| | Wat | ter Pr | operti | es | Grou | р | | Sar | mpl | ing L | .og | | Instit | ute of (| Ocea | n Scien | nces, O | cean Sciences | | | | |
|-------------|--------|--------|-----------|----|----------|----------------------|---------|--------------------|-----|----------|----------|---|--------|----------|------|---------|---------|---------------|---------------|--|----------------|-------------|
| | Cruise | D: | 2015-01 | | Station: | | Haro | 59 | | Event # | :3 | | | Ship | | Tully | | UTC Date (c | d mm | m yyyy): _(| 12 | 2015 |
| Niskin # | | Sample | Rosette C | Co | ration | Samp DIC NR/PH | les Tak | en / San Nut-fr | | pH GC | No Mg | | | | | | | Comments | | Profile type: ROS TRM Watchkeepe | X-Niskin | other? |
| 1 | 1 | 1 | Bot-10 | 17 | 214 | x | x | x | | x | | | | | | | | | | | | |
| 2 | 4 | 2 | 200 | 1 | 201 | xx | x | x | | x | | | | | | | | | | Bottom Dept | h:225 | m |
| 3 | 5 | 3 | 175 | | 175 | x | x | x | | xxx | | | | | | | | | | Transmisso | Cleaned: | Ŷ/N |
| 4 | 6 | 4 | 150 | 1 | 151 | x | x | x | | × | | • | | | | | | | - | | | |
| 5 | 8 | 5 | 125 | V | 125 | x | xx | x | | x | | | | | | | | | | Time | UTC | Local |
| 6 | 9 | 6 | 100 | V | 99 | x | x | x | | x | _ | | | | | Se | | | _ | Start | 0519 | 2119 |
| 7 | 12 | 7 | 80 | V | 80 | xx | x | xx | | x | | | | | | | | | | Bottom | 0524 | |
| 8 | 14 | 8 | 60 | ~ | 60 | x | x | x | | x | | | | | | 1.1. | | | | End | 0542 | *1 |
| 9 | 15 | 9 | 50 | 1 | 49 | x | x | x | | x | | _ | | * | | | | | | | | <i>4</i> |
| 10 | 17) | 10 | 40 | ~ | 40 | x | x | × | | x | | - | | | | _ | | | | Positional In | | - |
| 11 | 18 | 11 | 30 | 1 | 29 | x | x | x | | x | | _ | | | | | | | | Lat: 4 | B · 36. | <u>60 N</u> |
| 12 | 19 | 12 | 20 | 1 | 20 | x | x | x | | × | | - | | | | | | * | - lõ | ō Lon: 12. | 3 14.0 | 02 W |
| 13 | 20 | 13 | 10 | 1 | . 10 * | xx | x | x | | XXX | | | - | _ | | - | | | | | 2 . 3/ 5 | 2- |
| 14 | 21 | 14 | 5 | V | 5 | x | XX | × | | x | | | | | | | | | | Lat: 48 | 3 0 36.8 | O N |
| 15 | 24 | 15 | 0 | | 0.4 | × | x | x | | x | | _ | | | | | | | ° | | ▼ 14.6 | <u>V W</u> |
| 16 | 2 | 16 | Bot-10 | 1 | 2.14 | | × | <u></u> | | | × | | | | | - | | | | 1 | 8 ° 36. | 77 |
| 17 | 3 | 17 | Bot-10 | | 2142 | | | No. | | | X | | | | - | e Think | | | 3 | 8 | 30 14 | |
| 18 | 7 | 18 | 150 | Ľ | 151 | - | | | | | X | | | | | | | | | | -31 | VV |
| 19 | /0 | 19 | 100 | É | 99 | | | | | | X | | | | ÉV. | - | | | | Extra comm | onts: | |
| 20 | 11 | 20 | 100 | F. | 99 | | | | | | X | | | | | | | | | Debby and I | | |
| 21 | 13 | 21 | 75 | | | | | | | | X | | | | | | | | | OUT-OF-OR | _ | 7. |
| 22 | 16 | 22 | 50 | V | 49 | | | | | | X | | | | | | | | | 1; 16-17; 20 | | -20: 7.21 |
| 23 24 | | | | | | | | | | x | _ | | | | | | | | 8-9; 22; 10-1 | | | |
| 2 4 | 42 | 24 | 5 | | | | - | | | | ^ | | | | - | 4 | | | | Promitical and the second second | Inneisetekuete | |

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

J

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | ID: | 2015-01 | | Station: | · | JF2 | | | Event | #: | 5 | | | Ship: _ | | Tully | UTC Date (c | | | FEB | 1 2015 |
|-------------|-------------|-------------|---------|----|----------|-------------------|-------------------------|--------------------|------------------------|----------------------|-----|------|----|----|---------|---|-------|-------------|----------------|--|---------------|----------|
| Niskin # | Firing # | Sample # | | Co | | Samp DIC KS | les Tak Oxy MB/KB | en / San Nut-fr | n pler's Sal | Initials pH GC | Chl | HPLC | | Cr | | | | Comments | | Profile type: ROS) TRM Watchkeeper | | |
| 1 | 1 | 25 | Bot-10 | V | 177 | x | x | x | | x | | | | x | | | | | | 10 s 0' | | |
| 2 | 2 | 26 | 150 | V | 1 KO | xx | x | x | | x | | | | | | | | | | Bottom Depth | : 187 | 7 |
| 3 | 5 | 27 | 125 | 4 | 1.125 | x | x | x | | xxx | | | | | | | | | | Transmisso C | leaned: | (y) / N |
| 4 | 0 | 28 | 100 | V | 100 | x | x | x | | x | | | | | | 1 | | | | | | |
| 5 | 9 | 29 | 80 | V | 08. | x | xx | x | | x | | | | | | | | | | Time | UTC | Local |
| 6 | 10 | 30 | 60 | V | 60 | xx | x | x | | x | | | | | | | | | | Start | 1112 | 0312 |
| 7 | 13 | 31 | 50 | V | 50 | x | x | xx | | x | | | | | | | | | | Bottom | 1116 | |
| 8 | 14 | 32 | 40 | V | . 40 | x | x | x | | x | | | | | | | | | | End | 1132 | |
| 9 | F | 33 | 30 | V | 30 | x | x | x | | x | xx | xx | | | | | | | | | | |
| 10 | 18 | 34 | 20 | V | 20 | xx | x | x | | x | | | | | | | | | | Positional Int | | |
| 11 | 21 | 35 | 10 | V | 10 | x | x | x | | xxx | | | | | | | | | t | Lat: 48 Lon: 124 | ° 18 | 0) N |
| 12 | 22 | 36 | 5 | V | 15 | x | x | x | | x | xx | xx | | | | | | | ي [| Lon: 124 | <u>° 00</u> . | 14 W |
| 13 | 24 | 37 | 0 | V | 0 | x | x | x | | x | | | | | | | | | | | | |
| 14 | 3 | 38 | 150 | 1 | 110 | | | | | | | | | x | | | - | | tton | Lat: 48 | • IKC | N N |
| 15 | 4 | 39 | 125 | 1 | 125 | | | | | | | | | x | | | | | ñ | Lat: 48 Lon: 124 | <u>• 00</u> | 46 W |
| 16 | 7 | 40 | 100 | V | .00 | | | | | | | | | x | | | | 21 | | | | - Ha - H |
| 17 | 8 | 41 | 80 | V | .80 | | | | | | | | | x | | _ | | | | Lat: 48 Lon: 124 | · 18 | 50 N |
| 18 | 11 | 42 | 60 | V | 1.60 | | | | | | | | | x | | | | | ū | Lon: 124 | • <u>Oo</u> | 14 w |
| 19 | 12- | 43 | 50 | V | 50 | | | | | | | | 20 | x | | _ | | | | - | | |
| 20 | 15 | 44 | 40 | V | 1 | | | | | | | | | x | | | | | | Extra comme | | |
| 21 | 16 | 45 | 30 | 1 | 30 | | | | | | | | | x | | _ | | | | Debby and R | oger | 11/ |
| 22 | 19 | 46 | 20 | V | 20 | | | | | | | | | x | | | | | | Debby and R 1-2; 14-15;3-4 | 1; 16-17; 5- | 6; 18-19 |
| 23 | 20 | 47 | 10 | V | 10 | | | | | | | | | x | | | _ | | | 7-8; 20-21; 9- | 10; 22-23; | 11-12; |
| 24 | 23 | 48 | 5 | V | 15 | | | | | | | | | x | | | | | | 24; 13 | | - |

