DAILY LOG BOOK

MISSION NUMBER 2004-10

DATE: From: JUNE 1 to: JUNE 18 2004

VESSEL: J. P. TULLY

PROJECT: LINE P

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

Captain: BILL NOON First Officer: GARRY McDonnell
Second Officer: SHANE Lovelace Third Officer: Tom Maxie

Mission Participants / Agencies: JOS / UBC

Scientific Personnel: Party Chief: MARIE ROBERT

Name	Watch	Cabin	Name	Watch	Cabin
LINDSAY RICHIER			MIKE ARYCHUK		
NINA NEMCEK			TIM SOUTAR		
DAVE TIMOTHY			KEN MORGAN		
JEAN LACHAPELLE			NICK HALL-PATCH		
SVEIN VAGLE			DOUG YELLAND		
PHILIPPE TORTELL			DARREN TUELF		
JANET BARWELL-CLARKE					
WENDY WIGGINS					
CHERYL MARTIN					
SHEILA IDEWS					

Second leg of Mission: Party Chief:

Name	Watch	Cabin	Name	Watch	Cabin

Data logging computer: PACOSAP - FS03
Data acquisition program: SEASAVE
CTD deck unit make: SEABIRD model: 11 serial number: 0508

Primary CTD
Make: Seabird model: 911 serial number: 0585
Primary temperature serial number: 2023
Primary conductivity serial number: 1763
Secondary temperature serial number: 2095
Secondary conductivity serial number: 1764
Transmissometer: Chelsea Model: Seatech s/n: 333 DR / 498 DR
Fluorometer: Model Seapoint Cable gain: 10 x 15M s/n: 2229 **P, S** or **NO** pump?
Oxygen sensor: Seabird Model: SBE 43 s/n: 0047 **P, S** or **NO** pump?
PAR sensor: Biospherical Model: Licor s/n: 4615
Other sensors: Pressure - Digiquartz s/n: 79511 **P, S** or **NO** pump?
Other sensors: Altimeter s/n: 1024 **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: 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 Cable gain: s/n: **P, S** or **NO** pump?
Oxygen sensor: Model: s/n: **P, S** or **NO** pump?
PAR sensor: Model: s/n:
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?

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

Date of cable termination: _____

Guide to cable terminations:

Please read and complete this form before reterminating cable. We have two standard CTD cables in use, nominal .316" and .322". This form specifically addresses these two cables, however the same considerations apply to using other cables. The specifications for non-standard cables and associated terminations are available at Tom Juhasz's office (room 1221).

Please identify nominal cable diameter: 0.322 **Winch:** _____

Actual diameter measurements, two locations in triplicate at termination and approximately 5 metres back from termination.

At cable end:	at 5 metres:
1. _____	1. 0.3237 June 11/04
2. _____	2. _____
3. _____	3. _____

For comparison, the outer armour measurements of new cable:

Nominal .316" should be .3155 to .3165"

Nominal .322" should be .318 to .326"

Record specifications for other cables: _____ within: _____

The tolerance of the PMI Evergrip termination is tighter and only cables within these limits should be used.

For nominal .316" cable the lowest possible diameter is .309"

For nominal .322" cable the lowest possible diameter is .321"

Describe cable:

Kinks: _____

Birdcage _____

Rust flaking off cable _____ (flaking, not just looks rusty)

Cable round or oval _____

Does cable have loose outer armour? _____

(Raised wires or space between wires.)

Are outer armour wires flattened? _____

Remove cable that exhibits these signs of deterioration. To be authorised by Chief Scientist of the cruise, or the winch shop (Tom Juhasz at 250-363-6598).

Megger results by conductor (should be greater than 10,000. meg ohms)

Inner armour to conductor 1 _____

Inner armour to conductor 2 _____

Inner armour to conductor 3 _____

Please identify PMI sleeve used by checking the appropriate blank:

For .316" cable, diameter of inner dimension of sleeve should be .3265" _____

part number 9004897–13, cable diameter range .309" to .320".

For .322" cable, diameter of inner dimension of sleeve should be .3400" _____

part number 9004897–14, cable range .321" to .333".

Sliding the sleeve onto the cable should be difficult.

Evergrip helical Rods:

The part number is 9005-9002 and covers left hand lay cables of diameter range .309" to .333".

