

DAILY LOG BOOK

MISSION
NUMBER

2003-39

DATE:

From: October 23

to: November 1

VESSEL:

Vector

PROJECT:

Paleoceanography

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

Captain: Glen Ormiston First Officer: Bob Bennett
Second Officer: _____ Third Officer: _____

Mission Participants / Agencies: IOS/PGC

Scientific Personnel:

Name	Watch	Cabin	Name
David Spear			

[illegible]

Second leg of Mission: _____ **Party Chief:** _____

[illegible]

Data logging computer: Pentium 4 PACOSAP - ES03

Data acquisition program:

CTD deck unit make: Seabird model: S&F 11 serial number: 0424

Primary CTD

Make: Seabird model: 911 serial number: 10585

Primary temperature serial number: 2095

Primary conductivity serial number: 1764

Secondary temperature serial number: 2106

Secondary conductivity serial number: 7128

Transmissometer: Chelva Model: 502Tch s/n: 333 DR

Fluorometer: Model	Cable gain:	s/n:
Sea-View	10x0-15	2957

Oxygen sensor: SPEL 43 Model: — s/n: 1047
 Ozone gauge: 0.00 s/n: —

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

Other sensors: Pressure - Diaphragm s/n: 77511

Other sensors: Altitude 00 s/n: 1024

Other sensors: _____ s/n: _____
 _____ s/n: _____
 _____ 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: _____

Fluorometer: Model _____ Cable gain: _____

Oxygen sensor: _____ Model: _____

PAR sensor: _____ Model: _____

Other sensors: _____

Other sensors:

Other sensors:

Other sensors:

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

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>October</i>				Year <i>2003</i>			Ship <i>Vector</i>				Cruise ID <i>2003-39</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							
23	TEST	1538	BE	ROS	US	001	48° 39.23	123° 29.96	180		—	6	ST		ammonia samples
	(SAATCHI INLET)	1543	BO				48° 39.26	123° 29.96		172					for Tanet
		1552	EN				48° 39.31	123° 29.90							
24	FOX 1		BE	ROS		002	<					12			seas beginning
			BO				51° 4.138	127° 41.380			1-8	8	Bottle		to roughen. Drizzle
		2113	EN				51° 4.094	127° 41.352					Empty		and breeze
24	SE2A	2328	BE	CTD		003	51° 02.254	127° 20.057	91				DS/SM		6.5 m off bottom
		2333	BO				02.242	127° 20.071							
		2335	EN				02.237	20.068							
25	SE3	0009	BE	ROS		004	51° 2.874	127° 15.69	445	44					
		0012	BO				51° 02.88	127° 15.69		440	9-23		ST.		didn't trip bottle
		0040					51° 02.85	127° 15.65							15
25	SE4	0218	BE	CTD		005	51° 03.156	127° 08.029	545						
		0230	BO				51° 03.169	127° 08.016		540					4 m off bottom
		0239					51	127							WIND DOWN - (HEAVY)
25	SE5	0320	BE	ROS		006	51° 04.296	127° 0.697	623						RAIN
		0331	BO				51° 04.314	127° 0.699		610	24-39				33 m off bottom
		0356	EN				51° 04.33	127° 0.64							

Cast type:

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28 May 2003
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October 23

0800 Leave IOS Jetty and conduct CTD Rosette near Met buoy

~1500 Drop crew member off in Nanaimo

October 24

- Ship has decided to wait near Pt Hardy for New crew member to come out by life boat. We miss morning slack and will be unable to enter Seymour Inlet until 1530 Slack

- 1448 - Send Rubber boat through Rapids early to install tide gauge at Charlotte Bay

~1530 Enter Seymour Inlet

- Occupy station along Seymour Inlet

(S1) 3.5 kHz Sounder Line: N. Seymour	SOL 51° 06' 31.19 N	EOL 51° 07' 19.48 N
SOL UTM 23:34:54	126° 46' 35.03 W	126° 43' 06.11 W
(S2) 3.5 kHz Sounder Line: N. Seymour	SOL 51° 09' 02.78	EOL 51° 11' 27.6 N
	126° 39' 31.72	126° 39' 34.42 W