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Sampling Log

16

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | ID: | 2015-01 | | Station: | | P1 | | _ | Event | t #: | 10 | | Ship: | _ | Tully | | UTC Date (dd m | | | | |
|-------------|-------------|-------------|---------------------------------|-----------|------------------------------|----------------|----------------------|-----------------|------------------------|----------|------|-----|------|----------|---|-------|---------------------------------------|-----------------------------------|--------------|--------------------------------------|---------------------|--------------|
| Niskin # | Firing # | Sample # | Rosette C Target Pressure | Cor | ation nfirmed Pressure | Sampl Nut-F | es Tak Sal | en / Sai Chl | mpler's | Initials | | рН | | Nd | | | | Comments | Pr ℝ ₩ | ofile type: OS) TRM atchkeeper | X-Niskin (s): MS | other? |
| 1 | 1 | 49 | Bot-10 | 1 | 116 | X | | | | xx | xx | xxx | | | | | | | | | | |
| 2 | 2 | 50 | 30 | \bigvee | 29 | X | | xx | xx | x | x | x | | | | | | i | В | ottom Dept | h: <u>118</u> | m |
| 3 | 3 | 51 | 5 | V | 5 | t HA | x | xx | xx | x | x | x | | | | | | No water left | Tr | ansmisso | Cleaned: | Y I N |
| 4 | | | | | |) C | | | | | | | | | | | | (no idea why) | | | | |
| 5 | | | | | | | | 5 | 1 | | | | | | | | | -no NH, 1/2 of | Ti | me | UTC | Local |
| 6 | | | | | | | | Nut | | | | | | | | | | 2" HALC from | St | art | 19:21 | 1121 |
| 7 | | | | | | | | ₽ ₽ | | | | | | | | | | 5 m Bottle | B | ottom | 19:24 | |
| 8 | | | | | | | | | | | | | | | | | | | E | nd | 19:28 | |
| 9_ | | | | | | | | | 5 m 015-01 Bot 3 | | | | | | | | · · · · · · · · · · · · · · · · · · · | | | | | |
| 10 | | | | | | | | | | | | | | <u> </u> | | | | | | ositional In | | |
| 11 | | | | | | | | | 1 | | | | | | | | | | t La | at: 48 | 0 34 | 54 N 13 W |
| 12 | | | | | | | | | | | | | | 0.00 | | | - 6 | | ts Lo | on: 12.5 | • 30 | 13 w |
| 13 | | | | | | | | | | | | | | | | | | | | | V | |
| 14 | | | | | | | | | | | | | | | | | | | Li ton | at: 48 | 0 34 | 55 N |
| 15 | | | | | | | | | | | | | | | | | | | B La | on: 125 | 0 30 | 55 N 14 W |
| 16 | | | | | | | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | | | - La | at: 48 | 0 34 | 58 N 18 W |
| 18 | | | | | | | | | | | | | | | | | | | ۳ ۳ | on: 125 | • 30 | 18 w |
| 19 | | | | | | | | | | | | | | | | | | | - | | | |
| 20 | | | | | | | | | | | | | | | | | 11 | | | xtra comm | | |
| 21 | | | | | | | | | - | | | | | | | | | | XI | Fire both | 4 23 | to |
| 22 | | | | | | | | | | | | | | | | | | no sample fire to check spigat | | test spis | all vent | |
| 23 | 4 | - | 5 | V | 5 | | | | | | | | | | _ | | | fire to check spirat | | shich m | aybe 1 | entry. |
| 24 | | | | | | | | | | | | | | | | | | 13 | 1 | -Verd S | light leak | - / |

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http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

| Water | Pro | perties | Grou |
|-------|-----|---------|------|
|-------|-----|---------|------|

up Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | ID: | 2015-01 | Statio | n: | P2 | | | Event | :#: | 16 | | Ship: | Τι | ully | UTC Date (de | dimmmiyyyy): <u>11 2 2015</u> |
|-------------|-------------|-------------|--------------------|--------------|-----|----------|----------|---------|----------|-----|----|--------|-----------|----|------|--------------|---|
| | | | Rosette C | peration | Sam | ples Tak | en / San | npler's | Initials | | | | 4 | | 72 | Comments | Profile type: |
| Niskin # | Firing # | Sample # | Target Pressure | | | Nut-F | Nut-C | Sal | DIC | pH | | Céline | | | | | Profile type: ROS TRM X-Niskin other? |
| | # | # | Pressure | | | | | | | | | | | | | | Watchkeeper(s): |
| 1 | 1 | 96 | Bot-10 | V (06 | xx | x | | | x | x | | x | | | | | |
| 2 | 2 | 97 | 100 | 1 | x | x | | | x | x | | x | | - | | | Bottom Depth: <u>115</u> m |
| 3 | 3 | 98 | 75 | \checkmark | × | x | | | хх | x | | | | | | | Transmisso Cleaned: 🔗 / N |
| 4 | 4 | 99 | 75 | V | x | x | | | x | x | | | | | | | |
| 5 | 5 | 100 | 50 | / | x | x | | | x | xxx | | x | | | | | Time UTC Local |
| 6 | 6 | 101 | 25 | | × | хх | | | x | x | | x | | | | | Start 2320 1520 |
| 7 | 7 | 102 | 10 | 1 | × | x | | | x | x | | x | | | | | Bottom 2321(|
| 8 | 8 | 103 | 5 | \checkmark | x | x | | x | x | х | | | | | | | End 2374 |
| 9 | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | Positional Information |
| 11 | | | | | | | | | | | | | | | (4) | | + Lat: 48 . 26.01 N |
| 12 | | | | | | | | | | | | | | | - | | Lon: 125. 59.97 w. |
| 13 | | | | | | | | | | | | | | | | | $ \begin{array}{c} $ |
| 14 | | | | | | | | | | | 54 | | | | | | Eg Lat: 48 ° ₩ 36.00 N Lon: 125 ° 59.95 W Lat: 48 ° 36.01 N Lon: 125 ° 59.95 W |
| 15 | | | | | | | | | | | | | | | | | B Lon: 125 . 59.95 W |
| 16 | | | | | | | | | | | () | | | | | | |
| 17 | | | | | | | | | | | | | | | | | Lat: 48 . 36.01 N |
| 18 | | | | | | | | | | | | | | | | | Eun: 125 . 59.97 W |
| 19 | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | - | | | | _ | | 4 | | Extra comments: |
| 21 | | | | | | | | | | | | | | | | | Deep cast + Céline |
| 22 | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | |
| 24 | 10.1 | | | | | | | | | | | | | | 1 | | |

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

| | Wat | er Pro | opertie | es G | Grou | р | Sam | pling | Log | In | stitute of (| Ocean Scienc | es, Ocean Sciences I | Divisi | ion, Sidney, BC |
|-------------|-------------|-------------|--|-------------------------|--------|-------------|--------------|-------|------|----|--------------|---------------------|----------------------|---------|--|
| | Cruise | ID: | 2015-01 | Sta | ation: | P2 | | Even | t #: | 12 | Ship: | Tully | UTC Date (dd | l mmn | nyyyy): 11 2 2015 |
| Niskin # | Firing # | Sample # | Rosette O Target Pressure | Confirm | ned | Samples Tal | ken / Sample | | | - | | | Comments | | Profile type: ROS TRM X-Niskin other? Watchkeeper(s): Watchkeeper(s): |
| 1 | | 52 | Bot-10 | 1 | 67 | | x | | | | | | | | |
| 2 | | 53 | Bot-10 | 1 | | | x | | | | | | | | Bottom Depth: 115 m |
| 3 | | 54 | Bot-10 | V | | | x | | | | | - | | | Transmisso Cleaned: (Y) / N |
| 4 | | 55 | Bot-10 | \checkmark | | | x | | | | | | | | |
| 5 | | 56 | 100 | 11 | 00 | | x | | | | | | | | Time UTC Local |
| 6 | | 57 | 100 | 4 | | | x | | | | | | | | Start 2138 1338 |
| 7 | | 58 | 100 | ~ | | | x | | | | | | | _ | Bottom 2140 |
| 8 | | 59 | 100 | $\overline{\mathbf{A}}$ | | | x | _ | | | | | | _ | End 2149 |
| 9 | | 60 | 75 | 1 | 75 | | x | | | | | | | _ | |
| 10 | | 61 | 75 | 1 | | | x | | | | | | | _ | Positional Information |
| 11 | | 62 | 75 | | | | x | | | | | | | <u></u> | Lat: 48 ° 36.08 N |
| 12 | | 63 | 75 | 1 | | | x | | | | | | | Sta | Lon: 125 . 59.96 W |
| 13 | 8 | 64 | 50 | 15 | 0 | | x | | ļ | | | | EFired early | | Lat: 48 ° 36.08 N Lon: 125 ° 59,96 W |
| 14 | | 65 | 50 | 5 | | | x | | | | | | | tton | Lat: 48 ° 36.07 N |
| 15 | | 66 | 50 | | | | x | | | | | | | | Lat: 48 ° 36.07 N Lon: 126 ° 0.03 W |
| 16 | | 67 | 50 | \checkmark | | | x | | | | | | | | |
| 17 | | 68 | 25 | 12 | 6 | | x | | | | | | | | Lat: 48 ° 36 07 N Lon: 126 ° 0:05 W |
| 18 | | 69 | 25 | | | | x | | | | | | | ដ្ | Lon: 126 ° 0.05 W |
| 19 | | 70 | 25 | V | | | x | | | | | | | _ | |
| 20 | | 71 | 25 | \checkmark | | | x | | | | | | | | Extra comments: |
| 21 | | 72 | 5 | 1 | 5 | | x | | | | | 1 | | | Maureen's cast for Nd |
| 22 | | 73 | 5 | 1 | | | x | | | | | | | | |
| 23 | | 74 | 5 | 1 | | | x | | | | | | | | |
| 24 | | 75 | 5 | V | | | x | | | | | | | | |