Presence of grit on inner surface (yes / no) _____

Condition of wires (damaged ends?) _____

Are the wires rusted? _____

Comments:

_____

_____

_____

_____

_____

_____

_____

_____

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month JUNE **Year** 2004 **Ship** TULLY **Cruise ID** 2004-10

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
01	JF1	2333		Loop			49°16.24	123°34.01	174		LOOP		ST/TS		WENT PAST THE
02	JF2	0109		Loop			48 18.01	124 00.04							STATION.
	JF3	0312		loop			48 28 088	124 34 787			Loop				
02	JF4	0504		Loop			48 30.58	125 00 22	60m		loop				
02	P1	0718	BE	ROS	US	1	48 34.57	125 30.07	116		1	1	DY		5 m sample
1	1	0721	BO	1			48 34.57	125 30.10		112					
		0724	EN				48 34 58	125 30 08							
02	P2	0940	BE	ROS	US	2	48 35.94	126 0.18	118						
1	1	0943	BO	1			48 35.92	126 0.20		113	2-9	8			O_2 = 1238 stopper seized
1	1	0951	EN				48 35.91	126 0.25							
02	P2	1013	BO	NET		3	48 35.98	126 0.08	118	105					Bongo
2	P3	1151	BE	~~CTD~~ ROS	US	4	48°37.45	126°20.03	837		10	1	ST		
		1207	BO				48°37.45	126°20.03		835					
		1216	EN				48°37.56	126°19.96							
2	P4	1354	BE	ROS	US	5	48°38.94	126°40.07	1300	1335	11-30	20	ST.	✓	Seasave (program) computer crashed
		1414	BO				48°38.86	126°40.20		1333					at start.
		1459	EN				48°38.77	126°40.42							
2	P4	1510	BO	NET		6	48 39 001	126 39.002							
		1538	EN				48 39 020	126 39.987							

Cast type:
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MOR = mooring
NET = net haul
DRF = drifter

bottle firing method:
US = up / stop
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Time Code
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RE = recover mooring time

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

28 May 2003
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DAILY LOG

Ocean Sciences and Productivity Division

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Month June **Year** 2004 **Ship** Tully **Cruise ID** 2004-10

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
02	P4	1630	BE	ROS		7	48 38.992	126 39.979	736						
"	"	1634	BO			"	4838.989	126 39.986		201	31-46	16			PAR ON
"	"	1652	EN			"	4839.026	126 40.036							
02	P4	1740		MOOR		8									P4 mooring recovery
03	P5	0233	BE	~~CTD~~/R		9	48° 41.53	127° 09.98	~2100		47	2	ST		PAR OFF
"	"	0258	BO	"		"	48.41356	127 10 066					DT		5m Niskin 140m bottle - Phil/GBC
"	"	0325	EN	"		"	4841 664	127 09.990							
03	P6	0548	BE	~~CTD~~/R		10	48 44.540	127 39.908							
"	"	0611	BO	"		"	48 44 624	127 40 032			48	1	DT		Niskin @ 5m
"	"	0636	EN	"		"	48 44 753	127 40 148							
07	P7	0850	BE	~~CTD~~/R		11	48 46.60	128 10.00	2520		49	1			Niskin 5m
"	"	0915	BO	"		"	48 46.45	128 10.03		2005					
"	"	0933	EN	"		"	48 46.61	128 10.02							

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June 02 2004 P4 Event 7 – Put PAR sensor on for 200m cast. All cables are in place for PAR

03 P5 – Surface data on upcast may show funny numbers while at surface. Some confusion on what was "surface" with Heave Comp.

– PAR sensor removed prior to P5. (S.T)

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3	P8	1201	BE	ROS	US	12	48°49.03	128°40.04	2440		50-69	20	ST.	✓	gorgeous morning!
		1226	BO				48°48.92	128°40.04		2008	+ LOOP *				- Bottle 1 valve was open
		1311	EN				48°48.98	128°40.04			(SAL, NUT, CHL)				*comparison loop
3	P8	1346	BO	NET		13	48°40.67	129°22.88		250					sample taken while Rosette at 5m
3	P9	1605	BE	~~CTD~~/R		14	48 51 436	129 10 048							
		1632	BO	.			48 51.407	129 10 088			70	1			5m Niskin
		1658	EN				48 51 553	129 09 985							
3	P10	1903	BE	~~CTD~~/R		15	48 53.52	129 39.86	2660						
1	"	1925	BO	"		"	48 53.63	129 39.94		2005	71	1			5m Niskin
"	"	1946	EN	"		"	48 53.75	129 39.92							
3	P11	2147	BE	ROS/~~CTD~~		16	48 56.04	130 9.97	2767						
1	"	2209	BO			"	48 55.98	130 9.89		2005	72	1			5m Niskin
"	"	2231	EN			"	48 55.78	130 9.74							
4	P12	0047	BE	ROS	US	17	48°58.26	130°39.95	3300				ST+	✓	PAR ON
		0050	BO				48°58.25	130°39.97		2063	73-89	~~17~~	TS		shallow cast
		0104	EN				48°58.24	130°39.95			(+999)	18			1 extra sample # due to operator error
4	P12		BO	NET		18	48°58.21	130°39.89		150					

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→ 0012: Wrong STN name in header, P12 should be P8