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>25</i>	<i>SE6</i>	<i>4:38:00 BE</i>	<i>ROS</i>	<i>US</i>		<i>007</i>	<i>51°41.30'N</i>	<i>126°52.390'W</i>	<i>532</i>						
		<i>5:12:00 BO</i>					<i>51°4.330'N</i>	<i>126°52.358'W</i>							
		<i>5:20:17 EN</i>					<i>51°4.330'N</i>	<i>126°52.375'W</i>							
<i>25</i>	<i>SE07</i>	<i>6:19:35 BE</i>	<i>ROS</i>			<i>008</i>	<i>51°6.007'N</i>	<i>126°45.001'W</i>	<i>267</i>		<i>40-52</i>	<i>13</i>	<i>AD/ST</i>		
		<i>6:29:35 BO</i>					<i>51°6.022'N</i>	<i>126°45.005'W</i>		<i>272</i>			<i>↓</i>		
		<i>6:45:46 EN</i>					<i>51°6.040'N</i>	<i>126°45.023'W</i>					<i>↓</i>		
<i>25</i>	<i>SE07.5</i>	<i>7:30:08 BE</i>	<i>ROS</i>			<i>009</i>	<i>51°8.150'N</i>	<i>126°41.531'W</i>	<i>379</i>						
		<i>8:02:05 BO</i>					<i>51°8.210'N</i>	<i>126°41.588'W</i>							
		<i>8:08:24 EN</i>					<i>51°8.231'N</i>	<i>126°41.629'W</i>							
<i>25</i>	<i>SE08</i>	<i>09:27 BE</i>	<i>ROS</i>			<i>010</i>	<i>51°10.98</i>	<i>126°39.50</i>	<i>135</i>		<i>53-59</i>	<i>6</i>			
		<i>BO</i>					<i>51°10.965'N</i>	<i>126°39.493</i>		<i>104</i>					
		<i>EN</i>					<i>51°10.916</i>	<i>126°39.504</i>							<i>surface bottle not fired.</i>
<i>26</i>	<i>FRS3</i>	<i>22:30:08 BE</i>	<i>ROS</i>			<i>011</i>	<i>50°59.909'N</i>	<i>126°43.666'W</i>	<i>61</i>						
		<i>BO</i>													
		<i>22:40:19 EN</i>					<i>50°59.90'N</i>	<i>126°43.684'W</i>							
<i>26</i>	<i>FRS2</i>	<i>23:04:51 BE</i>	<i>ROS</i>			<i>012</i>	<i>51°0.535'N</i>	<i>126°42.222'W</i>	<i>211</i>						<i>Bottom 2 bottles H₂S</i>
		<i>23:11:51 BO</i>					<i>51°0.534'N</i>	<i>126°42.206'W</i>			<i>66-76</i>	<i>11</i>			
		<i>23:26:35 EN</i>					<i>51°0.533'N</i>	<i>126°42.149'W</i>							

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28 May 2003

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October 25, 2003

Fred-C Recovery

0851 POT - On Station

Range 209 20e

More OFF

0859 Release Code ADEF Sent
- Surface

0934 - On Deck

Clean up Mooring and Service Seacat 16 plus

Redeploy Fred-D at 51° 03.023' N
126° 43.931' W
211 m depth
1500 POT October 25, 2003

3.5 kHz Sounding Line

(S3) 3.5 kHz Sounding Line: N. Seymour
SOL 51° 10' 03.94
126° 39' 52.85 UTM 3:01

(S4) 3.5 kHz Sounding Line:
Tahiti Point - Frederic Sound UTM 11:34
SOL 51° 01' 56.99 N
126° 42' 41.13 W

(S5) 3.5 kHz Sounding Line: N. Seymour UTM 21:18
SOL 51° 04' 26.08 N
126° 53' 48.37 W

EOL opposite shore @ Martin Point
(S6A) 3.5 kHz Sounding Line: Munsell Bay, N. Seymour
SOL 51° 04' 56.19 N
126° 51' 32.12 W

