

DAILY LOG BOOK

MISSION
NUMBER

2003-41

DATE:

From: Dec 1 to: Dec 6, 2003

VESSEL:

VECTOR

PROJECT:

ST. GEORGIA
& JUAN DE FUCA (MASSON)

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

Captain: Brian First Officer: Steve Kennedy
Second Officer: Mark Third Officer: _____

Mission Participants / Agencies: _____

Scientific Personnel: Sophie Johannesen

Name	Watch	Cabin	Name	Watch	Cabin
Darien	4-8				
Sherila	8-12				
Debbie	8-12				
Kob	8-12				
Tsuwashi	12-4				
James	12-4				
Liette	4-8				

Second leg of Mission: _____
Party Chief: _____

[illegible]

Data logging computer: PAC65AP - F503

Data acquisition program: Seasoft

CTD deck unit make: Seabird model: 11 serial number: 05

Primary CTD

Make: Sabird model: 911 serial number: 0585

Primary temperature serial number: 2695

Primary conductivity serial number: 1762

Secondary temperature serial number: 2106

Secondary conductivity serial number: 228

Transmissometer: Ches's Spectech Model: wotlab s/n: 333 DR

Fluorometer: Model Seamount Cable gain: 10x 0.5u/s/n s/n: 2356 P, S

Oxygen sensor: Seabird Model: 5BE 43 s/n: 0047 P, S

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

Other sensors: _____ s/n: _____ P, _____

Other sensors: _____ s/n: _____ P, _____

Other sensors: _____
s/n: _____ P, _____

Other sensors: _____
s/n: _____ P, _____

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 _____

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

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

Other sensors: _____ s/n: _____ p, n

Other sensors: _____ s/n: _____ p. 9

Other sensors: _____ s/n: _____ P, n: _____

Other sensors: _____ s/n: _____ p, s/n: _____

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

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Month Dec				Year 2003				Ship Vector				Cruise ID 2003-41			
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							
1	58	0656	BE	CTD		001	48° 42.91	123° 14.49	335		—	—	ST	✓	+8 hrs
		0705	BO				48° 42.89	123° 14.65		330					+8 hrs
		0710	EN				48° 42.90	123° 14.68							
2	57	0751	BE	CTD		002	48° 44.60	123° 08.08	141				ST		
		0755	BO				48° 44.03	123° 08.07		154					
		0758	EN				48° 44.06	123° 08.06							
2	56	0846	BE	ROS	US	3	48° 46.495	123° 1.667	203	190	1-12		JW	✓	Time local mble converted to GMT
		0848	BO				48° 46.529	123° 1.694							in log.
		—	EN				48° 46.469	123° 1.554							"
2	47	1009	BE	CTD		4	48° 49.306	123° 6.058	185	183			SP	✓	
		1014	BO				48° 49.280	123° 6.043							
		1020	EN				48° 49.274	123° 6.000							
2	48	1110	BE	CTD		5	48° 51.564	123° 3.073	210	196			SP	✓	Hit bottom
		1115	BO				48° 51.462	123° 3.089							14m above depth
		1121	EN				48° 51.402	123° 3.066							given by bridge. Altimeter kicked in late & I stopped looking at it just as the wrong moment.
2	49	1159	BE	CTD		6	48° 54.984	122° 59.570	130	121	stopped 7m above bottom				Cleaned with hose, but no mud visible in pump
		1203	BO				48° 55.013	122° 59.521			because %trans suddenly decreased				+ top of upcast looked ok.
		1207	EN				48° 55.042	122° 59.452							

Cast type:

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- Dec 01 2003

1600 - Rosette test cast, Saanich Inlet

- lost communication w/ CTD

- bring back on board, trouble shoot

- Sea Cable splice pulled apart

- Back to IOS for splice kit

- reterminate splice / Test / leave IOS 2115

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Month <i>12</i>				Year <i>03</i>			Ship <i>Vector</i>				Cruise ID <i>2003-41</i>				
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							
<i>2</i>	<i>50</i>	<i>4:42</i>	<i>BE</i>	<i>CTD</i>		<i>7</i>	<i>48 57.62</i>	<i>122 56.06</i>	<i>26</i>						<i>(add 8 hrs to times)</i>
		<i>4:44</i>	<i>BO</i>				<i>48 57.61</i>	<i>122 56.07</i>		<i>20</i>					
		<i>4:46</i>	<i>EN</i>				<i>48 57.59</i>	<i>122 56.07</i>							
<i>2</i>	<i>51</i>	<i>6:13</i>	<i>BE</i>	<i>CTD</i>		<i>8</i>	<i>48 46.67</i>	<i>122 51.59</i>	<i>155</i>						<i>all in P.S.T. hook a bit to figure out how to change it.)</i>
		<i>6:17</i>	<i>BO</i>				<i>48 46.64</i>	<i>122 51.52</i>		<i>150</i>					
		<i>6:21</i>	<i>EN</i>				<i>48 46.61</i>	<i>122 51.44</i>							
<i>2</i>	<i>52</i>	<i>7:34</i>	<i>BE</i>	<i>CTD</i>		<i>9</i>	<i>48 38.97</i>	<i>122 43.09</i>	<i>91</i>	<i>82</i>					
		<i>7:37</i>	<i>BO</i>				<i>48 38.98</i>	<i>122 43.09</i>		<i>76</i>					
		<i>7:39</i>	<i>EN</i>				<i>48 38.98</i>	<i>122 43.10</i>							
<i>2</i>	<i>53</i>	<i>8:33</i>	<i>BE</i>	<i>CTD</i>		<i>10</i>	<i>48 33.295</i>	<i>122 44.96</i>	<i>60</i>				<i>ST</i>	☒	<i>* see note re oxy sensor</i>
		<i>8:35</i>	<i>BO</i>				<i>48 33.36</i>	<i>122 44.98</i>		<i>58</i>					
		<i>8:37</i>	<i>EN</i>				<i>48 33.39</i>	<i>122 45.01</i>							
<i>2</i>	<i>54</i>	<i>17:48</i>	<i>BE</i>	<i>CTD</i>		<i>11</i>	<i>48 26.76</i>	<i>122 44.13</i>	<i>77</i>					☒	
		<i>17:50</i>	<i>BO</i>				<i>48 26.78</i>	<i>122 44.08</i>		<i>75</i>					
		<i>17:53</i>	<i>EN</i>				<i>48 26.83</i>	<i>122 44.04</i>							
<i>2</i>	<i>62</i>	<i>19:37</i>	<i>BE</i>	<i>ROS</i>	<i>US</i>	<i>12</i>	<i>48 22.77</i>	<i>123 02.40</i>	<i>147</i>		<i>13-22</i>			☒	<i>rosette hit</i>
		<i>19:41</i>	<i>BO</i>				<i>48 22.75</i>	<i>123 02.33</i>		<i>145</i>					<i>stern (Bot 5)</i>
			<i>EN</i>												<i>but no apparent</i>
															<i>damage. Bot 1</i>

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* Dec 2/03 - I noticed the oxygen sensor values were very unusual (high and unchanging). I went into the con file & there was an incorrect voltage offset value (positive, not negative as it was in a previous Cruise). I changed it and it seems more reasonable & comparable to what I'm getting with the titrated values. S.T.

slipped down, but ~~I~~ tightened ~~it~~.

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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							
2	63	2130	BE	CTD		13	48° 14.591	122° 58.220	150	147			SJ		large swells
		2117	BO				48° 14.585	122° 58.103							
		2121	EN				48° 14.602	122° 58.004							
3	101	0539	BE	CTD		14	48° 25.71	124° 44.92	240				SJ	✓	drifting + strong current
		0545	BO				48° 25.88	124° 44.83		238					
		0551	EN				48° 26.03	124° 44.81							
3	102	0634	BE	CTD		15	48° 29.81	124° 43.92	257				ST/RM	✓	
		0639	BO				48° 29.92	124° 43.86		127	(23-35)				*had to abort cast -
		0641	EN				48° 29.66	124° 43.85							drifting in
3	74	0735	BE	CTD		16	48° 25.18	124° 35.95	187				ST	✓	towards beach.
		0738	BO				48° 25.14	124° 35.93		180					
		0742	EN				48° 25.10	124° 35.93							
3	75	0826	BE	ROS	US	17	48° 27.968	124° 32.552	226	222	23-35		88	✓	spigot of bottle 9 broke
		0834	BO				48° 27.924	124° 32.472							
		0854	EN				48° 27.733	124° 32.594							
3	76	0945	BE	CTD		18	48° 31.333	124° 30.194	91	92			ST	✓	
		0949	BO				48° 31.310	124° 30.254							
		0952	EN				48° 31.274	124° 30.306							