Mooring 49 32.769
132 42.441

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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
4	P12	0203	BE	ROS	US	19	48°58.23	130°39.91	~3300		90–112	23	ST/TS		PAR off –
		0249	BO				48°58.24	130°39.94		3279			DT		Deep cast
		0400	EN				48 58.188	130 40 062							
4	P13	0803	BE	ROS		20	49 2.61	131 40.00	?				D.T		
1	1	0837	BO	1		1	49 2.61	131 40.05		2005	113	1			5 m Niskin
1	1	0859	EN	1		1	49 2.60	131 39.99							
4	P14	1303	BE	~~CTD~~ IR		21	49°07.30	132°40.01	3324				ST		5 m Niskin
		1328	BO				49°07.21	132°39.91		2005	114	1			
		1352	EN				49°07.12	132°40.08							
4	Dion	2021	DE	MOOR		22	49 32.769	132 42.441		320					Whale mooring
5	P15	0119	BE	~~CTD~~		23	49°11.95	133°40.04	3419		115	1	ST	✓	transmissometer
		0136	BO	ROS			49°11.73	133°40.12		2003					spiking again
		0202	EN				49°11.49	133°40.42							
5	P16	0600	BE	ROS		24	49 17 107	134 40 142	3675						
		0603	BO				49 17 071	134 40 088		203	116-132	17 18 tripped			
		0632	EN				49 17 050	134 40 042							
5	P16	0640		NET		25	49°16.905	134 40.327		250					

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P16 2300 local - Shallow cast - went to 200m then came up to 175. Bottle not tripped @ 200 so sent back down.

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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
5	P16	0857	~~BE~~	ROS		26	49 17.07	134 40.09	3640						check con file used - 2004-10-0012 ?
1	1	0941	BO	1		1	49 16.98	134 40.01		3683	133-156	24			Trans TU @ 800m T → 1m @ 600m
		1045					49 16.99	134 40.08							
5	P17	1525	BE	~~CTD~~/R		27	49 20 885	135 40 042		~~3667~~					
		1550	BO				49 20 900	135 40 052		2000	157	1			Night 0 5m
		1614	EN				49 21 001	135 40 027							
5	P18	20:21	BE	~~CTD~~/R		28	49 26 066	136 40 066	3830						
1	1	20:41	BO	1		1	49 26.23	136 40.24		2005	158	1			
		21:04	EN				49 26 216	136 40 762							
6	P19	0129	BE	ROS	US	29	49°30.03	137°39.94	3925		159-165	7	ST	✓	*
		0159	BO				49°30.23	137°39.84		2003					transmissometer
		0226	EN				49°30.76	137°39.03							trace looks good.
6	~~5~~ P20	0706	BE	ROS		30	4934 148	138 39 775	3963						DMS might shallow
1	1	0710	BO	1		1	4934 180	138 39 784		200	166-178	13			
		0728	EN				4934 042	138 39 629							

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After P16:
I was going to change the transmissometer cable, take out the Y connect + re-splice. When I undid the connection of the cable to the CTD, there was corrosion around a couple of pins. So I cleaned everything all up first + see if that helps before I do any splicing. The Y cable goes to the transmissometer + oxy sensor, not the PAR as I was told. (S.T.) June 5

P-17 - 0800 local ~ transmissometer spikes @ 600 on down cast. Also on upcast

Prior to P19:
* Y cable from oxy sensor + transmissometer was removed - 2 cables going straight to the above 2 sensors were put in place of the Y. (S.T.)

June 4 (0140 UTC) Thermosalinograph time was out: Computer reads 01:41; Thermosal reads 01:24. We shut it down, restarted it up (New File name 2004-10-0002.hex
Read Lat 49° 30.12 Thermosal time 01:45 (S.T.)
Long 137° 40.02 Computer time 01:44

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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
5	P20	~~0005~~		NET		31	49 34.11	138 40.06	3963	250					
		0755													
6	P20	0825	BE	ROS		32	49 33.95	138 39.82	3964						some Trans spiking @ 3450m & stayed low
1	1	0911	BO	1		1	49 34.10	138 39.83		4026	179-202	24	DM		
1	1	1025	EN	1		1	49 33.95	138 40.06							
6	P21	1451	BE	ROS		33	49 38.00	139 40.02	3956		203.	1	ST.		niskin @ 5m
	1	1520	BO	1			49 38 015	139 40 022		2004					
	1	1541	EN				49 38 008	139 40 015							
06	P22	2027	BE	ROS		34	49 41.96	140 40.07	3850				DY		
1	1	2055	BO	1		1	49 41.99	140 39.94		2005	204-214	11			5 m Nisk & samples for Phil & Dave
	1	2121	EN				49 42.00	140 39.97							
07	P23	0146	BE	ROS	US	35	49 45.93	141 39.90	4049		215-221	7	ST	✓	new transmiss.
		0213	BO				49 45.97	141 39.98		2005					- see notes →
		0239	EN				49 46.02	141 40.03							
07	P24	0703	BE	ROS		36	49 50.22	142 39.94	3983						- transmissometer trace looks OK.
1	1	0733	BO	1		1	49 50.22	142 39.99		2005	222	1	DY		5 m Niskin
1		0801	EN	1		1	49 50.19	142 40.01							- trans no spikes