(S6B) 3.5 kHz Sounding Line: Hubbard Point, N. Seymour
SOL 51° 03' 54.62
127° 00' 48.01

(S7) 3.5 kHz Sounding Line: Mendsdorf Pt., Seymour
200m CONTINU
SOL 51° 02' 29.38 N // 127° 09' 25.66 W
EOL 51° 02' 25.9 N // 127° 10' 25 N

(S7A) SOL 51° 02' 34.77 // 127° 08' 42.98 W
51° 02' 26.71 // 127° 10' 22.62 W

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>OCTOBER</i>				Year <i>2003</i>			Ship <i>Vector</i>			Cruise ID <i>2003-29</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							
25	FRS 1	2356	BE	ROS	US	013	51°02.27	126°42.98	245		77-88	12	ST	✓	Bottom 2 bottles H ₂ S
26		0002	BO				51°02.28	126°42.98		235					
		0016	EN				51°02.29	126°42.00							
26	FRSP	0043	BE	ROS		014	51°03.834	126°44.552	157						
		0047	BO												
		0053	EN				51°03.876	126°44.512							
26	BEG5	1607	BE	ROS		015	51°07.158	126°08.896	291		98-110		SM		SVP on board Rosette
		1618	BO				7.168	8.935		294	2m off bottom				gorgeous sunny day
		1638	EN				7.198	126°08.872							midwater oxy minimum
27	ALS3	0038	BE	ROS		016	51°10.002	126°56.790	133		111-118		SM/DS	✓	Bottom 4 bottles
		0042	BO				51°10.00	126°56.790	1	131					stinky
		0055	EN	1			51			2m off bottom					
27	ALS2	0134	BE	ROS		017	51°10.145	127°02.42	165		119-127		ST		
		0137	BO				51°10.15	127°02.45		103					
		0144	EN				51°10.15	127°02.44							
27	ALS1	0255	BE	ROS		018	51°10.152	127°06.050	150						Bottle open off
		0300	BO				51°10.151	127°06.046			128-136				
		0308	EN				51°10.148	127°06.025							

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28 May 2003
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October 26 - Alison - C Recovery

PST

0940 - On station

Range 166 167

Ranges Flakes shorter ranges between "good Range"

Move off a safe distance

0946 - Range 192 192

0946 - Release code ABEH sent

No confirmation

Resend Code ABEH

1000 Pinger receivers - 2 pingers present

Move Again Range 165 165 163

Send CDFG

Resend ABEH

ABEH

No Response

No Response

Set up For Drag

Do multibeam line while setting up

1055 - Start Drag

~ 1200 Two Packages on Surface!

(S8) 3.5 kHz sounder line: Frederick Bay
SOL 51° 02' 50.5 N // 127° 13' 54.57 W
LOL 51° 02' 23.8 N // 127° 14' 26.9 W.

(S8A) 3.5 kHz sounder line: Frederick Bay
SOL 51° 02' 22.55 N // 127° 14' 26.9 W.

(S10) 3.5 kHz sounder line: Alison Sound

(S10A) A153 → A153

(S10B) A153 → A152

(S10C) A152 → A151

(S10D) A151 → A150

— weather: clear beginning to cloud over wind & waves
downright beautiful

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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							
27	MES1	1928	BE	ROS	UP	019	51°07.799	127°25.228	208						
		1931	BO				51°07.802	127°25.213							- Fog LIFTING
			EN				51°07.802	127°25.213			2m - off bottom				- DEAD CALM
27	MES1	2017	BE	ROS		020	51°08.845	127°24.744	80		137-142	6	AD/ST		- OVER CAST
		2018	BO				"	"		82					
		2024	EN				51°08.848	127°24.752							
27	MES2	2055	BE	ROS		021	51°09.94	127°25.11	90		143-149				
		2057	BO				51°09.94	127°25.11		84					
		2103	EN				51°09.92	127°25.09							
27	MES3	2136	BE	ROS		022	51°11.60	127°24.72	87						
		2138	BO				51°11.59	127°24.71		85	150-156	7			
		2145	EN				51°11.59	127°24.70				10			
27	MES4	2226	BE	ROS		023	51°11.83	127°21.23	168		157-166				
		2230	BO				51°11.84	127°21.15		163		10			
		2239	EN				51°11.83	127°21.10							
27	MES5	2327	BE	ROS		024	51°11.59	127°16.30	132		167-174	8	AD/ST		
		2330	BO				51°11.59	127°16.30		130					
		2337	EN				51°11.62	127°16.29							

