DAILY LOG BOOK

MISSION NUMBER 2007-01

DATE: From: 7 FEB 2007 to: 26 FEB 2007

VESSEL: JOHN P TULLY

PROJECT: LINE P

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

Captain: Sid Webb First Officer: PETER VISSER
Second Officer: BRYEN McGUIRE Third Officer: Doug Murdock

Mission Participants / Agencies: IOS, CWS, UBC

Scientific Personnel: Party Chief: MARIE ROBERT, 0800-1600; 2000-0000 A

Name	Watch	Cabin	Name	Watch	Cabin
MICHAEL BENTLEY		B	MICHAEL ARYCHUK		7
LORA PAKHOMOVA	0000-0600	C			
KEITH JOHNSON		D			
JANET BARWELL-CLARKE		E			
DOUG MOORE	0800-1600, 2000-0000	F			
JIAN GUO		G			
HOLLIE JOHNSON	1600-2000, 0000-4000	G			
DAVID SEMENIUK	0600-0800, 1600-2000	H			
BENOIT MONTPETIT	2000-0000, 0400-0800	H			
DOUG ANDERSON	1600-2000, 0000-0800	4			

Second leg of Mission: Party Chief:

Name	Watch	Cabin	Name	Watch	Cabin
0585 in Rosette - Casts	129 + till end.				
To 2106					
T1 2754					
Co 2038					
C1 2173					
V0 Fluo 2845	Pri - pumped				
V1 Free					
V2 Trans 1005					
V3 Oxy 1119	Sec - pumped				
V4 Altimeter 1252					
V5 Free					

Data logging computer: Horz Dell
Data acquisition program: Seasave Win32 V 5.37c
CTD deck unit make: Seabird model: 11plus serial number: 0425

Primary CTD
Make: Seabird model: 911plus serial number: 0443
Primary temperature serial number: 2095
Primary conductivity serial number: 2424
Secondary temperature serial number: 2658
Secondary conductivity serial number: 3038
Transmissometer: Wetlabs Model: CSTAR s/n: 1005DR
Fluorometer: Model ~~A~~ Seapoint Cable gain: 10x s/n: 2845 P, S or NO pump?
Oxygen sensor: Seabird Model: SBE43 s/n: 1117 (P) S or NO pump?
PAR sensor: Biospherical Model: s/n: 4656
Other sensors: s/n: P, S or NO pump?
Other sensors: s/n: P, S or NO pump?
Other sensors: s/n: P, S or NO pump?
Other sensors: s/n: P, S or NO pump?

Secondary CTD
Make: Seabird model: 911plus serial number: 0585
Primary temperature serial number: 2106
Primary conductivity serial number: 2754
Secondary temperature serial number: 2038
Secondary conductivity serial number: 2173
Transmissometer: Wetlabs Model: CSTAR s/n: 953DR
Fluorometer: Model Cable gain: s/n: P, S or NO pump?
Oxygen sensor: Seabird Model: SBE43 s/n: 1119 P (S) or NO pump?
PAR sensor: Model: s/n:
Other sensors: Benthos Altimeter s/n: 1233 P, S or NO pump?
Other sensors: s/n: P, S or NO pump?
Other sensors: s/n: P, S or NO pump?
Other sensors: s/n: P, S or NO pump?

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

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month February **Year** 2007 **Ship** Tully **Cruise ID** 2007-01 P1

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position Latitude	Position Longitude	Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
8	SI03	1826	BE	ROS		1	48 35 61	123 29.96	226					✓	
		1834	BO				48 35 61	123 29 96		215	1 - 11	11	MR/DM DA		O^2 plug left on
		1848	EN				48 35 62	123 30 12							Salinity affected
8	SI03	1933	BE	ROS		2	48 35 60	123 30.02	226					✓	Turned pumps off @ 50m - Upcast
		1937	BO				48 3562	123 30.02		220	12 - 35	24			UBC
		1956	EN				48 35 57	123 30.00							
9	JF1	0214		USW		LOOP	48 15.93	123 30.36	165			3			SAL, NUT, CHL
9	JF2	0416		USW		LOOP	48 17.95	124 00.09	187			3			SAL, NUT, CHL
9	JF3	0622		USW		LOOP	48 2693	124 30.06	225			3			SAL, NUT, CHL
9	JF4	0019		USW		LOOP	48 32.29	124 59.977	61m			3			Sal, Nut, Chl
9	P1	10:21		ROS		3	48 34.55	125 29.99	111						
		1625					48 34 52	125 29 98		106	36	3	DA/L/IH	✓	Removed PAR
		1630					48 34 54	125 29 96							
9	P2	1244		Ros		4	48 36.03	126 00.38	117						
		1249					48 36 02	126 00 05		107	37 - 44	8	DA/L/BI/H	✓	
		1257					48 36 01	126 00 01							
	P2	1352	DE	NET		5	48 36 01	126 00 01	117	100			DA/L/IH	✓	BONGO To 100m

Cast type:
BOT = bottle cast, no CTD
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MOR = mooring
NET = net haul
DRF = drifter

bottle firing method:
US = up/stop
UN = up/no stop
DN = down/no stop

Time Code
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Transmissometer to be cleaned for each cast, do not use Ammonia products

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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month Feb **Year** 2007 **Ship** Tully **Cruise ID** 2007-01 p2.