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P-21 03:00 UTC - transmissometer spikes at 1100 & 1600 on down cast

June 6 - Prior to P23 - Put in transmissometer from the spare CTD (Serial # 498 DR + changed info in con file to match. Will see if spiking re-occurs. (S.F)

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07	P25	1209	BE	ROS	US	37	50 00.00	143 36.31	4114		223	1	S.T	✓	* see note →
		1240	BO				49 59.99	143 36.36		2005					-trace looks OK-
		1308	EN				50 00.00	143 36.27							
07	P35	1607	BE	~~CTD~~/R		38	50 00.08	144 18.167	4142					✓	
			BO				49 59.990	144 18.203		2003	224	6	DT		5m Niskin/5bttl@10m UBC
		1655	EN	.			50 00.001	144 18.234							
07	~P26	2153	EN	MOR		39	50 06.92	144 57.12							FD Star deployed
07	P26	2306	BE	ROS		40	50 00.61	144 58.65	4190				ST		DMS cast
1	1	2311	BO	1		1	50 00.68	144 58.68		203	225-243	19			PAR ON
		2325	EN				50 00.98	144 58.63							
		2350		NET		41	50 00.54	144 58.55	4190	250					
8	P26	0042	BE	ROS		42	50 00.55	144 58.74	4432					✓	PAR OFF
		0141	BO				50 00.54	144 58.69		4317	244-267	24			→
		0312	EN				50 00 516	144 58 652							
8	P26	0538	BO	SCOR		43	49 59.97	144 57.87	4166	50					

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Re: TRANSMISSOMETER:

* – I put the Y cable back on the CTD (transmissometer + oxygen) + hooked up
pre-cast the PAR cable again. We'll see how it goes. (S.T)

during cast → update → data is being logged, but doesn't look right - ie transmiss. reading 91%, whereas it is usually 88%
I didn't change anything in computer... shouldn't have lost any data, hopefully.

post-cast = What happened was → I didn't notice for some reason the con file the computer was using was .0010 hex which contained the old transmissometer calibration numbers/data. I changed it and re-ran the cast in the archives + it looks more reasonable now. Will see how P35 pans out.

P35 0900 local – 2000m cast. 5m Niskin / 10m UBC x 5 bottles - Tortell

Forgot pumps! Down to 400m back to surface, then cast.

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08	P26	0933		NET		44	50 0.24	145 0.70		50m					50m SCOR
08	P26	0959	DE	ROS		45	50 0.25	145 0.70	4226						
1	1	1002	BO	1		1	50 0.25	145 0.71		200	268-279	12			Dms
1	1		EN	1		1									
8	P26	1101	BE	ROS		46	50°00.12	145°00.66	4226		280-287	8	ST		1° prod cast
		1105	BO	.			50°00.15	145°00.65		100					
		1111	EN	.			50°00.18	145°00.61							
8	P26	1312	BO	NET		47	50 00.21	145 00.81	~4200	~~250~~			ST		BONGO. SCOR.
08	P26	1329		DRF		48	50 00.35	145 00.71		100			TS JEB-C		DEPLOYED PROD MOORING
08	SOLAS	1500		MOOR											Solas Recovery
08	P26	2040		DRF			50 00.14	145 00.60							RECOVER PROD. DRF.
08	PSED	2200		MOOR											STN PSED Trap recovery
9	argo	0908		DRF	—	—	49 59.83	147 00.78							Argo 1422
9		1742		Skim		49	50 00 945	144 55 789							Skimmer Deploy
9	P26	2119		MOOR		50	49 57.92	145 03.45	4030						SED TRAP
11	P26	0120		MOOR		~~51~~	50 10.498	144 52.65							RECOVER FDSTAR MOORING

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- re-set Thermosalinograph (June 8 49 59.07 00:40
to match computer time 145 06.46
(was out by 13 minutes) S.T.

