

DAILY LOG BOOK

MISSION
NUMBER

2007-62

DATE:

From:

Sep. 11

to:

Sep. 19, 2007

VESSEL:

CCGS J.P. Tully

PROJECT:

Aquaculture, La Perouse, Effingham,
Juan de Fuca

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

Captain: Syd Webb First Officer: Simon Dockera
Second Officer: _____ Third Officer: Mark

Mission Participants / Agencies: OSD IOS

Scientific Personnel:		Party Chief:		Name		Watch		Cabin		Name		Watch		Cabin	
Name															
<u>D. Spear</u>		<u>day</u>		<u>E</u>		<u>Tom Juhász</u>									
<u>D. Anderson</u>		<u>night</u>		<u>F</u>											
<u>L. Perreault</u>		<u>day</u>		<u>G</u>											
<u>S. Rose</u>		<u>night</u>		<u>D</u>											
				<u>H</u>											

Rosette Setup:

Number of bottles: _____
Manufacturer: _____
Volume of Bottles (litres): _____

Winches:

1. Make:	Model:	Serial #:	used for:
2. Make:	Model:	Serial #:	used for:
3. Make:	Model:	Serial #:	used for:

Comments on performance during cruise:

Salinometer:

Make: _____ Model: _____ Serial #: _____

Comments on performance during cruise:

Oxygen Kit #

Comments on performance of kit and chemicals:

Thermosalinograph System:

Program: _____ Version: _____

Sampling interval (seconds): _____

Fluorometer sensor serial number: _____

Comments on performance during cruise:

ADCP Setup:

Computer time zone: _____

Sampling interval (seconds): _____

Bin Length (2^x): _____

Pulse Length: _____

Buffer (bytes): _____

Gyro Offset: _____

Comments:

CTD Test Cast Information

Test Cast at IOS Jetty? (optional) yes ☐ no ☒

Comments: (i.e. how did everything work??)

Test cast in Saanich Inlet? (recommended) yes ☐ no ☒

If no, give reason: _____

Comments: (i.e. how did everything work??) -system known to be working from previous cruise

CTD pressure reading on deck (db): _____
(Should be 0.0 db $\pm$ 0.5)

Pumps working? yes ☐ no ☐
(i.e.. Was the red LED display on the deck unit 0011 and not still 0010?)

Secondary Temp- Primary Temp: _____
(Average from the Mixed Region)

Secondary Salinity- Primary Salinity: _____
(Average from the Mixed Region)

Additional Comments:

Date Time PDT

Sep. 11 0830 - 1600 - load + set up

1600 - depart I.O.S. - on board: D. Spear, D. Anderson, L. Perreault,
S. Rose, T. Jukász

- heading for Knight Inlet ETA - evening Sep. 12 intend to start
with CTD's unless we arrive in
time to recover a mooring

app. 1930 - started T/S system

Sep. 12 0730 - en route

- ETA Knight Inlet 1500-1600 hrs decide to complete recovery
KIW + TCS

1030 - fire/boat drill app. entrance Horannah Channel

1600 - at KIW-04 for recovery

1603 - sent CA11 to enable got 323 m, 311 m, 260 m, 254 m, - rec'd + exec'd each time

1606 - stopped over mooring. approaching stepping up *stopped over
249 m mooring.

- backing away 330 m

1608 - sent CA15 → rec'd + exec'd sent CA15 again - good response

1609 - sighted on surface

- mooring recovered without problem but we can't wash down - fresh water
on deck, in lab + cabins is not running

- head for TCS mooring to recover. - water problem fixed + wash down
enroute.

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <i>Sept</i>				Year <i>2007</i>			Ship <i>Tully</i>				Cruise ID <i>2007-62</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							
13	Km 2	0225	BE	ROS	US	1	50 39.25	126 11 41	183						
		0230	BO				50 39.25	126 11 57		171	1-11	11	DA SR	✓	
		0244	EN				50 39.29	126 12 02							
13	TrC 0.5	0322	BE	ROS	US	2	50 40.74	126 14 62	151						
		0326	BO				50 40.75	126 14 64		145	12-21	10	DA SR	✓	
		0338	EN				50 40.78	126 14 67							
13	TrC 1.0	0422	BE	ROS	US	3	50 43.64	126 10 81	264						
		0430	BO				50 43.64	126 10 79		270	22-34	13	DA SR	✓	
		0448	EN				50 43.64	126 10 83							
13	TrC 1.5	0525	BE	ROS	US	4	50 45.65	126 09 12	210		35-46	12	DA/SR	✓	
		0530	BO				50 45.66	126 09 08		200					
		0545	EN				50 45.66	126 09 04							
13	TrC 2.0	0631	BE	ROS	US	5	50 49.25	126 12 64	206						
		0637	BO				50 49.24	126 12 60		205	47-58	12	DA/SR	✓	
		0650	EN				50 49.19	126 12 49							
13	TrC 2.5	0740	BE	ROS	US	6	50 50.40	126 19 60	270						
		0748	BO				50 50.40	126 19 57		245	59-72	14	DA/SR	✓	
		0805	EN				50 50.29	126 19 48							