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bottle firing method:
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28 May 2003
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Alison Moore Recovery - Dirty Little Secret

- Cut off at thumb
- Correct Code is "ABDH"!
- Both drawing & deck check had ABEH probably deck check hearing error copied onto drawing

Alison D. deployment

51° 10.124'

127° 06.068'

at 1519 PST Oct 26, 2003

151.9m

(S12) 3.5 kHz sounder line: Head of Munawka to MES05

(S12A) MES05 down only

SOL 51° 11' 34.60' EOL 127° 16' 45.79'

(S12B) Munawka; Rock Island to Head of inlet.

SOL 51° 11' 46.03' N EOL 127° 19' 49.13'

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							Latitude	Longitude							
28	BE03	0324	BE	ROS		025	51° 7.840	127° 22.206	284		175-187	13	AD/ST		75m oxy minimum
		0333	BO				870	230		279					
		0348	EN				51° 7.918'	127° 22.324							
28	BE04	0451	BE	ROS		026	51° 7.830	127° 15.204	363						
		0457	BO				"	"							
		0505	EN				51° 7.843'	127° 15.064							
28	BE06	0616	BE	ROS		027	51° 6.548	127° 2.125W	325				AD/ST		(called BE05 in the file)
		0624	BO				51° 6.537	127° 2.104W							
		0631	BE				51° 06.56	127° 02.08			188-200				
28	BE07	0703	BO	ROS		028	51° 06.32	126° 55.83		254					
		0708	EN				51° 06.34	126° 55.82	256						
		0720					51° 06.34	126° 55.81							
27	NS					029			88		201-207				
28		1609	BO				51° 5.648	127° 28.898	88	85					2m off bottom
		1617	EN				51° 5.629	127° 28.872							overcast
28	NS1	1650	BE			030	51° 5.426	127° 25.800	75		208-213	7			temp dropping
		1653	BO				51° 5.426	127° 25.807		73					2m off bottom
		1660	EN				51° 5.428	127° 25.799							

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28 May 2003
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ALISOAK-D

Deck Checks

5 m poly-pd line w/ float

1/2"

SS30 - 1000

7/16"

7/16"

Swivel, 7/16"

Pinger 7323, 18.3V

7/16"

1 m 5/16 wire

TR 2, 771, 50m T-chain 1308

8.62 - 1/4 wire

TR 2, 889 50m T-chain 2021

Brackner

1 m, 5/16 wire

1/2"

SS28M487, 1/2", 1/2"

Swivel 7/16"

OMAL pinger 6.4V

3/4"

10 1090, #404, rel: BDEF

reum: CDF-9

reply 8 kHz

1" ϕ , 13.66 1" polysteel

7/8"

820 lbs anchor 2m chain

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							Latitude	Longitude							
28	NS2	1746	BE	ROS		031	51 5.38	127 20.902	103		222-229	8			TWO BOTTLES
		1750	BO				51 5.392	127 20.846		100	214-221				TAKEN @ 75m
		1757	EN				51 5.359	127 20.896							DID NOT ACHIEVE BOTTOM DEPTH OF 126 LOTS OF SHIP MANEUVER IN 4 (SP?)
28	NS3	1905	BE	ROS		032	51 5.256	127 13.790	126		222-229				
		1910	BO				51 5.251	127 13.808		122					
		1921	BN				51 5.279	127 13.600							
29	BE2	1700	BE	CTD		33	51 7.992	127 30.508	195		Near max ebb - 6.33 kt				Beginning of time series. Beautiful cool clear day.
		1708	BO				51 7.936	127 30.468		188	2.66 mab (metres above bottom)				
		1712	EN				51 7.934	127 30.427							
	BE1	1731*	BE	ROS		34	51 7.710*	127 34.196	215		230-241				
		1732	BO				51 7.697	127 34.147		182	1 mab				
		1759	EN				51 7.729	127 34.200							
29	BE2-1	1825		CTD		35	51 7.856	127 30.487	198						
		1830					51 7.980	127 30.494		189	3 mab		-		-3.85 kt @ Nak
29	BE1-2	1856		CTD		36	51 7.734	127 34.307		221					
										220	1 mab				