1200 local
June 11 - Pick up Solas Empty Mooring. Deploy 1600
1900 UTC

Wake float up @ 0844 UTC

1420 SED TRAP STN P Start 49 58 947 145 00 976 200m Trap 700m Kevlar
1445 Start 2700 Kevlar
Deploy Anchor 49 57 92 145 03 45 Lat GPS

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month June **Year** 2004 **Ship** Tully **Cruise ID** 2004-10

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	P49	0717	BE	ROS	US	51	50°54.15	144°17.27	3614		288 - 311	24	ST		BOT 19 DIDN'T TRIP
		0745	BO				50°54.17	144°17.27		2002					
		0829	EN				50°54.19	144°17.17							
11	P49	0840	—	DRF	—	—	50°54.081	144°16.725		—	—	—	—	✓	FLOAT 956
	Loop 1	1056					50°54.87	143°45.76	3866	Loop			ST		
11	Loop 2	1503					50°58.50	142°31.80	3646	Loop			WW		
11	Loop 3	1910					51°0.85	141°25.47	3880	Loop			DY		
11	R17	2059	BE	ROS	US	52	51°2.03	140°55.99	3053				DY		Bot. 19 didn't
"	"	2143	BO	"		"	51°2.02	140°55.96		1005	312-335	24			trip (again)
"	"	2154	EN				51°2.00	140°55.93							
11	Loop 4	2300					51°03.15	140°38.61	3815	Loop			ST		
12	LOOP 5	0103					51°07.372	138°26.114	2810	Loop			WW		
12	Loop 6	0700					51°09.17	138°28.30		Loop			DY		
12	R12	1052	BE	ROS	US	53	51°13.00	137°23.04	3649						
"	"	1120	BO	"		"	51°13.05	137°22.94		2000	336-359	12	ST	✓	
"	"	1202	EN				51°13.07	137°22.94							
12	R12	1212	—	DRF	—	—	51°13.077	137°23.082							Deploy Argo 952
12	Loop 7	1500					~~51°08.650~~	~~136°23.423~~							Loop pos'n 0935?
							51°09.5	136°33.3	→ POS'N @	1500 UTC	FLOW	SHIP'S	LOG		

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150m	100m	50m	5m
3385	3515	3345	3255
3225	3225	3210	3230
3275	3410	3290	3245
3250	3280	3225	3235
3290	3210	3220	3220
	3260		1185
			37
			0.3237

Prior to R12 - took carousel off + gave it a cleaning. See if Bot 19 fires. (ST)
It worked! 19 did close thanks Sheila.

Strong current towards N-W; influence of the eddy? We'll have to keep a close eye on float 95.

Loop #7 - Sample drawn @ 0800 local / posn' taken @ 0935 local - sorry

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month JUIN **Year** 2004 **Ship** JOHN P TULLY **Cruise ID** 2004-10

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	Loop 8	1925					51 03.38	138 19.55							
	ED 1	2300				54	51 00.016	134 30.206	3395						Pressure Case Test
	ED1	0133	BE	CTD		56	51°00.35	134°30.58	3395	~~200~~			ST	✓	PAR ON
13		0135	BO				51°00.37	134°30.58		205					(Event #55 is
		0138	EN				51°00.41	134°30.61							a blank - had computer problems)
	ED 2	0215	BE	CTD		57	51°04.96	134°29.80	3404						
		0218	BO				51°04.96	134°29.85		205					
		0221	EN				51°04.98	134°29.96							
	ED3	0301	BE	CTD		58	51 10.006	134 29.819	3375				WW	✓	
		0304	BO				51 10.031	134 29.922		214					
		0307	EN				51 10.057	134 29.996							
	ED4	0345	BE	CTD		59	51 15.062	134 30.149	3385				WW	✓	
		0352	BO				51 15.112	134 30.197		210					
		0356	EN				51 15.146	134 30.192							
	E5	0435	BE	CTD		60	51 19.867	134 30.175	3355						
		0440	BO				51 19.859	134 30.158		210				✓	
		0444	EN				51 19.848	134 30.093							

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12th June

2300 – ED1 - whale pressure test on instrument cases. 2cast - 1000m
Saw humpback whale ½ cable astern of ship

ED5

Bridge reports strong drift to port (WEST) @ 04:29 → 51 20.593, 134 29.022.

Lots of porpoise & birds

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month				Year			Ship						Cruise ID		
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	E6	0528	DE	CTD		61	51 25 033	134 30 245	3288				N^2		
		0531	BO	1			5125042	134 30 293		210					
		0535	EN	1			51 25 021	134 30 397							
13	E7	0616	BE	CTD		62	5130 054	134 30 486	3196				N^2		
		0621	BO	1			5130143	13430 722		210					
		0624	EN	1			5130215	134 30 898							
13	E8	0703	BE	CTD		63	51 35.107	134 30.186	3308						
		0707	BO	1			51 35.082	134 30.202		210			DY		
		0709	EN				51 35.078	134 30.185							
13	E9	0746	BE	CTD		64	51 39.881	134 30.044	3266						
1	1	0750	BO	1		1	51 39.912	134 30.090		210			DY		
		0753	EN				51 39.944	134 30.128							
13	E10	0829	BE	CTD		65	51 44.970	134 30.061	3245						
1	1	0832	BO	1		1	51 44.987	134 30.055		210			DY		
		0835	EN				51 44998	134 30.052							
13	E11	0912	BE	CTD		66	51 50.011	134 30.078	3190						
1	1	0916	BO	1		1	51 50.020	134 30.132		210			DY		
		0919	EN				51 50.000	134 30.161							