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							Latitude	Longitude							
3	71	12:32	BE	CTD		19	48 22.16	123 59 46	108				71		
		12:36	BO				48 22.14	123 59 41		105					
		12:39	EN				48 22.12	123 59 39							
3	72	13:38	BE	ROS	US	20	48 18.66	124 4 07	190		#36-46		71		
		13:44	BO				48 18.60	124 4 12							
		13:57	EN				48 18.59	124 4 33		182					
3	73	14:41	BE	CTD		21	48 15.05	124 6 45	161				71		
		14:45	BO				48 15.00	124 6 43		158					
		14:49	EN				48 14.96	124 6 40							
3	68	16:34	BE	CTD		22	48 12.13	123 42.84	137				d.l.	✓	
		16:38	BO				48 12.11	123 42.73		133					
		16:42	EN				48 12.10	123 42.66							
3	69	17:18	BE	ROS	US	23	48 15.600	123 43.254	178		47-56	10			
		17:23	BO				48 15.88	123 43.288							
		17:37	EN				48.15.534	123 43.27							
3	70	18:15	BE	CTD		24	48 19.178	123 43.229	152						
		18:19	BO				48 19.159	123 43.252							
		18:23	EN				48 19.147	123 43.258							

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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							
3	104	2028	BE	CTD		25	48°20.062	123°17.992	82	81			JW	✓	
		2031	BO				48°20.088	123°17.984							
		2034	EN				48°20.102	123°17.982							
3	ADCP	2124	BE	ROS	US	26	48°13.993	123°18.152	120	117	57-64		SP	✓	Bottle 8 only top fired ⇒ no sample. Nutrient kept from bottle 7
		2128	BO				48°13.981	123°18.229							
		2137	EN				48°13.915	123°18.469							
3	105	2207	BE	CTD		27	48°10.997	123°19.075	84	82			SP	✓	
		2210	BO				48°10.996	123°19.052							
		2212	EN				48°10.991	123°19.049							
3	64	2321	BE	CTD		28	48°12.721	123°05.846	110	111			SP	✓	
		2324	BO				48°12.666	123°05.938							
		2327	EN				48°12.642	123°06.020							
4	65	0:03	BE	ROS	US	29	48 15 91	123 9 8 1	125				SP		
		0:06	BO				48 15 92	123 9 8 3		120					
		0:13	EN				48 15 97	123 9 9 0							
4	66	0:48	BE	CTD		30	48 19 30	123 14 10		100			SP		
		0:51	BO				48 19 31	123 14 11			97				
		0:53	EN				48 19 31	123 14 10							

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							Latitude	Longitude							
4	67	1:26	BE	CTD		31	48 22.78	123 18.06	105				7/11	✓	
		1:29	BO				48 22.77	123 18.01		104					
		1:32	EN				48 22.77	123 17.98							
4	61	3:07	BE	CTD		32	48 29.22	123 9.23	266				11	✓	
		3:14	BO				48 29.24	123 9.22		275					
		3:19	EN				48 29.24	123 9.20							
4	60	4:10	BE	CTD		33	48 29.25	123 12.79	289						
		4:17	BO				48 33.94	123 12.79		286			D.1	✓	
		4:23	EN				48 33.95	123 12.79							
4	59	4:59	BE	ROS	US	34	48 37.86	123 14.4	239				D.1.	✓	
		5:05	BO				48 37.96	123 14.34		235			D.1.	✓	
		5:19	EN				38.13	14.17							
4	46	0814	BE	ROS	US	35	48°51.510	123° 10.896	170	170	85-94		SL	✓	
		0821	BO				48°51.618	123° 11.183							
		—	EN				—	—							
4	45	0925	BE	CTD		36	48°54.204	123° 8.780	126	123			SL	✓	Darren - structure in top 30m here.
		0929	BO				48°54.331	123° 8.821							
		0934	EN				48°54.416	123° 8.788							

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							Latitude	Longitude							
4	44	1007	BE	CTD		37	48°56.776	123°5.978	118	115			sf	✓	
		1010	BO				48°56.804	123°5.916							
		1014	EN				48°56.836	123°5.851							
4	41	1144	BE	CTD		38	49°3.288	123°22.118	232	227			sf	✓	
		1150	BO				49°3.334	123°22.003							
		1156	EN				49°3.414	123°21.935							
4	42	1234	BE	ROS	US	39	49 1 79	123 26 18	320				sf	✓	
		1242	BO				49 1 82	123 26 08		313	95-108				
		1303	EN				49 1 83	123 26 04							
4	43	1343	BE	CTD		40	49 0 33	123 30 08	207				sf		
		1348	BO				49 0 42	123 30 05		210					
		1353	EN				49 0 47	123 30 01							
4	40	1503	BE	CTD		41	49 8 53	123 36 88	142						
		1508	BO				49 8 58	123 36 82		147			sf		
		1512	EN				49 8 61	123 36 73							
4	39	1541	BE	ROS	US	42	49 9 81	123 32 87	375		109-123		L + ST		
		1550	BO				49 9 74	123 32 85		372		15			X see note →
		1612	EN				49 09 78	123 32 34							

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→ Bottle 13 didn't have any water in it. Weird b/c it was closed properly, but nothing in it.