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position Latitude	Position Longitude	Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
9	P3	1456	BE	ROS		6	48 37.52	126 20.02	814						
		1507	BO				48 37.53	126 20.12		755	45	1	OA/D/B	✓	
		1516	EN				48 37.54	126 20 11							
9	P4	1648	BE	ROS		7	48 39 03	126 40 03	1320						Altimeter starts @ 30 from bottom.
		1708	BO				48 39.01	126 40.01		1320	46-65	20	DM/MR	✓	
		1743	EN				48 39.01	126 40 09							
9	P4	1745	BE	NET		8	48 39 00	126 40 00	1322						
		1759	BO				48 39 00	126 39 97		250					BONGO TO 250 m
		1804	EN				48 39 00	126 40 00							
9	P4	1848	BE	ROS		9	48 39.01	126 40 00	1320				DM/MR	✓	PAR ON
		1853					48 39.008	126 40.018	200	200	66-79	14			
		1908					48 39.02	126 40.00							PAR OFF
9	P4	1930	BE	PUMP		10	48° 39.0	126 40.00			(Fe 2-4)				10 L 25 + 40 m
		2020	EN				48° 39.0	"		40					NO Fe #1 (ZODIAC) TOO ROUGH
9	P4	2030	BE	GO FLO		11	48° 39.0	"		"	(Fe 5+6)				75 + 100 m
		2055	EN				48° 39.0	"		100					

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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month FEB **Year** 2007 **Ship** J.P. TULLY **Cruise ID** 2007-01 P3

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position Latitude	Position Longitude	Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
9	P5	2300	BE	ROS		12	48°41.47	127°09.93	2087		80	1	MR/DM	✓	+ LOOP P5
		2329	BO				48°41.50	127°10.01		2005					
		2353	EN				48 41.55	127°09.97							
10	P5	00:10	BE	Go-Flo	MES	13	48° 41.592	127° 09.952			(Fe 7+8)				10 + 25m Depth
		00:20	EN												
10	P6	0237	BE	ROS		14	48 44.63	127 40 01	2545		81				
		0257	BO				48 44 65	127 39 91		2005		1	DA/DS Molly	✓	
		0320	EN				48. 44 63	127 40 00							
10	P6	0329	BE	Go-Flo	MES	15									
		0335	MS				48 44.60	127 40.21		25	(Fe 9+10)	2			10 + 25 m
		0340	EN												
10	P7	0556	BE	Go-Flo		16	48 46 61	128° 10.05	2506						
		0601	BO		MES		48° 46.58	128° 10.15		25	(Fe 11+12)	2			10 + 25 m
		0604	EN				48° 46 56	128° 10. 14							
10	P7	0624	BE	ROS	US	17	48° 46 64	128° 10.26	2507				DM/BM MR	✓	BIG SWELL
		0654	BO				48 46 59	128° 10 71		2009	82	1			NISKIN CLOSED @ ~2m
		0724	EN				48° 46.66	128° 10.73							

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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month FEBRUARY **Year** 2007 **Ship** J.P. TULLY **Cruise ID** 2007-01 P4

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position Latitude	Position Longitude	Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
10	P8	9:45	BE	NET		18	48 48 89	128 39 99	2516	250					
10	P8	10:13	BE	ROS		19	48 48 99	128 40 .01	2516						
10		10:39	BO				48 49 01	128 39. 99		200m	83 -102	20	DA/LP/HJ	No	Some swell 25 knot windy
		11 21	EN				48 48 99	128 40 00							
10	P9	1345	BE	ROS		20	48 51 41	129 09 98	2344						
		1407	BO				48 51 41	129 09 98		2005	103	1	DA/13M/LP	✓	Brush sht 13:35 TSG Fluo.
		1423	EN				48 51 42	129 09 98							
10	P10	1639	BE	ROS	US	21	48:53.60	129 39.94	2645				DM/MR	✓	+LOOP P10
		1702	BO				48 53.60	129 39.97		2005	104	1			
		1722	EN				48 53.61	129 39.94							
10	P10	17?	BE	BOT	MCS	22	48 53.58	129 39.94	2644						Go-Pos 10-25
		1736	BO				48 53 58	129 39.96		25	(Fe 13-14)	2			x Niskin
		1739	EN				48 53 58	129 39 95							
10	P11	2007	BE	ROS	US	23	48 56.01	130 10.04	2755					✓	
		2035	BO				48 55.92	130 10.24		2005	105	1			
		2103	EN				48 55.74	130 10.28							
10	P11	2112	BE	BOT	MCS	24	48 55.70	130 10.51	2755						Go-Pos 10-25
		2116	BO				48 55.64	130 10.57		25	(Fe 15-16)	2			
		2119	EN				48 55.65	130 10.59							

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0740 10 Feb local (=1540): Reboot Science server

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month FEBRUARY **Year** 2007 **Ship** J.P. TULLY **Cruise ID** 2007-01 P5