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Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | ID: | 2015-01 | _ | Station: | · | P2 | | - | Event | t #: | 15 | _ Ship: _ | Tully | UTC Date (dd | mmm yyyy): 1(2 2015 |
|-------------|-------------|-------------|---------------------------------|--------------|----------|-----|----|-----------------------|-------|-------|------|----|-----------|-------|-----------------|--|
| Niskin # | Firing # | Sample # | Rosette C Target Pressure | Co | | DMS | | en / Sar DMSP d | | | | Cr | | | Comments | Profile type: ROS) TRM X-Niskin other? Watchkeeper(s): |
| 1 | | 76 | 100 | \bigvee | 1 | x | x | x | xx | x | | | | | | |
| 2 | | 77 | 75 | V | ł | x | | | x | x | | | | | | Bottom Depth: m |
| 3 | | 78 | 50 | 1 | | x | | | x | x | | | | | | Transmisso Cleaned: (Y / N |
| 4 | | 79 | 40 | \checkmark |] | x | | | x | x | | | | | a . | |
| 5 | | 80 | 30 | 1 | | x | | | x | x | | | | | | Time UTC Local |
| 6 | | 81 | 25 | 1 | | x | | | - x | xx | | | | | | Start 2228 1428 |
| 7 | | 82 | 20 | 1 | | xx | xx | xx | x | x | | | | | | Bottom 2231 |
| 8 | | 83 | 15 | 1 | | x | | | x | х | | | | | | End 2245 |
| 9 | | 84 | 10 | V | / | x | | | x | x | | | | | | |
| 10 | | 85 | 5 | 1 | | x | x | x | x | x | | | | | | Positional Information |
| 11 | | 86 | 0 | 1 | (| x | x | x | x | x | | | | | | <u><u>t</u> Lat: 48 ° 36.05 N</u> |
| 12 | | 87 | 30 | V | 1 | | | | | хх | xx | | | | Had to rotorn ! | Lat: 48 ° 36.05 N Lon: (25 ° 59.97 W |
| 13 | | 88 | 15 | J | | | | | | хх | xx | | | | | |
| 14 | | 89 | 5 | 1 | | | | | | хх | xx | | | | | 5 Lat: 48 . 36.05 N |
| 15 | | 90 | Bot-10 | J | 106 | | | | | | | x | | | | Lat: 48 ° 36.05 N Lon: 125° 59.98 W |
| 16 | | 91 | 100 | \checkmark | | | _ | | a apr | | | x | | | | |
| 17 | | 92 | 75 | \checkmark | | | | | | | | x | | | | Lat: 48° 36.04 N Lon: 126° 0.01 W |
| 18 | | 93 | 50 | \bigvee | | | | | | | | x | | | | ш́ Lon: (26 ° ° °) w |
| 19 | | 94 | 25 | N | | | | | | | | x | | | | |
| 20 | | 95 | 5 | \checkmark | | 1 | | | ×. | | | x | | | | Extra comments: |
| 21 | 5. | | | | | | | | | | | | | | | DMS + Kohen cast; out-of-order |
| 22 | | - | | | | | | | | | - | | | | | 15-16-1-2-17-18-3-4-5 12-6-19-7-8-13-9-10-14 |
| 23 24 | | | | | in Med | | | | | | | | | | | 1/2 - 6/- 19/- 7/-8/- 13/-9/- 10/- 1.4 20/- 1.1 |

Version: 25 Nov 2011

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

J

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | ID: | 2015-01 | | Station: | | P3 | | | Event | #: | 18 | Ship: | 1 | ully | UTC Date (d | ld mmm yyyy): <u> 2</u> _ | FEB | 2015 |
|----|--------|--------|-----------|--------------|----------|-------|--------|----------|---------|----------|----|----|-------|---|---------|-------------|------------------------------|--------------|--------------|
| | | | Rosette C | - Dpei | | Sampl | es Tak | en / San | npler's | Initials | | | | | | Comments | Profile type: ROS TRM X-N | iokin | othor? |
| | | Sample | | | | Nut-F | Sal | Chl | HPLC | | Nd | | | | | | Watchkeeper(s): | ISKIII | |
| # | # | # | Pressure | V | Pressure | | | | | | | | 2 | | | | | DY | |
| 1 | | 104 | Bot-10 | 1 | 772 | | | | | | x | | | | | - | | 0 - | |
| 2 | | 105 | Bot-10 | 1 | 772 | | | | | | x | | 4 | | | | Bottom Depth: | | |
| 3 | | 106 | 625 | V | ~626 | | | | | | x | | | | | | Transmisso Clea | ned: (| (Y) I N |
| 4 | | 107 | 625 | V | -625 | | | | | | х | | | | | | | | |
| 5 | | 108 | 525 | 1 | 525 | | | | | | x | | | | | | | UTC | Local |
| 6 | 1. | 109 | 525 | 1 | 525 | | | | | _ | x | | | | | -9. I. | | 111 | 1711 |
| 7 | | 110 | 425 | J | 425 | | | | | | x | | | | | | | 130 | |
| 8 | | 111 | 425 | 1 | 425 | | | | | | x | | - | | | | End O | 201 | τ |
| 9 | | 112 | 375 | J | 478 | | | | | | x | | | | | | | | |
| 10 | | 113 | 375 | V | 475 | | | | | | x | | | | | - | Positional Inform | | |
| 11 | | 114 | 300 | \bigvee | 300 | | | | | | x | | | | 5 | | Lat: 48 • Lon: 126• | 37.5. | <u>3 Ň</u> , |
| 12 | | 115 | 300 | V | 300 | | | | | | x | | | | 1 | | 5 Lon: 1260 | 20.02 | Ŵ |
| 13 | | 116 | 225 | 1 | 226 | | | | | | x | | | | | | | | - |
| 14 | | 117 | 225 | J | 226 | | | | | | x | | | | | | Lat: 480 | | |
| 15 | | 118 | 175 | 2 | 175 | | | | | | x | | | | | | Lat: 480 Lon: 1260 | 20.2 | 23 w |
| 16 | | 119 | 175 | V | 174 | | | | | | x | | | | | | | ▼ | |
| 17 | | 120 | 100 | V | 101 | | | | | | x | | | | · · · · | | Lat: 48 ° | 37.6 | <u>59</u> N |
| 18 | | 121 | 100 | \checkmark | 101 | | | | | | x | | | | | | ш. Lon: 126 ° | <u>20. E</u> |)9 w |
| 19 | | 122 | 50 | 1 | 53 | | | | | | x | | | | | | | | |
| 20 | | 123 | 50 | 1 | 52 | | | | | | x | | | | | | Extra comments | : | |
| 21 | | 124 | 5 | V | 5 | | | | | | x | | | | | | OUT-OF-ORDER | | |
| 22 | | 125 | 5 | V | 5 | | | | | | x | | | | | | 1 - 20; 23 - 24;. 2 | 1 - 22 | |
| 23 | | 126 | 30 | ſ | 30 | x | | xx | xx | | | | | | | | | | |
| 24 | | 127 | 5 | 1 | | x | x | | xx | | | | | | | | | | |

Version: 25 Nov 2011

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | ID: | 2014-19 | | Station: | P4 | Event #: _ | 20 | Ship: | Tu | | Date (dd mmm yyyy): 12 2 2015 |
|-------------|-------------|-----|-----------|-------------------------|----------|---------------------|------------|----|-------|----|--------------|---|
| Niskin # | Firing # | | Rosette C | per Co | ation | Samples Taken / Sam | | | | | Comments | Profile type: (ROS) TRM X-Niskin other? Watchkeeper(s): |
| 1 | | 128 | 150 | | 152 | x | | | | | | |
| 2 | | 129 | 150 | 1 | | x | | | | | | Bottom Depth: 13/0 m |
| 3 | | 130 | 150 | 1 | | x | | | ÷ | | | Transmisso Cleaned: Y) / N |
| 4 | | 131 | 150 | V | j | x | | | | | 1 P | |
| 5 | | 132 | 150 | J | / | x | | -2 | | | | Time UTC Local |
| 6 | | 133 | 150 |]] | | x | | | | | | Start ()357 1957 |
| 7 | | 134 | 100 | $\overline{\mathbf{V}}$ | 102 | x | | | | | | Bottom 0354 |
| 8 | | 135 | 100 | V | | x | | | | | | End 0403 |
| 9 | | 136 | 100 | V | | x | | | | | | |
| 10 | | 137 | 100 | V | | x | ± | | | | | Positional Information |
| 11 | | 138 | 100 | 17 | | x | | | | | | Lat: 48 ° 39 0 / N Lon: 126 ° 39.97 W |
| 12 | | 139 | 100 | V | | x | | | | | , 14 , 14 | あ Lon: 126 · 39,97 w |
| 13 | | 140 | 50 | V | 51 | x | | | | | | |
| 14 | | 141 | 50 | 1 | | x | | | | | 4.1 | Lat: 48 • 39.01 N Lon: 126 • 39.96 W |
| 15 | | 142 | 50 | J | | x | | | | | | B Lon: 126 . 39,96 w |
| 16 | | 143 | 50 | J | | x | | | | | | |
| 17 | | 144 | 50 | V | 2 | x | | | | | | Lat: 48 • 39.0 N Lon: 126 • 39.96 W |
| 18 | | 145 | 50 | J | | x | | | | | | Lon: 126 • 39.96 w |
| 19 | | 146 | 0 | J | 2 | x | | | | | | |
| 20 | | 147 | 0 | 17 | | x | | | | | | Extra comments: |
| 21 | | 148 | 0 | J | | x | | | | | | Shallow Cesium cast |
| 22 | | 149 | 0 | J | | x | | | | | | |
| 23 | | 150 | 0 | V | | x | | | | | | |
| 24 | | 151 | 0 | V | | x | | | | | | |

Version: 25 Nov 2011

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http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

