DAILY SCIENCE LOG BOOK

MISSION NUMBER: 2010 - 24

DATE: From: APR 13/10 to: APR 18/10

VESSEL: VECTOR

PROJECT(S): E. R. I.

Water Properties Group
Fisheries and Oceans Canada
Institute of Ocean Sciences
Ocean Sciences Division
Sidney, BC, Canada

Captain: KENT REED First Officer: MACKENZIE
Second Officer: JOHN ROSE Third Officer: _____
Fishing Master: _____

Mission Participants / Agencies: WEST VAN LABS / IOS

Scientific Personnel: Chief Scientist: TERRI SUTHERLAND

Name	Watch	Cabin	Name	Watch	Cabin
SHANE PETERSEN					
NICOLA COOK					
SCOTT MCCAUGHRAN					
HUGH MACLEAN					

Second leg of Mission: Chief Scientist: _____

Name	Watch	Cabin	Name	Watch	Cabin

Data logging computer: DELL
Data acquisition program: SBE SEASAVE V 7
CTD deck unit make: SBE 11 model: 11+ serial number: 0425

Primary CTD
Make: SBE model: 9 serial number: 550
Primary temperature serial number: 4983
Primary conductivity serial number: 1763
Secondary temperature serial number: 2095
Secondary conductivity serial number: 2754
Transmissometer: _____ Model: _____ s/n: 1005DR
Fluorometer: Model SEAPOINT Cable gain: 30x0.5 s/n: _____ **P, S or NO pump?**
Oxygen sensor: SBE Model: 43 s/n: 1119 **P, S or NO pump?**
PAR sensor: LICOR Model: _____ s/n: 4615
Other sensors: ALTIMETER s/n: 1252 **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: _____ 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?**
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CTD calibration bottle location (height above CTD in metres): _____

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Ocean Sciences Division, Institute of Ocean Sciences

Month APRIL **Year** 2010 **Ship** VECTOR **Cruise ID** 2010-24

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
14	TS 01	1406	BE	ROS	U.S.	001	48° ~~49.45~~	123° ~~01.28~~	239		1-11	11	H.M.	✓	CAM COLLED
			BO												
			EN												
		1505	BE	GRAB		002	48° 49.40	123° 00.00	234						
14	TS 02	1601	BE	ROS	U.S	003	48° 50.54	123° 07.69	251		1-11	11	H.M.	✓	OK NO NMEA
		1609.	BO				48° 50.494	123° 07.602		250					
		1622	EN				48° 50. 57	123° 07.55							
			BE	GRAB		004	48° 50.594	123° 07.672	248						
14	TS03	1718	BE	ROS	U.S.	005	48° 52.10	123° 13. 08	220		11 - 21	10	H.M.	✓	NO NMEA
		1724	BO				48° 52. 07	123° 12. 95		217					
		1736	EN				48° 51. 97	123° 12. 70							
			BE	GRAB		006	48° 52.035	123° 13.019	222						
			BE	GRAB		007	48° 52.102	123° 13.167	220						
			BE	GRAB		009	48° 52.118	123° 13.110	220						
14	TS 04	1949	BE	ROS	U.S	009	48° 53. 83	123° 15. 57	214		22- 31	10	H.M.	✓	NO NMEA
		1956	BO				48° 53. 76	123° 15. 49							
		2010	EN				48° 53. 73	123° 15. 45							

Cast Type:
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CTD = CTD without Rosette
ROS = Rosette plus CTD
SET = Fish Set
USW = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
____ = _____

Bottle Firing Method:
US = Up / Stop
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RE = Recover Mooring Time