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28 May 2003
Daily_log_book.doc

Sunday October 26, 2003 ~ 0330 UTC

After completing the Alison Sound Stations and multibeam, we anchor in Chief Nollis Bay for the night. It is too dark to negotiate the narrows.

Monday - Leave Alison Sound in Fog and proceed along Belize Inlet to MESO
- collect multibeam data along

- complete Mereworth to dusk, head up Belize for multibeam and Belize str-

TUES 0030 - stations completed

PST

00 - multibeam the 3#!#12! out of Belize

0700 - SVP Stn @ BE1

0800 - Enter Nugent Sound

1200 - complete Nugent sound, pick up multibeam on the way out

1300 - begin MVP survey of Nakwakto and environs, get 2 before Nakwakto

- pass mouth at/near peak of flood of 11.3 kt @ 11:43 PM; head to BE1

1415 - turn around just east of BE1, head to SE1 doing MVPs continually

- SVP profiles begin to have structure after BE1

1452 - Pass Nakwakto, 9.27 kts but looks substantially less nasty, this time around
(I've seen Action worse than this)

7.6°

BE1 @ 220, 242, 253

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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							
29	BE2	~1930	BE	CTD		37	51°7.912	127°30.421	195						clear, 7°C
		1936	BO				51°7.910	127°30.361		189	2 mab				Slack tide at Nakuratto
		1941	EN				51°7.901	127°30.332							
29	BE1-3	2007	BE	CTD		38	51°7.762	127°34.220	221						
		2010	BO				51°7.710	127°34.218	223						
		2014	EN				51°7.702	127°34.202W							
29	BE2	2038	BE	CTD		39	51°7.8710	127°30.535W	195						12:30 local Rising sun in village
		2042	BO				51°7.877	127°30.572							@ surface
		2045	EN				51°7.877	127°30.572							-wind 0.5m.
29	BE1-4	2106	BE	CTD		40	51°7.694	127°34.249	224						
		2112	BO				51°7.696	127°34.250							
29	BE2	2116	BE	CTD		41	51°7.699	127°34.260	187						-Seas are good data lost in occupied station
		2142	BO				51°7.895	127°30.535							
		2146	EN				51°7.888	127°30.553							
29	BE2	2200	BE	CTD		42	51°7.903	127°30.570	197						-re-dr of cast 41
		2205	BO				51°7.895	127°30.553							-allium, oxygen
		2208	EN				51°7.900	127°30.565							sensor not working
29	BE1-5	2229	BE	CTD		43	51°7.705	127°34.242	221						
		2236	BE				51°7.705	127°34.231W							Aborted -wrong can file
															they were working?

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28 May 2003

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1513 - Heading fwd SE1 (3 cables) MVP profiles indicate less effect of rapids fwd the south. Rapids appear to be dynamically injected toward the north.

1523 - Final MVP cast 5 cables SE of SE1 7.45 kt predicted at Nakwakto
- Head to Nugent Sound to pick up multi-holes

2030 - Anchor up in Strachan Bay - Ship not keen on further multibeam

Oct 29 0700 - Multibeam Strachan Bay & entrance to Moreworth

0820 - Head for BB2 to start Time series 2 hrs later than intended

Capt: 40-42 significant prep work on CTD @ surface while ship holding station in wind.