1

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | ID: | 2015-01 | _ | Station: | | P4 | | £6 | Event | t #: | 21 | | | Ship: | Tull | у | UTC Da | ate (dd m | | | | 12015 |
|-------------|-------------|-------------|---------------------------------|--------------|----------|------|-----------------|----------|-----------------------|----------|------|----------|--------------------|---------|-------|------|---------|----------|-----------|----------|--|----------------------------|-----------------|
| Niskin # | Firing # | Sample # | Rosette C Target Pressure | per Co | ation | Samp | les Take UBC | en / San | n pler's Cs | Initials | - | | | | | | | Comments | | | Profile type (ROS) TRM Watchkeep | : X-Niskin er(s): ファ | other? |
| 1 | | 152 | Bot-10 | 17 | 1319 | | x | | | | | | | | | | | | | | | | |
| 2 | | 153 | Bot-10 | 17 | | | | | | | + | | | 11 1 | | | | | | | Bottom Dep | oth: <u>13</u> 1 | <u> </u> |
| 3 | | 154 | Bot-10 | 1 | | | | | | | | | | | | | | | | | Transmisso | Cleaned: | Y / N |
| 4 | | 155 | Bot-10 | 1 | | - | | | | | | 1. | | | | | | | 19.0 | | | | |
| 5 | | 156 | 1000 | \checkmark | 1001 | N | x | | | | | | | | | | | | | Ι, | Time | UTC | Local |
| 6 | | 157 | 1000 | 1 | | | | | | | | <u>1</u> | | | | | | - 60 | | | Start | 0435 | |
| 7 | | 158 | 1000 | V | / | | | | | | | | | | | | | | 2 | | Bottom | 0459 | |
| 8 | | 159 | 1000 | V | | | | | | | | | , ^e n | , 5m | | | - Junio | | | | End | 0527 | |
| 9 | | 160 | 500 | 1 | 501 | | x | | | | | | | | | | | | | | | | |
| 10 | | 161 | 500 | V | | | | | | | X | | | | | | | | | | Positional | | |
| 11 | | 162 | 500 | V | | | | | | | | | | | | | | | | E | Lat: 45 Lon: 121 | • 39 | 01 N |
| 12 | | 163 | 500 | V | | | 12 | | | | | | | | | | | | g | Sta | Lon: 12 | 6 ° 39 | .99 w |
| 13 | | 164 | 10 | 1 | 10 | | x | | | | | | | | | | | | - K | | | | |
| 14 | | 165 | 10 | 1 | | | | | | | | | | | | 1 | | | | Eo To | Lat: 48 Lon: (こ | • 29 | ,0/ N |
| 15 | | 166 | 10 | V | | | | | | | | | | | - | | | | | <u> </u> | Lon: (2 | 6.39 | .99 w |
| 16 | | 167 | 10 | V | | | | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | | | | - | Lat: 48 | 2 . 39 | .01 N D.00 w |
| 18 | | | | | | | | | | | | | | | | | | | | Ē | Lon: (2 | 50 41 | <u>0.00 w</u> |
| 19 | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | 1 | | | | - | | | | n ^U n L | | | | | | | | Extra com | nents: | |
| 21 | | | | | | | | | | | | | | | | | | | | | Sam | | |
| 22 | | | | | | | | - | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | 10 | | | | | 1 | | | | - | | | | |

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http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | ID: | 2015-01 | s | Station: | | P 4 | | | Event #: | 22 | - | Ship: | Τι | ully | UTC Date (do | lmmr | n yyyy): <u>12</u> | _ Fet | 5 2015 |
|-------------|-------------|-------------|-----------|--------|----------------------------------|--------|------------|----------------------|---------|----------|----|---|-----------|----|------|---------------------|------|-------------------------|------------------------|---------------------|
| Niskir # | Firing # | Sample # | Rosette C | Dperat | tion îrmed Pressure | Samp | les Tak | en / Sar TM UN | npler's | Initials | ĺ | | | | | Comments KS .D.Y | | Profile type ROS TRM | X-Niskin | other? |
| 1 | | 168 | | | 40 | | × | ¥ | | | | | | Ξ. | | | | | | |
| 2 | | 169 | 1 I R | | 20 | | × | A | | | | | | | 2 | | | Bottom De | oth: <u>131</u> | <u> </u> |
| 3 | | 170 | | | 10 | | XX | XX | | | | | | | | | | Transmisso | Cleaned: | |
| 4 | 1.1 | 171 | | | 5 | | | Ξ.Π. | T T T | | | | | | | | | | 1 m. 2 ¹¹ 1 | 10.00 |
| 5 | | | | | | | | | | | | | | | | | | Time | UTC | I_ocal |
| 6 | | | | | | | | | | · | | | | | | + | | Start | 0612 | 20 22:0 |
| 7 | | | | | | | | | | | | | | | | | | Bottom | | |
| 8 | 1 | | | | | | | | | | | | | | | | | End | 070Y | 23:04 |
| 9 | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | Positional | Information | |
| 11 | | | | | | | | | 5 | | | | | | | | | Lat: 48 | •39.1 | ol N |
| 12 | | | | | | | | | | | | | | | | | Stai | Lon: 126 | · 39. | <u>51 n</u> 55 w |
| 13 | | | | | | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | | Eo | Lat: Lon: | 0 0 | N |
| 15 | | | | | | | | | | | | | | | | | Bot | Lon: | 0 | w |
| 16 | | | | | | | | | | , | | | | | | | | | V | |
| 17 | | | | | | | | | | | | | | | | | | Lat: 47 Lon: 120 | 039-1 | ON N |
| 18 | | | | | | | | | | | · | | | 11 | | | End | Lon: 120 | · · 39. | <u>) n</u> 93 w |
| 19 | | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | Extra com | nents: | |
| 21 | | | | | | | | | | | | | | | | | | TM pumpir | g | |
| 22 | | | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | 71 8 1 | | | | | | | | | | | | | | |

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http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | ID: | 2015-01 | • | Station: | P4 | ; | Event # | <u>= 25</u> | Ship: | Tully | UTC Date (o | ld mmr | n yyyy): _(| 2 FER | 2015 |
|-------------|-------------|-------------|---------------------------------|---------------|----------|---------------------------|-------------|-------------|-------------|-----------|--------|-------------|---------|---|--|--------------|
| Niskin # | Firing # | Sample # | Rosette O Target Pressure | Co | | Samples Taker Plastics | n / Sampler | 's Initials | | | | Comments | | Profile type (ROS) TRM Watchkeep | A X-Niskin | other? nB |
| 1 | 1 | 172 | Bot-10 | | 1319 | x | | | | | | | | | | |
| 2 | 2 | 173 | 1200 | \checkmark | 1202 | x | | | | | | | | Bottom De | pth:/3 | lucm |
| 3 | 3 | 174 | 1100 | 4 | 1100 | x | | | | | = | | | Transmiss | | (Y)/ N |
| 4 | 4 | 175 | 1000 | \leq | 1000 | x | | | | | | | | | | |
| 5 | 5 | 176 | 900 | 4 | 1900 | x | | | | | | | | Time | UTC | Local |
| 6 | 6 | 177 | 800 | \square | ,800 | x | | | | | | | | Start | 09.05 | 0105 |
| 7 | 7 | 178 | 700 | V | 700 | x | | | | | | | | Bottom | 0927 | |
| 8 | 8 | 179 | 600 | И | 600 | x | | | _ | | | | т. ц. | End | 10 07 | |
| 9 | 9 | 180 | 500 | V | 500 | x | | | | | | | | | | |
| 10 | 10 | 181 | 450 | \vee | ,450 | x | | | | | | | | Positional | Information | |
| 11 | 11 | 182 | 400 | \checkmark | 400 | x | | | | | * | | ± | Lat: 49 | 2 . 39 | 02 N |
| 12 | 12 | 183 | 350 | \checkmark | ,350 | x | | | | | in the | | Stal | Lat: 4 | 6 . 39 | 99 W |
| 13 | 13 | 184 | 300 | V | 300 | x | | | | | | | | | | |
| 14 | 14 | 185 | 250 | V | 250 | x | | | | | | | to T | Lat: 48 | 3 . 37 | N 50 |
| 15 | 15 | 186 | 200 | V | 200 | x | | | | | | | Bot | Lon: 121 | 6 . 39 | 99 w |
| 16 | 16 | 187 | 175 | V, | 175 | x | | | | | | | | | V | |
| 17 | 17 | 188 | 150 | \vee | 150 | x | | | | | | | _ | Lat: 48 | • 39 | 07 N |
| 18 | 18 | 189 | 125 | V | 125 | x | | | | | | | Enc | Lon: 17(| · 40 | On w |
| 19 | 19 | 190 | 100 | V | 101 | x | | | | | | | | | ······································ | |
| 20 | 20 | 191 | 75 | \vee | 76 | x | | | | | | | п. п. | Extra comr | nents: | |
| 21 | 21 | 192 | 50 | V | 51 | x | | | | | | | | Plastics ca | st | |
| 22 | 22 | 193 | 25 | | 26 | x | | | | | | | | | | |
| 23 | 23 | 194 | 10 | V | 10 | x | | | | | | | | | | |
| 24 | 24 | 195 | 5 | $\overline{}$ | 5 | x | | | | | | | | | | |