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

Notes: _____

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 06 March 2008

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							Latitude	Longitude							
14	TS 04		BE	GRAB		010	48°53.713	123°15.462	214						
14	TS 05	2046	BE	ROS	U.S	011	48°54.23	123°16.74	200		32 - 41	10	H.M.	✓	
		2052	BO				48° 54.19	123° 16.74		197.5					
		2105	EN				48° 54.14	123° 16.71							
			BE	GRAB		012	48°54.192	123°16.814	199						
14	TS 06	2135	BE	ROS	U.S.	013	48°54.47	123° 16.64	196		42- 51	10	H.M.	✓	
		2141	BO				48° 54.46	123° 16.63		193.7					
		2152	EN				48° 54.43	123° 16.66	197						
			BE	GRAB		014	48°54.441	123°16.681							
14	TS 07	2229	BE	ROS	U.S.	015	48°55.14	123°19.20	187		52- 61	10	H.M	✓	
		2236	BO				48° 55.14	123° 19.21		184.9					
		2248	EN				48° 55.10	123° 19.22							
			BE	GRAB		016	48°55.140	123°19.210	187						
14	TS 08	2333	BE	ROS	U.S	017	48°55.67	123° 18.22	187		62-71	10	H.M	✓	
		2340	BO				48° 55 67	123° 18.17		183.7					
		2351	EN				48° 55.70	123° 18.21							
			BE	GRAB		018	48°55.715	123° 18.366	188						

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							Latitude	Longitude							
15	TS09		BE	GRAB		019	48°56.195N	123°21.130W	195						
	TS10		BE	GRAB		020	48°56.877N	123°20.090W	199						
15	TS09	1406	BE	ROS	U.S.	021	48°56.27	123°21.19	195		72-81	10	H.M.	✓	
		1414	BO				48°56.26	123°21.10		191.7					
		1426	EN				48°56.34	123°20.97							
15	TS10	1445	BE	ROS	U.S.	022	48°56.89	123°20.20	198		82-91	10	H.M.	✓	NO O_2/SALTS
		1455	BO				48°56.06	123°20.21		195.2					NUTS ONLY
		1508	EN				48°56.08	123°20.08							
15	TS11	1536	BE	ROS	U.S.	023	48°57.78	123°22.36	220		92-101	10	H.M.	✓	
		1542	BO				48°57.77	123°22.34		215.5					
		1554	EN				48°57.73	123°22.39							
		906 GMT	BE	GRAB		024	48°57.764	123°22.452	220						
15	TS12	1637	BE	ROS	U.S.	025	48°58.00	123°21.80	218		102-111	10	H.M.	✓	NO O_2/SALTS
		1646	BO				48°57.93	123°21.82							NUTS ONLY
		1659	EN				48°57.82	123°21.46							
		10:17 GMT	BE	GRAB		026	48°57.996	123°21.778	217						

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							Latitude	Longitude							
15	TS 13	1739	BE	ROS	U.S.	027	48° 58.35	123° 23.34	238		112 - 121	10	H.M.	✓	
		1746	BO				48° 58.29	123° 23.25		234					
		1759	EN				48° 58.19	123° 23.16							
		11:15am	BE	GRAB		028	48° 58.385	123° 23.274	240						
15	TS 14	1918	BE	ROS	U.S.	029	48° 58.67	123° 22.63	246		122 - 132	11	H.M.	✓	
		1924	BO				48° 58.69	123° 22.63							
		1939	EN				48° 58.70	123° 22.62							
		12:51pm	BE	GRAB		030	48° 58.697	123° 22.626	241						
15	TS 15	2008	BE	ROS	U.S.	031	48° 58.93	123° 23.72	255		133 - 143	11	H.M.	✓	
		2015	BO				48° 59.04	123° 23.70							
		2031	EN				48° 58.85	123° 23.68							
		1:42	BE	GRAB		032	48° 58.847	123° 23.678	255						
15	TS 16	2109	BE	ROS	U.S.	033	48° 59.25	123° 22.95	259		144 - 154	11	H.M.	✓	
		2116	BO				48° 59.26	123° 22.96							
		2130	EN				48° 59.25	123° 22.97							
		2:44pm	BE	GRAB		034	48° 59.232	123° 23.038	262						