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		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keepers	Trans. cleaned	Comments
							Latitude	Longitude							
29	BE01	0240	BO				51° 7.676	127° 34.229							
		2351	EN				51° 7.724	127° 34.215							
29	BE02			CTD		44			198						
		2320	BO				51 7.351	127 30.494		190	—				
		2324	EN				51 7.850	127 30 499							
29	BE 1-6			CTD		45			222						
		2354					51 7.686	127 34.259		225	1 mab		SM		
		2358					51 7.686	127 34.242					↓		
30	BE02	0020	BE	CTD		046	51 7.862	127 7.848	198						
		0023	BO				51 7.848	127 30.516		190					
		0027	EN				51 7.847	127 30.540							
30	BE017	0046	BE	CTD		047	51 7.676	127 34.189	220	218					
		0053	BO				51 7.667	127 34.288		1 mab					
		0057	EN				51 7.678	127 34.352							
30	BE02	0118	BE	CTD		048	51 7.904	127 30.485	198						
		0122	BO				51 7.919	127 30.505		190	2.3 mab				
			EN				51	127							
30	BE018	0150	BE	CTD		049	51 7.738	127 34.255	223						black hole

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28 May 2003
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(S13A)

Belize moraine feature:

(8:20 pm PST)

SOL 51° 07' 47.76" 127° 16' 49.18" W
EOL 51° 07' 27.68" N 127° 16' 50.63" W

(S14)

Nichol Range Feature Belize

SOL 51° 06' 46.89" N 127° 06' 35.77" W
EOL 127° 06' 35.77" W 127° 06' 35.77" W

(S15)

Nugent

SOL 51° 05' 13.85" N
EOL 127° 12' 25.27" W

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		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keepers	Trans. cleaned	Comments
							Latitude	Longitude							
	BE01-8	1:54	BO	ROS		049	51° 7.764'N	127° 34.339'W	218				AD		slack tide.
		1:57	EN				51° 07.76	127° 34.33					↓		-exume. wire. UN
30	BE2	2:25	BE	ROS		050	51° 09.918	127° 30.544	198						-prop. wash @ SURF
		2:27	BO				51° 09.918	127° 30.544							
		2:30	FN				51° 09.927	127° 30.546							
30	BE01-9	2:51	BE	ROS		051	51° 7.722	127° 34.184	218						
		2:53	BO				51° 7.722	127° 34.184							
		2:57	EN				51° 7.726	127° 34.152							
30	BE2	3:19	BE	ROS		052	51° 7.938	127° 30.617	190						
		3:22	BO				51° 7.951	127° 30.642							
		3:25	EN				51° 7.937	127° 30.617							
30	BE01-10	3:46	BE	ROS		053	51° 7.706	127° 34.308	218						
		3:51	BO				51° 7.716	127° 34.260							
		3:55	EN				51° 7.733	127° 34.226W							
30	BE2	4:16	BE	ROS		054	51° 7.870	127° 30.548W	196						
		4:19	BO				51° 7.868	127° 30.546W							
		4:23	EN				51° 7.877	127° 30.535W							
30	BE01-11	4:44	BE	ROS		055	51° 7.702	127° 34.333W	218						
		4:48	BO				51° 7.711	127° 34.321W							

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28 May 2003
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October 29

2130 - After Belize Time Series multibeam Westerman Bay and anchor there for night
(still no enthusiasm for hydrography after the Reid incident.)

