

CRUISE
NUMBER

95-42

DAILY LOG

INSTITUTE OF OCEAN SCIENCES
OCEAN PHYSICS

DATE

Dec. 11-15, 1995

VESSEL

J.P. Tully

PROJECT

Effingham Inlet

Captain: John Anderson First Officer: AL Coombs
Second Officer: Brian Third Officer: D

Cruise Participants / Agencies: _____

Scientific Personnel: Party Chief: Rick Thomson

Name	Watch	Cabin	Name	Watch	Cabin
Bernard Minkley	105	E			
Gail Tewsbury	P6C				
Hugh Maclean	UBC				
Tim Baumgartner	S10				
John Crusius	UBC				
Robert Francis	U1W				
Andy Sontar	S10				
John Field	U1W				
Diego Holmgren	U1W				
Vicente Serreira	S10				

Second leg of cruise: Party Chief: _____

Name	Watch	Cabin	Name	Watch	Cabin

Data logging system: Unit no.: _____

Program Name: CTD.exe Program version: 1.44 11/12/95

CTD deck unit make: _____ model: _____ serial no.: _____
Computer make: _____ model: _____ serial no.: _____

1st CTD make: _____ model: _____ serial no.: _____
Temperature sensor model: _____ serial no.: _____
coefficients: slope: _____ offset: _____
Conductivity sensor model: _____ serial no.: _____
coefficients: slope: _____ offset: _____
Pressure sensor range: _____ psi serial no.: _____
coefficients: FSP: _____ dB offset: _____
Transmissometer model: _____ serial no.: _____
coefficients: slope: _____ offset: _____

Comments: _____

PST

1400 Jernst IOS-
1500 fine & best drill

Blank	1	- .003	.002 ✓
	2	.002 ✓	
	3	- .002	- .007 .004 ✓

standard	1	.715	
	2	.714	
	3	.712	.716

Report IOS @ 1400 PST.

Dec 11/95

①

Pick up launch
Engine trials

Arrive BARKLEY Sound AM DEC 12/

A few "moderate" swell around midnight but
surprisingly low waves. Predictions were for strong winds -
Arrive BARKLEY Sound 0400 PST.

DEC 12. PST

0700 Proceed to Effingham Inlet Station EFFØ1
at the head of the inlet.

EFFØ1: 49°05.50'N, 125°11.61'

Winds to 55 knots today
SE. Waves to 6m. ✓

Sounding Line up inlet

#1 48°58.974' / 125°10.650'

0815(?)

#2 49°01.196' 125°09.357'

0835 @ 08.2 KN.

#3 49°01.691' 125°09.240'

0840 (1640 GMT)

Light wind in inlet; rain, low ceiling

#4 49°03.170' 125°08.67'

0855 (1655 GMT)

Just entering narrows north of main basin.

#5 49°03.792' 125°09.084'

1659 GMT

Speed ≈ 09.0 knots.

Chief Scientist rusty! Bernard did not like
his O₂ sample technique. TOO MANY BUBBLES
Stopped Raining! Salinity bottles wet; no labels.

Proceed to EFFØ2.

EFFØ2 49°04.994' 125°10.313' 1805 GMT

Touched bottom

Fixed 2x bottles at bottom sample NOT confirmed
on first bottle. @ 65m depth

Again 2x @ 50m

Having some problems with bottles tripping (11 bottles total
fixed)

EFFØ3

Lost GPS.

1840 UTC

EFFØ3 49°04.290' 125°09.444'

1844

No mud sample.

Problems with dragging

RUNNING SOUNDING GRID FOR CORING

POS'N

49°03.038'N 125°08.641'W

1918 UT

YEAR		MONTH		SHIP		CRUISE				PAGE		OF		
1995		DEC.				95-42								
DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS
12	EFF01	ROS	1730	UTC	1	49°05.55'	125°11.66'	GPS	28m	28m	1 → 6	6		touch bottom. Head of
		ROS	1732		(2)									Bottom @ 25m 11 mlet upcast
12	EFF02		1803	UTC	4	49°05.04'N	125°10.34'W	GPS	71m	65m	7 → 17	11(9)		problems with Rosette - 2 extra bottles fired
			1806		(5)									
12	EFF03		1843	UTC	6	49°04.25'N	125°09.53'W	GPS	120m	110m	18 → 30	13(11)		4
			1846		(7)									
13	EFF05		0422	UTC	8	49°02.51'N	125°09.11'W	GPS	205m	200m	31 → 47	17		current 20m/sec
			0429		(9)									
13	EFF11		1619	UTC	10	48°59.12'N	125°11.04'W	GPS	86m	80m	48 → 56	9		temperatures taken
			1622		(11)									
13	EFF14		1701	UTC	12	48°59.86'N	125°11.23'W	GPS	97m	90	57 → 66	10		
			1704		(13)									#14 taken on deck
13	EFF08		1746	UTC	15	49°00.67'N	125°10.21'W	GPS	82m	80m	67 → 75	9		
	EFF08		1750		(16)									
13	EFF07		2146	UTC	(17)	49°01.23'N	125°09.51'W	GPS	122m	119	76 → 87	12		up + down are one cast Salinity N/A
14	EFF05		0032		18	49°02.54'	125°09.04'			200.				
	EFF05		0039		(19)	49°02.54'	125°09.01'				88-105	18		upcast