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position Latitude	Position Longitude	Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
10	P12	2323	BE	ROS	US	25	48 58 23	130 40 01	3225				DM/MR	✓	PAR ON.
		2328	BO				48 58. 28	130 40 06		200	106 - 118	13			
		2342	EN				48 58. 28	130 40 10							
10	P12	2354	BE	NET		26	48 58. 22	130 40. 01	3227						
11		0001	BO				48 58. 32	130 40. 01		250					
11		0006	EN				48 58. 34	130 40. 10							
11	P12	0026	BE	PUMP		27			3227	40					PUMPING 5, 10, 25. 40
		0130	EN				48 58 25	130 3994							
11	P12		BB	GO FLO		28	11	11	3279	~~2~~00					75, ~~100~~, ~~150~~ 200
		0147	MS												
11	P12		BE	GO FLO		29	48 5832	130 3988							100, 150 + 200
		0205	MS				48 58 34	130 3984							
11	P12	0234	BE	ROS		30	48 58 25	130 40 05	3235			24	DA/DS/H	✓	
		0316	BO				48 58 22	130 4002		3275	119 - 142				
		0423	EN				48 58. 24	130 39. 92							
11	P13	0828	BE	ROS		31	49 02. 61	131 40. 05							
		0848	BO				49 02 61	131 40. 05			143	1	DA/HJ/LD	—	Bottle tripped at 4.7 m
		0908	EN				49 02 60	131 4008							Loop taken as bottle's
11	LOOP FL	0906		USW											LOOP trimmed CHL, NUT, SAL

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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month Feb **Year** 2007 **Ship** Tully **Cruise ID** 2007-01 p6

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position Latitude	Position Longitude	Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
11	P14	1317	BE	ROS	US	32	49 07 43	132 40.03	3309						
		1337	BO				49 07.42	132 39.97		2005	144	1	BM/LP DA	✓	Bottle 1 tripped at 2-9 m
		1356	EN				49 07 41	132 39 .98							
11	P14	1356		LOOP	USW		49 07 40	132 39 .99							
11	P15	1810	BE	ROS	US	33	49 12. 04	133 39. 96	3400				DM/MR	✓	
		1837	BO				49 12. 02	133 40 03		2015	145	1			
		1858	EN				49 12. 02	133 40. 03							
11	P15	1907	BE	BOT	MES	34	49 12.02	133 40.00	3400		(Fe 25-26)	2			Go-flos 10, 25
		1910	MR				49 12. 02	133 40. 01		25					
		1913	EN				49 12 03	133 40.02							
11	P16	2317	BE	ZODIAC	HAND	35	49 16 88	134 40,01	3620		#26 Fe				PAR ON
		2326	EN				49 16.80	134 39.95							
11	P16	2352	BE	ROS	US	36	49 16.99	134 39.99	3618				DM/MR	✓	
		2356	BO				49 16.99	134 40.01		200	146-159	14			
		0010	EN				49 17 06	134 39. 98							
11	P16	0030		NET		37	49 17 06	134 39 98	3618	250			DA/DS AP HS		
12	P16	0045		PUMP		38	49 17.02	134 39.88	3618	40	27-29 Fe				T-M 10, 25 + 40m

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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month FEBRUARY **Year** 2007 **Ship** J.P. TULLY **Cruise ID** 2007-01 P7

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position Latitude	Position Longitude	Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
12	P16	0154	MBS	G.FLD	Manual	39	49 16.97	134 39.98	3620	100	(30 31 Fe)	2			7-8 1400
12	P16	0210		11	Manual	40	49 16.97	134 39.98	11	200	(32, 33 Fe)	2			150 + 200m
12	P16	0226	BE	ROS	US	41	49 16.99	134 39.99	3620			24			
		0320	BO				49 17 05	134 40.12		3684	160 - 183		DA/MS DS	✓	
		0433	EN				49 17.00	134 39 99							
12	P17	0908	BE	ROS		42	49 21 00	135 40.05	←	3621					
		0927	BO				49 21 00	135 40 04		2005	184	1	DA/LD MJ	✓	Bottle tripped at 6m
		0948	EN				49 21 00	135 40 02							
12	P18	1410	BE	ROS		43	49 26 01	136 39 99							
		1435	BO				49 26 00	136 39.99	←	3516	185	1	DA/DS Gen	✓	Bottle tripped at 4.5m
		1454	EN				49 26 00	136 39 97		2005					SB 32 sn 0269 → ?
12	P19	1928	BE	ROS	US	44	49 30.00	137 39.99	3910				DM/MR	✓	Bottle 1 & 5 problem on previous casts?
		1951	BO				49 30.000	137 40.000		2005	186	1			+LOOP
		2012	EN				49 30.07	137 40 11							
12	P19	2021	BE	BOT	MCS	45	49 30.14	137 40.19	3910						
		2025	BO				49 30.09	137 40 24		25	(Fe 34-35)				Go-Flo 10,25
		2027	EN				49 30.07	137 40.24							

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Pylon sn 0269 tripped bottles 1 & 5 simultaneously; that is, at the same time.
Switched for spare. DA.

Cable was not connected, both ends of wire got wet.

P18= DEEP WATER SHRIMP FOUND STUCK BETWEEN BOTTLES ON ROSETTE. LIKELY FROM DEEP CAST AT P17?
AT P18, ROSETTE WAS LOWERED TO SURFACE, BUT LACK OF READINGS IN CTD PROGRAM CAUSED US TO BRING ROSETTE BACK ABOARD.
WHEN CHECKING CABLES, SHRIMP WAS FOUND LODGED BETWEEN BOTTLES. IT WAS STILL MOVING SLOWLY ~~so~~ (AFTER 4-HR STEAM FROM P17.?)

