## **EXPEDITION PLAN AND ITINERARY**

DEPARTMENT: DFO, Ocean Sciences Division

**MISSION NO:** 2013-01

#### CCG PATROL NO: 11-12

MISSION AREA: Line P, Station Papa.

**MISSION OBJECTIVE**: Repeat hydrography/zooplankton section, deploy MetOcean floats for DFO/IOS, deploy two Iridium floats for University of Washington, deploy drifters for University of Berkeley.

**SHIP**: John P. Tully

**DATE, FROM**: 5 February 2013 **TO**: 19 February 2013

SENIOR SCIENTIST: Marie Robert 363.6612 marie.robert@dfo-mpo.gc.ca

SCIENTIFIC PERSONNEL: 11 berths required

| Female                        | Male                    |
|-------------------------------|-------------------------|
| Emily Braithwaite (volunteer) | Michael Arychuk (IOS)   |
| Tamara Fraser (IOS)           | Mark Belton (Volunteer) |
| Marie Robert (IOS)            | Glenn Cooper (IOS)      |
| Jill Sutton (U. Berkeley)     | Sam Kheirandish (UBC)   |
|                               | Hugh Maclean (IOS)      |
|                               | Kyle Simpson (IOS)      |
|                               | Todd Wood (U. Berkeley) |

**SHIP EQUIPMENT REQUIRED**: EK60 functioning, EA600 functioning, EA600 remote display available from the closet and the bridge, GPS in lab/closet functioning, both DD20s functioning in the main lab, sea water supply to lab, heave compensator, tugger winch.

#### **DECK MACHINERY REQUIRED:**

See last page of this plan.

**OTHER EQUIPMENT TO BE LOADED**: Scientific gear (lab instruments, sampling equipment, etc.), aft-deck container.

**ANTICIPATED LOADING TIME**: Half-day. Loading will start as soon as the Tully is available, at the latest on February 5 at 1200. Departure in the evening.

#### **DANGEROUS CHEMICALS:**

Separate list to follow, to be handed to the Chief Officer before departure. Radioisotopes will NOT be used during this cruise.

| Station | Latitude                             | Longitude   | Bottom  | Sampling                 |  |  |
|---------|--------------------------------------|-------------|---------|--------------------------|--|--|
|         | deg min N                            | deg min W   | Depth m |                          |  |  |
| 6102    |                                      |             |         | e location in the inlet. |  |  |
| SI03    | 48°35.6                              | 123°30.0    | 225     | Rosette to B-10 for IOS  |  |  |
| 101     | 40.16.0                              | Underway sa |         | · ·                      |  |  |
| JF1     | 48 16.0                              | 123 30.0    | 150     | under way                |  |  |
| JF2     | 48 18.0                              | 124 00.0    | 180     | under way                |  |  |
| JF3     | 48 27.0                              | 124 30.0    | 230     | under way                |  |  |
| JF4     | 48 32.3                              | 125 00.0    | 60      | under way                |  |  |
|         | Line P CTD and water sampling survey |             |         |                          |  |  |
| P1      | 48 34.5                              | 125 30.0    | 120     | CTD B-10                 |  |  |
| P2      | 48 36.0                              | 126 00.0    | 114     | Rosette B-10, Bongo      |  |  |
| P3      | 48 37.5                              | 126 20.0    | 730     | CTD B-10                 |  |  |
| P4      | 48 39.0                              | 126 40.0    | 1300    | Major station.           |  |  |
| P5      | 48 41.5                              | 127 10.0    | 2100    | CTD 2000 m               |  |  |
| P6      | 48 44.6                              | 127 40.0    | 2500    | CTD 2000 m               |  |  |
| P7      | 48 46.6                              | 128 10.0    | 2450    | CTD 2000 m               |  |  |
| P8      | 48 49.0                              | 128 40.0    | 2440    | Major station.           |  |  |
| P9      | 48 51.4                              | 129 10.0    | 2340    | CTD 2000 m               |  |  |
| P10     | 48 53.6                              | 129 40.0    | 2660    | CTD 2000 m               |  |  |
| P11     | 48 56.0                              | 130 10.0    | 2700    | CTD 2000 m               |  |  |
| P12     | 48 58.2                              | 130 40.0    | 3300    | Major station.           |  |  |
| P13     | 49 02.6                              | 131 40.0    | 2875    | CTD 2000 m               |  |  |
| P14     | 49 07.4                              | 132 40.0    | 3275    | CTD 2000 m               |  |  |
| P15     | 49 12.0                              | 133 40.0    | 3200    | CTD 2000 m               |  |  |
| P16     | 49 17.0                              | 134 40.0    | 3550    | Major station.           |  |  |
| P17     | 49 21.0                              | 135 40.0    | 3200    | CTD 2000 m               |  |  |
| P18     | 49 26.0                              | 136 40.0    | 3775    | CTD 2000 m               |  |  |
| P19     | 49 30.0                              | 137 40.0    | 3850    | CTD 2000 m               |  |  |
| P20     | 49 34.0                              | 138 40.0    | 3890    | Major station.           |  |  |
| P21     | 49 38.0                              | 139 40.0    | 3840    | CTD 2000 m               |  |  |
| P22     | 49 42.0                              | 140 40.0    | 3880    | CTD 2000 m               |  |  |
| P23     | 49 46.0                              | 141 40.0    | 3970    | CTD 2000 m               |  |  |
| P24     | 49 50.2                              | 142 40.0    | 3910    | CTD 2000 m               |  |  |
| P25     | 50 00.0                              | 143 36.3    | 3890    | CTD 2000 m               |  |  |
| P35     | 50 00.0                              | 144 18.2    | 4170    | CTD 2000 m               |  |  |
| P26     | 50 00.0                              | 145 00.0    | 4250    | Major station.           |  |  |
| Mooring | 50°08.00                             | 144°50.00   | ~4250   | Rosette                  |  |  |