Version: 25 Nov 2011

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http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | D: | 2015-01 | _ | Station: | | P4 | | | Event #: | 26 | | - | Ship: | Tully | , | UTC Date (| (dd mm | m yyy | /): <u>12</u> | FCB | |
|-------------|--------|--------|----------|--------------|----------|------|---------|-----------|-------|----------|-----|---|---|-------|-------|---|------------|--|--------|----------------------|-----------------|----------------------|
| | n | 8 | Rosette | Oper | ration | Samp | les Tak | en / Samp | ler's | Initials | | | | | | | Comments | | Profil | e type: | | |
| Niskin # | | Sample | Target | Co | nfirmed | | C | <u> </u> | Cr | | | | | | | | - | | ROS |)TRM | X-Niskin | other? |
| # | # | # | Pressure | V | Pressure | | | | | | | | | | | | | | Watch | кеере | r(s): MB | |
| 1 | 1 | 196 | Bot-10 | V | 1319 | | x | | | | | | | | | | | | | | | |
| 2 | 3 | 197 | 1250 | V | 1250 | | x | | x | | | | | | | | | | Botto | m Dept | :h: <u>1310</u> | <u>ර m</u> |
| 3 | 4 | 198 | 1000 | V | 1000 | | x | | | | | | | | | | | | Trans | misso | Cleaned: | (Y) N |
| 4 | Ŧ | 199 | 800 | 1 | 800 | | x | | | | | | | | | | | R. | | | | 0 |
| 5 | 8 | 200 | 600 | 1 | 600 | | x | | | | | | | | 5 | | | | Time | | итс | Local |
| 6 | 11 | 201 | 400 | V | 400 | | x | | | | | | | | | | | | Start | | 10.49 | 2:49 |
| 7 | 12 | 202 | 300 | \lor | 300 | | x | | x | | | | | | | | | | Botto | m | 11:10 | |
| 8 | 13 | 203 | 250 | V | 250 | | x | | x | | | | | | | | | 47 | End | | 11:49 | |
| 9 | 14 | 204 | 200 | 1 | 700 | | x | | x | | | | | | | | | | | | | 1 |
| 10 | 15 | 205 | 175 | \checkmark | 175 | | x | | x | | 1.8 | | | | | | | 544 1 | Posit | ional In | formation | |
| 11 | 16 | 206 | 150 | V | 150 | | x | | x | | | | | | | | | | Lat: | 48 | 0 39 | 62 N |
| 12 | T | 207 | 125 | V | 125 | | x | | x | | | 1 | - | | | | | C+2 | Lon: | 12.6 | • 40 | <u>62</u> N 06 W |
| 13 | 18 | 208 | 100 | | 100 | | x | | x | | | | | | | | | | | | | |
| 14 | 9 | 209 | 75 | V | 75 | | x | | x | | | | | | | | | a contraction of the second seco | Lat: | 48 | • 37 | OZ N |
| 15 | 20 | 210 | 50 | | 50 | | x | | x | | · · | | | | | | | | Lon: | 126 | • 40 | 072 N 00 W |
| 16 | 21 | 211 | 25 | \bigvee | 25 | | x | | x | | | | | | | | | | | | ▼ | |
| 17 | 27 | 212 | 10 | 1 | 10 | | x | | x | | | | | | | | | | Lat: | 48 | • 39 | 02 N |
| 18 | 23 | 213 | 5 | V | ,5 | | x | | x | | | | | | | | | | Lon: | 12.6 | · 40 | <u>0</u> 2 N 0\ W |
| 19 | 2 | 21À | Bot-10 | V | ,1320 | | | | x | | | | | | | | | | | | | |
| 20 | 5 | 215 | 1000 | 1 | loou | | | | x | | | | | | | | | | Extra | comm | ents: | |
| 21 | 6 | 216 | 800 | V | , 800 | | | | x | | | | | | | | | | Célin | e + Koł | nen | |
| 22 | 9 | 217 | 600 | 1 | 600 | | | | x | | | | | | | | | | 0 | 1.09 | older | ,5,22,23, |
| 23 | 10 | 218 | 400 | V | L160 | | | | x | | | | | | | | | | 110 | 12.3 | 20,21,4 | 5,22,23 |
| - 24 | | | | | | | | | | | | | | | | | | | 6 | 7- | 18 | 1 1 |

Version: 25 Nov 2011

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http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

| | Wat | er Pr | operti | es | Grou | р | | Sai | mpli | ing L | Log | | Inst | titute | of Oc | ean S | cience | es, Ocean Sciences | Division, Sidn | ey, BC | |
|-------------|-------------|-------------|---------------------------------|-----------|----------|---|----|-------------------|-----------------|----------|-----|----|------|--------|-------|-------|------------------------|--------------------------|---------------------------------------|-----------------------------|---|
| | Cruise | ID: | 2015-01 | _ | Station: | | P6 | _ | - | Event # | #: | 28 | | | Ship: | Т | ully | UTC Date (d | dd mmm yyyy): 🕂 | 2 FEB | 2015 |
| Niskin # | Firing # | Sample # | Rosette C Target Pressure | Cor | | | | | npler's HPLC | Initials | | | | | | | | Comments | Profile type ROS) TRM Watchkeep | : X-Niskin er(s): ۲۰۰ | other? |
| 1 | 1 | 280 | 2000 | ~ | 2007 | | | | | | | | | | | | | Water for CW | | | |
| 2 | 2 | 281 | 250 | 1 | 249 | | | | | | | | | | | | 11. 11. 11. 10. 10. | NH4 water | Bottom De | oth: 25 | <u> </u> |
| 3 | 3 | 282 | 30 | 1 | | x | | xx | xx | | | 8 | | | | | | | Transmisso | Cleaned: | () I N |
| 4 | 4 | 283 | 5 | / | | x | х | xx | xx | | | | | _ | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | Time | UTC | Local |
| 6 | | | | \square | | | | | | | | | | | | _ | | | Start | 1725 | 0925 |
| 7 | | | | + | | | | | | | | | | | | | | | Bottom | 1757 | |
| 8 | | | | + | | | | | | | | | | | | | _ | ang in the second second | End | 1834 | |
| 9 | | | | + | | | | | | | | | | | | | | | | | 1. A. |
| 10 | | | | | | 1 | | | | | | | | | | | | | | nformation | |
| 11 | | | | + | _ | | | | | | | | | | | | 2 | | | 70 40 | 56 N |
| 12 13 | | 1 | | + | | | | | | | | | | - | | | × | | Lat: 4 Lon: 12 | ▼ | <u>, , , , , , , , , , , , , , , , , , , </u> |
| 14 | | | | | | | | | | | | | | | | | 100 | | E Lat: | 8044 | GL N |
| 14 | | | | | | | | | | | | | | | | | | | Lon: 12 | 70 40. | 15 W |
| 16 | | | | | | | - | | | | | | | | | | | | | ▼ | 4 |
| 17 | | | | | | | | | | | | | | | | | | | Lat: 42 | 3 • 44 | 66 N |
| 18 | | | | | | | | | | | | | | | | | | | Lon: 12 | 7 . 40 1 | 5 w |
| 19 | | | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | 1 | | | | | | | | | | | Extra com | nents: | |
| 21 | | | | | | | | | | | | | | | | | | | | | |
| 22 | | | | | | | | n 4, ¹ | | | | | | | | | | - | | | |
| 23 | | | | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | | | | |

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

V

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

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | ID: | 2015-01 | _ | Station: | | P7 | | - | Event #: | 2 | 9 | | Ship: | Tul | ly | UTC Date (| ddimm | m yyyy): | 2 | 2013 |
|----------|------------|--------------------|-----------|----------|----------|-------|---------|----------|---------|----------|-----|---|---|-------|-----|-----|------------|-----------------|-------------------------|---------|----------|
| | | | Rosette C | per | ation | Samp | les Tak | en / Sar | npler's | Initials | 200 | | | | | | Comments | | Profile type: | | |
| Niskin | Firing | Sample | Target | Co | nfirmed | Nut-F | Sal | Chl | HPLC | | | | | | | | | | ROS TRM X | -Niskin | other? |
| # | # | # | Pressure | | Pressure | | | | | | | _ | | | | | | | Watchkeeper(s) | : 24 | |
| 1 | 1 | 284 | 30 | П | 30 | x | | xx | xx | | | | | | | | | | | | |
| 2 | 2 | 285 | 5 | V | 5 | x | x | xx | xx | | | | | | | | | | Bottom Depth: | | |
| 3 | | | | | | | | | | | | | | | | | | | Transmisso Cle | eaned: | (Y / N |
| 4 | | | | | | | | | | | | | | | | 1.0 | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | Time | UTC | Local |
| 6 | | | | | | | | | | | | | _ | | | | | | | 2111 | 1311 |
| 7 | | | | | | | | | | | | _ | | | | | | | | 2144 | - |
| 8 | | | | | _ | | | | | | _ | | | | | | | | End | 2216 | |
| 9 | | | | | | | | | | | | _ | | | | | _ | | | | |
| 10 | . <u>N</u> | | | | | | | | | | | | | | | | A | | Positional Info | rmation | 4 |
| 11 | | 14 15 1 1 10 10 | | | | | | | | Ť | | | | | | | - | 1 | | 70.1 | |
| 12 | | | | | | | | | | | | _ | | | | | | v. | Lon: 1250 | · /0, | <u> </u> |
| 13 | | | | \vdash | | | | | | | | - | | | | | | | 118 a | 46 | 60 |
| 14 | | | | | | | | | | | | | | | | | | to | Lat: $\sqrt{28}$ | 10. | |
| 15 | | | | - | | | | | | | | | | | | | | I ^{II} | Lat: 48 ° Lon: 128 ° | ▼ | |
| 16 | | | | + | | | - | | | | | | - | | | | | | Lat: 48 | 46 | 61 N |
| 17 | | | | + | | | | | | | | - | | | | | | 7 uu | Lat: 48 a | 9.0 | 76 w |
| 18 19 | | | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | Extra commen | ts: | |
| 20 | | | | | | | | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | | | | | | | | |
| 23 | | | | Π | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | | | | |

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | ID: | 2015-01 | | Station: | | P8 | | | Event | #: | 30 | | Shi | p: | Tully | | UTC Date (dd n | nmn | n yyyy): 13 2 2014 |
|--------|--------|--------|-----------|--------------|----------|-----|-----|----------|-------|-------|-----|------|----|------|----|-------|---|----------------|--------|---|
| | | | Rosette C | Ope | ration | | | en / Sam | | | | | | | | | | Comments | 7 / | Profile type: |
| Niskin | Firing | Sample | Target | | | Оху | Sal | Nut Fr | Nut C | pH | Chl | HPLC | Cé | line | | | | _ | | ROS TRM X-Niskin other? |
| # | # | # | Pressure | V | Pressure | | | | | | | | | | _ | | | | | Watchkeeper(s): |
| 1 | | 286 | 2000 | 1 | 1 | xx | xx | x | x | | | | | | | | | | | |
| 2 | | 287 | 1500 | 1 | 7 | x | x | x | x | | | | | x | | | | | | Bottom Depth: <u>336</u> ² m |
| 3 | | 288 | 1250 | 7 | | x | x | xx | xx | | | | | | | | | | | Transmisso Cleaned: Y / N |
| 4 | | 289 | 1000 | 1 | 1001 | x_ | xx | x | x | | | | | x | | | | | | |
| 5 | | 290 | 800 | V | 1 | x | x | x | x | | | | | | | | | | | Time UTC Local |
| 6 | | 291 | 600 | V | | x | | x | x | | | | | x | | | | | | Start 0035 1635 |
| 7 | | 292 | 400 | \checkmark | | x | | x | x | | | | | | | | | | | Bottom 0109 |
| 8 | | 293 | 300 | 1 | | x | | x | | | | | | | | | 1 | | | End 0203 |
| 9 | | 294 | 250 | 1 | 1 | xx | | x | | - | | | | | | | | DIDNOT CLOSU | | |
| 10 | | 295 | 200 | 1 | 198 | x | | x | | | | | | x | | | | | | Positional Information |
| 11 | | 296 | 175 | N | | x | | x | | | | | | | | | | | - 2 | Lat: 48 • 48.96 N Lon: 128 • 39.95 W |
| 12 | | 297 | 150 | V | | x | | xx | | | | | | | | | | | Sta | Lon: 128 • 39.95 W |
| 13 | | 298 | 125 | V | | x | | x | | | | | | | | | - | | | ▼ |
| 14 | | 299 | 100 | 1 | | x | | x | | | x | | | x | | | | | | Lat: 48° 4895 N Lon: 128° 39,95 W |
| 15 | | 300 | 75 | | | x | | x | | | x | | | | | | | | | Lon: 1280 39 95 W |
| 16 | | 301 | 50 | 1 | 1 | x | | x | | | x | | | | | | | | | |
| 17 | | 302 | 25 | IJ | | xx | | x | | | x | | | | | | × | | | Lat: 48° 48.98 N Lon: 128° 40.07 W |
| 18 | | 303 | 10 | 1 | | x | | x | | | x | | | | | | | | Ĕ Ĕ | Lon: 128 . 40.07 W |
| 19 | | 304 | 5 | V | | x | x | x | | | x | | | | | | | 4 | | |
| 20 | | 305 | 50 | J | | | | | | | хх | xx | | | | | | | | Extra comments: |
| 21 | | 306 | 20 | J | | | | | | | хx | xx | | | | | | | | Firing out of order |
| 22 | | 307 | 5 | V | / | | | E. | | | xx | xx | | | | | | | | 1 - 16; 20; 17; 21; 18 - 19; 22 |
| 23 | | | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | | | |

Version: 25 Nov 2011

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

| | Wat | er Pr | operti | es | Grou | р | | Sai | mpli | ing l | _og | | | tute of | Ocea | n Science | | Division, Sidney, BC |
|-------------|-------------|-------------|-----------|-----------|---------------------|---------|-----|------------|---------|----------|------------|----|----|---------|------|-----------|--------------|---|
| | Cruise | ID: | 2015-01 | | Station: | | P9 | | | Event # | #: <u></u> | 34 | | Ship |): | Tully | UTC Date (do | dimmmiyyyy): <u>13</u> <u>2</u> <u>201</u> 5 |
| | n | | Rosette C | Opera | ation | | | | npler's | Initials | 1 | st | T. | | | 1 | Comments | Profile type: (ROS) TRM X-Niskin other? |
| Niskin # | Firing # | Sample # | Target | Cor | nfirmed Pressure | Nut-F | Sal | Chl | HPLC | | | | | | | | | Watchkeeper(s): |
| , <u>"</u> | | # | | 1 1 | | | | r | r | | | | | | | | | material prices y |
| 1 | 12 | 308 | 50 | 14 | 50 | × | | xx | xx | | | | | - | - | | | |
| 2 | 23 | 309 | 5 | ~ | 5 | x | х | xx | хx | | | | | | | _ | | Bottom Depth: 2514 m |
| 3 | | | | | | | | | | | | | | _ | _ | _ | | Transmisso Cleaned: (Y) / N |
| 4 | | | | | | | | | | | | | | | _ | | | |
| 5 | | | | | | | | | | | | | | | _ | | | Time UTC Local |
| 6 | | | | | | | | | | | | | | | | _ | | Start 0620 2220 |
| 7 | | | | | | | | | | | | | | | | | | Bottom |
| 8 | | | | | | | | | | | | | | | | | | End 0729 |
| 9 | 1 | NA | 2005 | \square | 2005 | | | | | | | | | | | | Flest fired | |
| 10 | | | | | | | | | | | | | | | | | @ 2005 m | Positional Information |
| 11 | | | | | | | | | | | | | | | | | | т Lat: 48 ° 51.40 N |
| 12 | | | | | | | | <u>ا</u> ا | | | | | | | | | | tr tr Lat: <u>48 ° 51.40 N</u> Lon: <u>129 ° 10.00</u> W |
| 13 | | | | | | | | | | | | | | | | | | 4 |
| 14 | | | | | | | | _ | | | | | | | | | | Eat: 48 • 51.38 N Lon: 129 • 9,98 W |
| 15 | | | | | | | | | | | | | | | | | | B Lon: 129. 9,98 W |
| 16 | | | | Π | | | | | | | _ | | | _ | | | | |
| 17 | | | | | | | | | | | | | | | | 8 | | ELat: 48 ° 51.34 N Lon: 129 ° 10.03 W |
| 18 | | | | | | | | | | | | | | | | | | E Lon: (29 · (0.0) w |
| 19 | | | | \square | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | Extra comments: |
| 21 | | | | | | | | | | | | | | | | | | 9-1-2 |
| 22 | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | in na s | | | | | | | | | | | | |

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

| | Wat | er Pr | opertie | es (| Grou | р | | Sar | npli | ing | Log | | Insti | tute of | Ocea | n Sciei | nces, | Ocean Science | s Divisio | n, Sidı | ney, BC | |
|----------|-----------------|------------|---------------------|------|----------|----------------|-----|-----|-----------|-------|-----|----|-------|---------|------|---------|--------|---------------|-----------|-------------|------------------|---------------|
| | Cruise | ID: | 2015-01 | s | tation: | | P10 | | • 11 | Event | #: | 36 | | Ship |): | Tully | | UTC Date (| dd mmm | уууу): _⁄ | 13 FEB | 2015 |
| Niekin | l Eiring l | Sample | Rosette O Target | | | Sampl Nut-F | | | npler's l | | Cs | ľ | F | ľ | ľ | 1 | 1 | Comments | | rofile typ | e: M X-Niskin | other? |
| # | # | # | Pressure | | Pressure | | Gai | | | | | | | | | | | | , M | latchkee | per(s): | outori |
| 1 | 1 | 310 | 300 | 1 | 200 | | | | | | x | | | | | | | | | | | |
| 2 | 2 | 311 | 300 | 1 | | | | | | | x | | | | | | 1.1 | | В | ottom D | epth:64 | <u>0m</u> |
| 3 | 3 | 312 | 300 | 4 | | | | | | | x | | | | _ | | | | I | ransmiss | so Cleaned: | (Y) / N |
| 4 | 4 | 313 | 300 | 1 | | | | | | | x | | | | 5 | - | | | | | | |
| 5 | 5 | 314 | 300 | V, | _ | | | | | | x | | | | | | | | | ime | UTC | Local |
| 6 | 6 | 315 | 300 | V, | + | | | | | | x | | | | - | | | | | tart | 10:21 | |
| 7 | 7 | 316 | 150 | | 151 | | | | T. | | X | | | | | - | | | | ottom nd | 10 54 | |
| 8 | 8 | 317 318 | 150 150 | V | | - | | | | | X | | | | | | | | | na | 1132 | |
| 9 10 | 9 10 | 319 | 150 | 1 | | | | | | | x | | | | | | - 10 ° | | p | ositiona | Information | 1.1 |
| 11 | 11 | 320 | 150 | V | | | | | | | x | | | | | | | | | | | (22 N |
| 12 | 12 | 321 | 150 | 1 | + | | | | | | x | | | | | | 1 | | T Star | on: 12 | 9 . 40 | 62 N 04 W |
| 13 | _/ 13 | 322 | 50 | V | 51 | | | | | | x | | | | | | | | | | • | |
| 14 | 14 | 323 | 50 | V. | | | | | | | x | | _ | | | | -10 | | | at: L | 8 • 53 | 62 N |
| 15 | 15 | 324 | 50 | 1 | | | | | | | x | | | | | | | | 🙆 L | on: 17 | 9 . 40 | 62 N 08 W |
| 16 | 16 | 325 | 50 | V | | | | | | | x | | | _ | - | | | | | | | |
| 17 | 17 | 326 | 50 | V. | - | | | | | _ | x | | - 20 | _ | - | | - | | p | at: | 8 . 53 | 63 N 07- W |
| 18 | 18 | 327 | 50 | V | ¥ | x | | хх | хх | | x | | | | - | | 1.1.4 | | անլլ | on: 12 | g · 40 | 01- w |
| 19 | ,19 | 328 | 5 | | 5 | · | | | | | X | | | | | 1 | | | | | | 1 |
| 20 | 20 | 329 | 5 | V | | | | | | | X | | | | - | | | | | xtra con | | 1 2 2 2 3 |
| 21 22 | 21 22 | 330 331 | 5 5 | | 1 | | | | | | x | | | - | - | | 1 | | | Cs D | ampling t | LUS sempling |
| 22 | 22 | 331 | 5 | N | | | | | | | x | | | | | | | | | | | |
| 24 | 24 | 333 | 5 | V | * | x | x | xx | xx | | x | | | | 1 | | | | | | | |