CAST TYPE - BOT - bottle cast
CTD - ctd
MOR - mooring

ROS - rosette
NET - net haul
DRF - drifter

USW - sea water loop

TIME CODE - BE - beginning time of cast
BO - bottom time of cast
EN - end of cast

DE - deployment time
MR - messenger release
RE - recover mooring

POSITION CODE - RAD - RADAR
GPS - GLOBAL
LOR - LORAN

SOUNDINGS / MAIN BASIN

(2)

DEC 12 / 95

1919 UT continuing to run grid for battery for coring

1920 UT 49° 02.973 N 125° 08.621 W 149 m

1922 UT 49° 02.871 N 125° 08.735 W 118 m

1925 UT 49° 02.753 N 125° 08.895 W 180 m

1926 UT 49° 02.683 N 125° 08.944 W 201 m

1930 UT 49° 02.489 N 125° 09.132 W 207 m

ADCP shows strong scattering layer at 65-70m depth.

1934 UT 49° 02.309 N 125° 09.367 W 187 m

1936 UT 49° 02.234 N 125° 09.191 W A/C

1939 UT 49° 02.248 N 125° 08.945 W

1941 UT 49° 02.256 N 125° 08.642 W A/C

1944 UT 49° 02.393 N 125° 08.829 W on line

1950 UT 49° 02.614 N 125° 09.216 W

1954 UT 49° 02.779 N 125° 09.431 W 180 m

SUMMARY TO DATE.

- ① CONDUCTED ALONG CHANNEL SOUNDING FROM Berkeley Sound to Head of INLET AM DEC. 12/95
- ② CONDUCTED 150 kHz ADCP line as part of Sounding line.
- ③ CTD/Rosette stations EFF01 — EFF03
- ④ SOUNDING LINES ACROSS MAIN CORING BASIN
- ⑤ Box Core after lunch. Found many scales of anchovies & SARDINE. Confirms that inlet could have a good record of past 100's years.
- ⑥ 1400 PST: Freeze Core John Cruikshank — Main site

DAILY LOG

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YEAR			MONTH			SHIP			CRUISE			PAGE		OF																
DAY (UTC)			STATION ID		CAST TYPE		TIME (UTC)		TIME CODE		STD/HYDRO CONSEC #		LATITUDE		LONGITUDE		POSITION CODE		BOTTOM DEPTH (m)		MAX SAMPLING DEPTH (m)		CONSEC SAMPLE #		# OF BOTTLES		INIT		COMMENTS	
14			EFF04				0520				20		49°03.13		125°08.60				44.		46.		—		—					
							0522				21																		upcast	
14			EFF06				0549				22		49°01.77'N		125°09.14'W		GPS		147.		148.		—		—					
							0552				23																		upcast.	
14			EFF12				0641				24		48°58.040'N		125°09.99'W				98		94		—		—					
							0644				25																		upcast	
14			CRD3				1724				26		48°23.51'N		123°24.20'W		GPS		67		65		—		—				CTD only	
							1727				27																		upcast	
14			CRD6				1808				28		48°23.48'N		123°20.47'W		GPS		90		85.		—		—				CTD only	
							1811				29																			
14			BB01				2012				30		48°35.29'N		123°21.68'W		GPS		32.		29.7		—						hit bottom	
							2014				31																		upcast	
14			BB02				2036				32		48°36.75'N		123°23.11		GPS		27		24.0								hit bottom	
14			BB03				2058				33		48°37.66'N		123°23.24'W		GPS		30		31.5		106-112		7				nutrient, oxy, sal.	
							2100				34																		upcast.	
14			BB04				2135				35		48°37.59'N		123°21.25'W		GPS				40.4		—						hit bottom	

CAST TYPE -

BOT -
CTD -
MOR -bottle cast
ctd
mooringROS -
NET -
DRF -rosette
net haul
drifter