Cast type:

BOT = bottle cast, no CTD
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bottle firing method:

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

Date Time PDT

TCS-041

Sep. 12 1735 - approaching mooring 353m, 264m ranges, 255
 - right on top 197m. backing away

1745 - 288m, 300m - sent B532 rec'd + exec'd

1747 - sighted on surface

- recovery proceeded well; however we lost AR191 15U, and the attached pinger, and the bottom 13 m length of mooring line. There were a number of contributing conditions

- the mooring was deployed without the bottom 3x SG17 glass ball floats so there was no buoyancy supporting the release
- the 13 m line was long enough that we could not lift the release package in one go under the A-frame
- the top of the 13 m line was stopped on deck by chain to a deck eye however the on-board end of this stopper chain was not secured + seized adequately i.e. a chain hook was secured to the chain but seized only with a cable - tie
- as we were about to attach the winch line to the stopped top end of the 13 m mooring line, a crew member stepped on or kicked the stopper chain, the hook and seizing let go and the stopper chain ran through the deck eye and over the side
- app. \$15K value of equipment was lost and 3 men on deck were potentially in the path of the chain running across deck. - a dangerous situation
- 1 requested an HOIR be submitted.

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							Latitude	Longitude							
14	LOOP1	142		USW			50 50 89	126 38.95					DA		
14	TrC30	0257	BE	ROS	US	7	50 49 94	126 25 58	228						
		0303	BO				50 48 90	126 25 59			73-85	13			
		0320	EN				50 48 93	126 25 60							
14	PPI	0356	BE	ROS	US	8	50 48 82	126 31.51	145						
		0402	BO				50 48 78	126 31 44		142	86-95	10	DA		
		0414	EN				50 48 73	126 31 32							
14	KINO	0459	BE	ROS	US	9	50 51 74	126 37 29	397						
		0508	BO				50 51 73	126 37 28		390	96-110	15	DA		
		0532	EN				50 51 63	126 37 21							
14	SC	0620	BE	ROS	US	10	50 53 42	126 45 67	208						
		0627	BO				50 53 46	126 45 72		200	111-123	13	DA		
		0639	EN				50 53 53	126 45 80							
14	QSC2	0821	BE	ROS	US	11	50 46 51	127 02 28	223						
		0827	BO				50 46 56	127 02 32		217	124-135	12	DA/SA		
		0842	EN				50 46 63	127 02 39							
14	LOOP2	1930	BE	USW			50 03 22	128 01 26				1	DA		
															*TSG clogged

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Date Time PDT

Sep. 12 1830 (app.) proceed with CTDs in Knight Inlet.

- CTDs Kn2 → TrC2.5 completed until we ran out of flasks
- NB: - for this cruise we got 3 cases as requested, but the new cases contain 24 bottles not 30 as before
- Dario's CTDs was a last minute add on and require many O₂ samples - this was not considered at the time of writing cruise plan.
- I have 5 people on cruise in total there is no one to run O₂ samples concurrent to standing CTD watch
- there were no additional flasks available because of loan to a UVic cruise at the same time.