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13 E7 0616 UTC transmissomotr spike @ 10m, SALP on recovery

DAILY LOG

Ocean Sciences and Productivity Division

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Month June **Year** 2004 **Ship** Tully **Cruise ID** 2004-10

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	E12	0956	BE	CTD		67	51 54.988	134 30.035	3197						
1	1	1001	BO	1		1	51 54.997	134 30.007		210			DY		
1		1004	EN				51 55.014	134 30.004							
13	E13	1041	DE	CTD		68	52 0.047	134 29.946	3187						
1	1	1045	BO	1		1	52 0.058	134 29896		210			DY		
		1048	EN				52 0.071	134 29.886							
13	E14	1124	BE	CTD		69	52 05.66	134 30.06	3154				ST	✓	* →
↓		1128	BO				52 05.10	134 30.10		210					
		1131	EN				52 05.14	134 30.08							
	E15	1204	BE	CTD		70	52 10.01	134 29.92	3132				ST		trans. spike - ~45m on way down weird! - OK on way up - like it hit something - nothing on CTD on recovery
		1210	BO				52 10.04	134 29.95		210					
		1212	EN				52 10.06	134 29.96							
	E16	1246	BE	CTD		71	52 15.03	134 29.93	3090				ST		
		1251	BO				52 15.04	134 29.92		210					
		1254	EN				52 15.04	134 29.94							
	E17	1329	BE	CTD		72	52 20.01	134 29.83	3081				ST		strong current
		1334	BO				52 19.95	134 29.83		210					
		1337	EN				52 19.94	134 29.68							

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(hex file, 004)

x restarted thermosal June 13 0410 Local Time - was out by 10 min + that just happened within the last 12 hours. because I've been watching it closely. ST.

DAILY LOG

Ocean Sciences and Productivity Division

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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	ED 18	1416	BE	CTD		73	52 25.02	134 29.92	3039				ST		
		1421	BO				52 24.99	134 29.92		210					
		1424	EN				52 24.98	134 29.93							
13	ED 19	1504	BE	CTD		74	52 30.001	134 29.948	3036				DY	✓	
		1507	BO				52 29 980	134 29 968		210					
		1511	EN				52 29 978	134 29 960							
13	ED20	1549	BE	CTD		75	52 35 014	134 29 990	2897				DY		
		1553	BO				52 35 012	134 30 044		210					
		1557	EN				52 35 020	134 30 078							
13	ED 21	1637	BE	CTD		76	5239 977	134 29 956	2922				DY	✓	
		1641	BO				52 39 991	134 29 954		210					
		1644	EN				52 40 003	13429 951							
13	ED22	1726	BE	CTD		77	52 45 017	134 29 944	2893				DY	✓	
		1731	BO				52 45 042	134 29 911		210					
		1734	EN				5245 058	134 29 878							
13	ED23	1816	BE	CTD		78	52 50 02	134 30 053	2814				DY	✓	
		1821	BO				5250 048	134 30 960		210					
		1825	EN				5250 063	134 29 882							

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28 May 2003
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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month June **Year** 2004 **Ship** Tully **Cruise ID** 2004-10

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	ED24	1902	BE	CTD		79	52 55.033	134 29.989	2810				DY	✓	Pump off @ start – returned to surf.
1	1	1908	BO	1		1	52 55.038	134 29.936		210					
		1910	EN				52 55.019	134 29.952							
13	ED25	1947	BE	CTD		80	52 59.959	134 30.014	2790				DY	✓	
1	1	1950	BO	1		1	52 59.958	134 30.025		210					
		1953	EN				52 59.924	134 30.080							
13	ED26	2028	BE	.		81	53 5.034	134 29.918	2709				DY		
1	1	2031	BO			1	53 5.065	134 29.885		210					
		2034	EN				53 5.080	134 29.849							
13	ED27	2108	BE	CTD		82	53 10.007	134 29.952	3718?				DY		
1	1	2113	BO			1	53 9.997	134 30.053		210					
		2117	EN				53 10.024	134 30.164							
14	ED27N	0121	BE	ROS		83	53°10.06	134°44.97	2777				ST	✓	PAR off – Rosette back in service. 2. calibration cast
		0150				1	53°09.89	134°44.61		2005	360-383	24			
		0217					53°09.64	134°43.83							
14	ED25N	0436	BE	ROS		84	52 50.024	134 44.857	2924				WW		
		0500	BO				52 50.038	134 44.969		2005					
		0523	EN				52 49.738	134 44.743							