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							Latitude	Longitude							
15	TS 17	2233	BE	ROS	U.S.	035	49° 01. 39	123° 31. 29	212		155 - 165	11	H.M.	✓	
		2239	BO				49° 01. 37	123° 31. 32		210					
		2252	EN				49° 01. 43	123° 31. 47							
		403pm	BE	GRAB		036	49°01.449	123°31.544	198						
15	TS 18	4:44pm	BE	GRAB		037	49°01.462	123°28.574	264						
		2344	BE	CTD		038	49° 01.43	123° 28.57	265		———	—	H.M.	✓	
			BO							175			ABORT CAST - TO MUCH NOISE		
			EN												SOMETHING WRONG - WILL CHECK CABLES
16	TS 22	1429	BE	ROS	U.S.	042	49° 01.52	123° 15.92	111		166 - 173	8	H.M	✓	LOGGED UPCAST ONLY
		1434	BO				49° 01. 54	123° 15. 95							
		1442	EN				49° 01. 51	123° 15. 91							
15	TS 19	5:44pm	BE	GRAB		039	49°01.451	123°26.253	323						
15	TS 20	6:16pm	BE	GRAB		040	49°01.480	123° 23.992	273						
15	TS 21	6:48pm	BE	GRAB		041	49°01.604	123°19.820	207						
16	TS 22	7:54am	BE	GRAB		043	49°01.456	123°15.885	112						
16	TS 19	1544	BE	ROS	U.S	044	49° 01. 44	123' 26.22			174 - 184	11	H.M.	✓	LOGGED UPCAST ONLY
		1559	BO				49° 01. 36	123° 26. 22							AGAIN!!!
			EN										*	DUGR	

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This page is for any notes or observations

- CHANGE WINCHES TO CENTERLINE #1307 & 329 SWAN

- MUCH NOISE IN UPPER 50m OF CAST
- FOUND GREEN PIN CORROSION ON PRIMARY COMM CABLE - CLEANED

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Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
16	TS 23	10:10am	BE	GRAB		045	49°03.424	123°34.832	194						
16	TS 24	1737	BE	ROS	U.S.	046	49°03.26	123°30.34	~~329~~		—	—	H.M	✓	TEST AFTER CLEANING
		1746	BO				49°03 14	123° 30. 34	318	310					ALL CABLES
		1753	EN				49° 03. 03	123° 30. 42							
		11:07am	BE	GRAB		047	49°03.288	123°30.424	321						
16	TS 25	1906	BE	ROS	U.S.	048	49°03.42	123° 27.95	323		185-196	12	H.M.	✓	
		1915	BO				49° 03.42	123° 27.81		320					
		1930	EN				49° 03. 43	123° 27. 79							
		12:49pm	BE	GRAB		049	49°03.438	123°27.752	323						
16	T 26	2013	BE	CTD	—	050	49°03. 51	123° 25.38	276		—	—	H.M.	✓	
		2019	BO				49° 03. 49	123° 25. 47							
		20	EN				49° 03.	123° 25.							
		1:36pm	BE	GRAB		051	49°03.516	123°25.472	293						
16	T 27	2:25pm	BE	GRAB		052	49°03.484	123°22.501	244						
		2133	BE	ROS	—	053	49° 03. 41	123° 22. 92	239		—	—	H.M.	✓	
		2141	BO	(CTD)			49° 03. 30	123° 23. 12							
		2146	EN				49° 03. 23	123° 23. 26							

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							Latitude	Longitude							
16	TS28	2218	BE	ROS	U.S	054	49°03.72	123° 18.67	114		197 - 204	8	H.M.	✓	
		2225	BO				49° 03 74	123° 18. 68							
		2231	EN				49° 03 .74	123° 18. 70							
		3:40pm	BE	GRAB		055	49°03.743	123°18.716	111						
16	TS 32	2304	BE	ROS	U.S	056	49° 05.79	123° 22.10			205 - 214	10	H.M.	✓	
		2311	BO				49° 05. 85	123° 22.22							
		2319	EN				49° 05. 93	123° 22. 35							
		4:31pm	BE	GRAB		057	49° 05.970	123° 22.461	196						
17	TS 31	0036	BE	ROS (CTD)	T.	058	49° 05. 79	123° 25. 66	271		—	-	H.M.	✓	
		0043	BO				49° 05. 80	123° 25. 63		263					
		0048	EN				49° 05. 81	123° 25. 63							
		5:57pm	BE	GRAB		059	49° 05.831	123° 25.608	268						
17	TS 30	1412	BE	ROS	U.S	061	49° 05. 72	123° 30 32	349		215 - 226	12	H.M	✓	
		1428	BO				49° 05. 70	123° 30. 32	332	330					
		1437	EN				49° 05. 67	123° 30. 36							
		6:32pm	BE	GRAB	1 ST	060	49° 05.777	123° 30.301	358						