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

V

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | ID: | 2015-01 | | Station: | | P11_ | | _ | Event #: _ | 37 | | Ship: | Tully | UTC Date | (dd mmm yyyy): <u>/3 </u> |
|----|--------|-----|-----------|------|----------|-------|---------|----------|---------|------------|----|---|-------|-------|----------|---------------------------------------|
| | _ | | Rosette C | Oper | ration | Sampl | les Tak | en / Sar | npler's | nitials | | | | | Comments | ROS TRM X-Niskin other? |
| | | | Target | Co | nfirmed | Nut-F | Sal | Chl | HPLC | | _ | | | | | ROS TRM X-Niskin other? |
| # | # | # | Pressure | V | Pressure | | | | | | | | | | | Watchkeeper(s): |
| 1 | 1 | 334 | 50 | 1 | 50 | x | | xx | xx | | | | | | | |
| 2 | 2 | 335 | 5 | 1 | | x | x | xx | xx | | | | | | 5 B | Bottom Depth: 2752 m |
| 3 | | | | | | | | | | | | | | | | Transmisso Cleaned: Y / N |
| 4 | | | | | | | | | | | | | | | | |
| 5 | | | | 1 | | | | | | | | | | | | Time UTC Local |
| 6 | | | 1 | | | | | | | | | | | | | Start 14.11 06.11 |
| 7 | | | | - | | | | | | | | | | | | Воttom)4 44 |
| - | | | | | | | | | | | | | | | | End 1516 |
| 8 | | | · · · · | | | - | | | | | | | | | | |
| 9 | | | | - | | | - | | | | | | | | | Positional Information |
| 10 | | | | - | | | | | | | | - | | | | |
| 11 | | - | | | | | | | | | | | | | | Lat: 48 ° 56 01 Lon: 130 ° 10 07 1 |
| 12 | | | | - | | | | | | | | | | | | ώ Lon: 1 <u>5</u> 0 ° 10 0.4 |
| 13 | | | | - | | - | _ | | | · | | | | | 1 | E |
| 14 | | | | | | | | | | | | | | | | Lat: 48 ° 56 02 |
| 15 | | | | _ | | ļ | | | | | _ | | | | | Lat: 48 ° 56 02 Lon: 130 ° 10 04 |
| 16 | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | _ | | | | | Lat: 49 ° 56 . 03 Lon: 130 ° 10 06 |
| 18 | | | | | | | - | | | | | | | | | E Lon: 130 ° 10 06 1 |
| 19 | | | v | | | | | | | | | | | | | <u></u> |
| 20 | | | | | | | | | | | | | | | | Extra comments: |
| 21 | | | | | | | | | 3 | | | | | | | |
| 22 | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | |
| 24 | | | | | | 1 | | | | | | | | | | |

Version: 25 Nov 2011

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

| | Wat | ter Pr | operti | es Gr | oup | з | S | amp | | | - | | | e of Oc | cean | Scien | ces, Oc | ean Sci | ences Di | vis | ion, Sidney, BC |
|----------|--------|--------|----------|-----------|---------|------------|---|-----------|------------|------|----|---|-----|---------|------|-------|---------|---------|------------|------|--|
| | Cruise | D: | 2015-01 | Statio | on: | P12 | 2 | | Even | t #: | 38 | | _ | Ship: _ | | Tully | | UTC | Date (dd n | nmı | myyyy): <u>13 CZ 15</u> |
| Niskin | Firing | Sample | | Confirmed | d T | М ТМ | | Sampler's | s Initials | | 1 | 1 | li. | | | | Co | mments | | 7 | Profile type: 7MPump ROS TRM X-Niskin _ other?) |
| # | # | # | Pressure | √ Pres | sure fi | lt un-fili | t | | | | | | | | | | | | | | Watchkeeper(s): K.S. M.B |
| 1 | | 336 | 40 | 1 | > | (x | | | | | | | | | | | | | | 1 | |
| 2 | | 337 | 20 | 1 | > | (x | | | | | | | | | | | | 37 | | | Bottom Depth: 3453 m |
| 3 | | 338 | 10 | 1 | x | x xx | (| | | | | | | | | | | | | | Transmisso Cleaned: Y / M |
| 4 | | | | | | | | | | | | | | | | | | | | | 1 |
| 5 | | | 110 | | | | | | | | | | | | | | | | | | Time UTC Local |
| 6 | | | | | | | _ | | - | | | | | | | | | | | | Start 17:02 10:02 |
| 7 | | | | | | | | | | | | | | | | | | | | | Bottom 18:05 10:04 |
| 8 | | | | | _ | | _ | _ | - | | | | | | _ | | | | | | End 18:53 10:53 |
| 9 | | - | | | | | | _ | | | | | | | | | | | | | |
| 10 | | | | | | | _ | | | | | | | | | _ | | | | | Positional Information |
| 11 | | 1 | | | | | _ | | | | | | | | | | | | | Ľ | Lat: 47 . 58.1467 N Lon: 130 .39.9127 w |
| 12 | | | | | | | | | | | | | | | | | | | | st | Lon: 150 0.39.9127 W |
| 13 | | | | | | | | _ | | | | | | | | | | | | - | |
| 14 | | | | | | | | | | | - | | | | | | | | | - ĮĮ | Lat: 48 . 48 . 14 +6 N |
| 15 16 | | | 1 | | | | _ | _ | | | | | | | - | | | | | m | Lon: 150 • 59 - 1600 w |
| | | | | | | | - | - | | - | | | | | | | | | | | Lat: 48 • 58 · 1476 N Lon: 130 • 39 · 9668 w · V Lat: 48 • 58 · 1476 N Lon: 130 • 39 · 911 W |
| 17 18 | | | | | | | - | - | | | | | | | | | | | | P | Lat: N N |
| 19 | | - | | | | | - | | - | | | | | | - | | | | | - " | |
| 20 | | | | - | | | | | | | | | | | | | | | | - | Extra comments: |
| 21 | | | | | | | | | | | | | | | | | | | | | TM pumping |
| 22 | | | | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | | | 1 | |

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

| | Wat | ter Pr | opertie | es | Group | р | | Sai | mpl | ing l | Log | | Inst | titute | of Ocea | an Scie | ences | , Ocean Sciences | Divis | sion, Sidney, BC |
|-------------|-------------|-------------|---------------------------------|-----|----------|----|----------------------------|-----|-------------------|----------|-----|----|------|--------|---------|---------|-------|----------------------|-------|--|
| | Cruise | D: | 2015-01 | _ 8 | Station: | | | | - 1 | Event # | #: | >5 | | S | hip: | Tully | | UTC Date (d | d mm | myyyy): <u>13 02 15</u> |
| Niskin # | Firing # | Sample # | Rosette C Target Pressure | Con | firmed | TM | oles Take TM un-filt | | npler's Nut-Fr | Initials | | | | | | | | Comments | | Profile type: ROS TRM X-Niskin other? Watchkeeper(s): |
| 1 | | 339 | .20015 | 0 | 150 | x | x | x | x | | | | | | | | | | | |
| 2 | | 340 | 150 🚅 | | 125 | x | x | | | | | | | | | | | | | Bottom Depth: <u>3753</u> m |
| 3 | | 341 | 1007 | | 75 | хх | XX | | | | | | | | | | | | | Transmisso Cleaned: Y / Nr4 |
| 4 | | 342 | 75 -50 | 11 | 50 | х | x | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | _ | | | Time UTC Local |
| 6 | | | | | | | | | | | | | | | | _ | | | | Start 1905 |
| 7 | | | | | | | | | | | | | | | | | | | | Bottom 19776 |
| 8 | | | | | | | | | | | | _ | | | | _ | | in the second second | _ | End 2020 |
| 9 | | | | | | | | | | | | | | | | | - | | _ | |
| 10 11 | | | | | | | | | | | - | | | | - | - | | | - | Positional Information |
| 12 | | | | | | | | | | | | | | | | | | | tart | Lat: Y7 • 58 1 N Lon: 130 • 39.57 W |
| 13 | | | | | | | | | | | | | | | | - | | - | | |
| 14 | | | | | | | | | | | | | | | | | | | | Lat: 48 • 58.14 N Lon: 130 • 39.91 W |
| 15 | | | | | | | | | | | | | | | | | | | Bott | Lon: 130 • 39.91 w |
| 16 | | | | | | | | | | | | | | | | | | | | • |
| 17 | | | | | | | | | | | | | | | | | | | | Lat: <u>Y</u> 3 • <u>9</u> ?.(<u>3</u> N Lon: (<u>3</u>) • <u>3</u> 9-90 w |
| 18 | | | | | | | | | | | | | | | | | | | Ë | Lon: (30 • 39-90 w |
| 19 | | | | | | | | | | | | | | | | _ | | | | |
| 20 21 | | | | | | | | | | | | | | | | | | | | Extra comments: TM Shallow Go-flos |
| 22 | | | | | | | | | | | | | | | | | | | | TM Shallow Go-flos Refline 12500 Winch a Broken |
| 23 | | | | | | | | | | | | | | | | | | | | minthe Broken |
| 24 | | | | | | | | | | | | | | | | | | | | PA AREACE LANGER |