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DAILY LOG

Ocean Sciences and Productivity Division

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14	ED20W	700	BE	ROS		85	52 35.01	134 44.93	3025						
1	1	0730	BO	1		1	52 35.04	134 44.96		2005	385	1			Tom Wilkin
		0749	EN				52 34.99	134 45.05							
14	ED17W	0930	BE	ROS		86	52 20.00	134 44.888	3090						
1	1	1004	BO	1		1	52 20.03	134 45.01		2005	386-403	21			
		1102	EN	1			52 20.02	134 45.02							
14	ED17W	1131		NET		87	52' 20.0	134' 44.96		250					Bongo to 250m
	ED 14W	1331		NET		88	52 05.03	134 44.94	3313	250					
14	ED14W	1351	BE	ROS		89	52'05.03	134'44.96	3313		407-430	24			
		1415	BO				52' 04.87	134'44.99		2008					
		1536	EN				52' 05.06	134' 45.00							
14	ED14W	1545	-	DRF		-	52' 04.98	134' 44.91							Deploy Arg. 1388
14	ED11W	1724	BE	ROS		90	51 50.054	134 45.073							Long time on surf on down Heave Comp. Op. Problems. again
			BO				51 50.382	134 45.299			431-449	19		✓	
		1904	EN				51 51.286	134 45.685							
14	ED11W	1926	BO	NET		91	51 51.54	134 46.06	3287						
		1931	EN				51 51.63	134 46.16		250					

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→ Lots of plankton! Salps, pteropods + "tons" of healthy looking big copepods. (S.T)

DAILY LOG

Ocean Sciences and Productivity Division

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Month JUNE **Year** 2004 **Ship** JOHN P TULLY **Cruise ID** 2004-10

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	ED8W	2215	BO	NET		92	51'35.50	134'46.22	3289	250			DY		250 m Bongo
	ED8W	2310	BE	ROS	US	93	51'35.06	134'45.35	3366		450-468	19	SF	✓	
		2338	BO				51'35.04	134'45.52		2008					
15		0044	EN				51'35.19	134'46.09							
15	ED5W	0237	BE	ROS	US	94	51'20.08	134'44.89	3395		469-487	19			
		0304	BO				51 20 014	134 44 004		2005					
		0407	EN				5120 346	134 44 568							
15	ED5W	0440	NET	NET		95	5120 716	134 44 789							Bongo 0-250
15	ED1W	~~0634~~ 0700	BE	ROS		96	5059996	134 44 990	2696		488	1			
"	"	0700	BO	"		"	51 0.10	134 44.76		2005					5m Niskin #5 fired
"	"	0724	EN	"		"	51 0.19	134 44.51							7 bottles fired OF
15	LOOP 9	1100		LOOP			51 10.74	133 39.44							LOOPS TAKEN #9
15	LOOP 10	1505		Loop			5123 320	13218 602	2967						Underway Loop #10
15	SS1	~~1016~~ 17	BE	ROS		97	5129 969	131 39 999	2499						
		~~1039~~ 17	BO				5130 019	131 39 976		1500	489-510	22			
		1820	EN				5130036	131 40 050							

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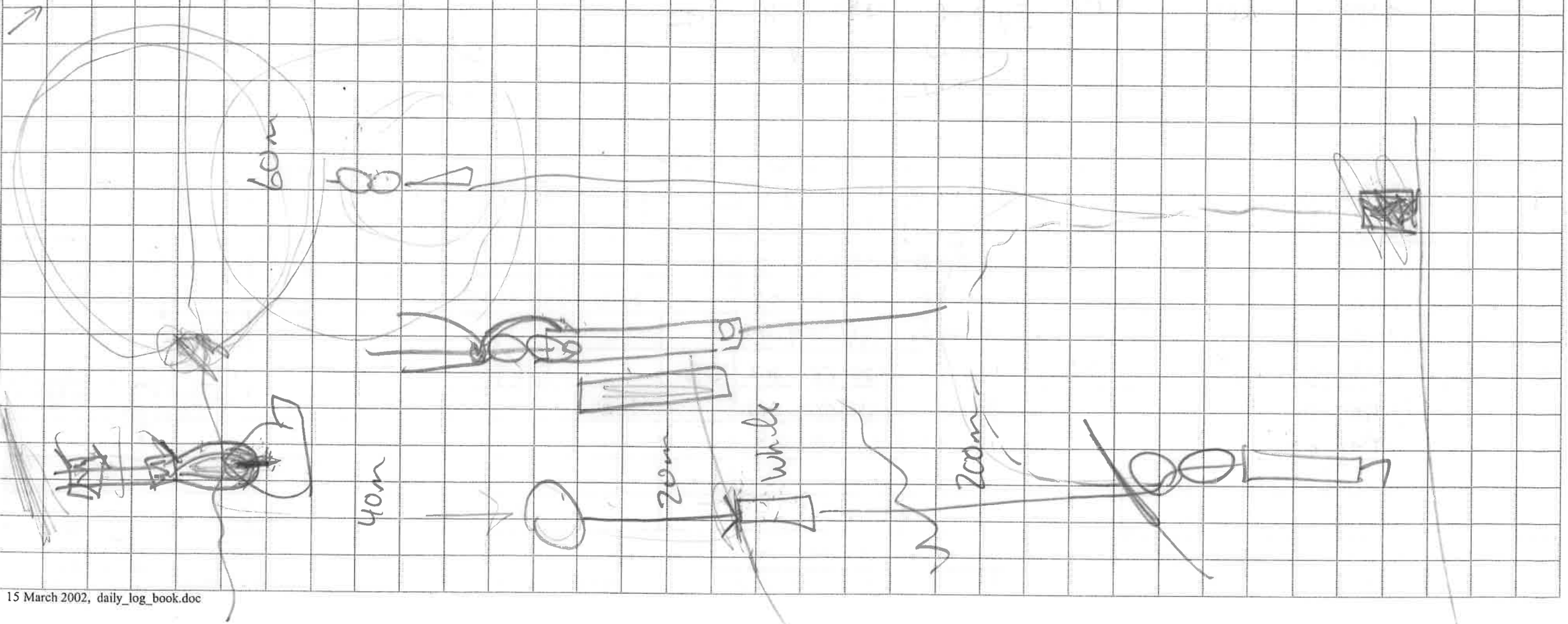
EDSW - Niskin #5 did not fire/close/trip on Rosette Event # 94 Sample # 473