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month FEBRUARY **Year** 2007 **Ship** J.P. TULLY **Cruise ID** 2007-01 P.8

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position Latitude	Position Longitude	Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
13	P 20	0040	BE	ROS		46	49 34 14	138 40 68	3696						PAR ON
		0044	BO				49 34 15	138 40 11			187-200	14			25 knots & building
		0057	EN				49 34 13	138 40 08						✓	
13	P20	0110	BE	NET		47	49 34 08	138 40 08	3944	250					BONGO TO 250m.
13	P20	0120	BB	PUMP		48	49 33 64	138 39 41		40					5, 10, 25 40
13		0230	BN	"											
13	P20	0251	BE	GoFLOs		49	49 33 62	138 39 42	3936	100					
		0309	BO				49 33.43	138 39.30		100					
		0321	EN				49 33.34	138 39 11							
13	P20	1330	BE	PUMP		50	49 34.05	138 40.02	3946	10					UBC 10m
			BO												BULK SW
		1445	EN				49 33 97	138 4002	3946						
13	P20	1601	BE	ROS	US	51	49 33.99	138 40.06	3945				DM/MR	✓	
		1654	BO				49 33.98	138 40 01		4020	201-224	24			
		1801	EN				49 33.94	138 40 00							
13	P21	2227	BE	ROS		52	49 37.90	139 40.17	3940				DM/MR	✓	
		2254	BO				49 37.91	139 40.27		2005	225	1			+LOOP
		2320	EN				49 37.92	139 40.24							

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INSTITUTE OF OCEAN SCIENCES

Month FEBRUARY | **Year** 2007 | **Ship** J.P TULLY | **Cruise ID** 2007-01 P9

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position: Latitude	Position: Longitude	Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
14	P22	0339	BE	CTD		53	49 42.16	14039.69	3860				DA/DS/HJ		
		0409	BO				49·42.53	140·39.99		2005		–	DM/MR BH	✓	Problem wit TEC data. →
		0432	EN				49·42.80	140·39.64							LOOP TAKEN @ END
14	P22	0443	BE	BOT	MES	54	4943.04	140·39.45	3845				DM/MR/BM		Go-flos
		0447	Bo				49·43.09	140·39.44		25	(Fe 44,45)				
		0449	EN				49·43.12	140·39.43							
14	P23	1044	BE	CTD		55	49 45 99	141 40 01	4126				DA/LP HJ		Changed cables, To [illegible] removed Flo →
		1105	BO				49 45 92	141 39 03		2005					30 knot wind
		1128	EN				49 45 82	141 40 23							Big Swell
															Fairly large salinity difference at ~700
14	P24	1824	BE	CTD		56	49·50 23	142·39.96	3965				DM/MR	✓	
		1852	Bo				49·50.20	142 40.03		2006					
		1911	EN				49·50.19	142·40.00							LOOP @ EN
14	P24	1936	BE	BOT	MES	57	49·50.19	142·39.97	3965						
		1940	MS Bo				49·50.19	142·39.98		25	(Fe 46, 47)				Go-flos 10+25
		1943	EN				49·50 20	142·39.97							

Cast type:
- BOT = bottle cast, no CTD
- CTD = CTD without Rosette
- ROS = Rosette plus CTD
- USW = sea water loop
- MOR = mooring
- NET = net haul
- DRF = drifter

bottle firing method:
- US = up/stop
- UN = up/no stop
- DN = down/no stop

Time Code
- BE = beginning time of cast
- BO = bottom time of cast
- EN = end time of cast
- DE = deployment time
- MR = messenger release time
- RE = recover mooring time

Transmissometer to be cleaned for each cast, do not use Ammonia products

BEFORE P22, CAST 53: SWITCH TO STAND-ALONE CTD # 0585

TRANSMISSOMETER QUITS ~ 400 M ON WAY DOWN.
TRANSMISSOMETER BACK ~ 1000 M ON WAY UP

SECONDARY SENSOR SEEMS OK COMPARED TO TSG. PRIMARY IS OFF

Primary T s/n 2663 removed, replaced with s/n 2706. Fluorometer 2228 removed. Spout for pumping broken.
Transmissometer cable replaced.

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month FEBRUARY **Year** 2007 **Ship** J.P. TULLY **Cruise ID** 2007-01 P10.