Sep. 13 0730

- on station KIW - 05 for deployment
- setting up mooring - instruments started previous night

Instrument issues:

- 3566 (OE) 300 ADLP has intermittent contact in connector. We had to use our spare #2272
- memory swaps, borrowed equipment with conditions of return associated make for complex requirements that effect flexibility of progress during the cruise

30
TSG clogged → 257.75 to 257.95. Cleared when time permitted

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							Latitude	Longitude							
15	LC08	0244	BE	ROS		12	48 55 22	127 13. 20	2058						
		0318	BO				48 55 30	127 13. 26		2060	136-157	22	DA SR	✓	
		0413	EN				48 55 14	127 13. 05							
15	LC093	0530	BE	USW			49 03 04	127 01 46				1			
15	LC05	0616	BE	ROS		13	49 07 38	126 55 20	271						
		0623	BO				49 07 39	126 55 15			158-170	13	DA SR	✓	
		0641	EN				49 07 34	126 55 94							
15	LC04	0730	BE	ROS		14	49 11 31	126 49 39	144						
		0734	BO				49 11 30	126 49 33		135	—	0	DA SR	✓	
		0737	EN				49 11 29	126 49 31							
15	LC03	0823	BE	ROS		15	49 15 05	126 43 65	126						
		0826	BO				49 15 05	126 43 63		120	171-178	8			
		0834	EN				49 15 05	126 43 62							
15	LC02	0919	BE	ROS		16	49 18 67	126 38 16	101						
		0922	BO				49 18 67	126 38 20		90	—	0	DA SR	✓	
		0925	EN				49 18 66	126 38 24							
15	LC01	0957	BE	ROS		17	49 20 48	126 35 09							
		959	BO				49 20 48	126 35 10	35	45	179-184	6	DA SR	✓	
		1004	EN				49 20 47	126 35 18							

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Date Time PDT

Sep 13

1022

- launched KIW-05 in 182 m (on sounder)
at position $50^{\circ} 39.356'$
 $126^{\circ} 09.810'$

- head for and set up TCS-05 for deployment

1316

- launched TCS-05 in 222 m (on sounder)
at position $50^{\circ} 43.700'$
 $126^{\circ} 10.479'$

1325

- head for recovery at PEN-02 and SUT-02

1548

- approaching PEN-02 ranges 180, 177, 175 B529
- stopped range = 176
- backing away range = 270

1555

- sent range 270 m
- sent B530 for release rec'd + exec'd 311 m range
- sent B530 " " 372 m range
- sent multiple release codes all rec'd + exec'd and got back reasonable ranges with few exception - mooring has not surfaced
- asked to be out of gen. mode + checked for bridge sounder (lab. sounder off)

1604

- sighted on surface.

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							Latitude	Longitude							
16	EFF13	03:28	BE	ROS		18	48 56 50	125 10 73	102						
		03:32	BO				48 56 51	125 10 72		95	105-191	7	DA SR	✓	
		03:41	EN				48 56 53	125 10 71							
16	EFF05	04:54	BE	ROS		19	49 02 53	125 09 16	200						
		05:00	BO				49 02 54	125 09 15		195	192-202	11	DA	✓	
		05:12	EN				49 02 55	125 09 16							
16	EFF03	07:14	BE	ROS		20	49 04 30	125 09 51	118						
		07:17	BO				49 04 27	125 09 46		110	203-207	7	DA	✓	
		07:25	EN				49 04 25	125 09 42							
16	EFF04	08:14	BE	ROS		21	49 03 11	125 08 57	55						
		08:18	BO				49 03 11	125 08 57			210-214	5	DA	✓	
		08:21	EN				49 03 11	125 08 57							
16	EFF07A	09:30	BE	ROS		22	49 00 91	125 09 78	136						
		09:34	BO				49 00 90	125 09 79			215-222	8		✓	
		09:45	EN				49 00 90	125 09 79							
17	200 PH	03:00	BE	USW			48 37 66	125 52 54				1	DA		
17	EFF12	06:59	BE	ROS		23	48 58 05	125 10 52	92						
		07:02	BO				48 58 04	125 10 51			219-225	7	DA	✓	
		07:10	EN				48 58 00	125 10 54							

