123		CTD		071	50° 49.23	126° 12.77	209	200			1428		2005-30-071.hxy ⁸
7	TRC 1.5	2206		CTD/BOT	Mess	072	50° 45.60	126° 08.94	213		295-304	10	1506 1515 hrs		2005-30-072.hxy ⁹

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Daily_log_book.doc

* Initialized logging "IL" to reset data pointers $V_{man} = 10.8 \text{ Volts}$

* Const# 64: Temp + Sal profile appear to be very noisy and the up & down casts do not overlay very well
difference in T of $0.1 - 0.2^\circ\text{C}$ + in Sal $\sim 0.1 \text{ PSU}$.

- flushed out cell with Triton.

- no evidence of sediment sensors

* Const# 65 sample number should have been 264 not 263. remained to 263a

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[illegible]

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x Cns 76 $V_{main} = 9.8 \text{ Volts}$