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position: Latitude	Position: Longitude	Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
15	P25	0007	BE	CTD		58	49 59.99	143 36.10	4114						Loop taken at
		0034	BO				49 59.98	143 36 28		2005	LOOP	–		✓	50 m on upcast
		0058	EN				49 59 89	143 36 08							
15	P25	0110	MRS	GoFLO	MESS	59	49 59 87	143 36 08	444	25	48, 49	2			10 + 25 m
													BM-DM MR	✓	
15	P35	0424	BE	CTD		60	50 00.02	144 18.15	4125						
		0450	BO				50 00 01	144 18.31		2005	LOOP	–			
		0515	EN				50 00 02	144 18 48							LOOP @ END
15	P26	08:25	MRS	GoFLO	MES	61	50 00 1500	145° 00.0235	4223.45	100m	54, 55	2	KJ HJ DA		75 + 100m
	P26	0848	MRS	11	MESS	62	49 59 99	144 59.95		150	56	1			150 m
	P26	0909	MRS	11	MESS	63	50 00 00	144 59.996		300	57, 58	2			200 + 300m
	P26	1012	BE	11		64	50.00.03	144 59.92		800	59, 60, 61	3			400, 600, 800 m
		1029	MS		MES		50 00.0189	144° 59.951							
		1120	EN				49 59.99	144 59.99							
15	P26	1205	BE	PUMP		65	49 59 99	145 00.00							
15	P26	1320	BE	ROS		66	50 00 06	144 59 98	4125						
		1358	BO				49 59 98	144 59 9 9		1000	226-232	7		✓	GNAR CAST
		1449	EN				50 00 07	144 59 98							

Cast type:
- BOT = bottle cast, no CTD
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- ROS = Rosette plus CTD
- USW = sea water loop
- MOR = mooring
- NET = net haul
- DRF = drifter

bottle firing method:
- US = up/stop
- UN = up/no stop
- DN = down/no stop

Time Code
- BE = beginning time of cast
- BO = bottom time of cast
- EN = end time of cast
- DE = deployment time
- MR = messenger release time
- RE = recover mooring time

Transmissometer to be cleaned for each cast, do not use Ammonia products

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month FEBRUARY **Year** 2007 **Ship** J. P TULLY **Cruise ID** 2007-01 P11

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position Latitude	Position Longitude	Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
15	P26	1648	BE	ROS	US	67	49 59 96	145 00.01	4221				DM/MR	✓	DMS SUNRISE
		1654	BO				49 59.96	144 59 99		200	233-245	13			PAR ON
		1711	EN				49 59.93	144 59.95							PAR OFF
15	P26	1754	BE	ROS	US	68	49 59.97	144 59.96	4221				DM/MR		
		1850	BO				49 59 98	145 00.00		4305	246-269	24		✓	
		2000	EN				49 59 98	145 00 15							
15	P26	2214	BE	ROS	US	69	50 00 01	145 00.02	4221				DM/MR	✓	PAR ON
		2219	BO				50 00.02	145 00.13		200	270-287	18			DMS-NOON HUGE SWELL
		2233	EN				50 00.10	145 00 51							
15	P26	2246	BE	NET		70	50 00 12	145 00 62	4221						
		2256	BO				50 00 12	145 00 66		250					Bongo
		2300	EN				50 00 11	145 00.66							
15	P26	2313	BE	NET		71	50 00 00	144 99.98	4221						
		2334	BO				50 00.00	145 00.03		1000					Bongo
		2345					03	13							
15	P26	0302		ROS		72	49 59.99	144 59.94	4221						
		0306					49 59.99	144 59.94		200	288-300			✓	
		0317					49 59 95	144 59 95		?					
															PAR OFF

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:
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Time Code
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EN = end time of cast
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RE = recover mooring time

Transmissometer to be cleaned for each cast, do not use Ammonia products

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month FEBRUARY **Year** 2007 **Ship** J.P. TULLY **Cruise ID** 2007-01 PIL

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position Latitude	Position Longitude	Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
16	P26	0001	BE	PUMP		73	50.00.03	145 00.03	4221	10	47				13ULIC SW COLLECTION + 5m Fe
16	P41	0615	BE	ROS	US	74	50 26 98	144 59 98	4230				DM BM MR	✓	Mekinie's phyto
		0636	BO				50 27.04	145 00.01		2005	301	1			plankton
		0656	EN				50 27.09	145 00.17							+ loop @ end
16	PEddy	09.55		GOFLO	MES	75	50° 50.0077	144 40 0164		100m	65+66	8	HJ DA		75+100
		10:14		11	MES	76				200	67+68	2			150 + 200 m
		10.53		11	11	77	50. 50.01	144 40.03		400	69+70	2			300 + 400 m
		11:35		11	11	78	50 49.9995	144. 40.0195		800	71+72	2			600+800
16	Eddy	1212	BE	ROS		79	50 50 02	144 40 04	3626						
		1230	BO				50 50 05	144 40.02			302-321	20	DA/LP BM	✓	
		1310	EN				50 50 01	144 40 05							
16	PBODY	1335	BE	PUMP		80	50 50 01	144 39 97		40					10, 25 + 40 m
		1410	BN												
16	EDDY	1420	BE	NET		81	50 50 01	144 39 97	3626	250					
16	P49	1630	BE	ROS		82	50 54.03	144 17.31	3891				DM/MR	✓	
		1657	BO				50 54.03	144 17.20		2006	322	1			
		1717	EN				50 54.02	144 17.18							

Cast type:
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NET = net haul
DRF = drifter

bottle firing method:
US = up/stop
UN = up/no stop
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Time Code
BE = beginning time of cast
BO = bottom time of cast
EN = end time of cast
DE = deployment time
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RE = recover mooring time

Transmissometer to be cleaned for each cast, do not use Ammonia products

Re-start EK60 as leaving P41

Stopped EK60 as we got to P49, 1623 UTC, 16 Feb

Start EK60 as we leave P49

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month FEBRUARY **Year** 2007 **Ship** J.P. TULLY **Cruise ID** 2007-01 p13