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							Latitude	Longitude							
<i>16</i>	<i>EFF13</i>	<i>03:28</i>	<i>BE</i>	<i>ROS</i>		<i>18</i>	<i>48 56 50</i>	<i>125 10 73</i>	<i>102</i>						
		<i>03:32</i>	<i>BO</i>				<i>48 56 51</i>	<i>125 10 72</i>		<i>95</i>	<i>105-191</i>	<i>7</i>	<i>DA SR</i>	<i>✓</i>	
		<i>03:41</i>	<i>EN</i>				<i>48 56 53</i>	<i>125 10 71</i>							
<i>16</i>	<i>EFF05</i>	<i>0454</i>	<i>BE</i>	<i>ROS</i>		<i>19</i>	<i>49 02 53</i>	<i>125 09 16</i>	<i>200</i>						
		<i>0500</i>	<i>BO</i>				<i>49 02 54</i>	<i>125 09 15</i>		<i>195</i>	<i>192-202</i>	<i>11</i>	<i>DA</i>	<i>✓</i>	
		<i>0512</i>	<i>EN</i>				<i>49 02 55</i>	<i>125 09 16</i>							
<i>16</i>	<i>EFF03</i>	<i>0714</i>	<i>BE</i>	<i>ROS</i>		<i>20</i>	<i>49 04 30</i>	<i>125 09 51</i>	<i>118</i>						
		<i>0717</i>	<i>BO</i>				<i>49 04 27</i>	<i>125 09 46</i>		<i>110</i>	<i>203-207</i>	<i>7</i>	<i>DA</i>	<i>✓</i>	
		<i>0725</i>	<i>EN</i>				<i>49 04 25</i>	<i>125 09 42</i>							
<i>16</i>	<i>EFF04</i>	<i>0814</i>	<i>BE</i>	<i>ROS</i>		<i>21</i>	<i>49 03 11</i>	<i>125 08 57</i>	<i>55</i>						
		<i>0818</i>	<i>BO</i>				<i>49 03 11</i>	<i>125 08 57</i>			<i>210-214</i>	<i>5</i>	<i>DA</i>	<i>✓</i>	
		<i>0821</i>	<i>EN</i>				<i>49 03 11</i>	<i>125 08 57</i>							
<i>16</i>	<i>EFF07A</i>	<i>0930</i>	<i>BE</i>	<i>ROS</i>		<i>22</i>	<i>49 00 91</i>	<i>125 09 78</i>	<i>136</i>						
		<i>0934</i>	<i>BO</i>				<i>49 00 90</i>	<i>125 09 79</i>			<i>215-222</i>	<i>8</i>		<i>✓</i>	
		<i>0945</i>	<i>EN</i>				<i>49 00 90</i>	<i>125 09 79</i>							
<i>17</i>	<i>LOOPH</i>	<i>0300</i>	<i>BE</i>	<i>USW</i>			<i>48 37 66</i>	<i>125 52 54</i>				<i>1</i>	<i>DA</i>		
<i>17</i>	<i>EFF12</i>	<i>0657</i>	<i>BE</i>	<i>ROS</i>		<i>23</i>	<i>48 58 65</i>	<i>125 10 52</i>	<i>92</i>						
		<i>0702</i>	<i>BO</i>				<i>48 58 04</i>	<i>125 10 51</i>			<i>219-225</i>	<i>7</i>	<i>DA</i>	<i>✓</i>	
		<i>0710</i>	<i>EN</i>				<i>48 58 00</i>	<i>125 10 54</i>							

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Date Time PDT

Sep 13

1730

- approaching SUT-02 for recovery
- sent B541 to wake instrument. while steaming ranges inconsistent + false
- ranges 341, 296, 277, 268, 244, 234 m
- moving away to release 262, 270, 277, 285
- 281 m away stopped sent B542 range returned 308
rec'd + exec'd.

1743

1744

1836

- sighted on surface
- clean up and heading for CTDs TrC3 northward
- completed CTDs TrC3 northward to QLS2

Sep 14 0950

- on route to Estevan Pt. LG Line LG08 station for CTDs.
- position $50^{\circ}28.94$ $128^{\circ}18.46$ on route to Estevan
- calm foggy morning over cast cool
- LG 08 ETA. 2000-2030 tonight.

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							Latitude	Longitude							
17	EFF06	0808	BE	ROS		24	49 01 79	125 09 19	154						
		0814	BO				49 01 79	125 09 20		145	226-234	9	DA/SR	✓	
		0824	EN				49 01 80	125 09 21							
17	EFF07	0906	BE	ROS		25	49 01 27	125 09 38	118						
		0910	BO				49 01 27	125 09 37		110	235-241	7	DA/SR	✓	
		0919	EN				49 01 28	125 09 35							
17	EFF08	1000	BE	ROS		26	49 00 70	125 10 18	87						
		1004	BO				49 00 70	125 10 18			242-247	6	DA/SR	✓	
		1011	EN				49 00 68	125 10 17							
18	JFC1	01:40	BE	ROS		27	48 20 19	123 44 98	62						
		01:42	BO				48 20 18	123 44 98		55	—	0	DA/SR	✓	
		01:44	EN				48 20 18	123 44 98							
18	JFC2	02:10	BE	ROS		28	48 18 50	123 44 96	173						
		02:14	BO				48 18 50	123 44 98		165	—	0	DA/SR	✓	
		02:18	EN				48 18 50	123 44 98							
18	JFC3	02:44	BE	ROS		29	48 16 49	123 45 03	183						
		02:48	BO				48 16 47	123 45 05		175	—	0	DA/SR	✓	
		02:52	EN				48 16 46	123 45 04							

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Date Time PDT

Sep. 15

0735

- on station EOI-RR for recovery
- sent B537 ranges = 96 and 96
- move off for release 166
- stopped range = 275 m

0744

- sent B538 - rec'd + exc'd sighted on surface.