USW - sea water loop

TIME CODE -

BE -
BO -
EN -beginning time of cast
bottom time of cast
end of castDE -
MR -
RE -deployment time
messenger release
recover mooring

POSITION CODE -

RAD -
GPS -
LOR -RADAR
GLOBAL
LORAN

0	37	46	0
10	45	10	
20	44	20	
30	43	30	
40	42	40	
50	41	50	
55	40	55	
60	39	60	
65	38	65	
70	37	70	
75	36	75	
		80	
100	35	90	
		100	
125	34	125	
150	33	150	
175	32	175	
200	31	190	

DEC. 12 CONT'D upper 1/3m (50 years) (3)
Freeze Core showed waves/but also a large
forbiddito layer below.
Move Central site to 49 02.30 125 09.10

~~NOTE~~ 1550 PDT very high tide at site EFF05

2350 UT Branches of evergreens at steep shoreline are in
the water. Strong > 55 knot winds offshore.
Suggests very strong set up along with runoff.

1600 - CBC reports 145 km/h winds at Seattle
0000 UT with northward moving system.

DEC 13 / 95

0024 UTC - putting freezer core over side

49° 02.170'N 125° 09.011'W - 197 m

0234 UT putting box core over side

49° 02.275'N 125° 09.135'W

0309 UT box core didn't hit bottom - trying again
DID NOT OPEN. REPEAT CORE 1

0405 AFTER REPAIRS ARE MADE TO BOX CORE
2nd attempt did not work

0410 UT PROCEEDING TO EFF05 for CTD

0422 UT CTD in water

49° 02.492'N 125° 09.113'W

1555 UT Anchor Up
Proceeding to CTD stn EFF11

1617 UT EFF11 CTD overside

48° 59.110'N 125° 11.049'W 86 m

Box core still full on deck.

Noted hmt of O₂ in flasks from last night's EFF05
Cast.

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[illegible]

13 Dec 95

(4)

1650 UT Proceeding to EFF10 for CTD

1700 UT CTD in water Cast 12 ↓, 13 ↑

48°59.866'N 125°11.252'W

Right to bottom!

Clearing shear. Liner put in last night's box core.

1736 Arrive STATION EFF08 CTD/hydro

1745 On way down.
water depth 86 m

49°00.710'N 125°10.178'W

About 1 m from bottom.

Proceed to Kasten Core STN just south of EFF05

Core @ 49°02.260'N 125°09.016'W

South of EFF05. On way up 18:47 UT
Hard RAIN & westerly wind Core Full.
Hung to dry.

1:00 — moderate strong outflow winds.

12 10^{Local} Sounding Line across site EFF07
in preparation for Freeze Core.

Freeze Core: 2030 - 2100 Dec 13

Site EFF07 49°01.254'N 125°09.419'W
121 m depth.

2148 UT → EFF07 in H₂O for CTD.

EFF07

49°01.250'N 125°09.458'W 122 m

Salinity sensor not working on this cast. Tried
twice; cleaned cell. Salinity too high.

Get salinities from hydro cast every 10 m.

No Separate up & down cast.

fairly strong flood to North. Ship being set. N.

2208 UT proceeding to coring stn.

1508 disconnected conductivity plug, sprayed with acetone
to remove moisture inside plug.

2350 UTC
1550 PST

(5)

Box Core @ Station EFFØ5; MAIN
Hole —

Dec 14/95 EFFØ5

0030 Site EFFØ5 2ND TIME
Slightly OK down but fouled near top of
the upcast.
High res O₂ + SAL.

0247 UT OXYGEN BOTTLE NO 1003 — R.I.P.
neck cracked.

Freeze Core at site EFFØ3.
On Board @ 0430 UTC 2030 PST.
CANCELLED "BABY BOX CORE". Wind too strong.
Nicely varved sediment.

• Proceeded TO Station EFFØ4. CTD only
Station EFFØ4

0550 Station EFFØ6 CTD only.

Proceeded to Victoria / Manakauy Point.

0845 PST: Storm force SE winds. Very lumpy
off Victoria.

1749 UT - 14 Dec '95

finished CTD at CRD3 proceeding to CRD6

1807 UT - slightly off station as there is a float at the site

1821 UT - proceeding to S. entrance CORONA CHANNEL.

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Sidney Region. Dec 14/95

STATIONS BBØ1 to BBØ6 Sidney Channel
to Sidney Channel.

STATION BBØ3 at proposed site for the
New Bazar Bay outfall. Oxygen &
nutrients at this site. CTbs only at others.
Storm warnings issued. Winds to 25 knots
offshore.

PAT BAY Dock @ 1600 PST.