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position Latitude	Position Longitude	Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
16	P33	2031	BE	ROS	US	83	50° 53.99	143° 35.57	3780				DM/MC	✓	
		2055	BO				50° 54.00	143° 35.82		2005	323-341	19			
		2139	EN				50 53.90	143° 36.21							
16	P 33	2149	BE	NET		84	50 54 00	143 35 49							Bongo
		2200	BO				50 54 07	143 35 42		250					
		2208	EN				50 54 08	143 35 44			—	—			
17	R20	0025	BE	ROS CTD	US	85	50°55.717.	143° 0.992.	3592				DA/HJ LP	✓	
		0050	BO				50° 55.715	143 1.051		2005	342	—			
		01:11	EN				50° 55.714	143 1.022							
17	R19	0406	BE	ROS	US	86	50 58.02	142° 20.02	3882				DM. BM MR	✓	
		0433	BO				50° 58.01	142° 20.07		2005	343	1			
		0456	EN				50° 58.03	142° 20.19							
17	R18	0812	BE	ROS		87	51 00 01	141 39 05	3888						
		0830	BO				51 00 20	141 38 94		2005	~~344~~	X	DA, HJ, LP	✓	No bottle tripped Sample taken from loop R18
		0849	EN				50 59 99	141 38 97							
17	R17	1156	BE	ROS		88	51 02 03	140 56 06	3833		345-364				
		1215	BO				51 01.98	140 55.98		2000		20		✓	
		1259	EN				51 01 97	140 55.99							

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NET = net haul
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bottle firing method:
US = up/stop
UN = up/no stop
DN = down/no stop

Time Code
BE = beginning time of cast
BO = bottom time of cast
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MR = messenger release time
RE = recover mooring time

Transmissometer to be cleaned for each cast, do not use Ammonia products

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p13.5

Stop EK60 as we arrived @ P33
Re-started after P33

Stopped EK60 as we arrived @ R19
Re-started after R19

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month FEBRUARY **Year** 2007 **Ship** J.P. TULLY **Cruise ID** 2007-01 p14

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position Latitude	Position Longitude	Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
17	R16	1557	BE	ROS	US	89	51 03.99	140 13.96	3750				DM/MR		NISKIN FOR SAL, NUT CHL, OXY, +OXY LOOP
		1618	BO				51 03.96	140 14.05		2005	365	1			→
		1639	EN				51 04.01	140 14.01							
	R15 to R13			Cancelled due to weather.											
18	R12	1608	BE	ROS	US	90	51 12.99	137 22.94	3600				DM/MR	✓	+LOOP OXY 385 C
		1635	BO				51 12.99	137 23.02		2005	366-385	20			
		1715	EN				51 12.98	137 23.01							
18	R12	1725	BE	NET		91	51 13.02	137 22.99	3600	Z					Bongo.
		1732	BO				51 12.97	137 23.05		250					0-250 m.
		1736	EN				51 12.95	137 23.04							
18	R11 S	2127	BE	ROS	US	92	50 49.987	136 40.285	3626		386-409	24	DM/MA		
		2150	BO				50 49.926	136 40.459		2005					Loop O^2 taken for CBC
		2217	EN				50 49.751	136 40.565							
19	Eddy 2	0153	BE	ROS	US	93	50 30.07	135 59 89	3693						
		0216	BO				50 30.18	136 00 05		2005	410-429	20	DM/DS HS	✓	
		0256	EN				50 30 26	136 00 03							
19	Eddy 2.	0345		GOFLO	MES	94	50° 30.0111	135 59.8441	3693	100	76, 77	2	HJ KJ DS		75m, 100m.
		0402		11	11	95	50 30 07	135 59.58		200	78 79	2			150 + 200

Cast type:
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NET = net haul
DRF = drifter

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

Transmissometer to be cleaned for each cast, do not use Ammonia products

Oxys: Black oxy box

R16

S/n 365 , Oxy a (Niskin 1):
Oxy c (Loop):

R15 , S/n 366 Oxy a (NISKIN): Cancelled
Oxy c (LOOP):

R14 , S/n 367 Oxy a (NISKIN) Cancelled.
Oxy c

Saturday 17 Feb (local time)
Morning (~0745) reboot the server. TCP/IP won't reactivate. Delete the EK60 files I had copied and reboot. The NDCP NAV doesn't work, gets the WINSOCK 10061 error message.