0815

- recovered without incident + washed down

0929

- deployed EOI-SS in 99m on sounder
at position $49^{\circ} 17.518'$
 $126^{\circ} 35.941'$

- NB: - intend to move position of EOI to app
 $49^{\circ} 17.393'$ $126^{\circ} 36.278'$ to
find 100 m depth.

- position has migrated to east and shallower water over
the years

- head for recovery of AI mid afternoon.

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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							
18	JFCH	0319	BO	ROS		30	48 14 42	123 45 09	164 m						
		0324	BO				48 14 37	123 45 09		158	—	Ø	DA SR	✓	
		0328	EN				48 14 36	123 45 10							
18	JFCH	0359	BE	ROS		31	48 12 43	123 45 05	139						
		0402	BO				48 12 43	123 45 12		130	—	Ø	DA	✓	
		0405	EN				48 12 43	123 45 17							
18	JFCG	0432	BE	ROS		32	48 10 43	123 44 96	54						
		0434	BO				48 10 42	123 44 99		45	—	Ø	DA	✓	
		0435	EN				48 10 42	123 45 00							
18	JF37	0558	BE	ROS		33	48 12 15	123 02 49	73						
		0600	BO				48 12 14	123 02 50		65	—	Ø	DA	✓	
		0602	EN				48 12 13	123 02 52							
18	JF36	0639	BE	ROS		34	48 14 28	124 01 83	134						
		0642	BO				48 14 33	124 01 87		128	—	Ø	DA	✓	
		0644	EN				48 14 35	124 01 85							
18	JF35	0709	BE			35	48 16 25	124 00 90	180						
		0714	BO				48 16 24	124 00 86		173	—	Ø	DA	✓	
		0717	EN				48 16 23	124 00 83							

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_book.doc

Date Time PDT

Sep. 15 1420 - arrive station AI-RR. for recovery
 - while approaching sent B533 for range got 575, 545, 530
 1428 - over mooring 511 m, 511 m.

- moving away 515, 524, 544
 1435 - stopped 607 m sent B534 got rec'd + exec'd at 630 m

1436 - sighted on surface VHF Chan 71 transmitting

1439:30 - ADCP popped up.

} rise time
 3 minutes 30 sec.

ADCP travelled 490 m

1500 = - head for Ettingham Inlet
 CTDs.

2.33 in 210 sec.

210 | 490
 420
 70
 630

rise rate = 4.6 knots

- intend to complete Nutrient sampling at priority stations as
 provided by Cindy Wright

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Month <u>Sept</u>				Year <u>2007</u>			Ship <u>Tully</u>				Cruise ID <u>2007-62</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							
18	JF34	0741	BE	ROS	US	36	48 17 74	124 00.08	187						
		0745	BO				48 17 75	124 00.06			-	⊗	DA SR	✓	
		0749	EN				48 17 76	124 00 04							
18	JF33	0814	BE	ROS	US	37	48 19 11	123 59 24	174						
		0818	BO				48 19 09	123 59 24		165	-	⊗	DA SR	✓	
		0822	EN				48 19 09	123 59 26							
18	JF32	0845	BE	ROS	US	38	48 20 78	123 58 35	136						
		0849	BO				48 20 77	123 58 31		130	-	⊗	DA SR	✓	
		0852	EN				48 20 76	123 58 29							
18	JF31	0911	BE	ROS	US	39	48 21 55	123 57 53	117						
		0914	BO				48 21 58	123 57 55		110	-	⊗	DA SR	✓	
		0915	EN				48 21 59	123 57 57							

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Date Time PDT

Sep. 16 0730

- at entrance to Effingham setting up mooring as we steam in to deploy EF04
- 4 of 6 Effingham stations were completed last night along with extra sampling program - filtering required extra processing time

0854

- launched EF04-B in 90m (on sounder) at $49^{\circ} 03.811'$ $125^{\circ} 09.083'$
- we changed buoyancy and anchor wt. i.e. added 2 Viny buoys to ADCP to increase reserve buoyancy and added chain to anchor to compensate still resulted in a mooring with lighter anchor than usual. Consequently, on release, it was observed that the mooring moved side ways as it sank. Light anchor = less accuracy of positioning during free-fall

0926

- we are heading out of Barkley Sound for recovery of PATC-E and deployment of AL-SS *weather prediction is gale force by afternoon
- intend to return to Effingham to complete stations.