October 30 -

0600 - Raise anchor and head for Seymour Time Series

0800 - Start time Series

2000 - End time series

- start clean up multibeam near Harriet Pt. 22.5 and 40 m shoals

2200 - go to head of inlet & Haig Bay for multibeam

October 31 -

0650 - Rubber Boat Inway to pick up Tide Gauge DT Sm & KP

0805 - return

0845 - Exit through Nakwatko Rapids to Do SCI

DAILY LOG

Ocean Sciences and Productivity Division 140

INSTITUTE OF OCEAN SCIENCES

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							
30		4:53	EN				51° 9.711	127° 34.259W							
30	BE02	0517	BE	205	GD	056	51 7.892	127 30.502	188						Good with some
		0521	BO				51 7.865	127 30.462		189	no altimeter @ bottom				wind
		0525	EN				51 7.849	127 30.421							
30	NS0	1600	BE	205	GD	057	51 5.568	127 28.784	88		Beginning of time series				Cool (20°C)
		1605	BO				51 5.557	127 28.790		83			2 mab		Clear - Water
		1607	EN				51 5.546	127 28.786							
30	SE1	1630	BE	ROS		058	51° 4.492	127° 26.504	105		254-260				1.7m off bottom
		1636	BO				51° 4.478	127° 26.490		102					
		1643	EN				51° 4.475	127° 26.468							
30	NS0	1702	BE	CTD	205	059	51° 5.576	127° 28.813	90						2m off bottom
		1706	BO				51° 5.574	127° 28.794		87					
		1708	EN				51° 5.579	127° 28.782							
30	SE1	1725	BE	CTD	205	060	51° 4.475	127° 26.430'	104						1.5m off bottom
		1729	BE				51° 4.478'	127° 26.465'		103					
		1731					51° 4.483	127° 26.495'							
30	NS0	1750	BE	CTD	205	061	51° 5.575	127° 28.741'	87						2m off bottom
		1754	BO				51° 5.575	127° 28.736'		84					
		1756	EN				51° 5.575	127° 28.746							

Cast type: USW = sea water loop
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 28 May 2003
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~ 2030 - SUP at Separation Point

- Multi beam Ruppel Rock 3 passes to complete April survey - Got it.

1036 do DP2 and Head for home

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <u>October</u>				Year <u>2003</u>				Ship <u>Vedder</u>				Cruise ID <u>2003-39</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							
30	SEI	1814	BE	CTD		062	51° 4.507'	127° 26.540'	106				DS		oxy min @ 50m
		1818	BO	ROS			51° 4.504'	127° 26.504'		102					1.5m off bottom
		1820	EN	ROS			51° 4.502'	127° 26							clearer water right at bottom
30	NSO	1837	BE	CTD		063	51° 5.586	127° 28.849'	88						
		1840	BO				51° 5.597	127° 28.819'		87					2m off bottom
		1842	EN				51° 5.597	127° 28.820							
30	SEI	1901	BE	CTD		64	51° 4.517	127° 26.527	113				DS		2m off bottom
			BO				51° 4.508	127° 26.507		102					
			EN				51° 4.506	127° 26.504							
30	NSO	1925	BE	CTD		65	51° 05.58	127° 28.80	86				ST	✓	transmissometer
		1928	BO				51° 05.58	127° 28.79		84					very noisy (I didn't
		1930	EN				51° 05.57	127° 28.78							see the scale
30	SEI	1949	BE	ROS		66	51° 04.49	127° 26.50	103					✓	was changed -)
		1951	BO				51° 04.47	127° 26.51		101					
		1953	EN				51° 04.47	127° 26.52							
30	NSO	2010	BE	ROS		67	51° 05.55	127° 28.84	86					✓	
		2012	BO				51° 05.57	127° 28.82		85					
		2014	EN				51° 05.59	127° 28.89							

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28 May 2003
 Daily_log_book.doc

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>October</i>				Year <i>2003</i>				Ship <i>Vector</i>				Cruise ID <i>2003-39</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							
30	NSD	2048	BE	ROS		68	51°05.56	127°28.83	88				ST	✓	
		2050	BO				51°05.57	127°28.83		86			↓		
		2052	EN				51°05.57	127°28.83							
	SEI	2110	BE	ROS		69	51°04.51	127°26.40	103					✓	no purger -
		2113	BO				51°04.51	127°26.52		102					altimeter working well
		2115	EN				51°04.51	127°26.50							
	NSD	2131	BE	ROS		70	51°05.59	127°28.83	88						- bad connection
		2133	BO				51°05.60	127°28.86							at which - display
		2135	EN				51°05.60	127°28.90		85					stopped a few times
	SEI	2156	BE	ROS		71	51°4.494	127°26.47	101						but seemed to
		2158	BO				51°4.502	127°26.478		100					catch up -
		2200	EN				51°4.508	127°26.480							Cleaned &
	NSD	2217	BE	ROS		72	51°5.557	127°28.760	86						Regreased Slipping
		2219	BO				"	"							Connector
		2221	EN				51°5.562	127°28.776							
	SEI	2240	BE	ROS		73	51°4.518	127°26.500	101						
		2242	BO				51°4.516	127°26.516							
		2245	EN				51°4.508	127°26.525							