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month FEBRUARY **Year** 2007 **Ship** JOHN P TULLY **Cruise ID** 2007-01 P15

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position Latitude	Position Longitude	Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
19	EDDY 2	0422	BE	GO FLO	MISS	96	50 29.45	135 59.91	3693	400	80-81	2			300 + 400m
	"	0450	"	"	"	97	50 29.80	135 59.07	"	800	82-83	2			600 + 800m
		0535		"	"	98	50 29.72	135 59.30	"	40	73-75	3			10 25 + 40
													BM-DM		BONGO TO 250M
19	EDDY 2	0552	BE	NET		99	50 29.71	135 59.56	3690						
		0602	BO				50 29.72	135 59.51		250					
		0606	EN				50 29.71	135 59.49							
															BIG SWELL
19	RIO S	0923	BE			100	50 54 31	135 37 98							OXY BOX DAMAGED →
		0940	BO				50.54.29	135 38 62		← 3694	430	1	DA/LP HJ	✓	
		1000	EN				50 54 27	135 38 00		2005					
19	R9	1412	BE			101	51 19 04	135 14 98	3478						
		1430	BO				51 18 99	135 14 94		2005	431-449	19	DA, LP	✓	30 knot wind Big Swell
		1509	EN				51 19 00	135 15 00							
	Cancel R8 - too rough. Dump.														
19	R8	1816		USW		-	51 21.02	134 32.85	3335						CHL, NUT, SAL
19	R7	2103		USW		-	51 23.6935	133 49.5404	3132						CHL, NUT, SAL

Cast type:
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USW = sea water loop
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NET = net haul
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bottle firing method:
US = up/stop
UN = up/no stop
DN = down/no stop

Time Code
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Transmissometer to be cleaned for each cast, do not use Ammonia products

BLUE oxy box hit the deck during analysis. Approx 17 flasks broken. DA

R7 Cancelled due to weather.

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month FEBRUARY **Year** 2007 **Ship** J.P. TULLY **Cruise ID** 2007-01 p16

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position Latitude	Position Longitude	Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
20	SS4	1606	BE	ROS	US	102	51 21.01	129 00.04	237				DM/MR	✓	
		1611	BO				51 21.04	129 00.06		226	450 +O2	1			
		1614	EN				51 21.04	129 00.06							
20	SS4	1622	BE	NET		103	51 21.04	129 00.08	238						
		1629	BO				51 21.04	129 00.08		225					
		1634	EN				51 21.01	129 00.06						✓	
20	SS5	1857	BE	ROS	US	104	51 28.05	128 30.12	200				DM/MR		
		1901	BO				51 28.07	128 30.14		188	451-460	10			
		1911	EN				51 28.23	128 30.18							
20	SS6	2138	BE	ROS		105	51 19.988	127 59.960		179		1	MA/DM	✓	5m MISCH
		2141	BO				51 19.966	127 59.951		160	461				
		2145	EN				51 19.927	127 59.98							
		2148	BE	NET		106									oops..forgot to record pos & time MA
20	SS6	2156	BO				51 19.79	127 59.92	179						
		2203	EN				51 19.7931	127 59.7658		160					
20	SS7	2305	BE	ROS		107	51 24.72	127 47.60	126		462-468	7	MA/DM	✓	
		2308	BO				51 24.73	127 47.60		110					
		2315	EN				51 24.73	127 47.58							

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bottle firing method:
US = up/stop
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EN = end time of cast
DE = deployment time
MR = messenger release time
RE = recover mooring time

Transmissometer to be cleaned for each cast, do not use Ammonia products

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month Feb **Year** 2007 **Ship** Tully **Cruise ID** 2007-01 p17

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position Latitude	Position Longitude	Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
21	Ri 1	0013	BE	ROS		108	51 26 39	127 38 11	334						
		0019	BO				51 26 44	127 38 14		326	469-482	14	DA, HJ DS	✓	
		0036	EN				51 26 47	127 38 19							
21	Ri 1	0045	BE	NET		109	51 29 40	127 38 14	334	300					
21	Ri 2	0150	BE	ROS		110	51 31 31	127 33 65	335						
		0155	BO				51 31 32	127 33 32		325	483	1	DA HJ DS	✓	
		0201	EN				51 31 28	127 33 76							
21	Ri 2	0215	BE	NET		111	51 31.29	127 33.44	300	325					
21	Ri 3	0300	BE	NET		112	51 35.9807	127 31.9941	326	250					
21	Ri 3	0317	BE	ROS		113	51 35.940	127 32.047	326		484	1		✓	
		0323	BO				51 35.941	127 32.047		310					
		0328	EN				51 35.948	127 32.047							CTL, SAL, NUT & DAG from Niskin 1 (5m)
21	Ri 4	0420	BE	ROS	US	114	51 38.90	127 26.75	298				DM. BM MR		
		0426	BO				51 38 87	127 26.79		288	485-497	13			
		0439	EN				51 38 85	127 26 86							
21	Ri 4		BE	NET			51 3889	127 26 72							
		0455	BO			115	51 38.92	127 26.72		288					
			EN												

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bottle firing method:
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BE = beginning time of cast
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EN = end time of cast
DE = deployment time
MR = messenger release time
RE = recover mooring time

Transmissometer to be cleaned for each cast, do not use Ammonia products

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month February **Year** 2007 **Ship** J.P. TULLY **Cruise ID** 2007-01 P1P