7 bottles fired to test Niskin 5, it worked.



DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month June **Year** 2004 **Ship** Tully **Cruise ID**

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	SS2	2150	BE	ROS		98	51 14.95	130 40.14	1993						
1	1	2219	BO	1		1	51 15.06	130 39.96		1987	511	1			5 m Niskin
		2244	EN				51 15.03	130 39.91							
15	PAC1	2320		MOOR			50°57.4	129°59.6							PAC1 Recovery
16	SS3	0724	BE	ROS		99	51 14.64	129 20.74	297				DY		
1	1	0728	BO	1		1	51 14.63	129 20.56		295	512-528	17			
1	1	0749	EN	1			51 14.61	129 20.18							
16	SS4	0920	BE	ROS		100	51°21.02	129 0.00	242				DY		
1	1	0926	BO	1			51 21.07	129 0.00		241	529	1			
1	1	0930	EN	1			51°21.10	128°59.98							
	SS5	1133	BE	ROS	US	101	51°27.97	128°30.00	203				ST	✓	
		1136	BO				51°27.98	128°30.03		200	530-543	14	↓		
		1151	EN				51°27.96	128°29.98							
16	SS6	1356	BE	ROS	US	102	51°19.50	128°00.02	162		544	1			1° + 2° temp. sensors
		1400	BO				51°19.51	128°00.00		160					are drifting more + more (±0.04)
		1404	EN				51°19.49	128°00.05							

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

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month | **Year** | **Ship** | **Cruise ID**

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	SS 7	1515	BE	ROS		103	51 24 809	127 47 533	123			11	WW	✓	PAR ON
		1519	BO				51 24 806	127 47 544		122	545-555				
		1534	EN				51 24 793	127 47 520							
16	RI 5	1818	BE	~~CTD~~/R		104	51 40 721	127 19 826	203						
		1823	BO				51 40 723	127 19 829		200	~~556~~	+	WW	✓	
		1829	EN				51 40 748	127 19 807							
16	RI 5	1830	BE	ROS		105	51 40 740	127 19 807	203		556	1			
		1836	BO				51 40 758	127 19 792		199					
		1840	EN				51 40 792	127 19 782							
16	RI 4	1918	BE	ROS		106	51 38.89	127 26.80	303						
"	"	1926	BO	"		"	51 38.92	127 26.86		301	557	1	DY		5m Niskin
"	"	1932	EN	"		"	51 3893	127 26.86							
16	RI 3	2036	BE	ROS		107	51 35.77	127 32.17	330		558	1			
"	"	2041	BO	"		"	51 35.73	127 32.16		328			DY		5m Niskin
"	"	2046	EN	"		"	51 35.70	127 32.14							

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28 May 2003
Daily_log_book.doc

SS7 - 2m bottle fired ~3 or 4m (altimeter died at this point)

Cis (event 104) - calibration cast without pump.

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month | **Year** | **Ship** | **Cruise ID**

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16	RI2	2137	BE	ROS		108	51 31.26	127 33.53	335						
1	1	2142	BO	1		1	51 31.21	127 33.58		331	559	1			5m Niskin
1	1	2147	EN	1		1	51 31.16	127 33.66							
16	RI1	2225	BE	ROS		109	51 26.38	127 38.09	336						
1	1	2231	BO	1			51 26.35	127 38.16			560-581	22			Bottom bottles tripped quickly (steep sides of inlet!) to get off bottom
1	1	2252	EN	1			51 26.39	127 38.48							

DONE

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