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							Latitude	Longitude							
17	TS 29	1509	BE	ROS	V.S.	062	49°05.73	123°34.73	241		227-237	11	H.M	✓	
		1518	BO				49° 05.74	123° 34.74		239					
		1527	EN				49° 05.74	123° 34.77							
		8:43am	BE	GRAB		063	49°05.723	123°34.794	241						
17	TS 33	1642	BE	ROS	V.S	064	49° 11.14	123° 42.51	204		238 - 247	10	H.M	✓	
		1650	BO				49° 11.11	123° 42.60							
		1658	EN				49° 11 12	123° 42 57							
		10:10am	BE	GRAB		065	49°11.162	123°42.558	204						
17	TS 34	1758	BE	ROS	V.S	066	49° 11.07	123° 34.48	377		248-259	12	H.M.	✓	
		1810	BO				49° 11.08	123° 34.47							
		18 22	EN				49° 11.10	123° 34.48							
		11:33am	BE	GRAB		067	49°11.101	123°34.454	375						
17	TS 35	1932	BE	ROS (CTD)	-	068	49° 11.11	123° 29.67	325		———	-	H.M.	✓	
		1939	BO				49° 11.12	123° 29.69		323					
		1945	EN				49° 11.14	123° 29.74							
		12:55pm	BE	GRAB		069	49°11.165	123°29.719	327						

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							Latitude	Longitude							
17	TS 36	2030	BE	ROS (CTD)	—	070	49° 11.13	123° 26.18	273		—	—	H.M.	✓	
		2037	BO				49° 11.14	123° 26.17		271					
		2042	EN				49° 11.14	123° 26.17							
		1:51pm	BE	GRAB		071	49° 11.151	123° 26.174	277						
17	TS 37	2118	BE	ROS (CTD)	—	072	49° 11.15	123° 22.16	224				H.M.	✓	
		2124	BO				49° 11.16	123° 22.15		222					
		2128	EN				49° 11.15	123° 22.17							
		2:38pm	BE	GRAB		073	49° 11.168	123° 22.155	225						
17	TS 38	2220	BE	ROS	U.S.	074	49° 11.18	123° 19.96	158		260 - 268	9	H.M.	✓	
		2230	BO		2ND		49° 11.29	123° 19.91		160					
		2235	EN				49° 11.32	123° 19.91							
		3:17pm	BE	GRAB	1ST.	075	49° 11.164	123° 19.912	163						
17	TS 45	2316	BE	ROS		076	49° 16.250	123° 18.22	80		269 - 276	8	H.M.	✓	
		2320	BO				49° 16.23	123° 18.24							
		2327	EN				49° 16.22	123° 18.26							
		4:37pm	BE	GRAB		077	49° 16.206	123° 18.265	84						

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DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

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

Notes: _____

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

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

Day	Station Name	Time (UTC)	Time Code	Cast Type	Firing Method	Event Number	Positional Information		Bottom Depth	Max Depth	Sample Numbers	# of Bottles	Watch Keepers	Trans. Cleaned	Comments
							Latitude	Longitude							
17	TS 44	2353	BE	ROS(CTD)	—	078	49° 16.26	123° 21.49	242		—	—	H.M.	✓	
		2359	BO				49° 16.28	123° 21.48		239					
18		0007	EN				49° 16.28	123° 21.41							
		5:55pm	BE	GRAB		079	49° 16.255	123° 21.512	243						
18	TS 43	0119	BE	ROS(CTD)		080	49° 16.22	123° 25.28	164		—	—	H.M.	✓	
		01	BO				49° 16.	123° 25.			CANCELLED			*	→
		01	EN				49° 16.	123° 25.							
		6:32pm	BE	GRAB		081	49° 16.186	123° 25.348	166						

Cast Type:
BOT = Bottle cast, no CTD
CTD = CTD without Rosette
ROS = Rosette plus CTD
SET = Fish Set
USW = Sea Water Loop
MOR = Mooring
NET = Plankton 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 before each cast, do not use Ammonia products

Notes: _____

Produced by the Water Properties Group, IOS

WaterProperties.ca
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* LAST CAST CANCELLED - SPIKED OUT - WATER IN PRIMARY COND. BULKHEAD CONNECTOR - 3RD TIME CLEANED NEEDS TO BE REPLACED