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							Latitude	Longitude							
4	38	1650	BE	CTD		43	49 12.05	123 26.35	308				ST	✓	
		1657	BO				49 12.01	123 26.17		299					
		1705	EN				49 11.934	123 25.979							
4	37	17:38	BE	CTD		44	49 13.69	123 20.67	214				DI	✓	
		17:43	BO				49 13.73	123 20.71		210					
		17:48	EN				49 13.79	123 20.75							
4	28		BE	CTD		45	oops		133				DI.	✓	
		20:01	BO				49 24.11	123 45.28		130					
		20:05	EN				24.12	45.25							
4	27	2056	BE	ROS		46	49° 19.086	123° 48.0	348	345	124 - 137		SG	✓	
		2104	BO				49° 19.08	123° 48.01							
		2122	EN				49° 19.016	123° 48.005							
4	26	2210	BE	CTD		47	49° 14.280	123° 50.707	248	258			JW	✓	
		2216	BO				49° 14.274	123° 50.544							
		2222	EN				49° 14.269	123° 50.437							
5	19	1635	BE	CTD		48	50 1.67	124 53.46	315					✓	
		1642	BO				50 1.69	124 53.39							
		1649	EN				50 1.72	124 53.39							

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Ocean Sciences and Productivity Division

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Month <i>December</i>				Year <i>2003</i>			Ship <i>Vector</i>				Cruise ID <i>2003-41</i>				
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							
5	18	1730	BE	CTD		49	49 59.14	124 58.96	147	142				✓	
		1734	BO				49 59.13	124 58.997							
		1738	EN				49 59.10	124 59.03							
5	17	1810	BE	CTD		50	49 58.76	125 4.42	270	264				✓	
		1818	BO				49 58.76	125 4.43				1			Bottom Salinity Sample
		1826	EN				49 58.72	125 4.46							A FEW NEG. DISC. RATES
5	16	1655	BE	ROS	US	51	49 57.69	125 08.73	155						
		1901	BO				49 57.74	125 08.65		150					
		1917	EN				49 57.81	125 08.38							
5	15	2030	BE	CTD		52	49 51.577	125 1.61	107	123	(I guess we did it)		SP	✓	
		2034	BO				49 51.552	125 1.564							
		2037	EN				49 51.534	125 1.532							
5	14	2100	BE	ROS		53	49 52.981	124 59.640	315	313	147-160		SP	✓	Pitching, rolling, taking water over the side
		2107	BO				49 52.910	124 59.636							Bottle 9 slow
		2123	EN				49 52.700	124 59.527							
5	13	2204	BE	CTD		54	49 55.273	124 55.127	234	241			SP	✓	
		2210	BO				49 55.309	124 55.153							
		2218	EN				49 55.324	124 55.165							

Cast type:

BOT = bottle cast, no CTD
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 DRF = drifter

bottle firing method:

US = up / stop
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Time Code

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

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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							
<i>6</i>	<i>12</i>	<i>0541</i>	<i>BE</i>	<i>ROS</i>	<i>US</i>	<i>55</i>	<i>49°43.65</i>	<i>124°40.76</i>	<i>357</i>		<i>161-174</i>	<i>14</i>	<i>ST</i>	☒	
		<i>0549</i>	<i>BO</i>				<i>49°43.71</i>	<i>124°40.65</i>		<i>351</i>					
		<i>0605</i>	<i>EN</i>				<i>49°43.72</i>	<i>124°40.83</i>							
<i>6</i>	<i>11</i>	<i>0634</i>	<i>BE</i>	<i>CTD</i>		<i>56</i>	<i>49°42.46</i>	<i>124°43.38</i>	<i>300</i> <i>290</i>				<i>ST</i>	☒	
		<i>0640</i>	<i>BO</i>				<i>49°42.40</i>	<i>124°43.37</i>							
		<i>0646</i>	<i>EN</i>				<i>49°42.38</i>	<i>124°43.33</i>							
<i>6</i>	<i>10</i>	<i>07:13</i>	<i>BE</i>	<i>CTD</i>		<i>57</i>	<i>49°40.75</i>	<i>124°47.26</i>	<i>99</i>				<i>D.I.</i>	☒	
		<i>07:15</i>	<i>BO</i>				<i>49°40.76</i>	<i>124°47.26</i>		<i>98</i>					
		<i>07:18</i>	<i>EN</i>				<i>49°40.77</i>	<i>124°47.25</i>							
<i>6</i>	<i>9</i>	<i>0813</i>	<i>BE</i>	<i>ROS</i>		<i>58</i>	<i>49°35.42</i>	<i>124°38.29</i>	<i>170</i> <i>170</i>	<i>166</i>			<i>SP</i>	☒	
		<i>0817</i>	<i>BO</i>				<i>49°35.35</i>	<i>124°38.26</i>							
		<i>0835</i>	<i>EN</i>				<i>49°35.165</i>	<i>124°37.95</i>							
<i>6</i>	<i>8</i>	<i>0923</i>	<i>BE</i>	<i>CTD</i>		<i>59</i>	<i>49°39.318</i>	<i>124°32.974</i>	<i>338</i>	<i>336</i>			<i>SP</i>	☒	
		<i>0930</i>	<i>BO</i>				<i>49°39.306</i>	<i>124°33.008</i>							
		<i>0938</i>	<i>EN</i>				<i>49°39.290</i>	<i>124°33.025</i>							
<i>6</i>	<i>7</i>	<i>1033</i>	<i>BE</i>	<i>CTD</i>		<i>60</i>	<i>49°34.380</i>	<i>124°24.306</i>	<i>350</i>				<i>SP</i>	☒	<i>Aborted after 65m. Pump not on.</i>
<i>6</i>	<i>7</i>	<i>1039</i>	<i>BE</i>	<i>CTD</i>		<i>60</i>	<i>49°34.318</i>	<i>124°24.295</i>	<i>350</i>	<i>344</i>			<i>SP</i>		<i>File overwritten.</i>
		<i>1046</i>	<i>BO</i>				<i>49°34.230</i>	<i>124°24.448</i>							
		<i>1053</i>	<i>EN</i>				<i>49°34.164</i>	<i>124°24.571</i>							

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							Latitude	Longitude								
6	6	1126	BE	ROS		61	49°30.552	124°27.763	190	192	185-195		88	✓		
		1130	BO				49°30.505	124°27.703								
		1145	EN				49°30.401	124°27.875								
6	5	1219	BE	CTD		62	49 27 39	124 30 84	317				11	✓		
		1225	BO				49 27 33	124 30 87		310						
		1231	EN				49 27 29	124 30 88								
6	4	1317	BE	CTD		63	49 24 53	124 22 14	345				11	✓		
		1324	BO				49 24 65	124 22 18		343						
		1331	EN				49 24 79	124 22 33								
6	3	1351	BE	ROS	US	64	49 26 51	124 20 12	330		196-209		11	✓	Bottle 8 empty - Y2 fired	
		1358	BO				49 26 47	124 20 14		326						
		1414	EN				49 26 34	124 20 37								
6	1	1514	BE	CTD		65	49 20 27	124 12 07	245				11	✓		
		1519	BO				49 20 25	124 12 02		240						
		1524	EN				49 20 17	124 12 01								
6	2	1559	BE	ROS	US	66	49 24 13	124 9 24	279		210-222		ST			
		1605	BO				49 24 06	124 09 15		275						-bottle 13
		1619	EN				49 23 90	124 08 99								didn't fire

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							Latitude	Longitude							
<i>06</i>	<i>25</i>	<i>16:53</i>	<i>BE</i>	<i>CTD</i>		<i>67</i>	<i>49 27.72</i>	<i>124 7.34</i>	<i>300</i>				<i>ST</i>	☒	<i>bottom sal?</i>
		<i>1658</i>	<i>BO</i>				<i>49 27.64</i>	<i>124 7.22</i>	<i>313</i>	<i>→</i>				☒	
		<i>1705</i>	<i>EN</i>				<i>49 27.56</i>	<i>124 7.10</i>							
<i>06</i>	<i>24</i>	<i>17:30</i>	<i>BE</i>	<i>CTD</i>		<i>68</i>	<i>49 30.29</i>	<i>124 5.87</i>	<i>426</i>						<i>bottom sal?</i>
		<i>1738</i>	<i>BO</i>				<i>49 30.30</i>	<i>124 5.78</i>	<i>420</i>	<i>→</i>					<i>2 bottom sal's</i>
			<i>EN</i>				<i>49 30.32</i>	<i>124 5.66</i>							<i>no Rosette sheet!</i>