Date Time PDT

Sep 16 1445

- approaching PATC-F for recovery
- slowing to stop range = 727m
- stopped on station and received ranges that were too short
no solid consistent hits
- sounders off, gen mode off, declutched
- put TT801 transducer in water and could hear our signals going out
and answering pinger by audio but no digital ranges
- as we drift away app 2 cables we got 691, 694, 698 m reasonable
slant range for our position
- we also try the XT6000 and again get audio responses but no
digital ranges.
- move back on station ranges 512, 503, 504, 503, 502, 501
*(using dunking transducer) XT6000 ranges 498, 498, 499, 498, 497

1538

- moved 2 cables off for release, using dunking transducer
- sent B536 got 698m range rec'd + exec'd
- ranges after release 680, 675, 665
- wind + seas picking up to gale force

1807

- deployed AI-SS in 503m on sounder. at position
48°31.762' 126°12.200 marginal conditions
- head for Effingham Inlet to complete stations

Date Time PDT

- Sep 17 0730 - steaming in Juan de Fuca, after completing more Ettingham station, for recovery of JF2C ETA 1100 hrs
- calm cloudy
- 1046 - approaching JF2C
- 1050 - sent enable 6432 got 221m → rec'd
- transpounded 220, 221, 222
- move off for release 215, 213
- 1056 - range 229 sending release - no response
- ranges 280 285, 290
- several more release got one that was not quite correct (rec'd + exec'd but no range)
- continue ranging, moving, + releasing
- 1110 - got good response on Window + Release command
good range rec'd + exec'd - waited longer app. 20 sec.
- 1112 - sighted on surface after Window open + release sent.

Date Time PDT

Sep 17 1210 - 1220

SF2E

- enabled with 6442

ranging $448 \rightarrow 282 \rightarrow 173 \rightarrow 151$
 consistently as we approach.

- dense fog, flat calm.

1220 - range 151 - moving mostly drifting off for release
159, 160, 162, 164, 167, 173, 176

$$70 = 156.525$$

1228 sent Window + 'release code' no response

$$68 = 156.425$$

- sent Window + release code, got 196, rec'd + exc'd

$$71 = 156.575$$

1229 - got VHF signal - not visible in dense fog

$$A = 154.585$$

- range 238

$$C = 160.725$$

1231 - range 124, 123 - VHF coming in on hand held radio.
can see it now - KF flashing as well

$$D = 160.785$$

can see it' now - KF flashing as well

- no signal ~~to~~ from Argos

- head for ASO4

1600 - approaching station app. 6 cables to ASO4

- send 6452 enable - no response
- continue sending as we approach slowly
- get first enable response 397 m
- send turn M

1610 - got first enable response 397 m rec'd + executed

- sending range - 329, 298, 276, 260, 249, 239, 213, 194, 183, 173, 127

16/14 - 115 on top of mooring - backing away for release

1618 - 270 m range. sent Window arm several times no response

1623 - deployed Junking transducers got range 256 sent release rec'd + exc'd

1625 - on surface

<u>Date</u>	<u>Time PDT</u>	
Sep. 18	0730	- on station JF2C-K for deployment - setting up.
	0832	- launched JF2C-K in 185 m (on sounder) at position $48^{\circ} 21.474'$ $124^{\circ} 12.802'$ - head for JF2E-K set up on way
	0930	- launched JF2E-K in 152 m (on sounder) at position $48^{\circ} 15.147$ $124^{\circ} 09.749'$ - head for AS04 deployment - Dave injured finger lifting 75 kHz ADCP - WCB + HOIR will be completed
	1307	- launched AS04-I in 117 m (on sounder) at position $48^{\circ} 18.012'$ $123^{\circ} 22.541'$ - sail for I.O.S. packing for off-loading.
app. 1830		arrive + tie up - offload Sep. 19 morning