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position Latitude	Position Longitude	Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
21	Ri 5	0537	BE	NET		116	51 40.70	127 19.92	200				DM. BM MR		
		0540	BO				51 40.70	127 19.91		190					BONGO
		0542	EN				51 40.71	127 19.91							
21	Ri 5	0549	BE	ROS		117	51 40.74	127 19.96	200				DM. BM MR	✓	
		0553	BO				51 40.76	127 19.97		190	498	1			
		0558	EN				51 40.78	127 19.98							
21	Ri 6	0628	BE	ROS		118	51 40 51	127 17.09	145				DM. BM MR	✓	
		0632	BO				51 40.50	127 17.08		135	499	1			
		0635	EN				51 40.50	127 17 09							
21	Ri 6	0641	BE	NET		119	51 40 48	127 17.09	145						BONGO
		0644	BO				51 40.47	127 17.10		135					
		0645	EN				51 40.47	127 17.10							
21	M2	1141	BE	ROS		120	51 46 44	127 53 26	192						
		1144	BO				51 46 46	127 53.23		185	500-509	10	DA, LP HJ		
		1156	EH				51 46 44	127 53 26							
21	M3	1224	BE	ROS		121	51 46 29	127 54 61	326						
		1229	BO				51 46 28	127 54 61		323	510-521	12	DA, LP BM, (HJ)		→ Visiting from 12:00-4:00
		1244	EN				51 46 29	127 5462							

Cast type:
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bottle firing method:
US = up/stop
UN = up/no stop
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Time Code
BE = beginning time of cast
BO = bottom time of cast
EN = end time of cast
DE = deployment time
MR = messenger release time
RE = recover mooring time

Transmissometer to be cleaned for each cast, do not use Ammonia products

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month February **Year** 2007 **Ship** Tully **Cruise ID** 2007-01 P19

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position Latitude	Position Longitude	Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
21	M4	1320	BE	ROS		122	51 44 68	128 00.24							
		1327	BO				51 44 66	128 00 26	436	425	522-535	14	DA, BM LP	✓	
		1344	EN				51 44 64	128 00 24							
21	M5	1410	BE	ROS		123	51 43 37	128 03 62	326						
		1415	BO				51 43 38	128 03 65		320	536	1	DA DS BM	✓	
		1419	EN				51 43 36	128 03 64							
21	M6	1444	BE	ROS		124	51 42 64	128 07 45	245						
		1447	BO				51 42 64	128 07 46		235	537	1	DA DS BM	✓	
		1451	EN				51 42 64	128 07 47							
21	SS3	2120	BE	ROS		125	51 15.118	129 21.320	290		538-549	12	MA/DM	✓	
		2125	BO				51 15.275	129 21.431		282					
		2142	EN				51 15.628	129 21.186							
21	SS2	2329	BE	ROS		126	51 13.028	129 43.043	592		550	1	MA/DM	✓	
		2338	BO				51 13.046	129 43.157		560					
		2346	EN				51 13.142	129 43.164							NUT, CHL, SAL @ 5m
21	SS2	2356	BE	NET		127	51 12.9986	129 42.9903	590				MA/DM		
22		0003	BO				51 12 99	129 43 .01		250					
		0005	EN				51 13 03	129 43 04							

Cast type:
BOT = bottle cast, no CTD
CTD = CTD without Rosette
ROS = Rosette plus CTD
USW = sea water loop
MOR = mooring
NET = net haul
DRF = drifter

bottle firing method:
US = up/stop
UN = up/no stop
DN = down/no stop

Time Code
BE = beginning time of cast
BO = bottom time of cast
EN = end time of cast
DE = deployment time
MR = messenger release time
RE = recover mooring time

Transmissometer to be cleaned for each cast, do not use Ammonia products

- With Saunder not working & altimeter jumping all over the place I only went to 560 despite saunder displaying a depth of ~590m. Wasn't 100% sure where bottom was! MA

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month Feb **Year** 2007 **Ship** Tully **Cruise ID** 2007-01 p20

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Position Latitude	Position Longitude	Bottom Depth	Max Depth	Sample Numbers	#of Bottles	Watch Keepers	Trans. Cleaned	Comments
22	SS1	0137	BE	ROS		129	51 12 06	129 59 94	493						
		0144	BO				51 12 06	129 59 81		475	551-564	14	DA OS HJ	✓	
		0206	EN				51 12 01	129 59 64							
23	27	0533	BE	ROS		129	49 19.163	123 48.058	350				MA/DM		CTD SWITCH
		0540	BO				49 19.156	123 48.098		340	565-573	9		✓	
		0552	EN				49 19.237	123 48.384							NEW 0565ctd.com
23	GEO1	0636	BE	ROS		130	49 15.067	123 44.998	403		574	1		✓	
		0641	BO				49 15,056	123 45.088		395					
		0646	E				49.18.054	123 45.139							
23	GEO1	0655	BE	NET		131	49 15.00	123 45.01	403						BONGO to 100
		0657	BO				49 15.01	123 45.02		100					
		0658	EN				49 15.01	123 45.01							
23	GEO1	0703	BE	NET		132	49 15.00	123 45.03	403						BONGO to 395
		0709	BO				49 15.02	123 45.00		395					
		0714	EN				49 15.06	123 44 99							
23	39	0827	BE	ROS		133	49 09.83	123 33.01	377						
		0831	BO				49 09.83	123 33.02		367	575-583	9	DA, HJ BD	✓	
		0843	EN				49 09.81	123 33 04							

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Daily_log_book.doc

Transmissometer to be cleaned for each cast, do not use Ammonia products

CTD SWITCH FROM 0443 TO 0585, previous stand-alone CTD.

See front page for 0585 "in rosette" configuration. Note, con file not same as used with CTD 0585 stand alone.