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28 May 2003
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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		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch keepers	Trans. cleaned	Comments
							Latitude	Longitude							
30	NS0	2259	BE	ROS		74	51°5.575	127°28.776	86						2 m off bottom
		2302	BO				51°5.584	127°28.818		84					
		2304	EN				51°5.586	127°28.831							
30	SE1	2322	BE	ROS		75	51°4.500'	127°26.486	102						1.0 m off bottom
		2326	BO				51°4.502'	127°26.542'		102					
		2327	EN				51°4.505'	127°26.548'							
30	NS0	2343	BE	ROS		76	51°5.584'	127°28.816	87						5 m off
		2346	BO				51°5.592'	127°28.846		84					wire leading well off
		2347	EN				51°5.592'	127°28.858'							
31	SE1	0005	BE	ROS		77	51°4.518'	127°26.492'	102						2.3m
		0009	BO				51°4.520'	127°26.503'		100					
		0010	EN				51°4.519'	127°26.508'							
31	NS0	0025	BE	ROS		78	51°5.608'	127°28.819'	87						2.0m
		0028	BO				51°5.622'	127°28.848'		85					
		0030	EN				51°5.622'	127°28.858'							
31	SE1	0047	BE	ROS		79	51°4.511'	127°26.521'	102						2.0 m off bottom
		0051	BO				51°4.519'	127°26.550'		102					
		0052	EN				51°4.525'	127°26.554'							

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28 May 2003
 Daily_log_book.doc

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>October</i>				Year <i>2003</i>				Ship <i>Victor</i>				Cruise ID <i>2003-39</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							
31	NSO	0107	BE	ROS		80	51°55.68	127°28.778	82				SM		2m off bottom
		0112	EN				51°55.74	127°28.828		86					
	SEI	0132	BE	ROS		81	51°04.51	127°26.48					ST		
		0135	BO				51°04.51	127°26.49	102						
		0137	EN				51°04.52	127°26.49		102					
	NSO	0156	BE	ROS		82	51°05.57	127°28.76							
		0159	BO				51°05.59	127°28.81	88	86					
		0200	EN				51°05.60	127°28.80							
	SEI	0223	BE	ROS		83	51°04.51	127°26.55						✓	
		0226	BO				51°04.50	127°26.55	102	102					
		0229	EN				51°04.50	127°26.54							
	NSO	0249	BE	ROS		84	51°05.58	127°28.83							
		0252	BO				51°05.58	127°28.82	88	86 87					
		0254	EN				51°05.58	127°28.82							
	SEI	0313	BE	ROS		85	51°04.50	127°26.51	104	102					
		0316	BO				51°04.51	127°26.50							
		0318	EN				51°04.51	127°26.50							

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28 May 2003
 Daily_log_book.doc

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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							
31	NSO	0339	BE	ROS		86	51° 05.39	127° 28.83					ST	✓	
		0342	BO				51° 05.60	127° 28.81	77	85					
		0344	EN				51° 05.60	127° 28.81							
	SEI	0404	BE	ROS		87	51° 04.51	127° 26.53							
		0407	BO				51° 04.51	127° 26.53	102				ST		
		0410	EN				51° 04.50	127° 26.53							
31	SCI	1655	BE	ROS	US	88	51° 5.515	127° 31.472	80		261-266		DS		Slack turning toebb
		1706	EN				51° 5.544	127° 31.513		79					< 2m off bottom
31	QCS1.5	2117	BE	ROS		89	50° 42.89	126° 55.69	135				ST		
		2121	BO				50° 42.88	126° 55.67		136					
		2124	EN				50° 42.89	126° 55.66							
	QCS1.0	2204	BE	ROS		90	50° 40.04	126° 46.42	160						
		2208	BO				50° 40.04	126° 46.36		159	267-275	9	ST		(bottom - 2m)
		2216	EN				50° 40.08	126° 46.33							
1	DP2	0636	BE			91	50° 4.818	125° 15.817	81		276-281				
		0639	BO				50° 4.805	125° 15.808		78					
		0644	EN				50° 4.799	125° 15.809							

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28 May 2003
Daily_log_book.doc