#### **Station List:**

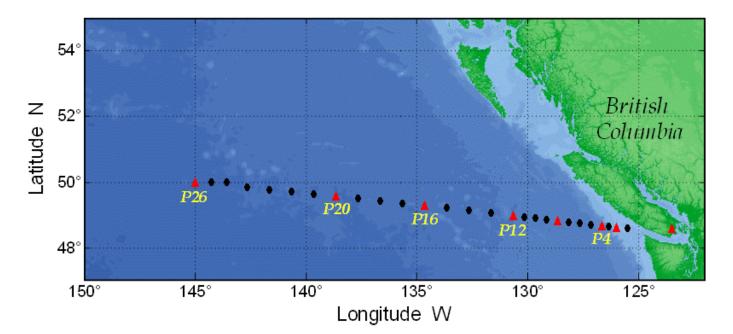
Note: we only have 2 weeks total for this cruise. Depending on weather we might go straight to Station P and work on the way back.

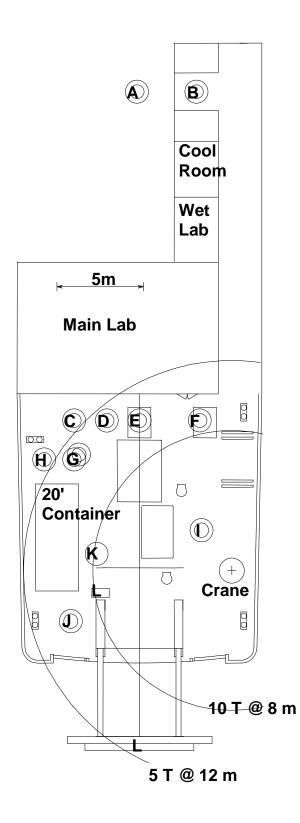
Major station: Many rosette casts, bongo to 250 m, Go-flos and pumping in the chains.

# Itinerary

- Feb 5Start loading at 1200 (or earlier if possible). Leave after dinner. Do a rosette cast in<br/>Saanich Inlet. Depart to P1 when sampling completed.
- ~Feb 14 Arrive at Station Papa.
- ~Feb 15 Leave Station Papa.
- Feb 19 Arrive at IOS and offload. Ship to be clear by noon.

## **Cruise track**





# CCGS John P. Tully

Deck Lay Out: Station P Cruise, M. Robert

Cruise ID: **2013-01** Date : **Feb 5**<sup>th</sup> **to Feb 19**<sup>th</sup>. **2013** 

|                     |                                    | ed 13,2013         |  |  |
|---------------------|------------------------------------|--------------------|--|--|
| A:                  | Empty                              |                    |  |  |
| B:                  | Rosette Landing                    |                    |  |  |
| C/D:                | Trace Metal Lab Container          |                    |  |  |
|                     |                                    |                    |  |  |
| E:                  | CTD Winch #17027 c/w 4500m         |                    |  |  |
|                     | x .322"Ø x 3 cdr cable             |                    |  |  |
| F:                  | Bongo winch 420 #1432 c/w 2650 m x |                    |  |  |
|                     | 5/32" X 3x19                       |                    |  |  |
| G:                  | Empty                              |                    |  |  |
| H:                  | Empty                              |                    |  |  |
| l:                  | Empty                              |                    |  |  |
| J:                  | Empty                              |                    |  |  |
| K:                  | Not Required                       |                    |  |  |
| L:                  | Heave Compensator Required         |                    |  |  |
| Cr                  | ane                                | Required           |  |  |
| Aft A               | Frame                              | Required           |  |  |
| Hawboldt Hydro (BD) |                                    | 0.25"ø x 4550m     |  |  |
|                     |                                    | Kevlar line        |  |  |
| Hawboldt CTD (BD)   |                                    | #17026 c/w 5350m x |  |  |
|                     |                                    | .322ӯ x 3 cdr      |  |  |
| Stbd. A             | A-Frame                            | Not Required       |  |  |
| 20' Co              | ontainer                           | Required           |  |  |
| Rad V               | an (BD)                            | Not Required       |  |  |
| A 1 11/1 1          |                                    |                    |  |  |

Additional Comments:

- Hawboldt spares box to be loaded.
- Please also load, 2 Osco 20" CTD blocks, and an Omron counter for each winch. The Heave Compensator and Tully Tugger operational c/w spares are required.