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | ID: | 2015-01 | Station | | P12 | | _ | Event | #: | 40 | Ship: | | Tully | UTC Date (dd n | nmm yyyy): <u>/3 FCB 2015</u> |
|--------|--------|-----|-----------|-----------------|------|---------|----------|-----------|----------|---------|----|--------|-------|-------|----------------|--|
| | | | Rosette C | Operation | Samp | les Tak | en / Sar | npler's | Initials | | | | 01 | | Comments | Profile type: (ROS) TRM X-Niskin other? |
| Niskin | Firing | | | Confirmed | OXY | Sal | Nut-F | Nut-C | | pН | | | Gases | | | (ROS) TRM X-Niskin other? |
| # | # | # | Pressure | √ Pressure | 74 | V | MR | M2 | KSM | 5 (1.00 | | UBC | UBC | | | Watchkeeper(s): <u>MB/DY</u> |
| 1 | | 343 | Bot-10 | J 3271 | x | | x | x | x | x | | x | хххх | | | |
| 2 | | 344 | 3000 | 1 | x | xx | x | x | xx | x | | . ju _ | | | | Bottom Depth: 3232 m |
| 3 | | 345 | 3000 | 1 | x | x | x | x | x | x | | x | xxxx | | | Transmisso Cleaned: (Y) / N |
| 4 | 1 | 346 | 2500 | 1 | xx | xx | x | x | x | xxx | | | | | fl | |
| 5 | | 347 | 2000 | J | x | x | xx | xx | x | x | | × | xxxx | | | Time UTC Local |
| 6 | | 348 | 1500 | | x | x | x | x | x | x | | x | xxxx | | | Start 2132 1382 |
| 7 | | 349 | 1250 | $ \mathcal{J} $ | x | x | x | x | x | x | | x | XXXX | | | Bottom 2726 |
| 8 | 172 | 350 | 1000 | | xx | xx | x | x | x | x | | x | xxxx | | (H. | End 2338 |
| 9 | | 351 | 800 | | x | | x | x | x | x | | x | xxxx | | | |
| 10 | | 352 | 600 | | x | | x | x | x | x | | x | хххх | | | Positional Information |
| 11 | | 353 | 400 | | x | | x | x | x | x | | x | xxxx | | | Lat: 48 . 58.18 N |
| 12 | | 354 | 300 | N | x | | x | | x | x | | x | XXXX | | 4 | Lat: 48 • 58.18 N Lon: 130 • 39.86 W |
| 13 | | 355 | 250 | | хx | | x | | x | x | | | - 4 | | | |
| 14 | | 356 | 200 | \bigvee | x | | x | | x | x | | × | XXXX | | | Eat: 48 ° 58.21 N ELan: 130 ° 39.86 W |
| 15 | | 357 | 175 | 1 | x | | x | | x | xxx | | | | | | B Lon: 130 ° 39.86 W |
| 16 | | 358 | 150 | | x | | x | . <u></u> | x | x | | x | хххх | | | V |
| 17 | | 359 | 125 | \square | x | | x | | x | x | | | | | | Lat: 48 ° 58,2 N Lon: 130 ° 39,99 W |
| 18 | | 360 | 100 | | x | | xx | | x | x | | × | xxxx | | | ш Lon: 130 • 39,99 w |
| 19 | | 361 | 75 | 1 | xx | | x | | x | x | | | | | | - |
| 20 | | 362 | 50 | 1 | x | | x | | x | x | | x | xxxx | | | Extra comments: |
| 21 | | 363 | 25 | \checkmark | x | | x | | x | x | | x | xxxx | | | Deep cast |
| 22 | | 364 | 10 | V | x | | x | | x | x | | x | xxxx | | | |
| 23 | | 365 | 5 | J | x | x | x | | x | x | | | | | | _1 |
| 24 | | | | | | | | | | | | | | | | 8 |

Version: 25 Nov 2011

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

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995 A.

| | Wat | er Pr | opertie | es (| Group | С | | Sar | npl | ing | Log | I | Insti | ute of C | cean Sci | ences, | Ocean Sciences | Divis | sion, Sidney, BC |
|-------------|-------------|-------------|---------------------------------|--------------|-----------------------|-----|------|--------------------------|-------|-------|---------------|--|-------|----------------|----------|--------|----------------|-------|---|
| | Cruise | ID: | 2015-01 | St | ation: | | P12 | | ~ | Event | #: | 4 | (| Ship: | Tully | / | UTC Date (de | d mm | myyyy): 14 2 2015 |
| Niskin # | Firing # | Sample # | Rosette O Target Pressure | Confir | on med Pressure | DMS | DMSP | en / San DMSP d ⊮∩ | Nut-F | | Chl MR-ILF | HPLC | C | line | | | PAR ON | | Profile type: ROS TRM X-Niskin other? Watchkeeper(s): |
| 1 | | 370 | 300 | 13 | 300 | x | | | x | | | | | | | | | | |
| 2 | | 371 | 200 | 1 | | x | x | x | x | | | | | | | | | | Bottom Depth: <u>3232</u> m |
| 3 | | 372 | 175 | 1 | | x | x | x | x | | | | | | | | | _ | Transmisso Cleaned: Y / N |
| 4 | | 373 | 100 | 1 | | x | x | x | x | | x | | | | | | | e | |
| 5 | | 374 | 75 | 1 | | x | | | x | | x | | | | | | | | Time UTC Local |
| 6 | | 375 | 50 | 1 | | x | | | x | | xx | хх | | | | | | _ | Start 0(01 1701 |
| 7 | | 376 | 40 | | | x | | | x | | x | | | | | _ | | | Bottom 0107 |
| 8 | | 377 | 30 | 1 | | x | | | x | | x | | | and the second | | | | | End 0125 |
| 9 | | 378 | 25 | \mathbb{M} | 2 | X | | | x | | x | | | | | | | | |
| 10 | | 379 | 20 | | | хх | xx | xx | x | | xx | xx | - | | | - | | | Positional Information |
| 11 | | 380 | 15 | | | x | | | x | | x | | | | | _ | | — t | Lat: 48 ° 58,21 N Lon: 130 ° 39,99 W |
| 12 | | 381 | 10 | \vee | | x | 13 | | xx | | x | | | | | _ | | | |
| 13 | | 382 | 5 | | | x | x | x | x | | хх | XX | | | | | | | |
| 14 | | 383 | 0 | | | x | x | x | x | | x | | | | | _ | | | $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ |
| 15 | | 384 | 200 | | | | | | | | | | - | x | | | | — ă | Lon: 13() • 39.99 W |
| 16 | | 385 | 175 | | | | | | | | | | | x | | | | | |
| 17 | | 386 | 150 | 1 | | | | | - | | | i de la composición de la comp | | x | | - | | | Lat: 48 ° 58,21 N |
| 18 | | 387 | 125 | | | | | | | | | | | x | _ | | | lů | Lon: 130 • 39.99 W |
| 19 | | 388 | 100 | | | | | | | | | | | x | | - | | - | 1 |
| 20 | | 389 | 75 | | | | | | | | | | | x | | | | | Extra comments: |
| 21 | | 390 | 50 | 1 | | | | | | | | | | x | | - | | | DMS cast - OUT-OF-ORDER |
| 22 | | 391 | 25 | V | | | | | | | | | | x | | _ | | | 1 - 2; 15 - 16; 3; 17 - 19; 4 - 5; 20-21; |
| 23 | | 392 | 10 | | | | | | | | | | | x | | | | | 6 - 9; 22; 10 - 12; 23 - 24; 13- 14 |
| 24 | | 393 | 5 | V | | | | | | | | | | x | | | | | |

38

Version: 25 Nov 2011

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

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

| | Wat | ter Pr | opertie | es Grou | р | | Sar | mpli | ing Lo |)g | | | Ocea | n Science | es, Ocean Sciences D | |
|-------------|-------------|-------------|------------|------------|------------|---------------|-----|--------|----------|-----|---|------|------|-----------|----------------------|---|
| | Cruise | D: | 2015-01 | Station: | | P12 | | _ | Event #: | - 4 | 2 | Ship | : | Tully | UTC Date (dd | mmm yyyy): 14 _ CZ 2015 |
| | 1 | | Rosette Op | | | oles Tak | | | | 1 | | 19 | - | т т | Comments | Profile type: |
| Niskin # | Firing # | Sample # | | V Pressure | TM filt | TM un-filt | Sal | Nut-Fr | · | | | | | _ | - went very well | Watchkeeper(s): |
| 1 | | 366 | 800 | | x | x | x | x | | | | | | | | |
| 2 | | 367 | 600460 | 60 | x | x | | | | | | | | | | Bottom Depth: <u>3233</u> m |
| 3 | | 368 | 499 3 | 1400 | xx | xx | | | | | _ | | _ | | | Transmisso Cleaned: Y / M |
| 4 | | 369 | 300 300 |) | × | x | | | | | | | _ | | | _ |
| 5 | | | | | | | | | | | _ | | - | | | Time UTC Local |
| 6 | | | | | | + | | | | | | | | | | Start 01:45 5:45 |
| 7 | | | | | | | 1 | | | | | | - | | | Bottom 02:10 6:10 End 02:42 6:42 |
| 8 | | | | | <u></u> | | | | | - | | | - | | | End 02:42 6:42 |
| 10 | 14 | | | | | | | | | | | | 1 | | | Positional Information |
| 11 | | | | | | | | | | | | | | | | |
| 12 | | | _ | | | | | | | | | | | * | | Lat: 48 ° 58 20 N Lon: 48 ° 39 99 W 130 ▼ |
| 13 | | | | | | | | | | | | | | | 4 | (30 🔻 |
| 14 | | | | | | | | | | _ | _ | | | | | E Lat: 18 . 58 . 20 N |
| 15 | | | | | | | | - | | _ | _ | | - | | | by Lat: √8 • 58 20 N Lon: 130 • 39 95 W V V V V Lat: 48 • 58 21 N Lat: 48 • 58 95 W U Lat: 48 • 58 95 W U Lat: 48 • 58 95 W |
| 16 | | | | | 1 | - | | | | | - | | - | | | |
| 17 | | | | | | | | | | | | | | | | ELAT: 47 ° 50 · · · N |
| 18 19 | | | | _ | | | | | | | | | | - | | |
| 20 | | | | | | | | | | | | | - | ÷ | | Extra comments: |
| 20 | | | | | | | | | | | | | | | | TM Deep Go-flos |
| 22 | | | | | | | | | | | | | | 1 | | |
| 23 | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | |

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

| | Wat | ter Pr | operti | es | s Grou | р | | Sar | npli | ing L | og | I | nstitu | ite of O | cean | Science | es, Ocean Sciences Di | ivis | ion, Sidney, BC |
|-------------|-------------|-------------|---------------------------------|--------------|------------------|------|-----------------|-----|-----------------------------|----------|----|-----|--------|----------|------|---------|-----------------------|-----------------|---|
| | Cruise | D: | 2015-01 | _ | Station: | | P12 | | | Event #: | L | -16 | 71 | Ship: | | Fully | UTC Date (dd r | nmr | nyyyy): 141212015 |
| Niskin # | Firing # | Sample # | Rosette (Target Pressure | Co | 20082112022919er | Samp | les Take Sam | | n pler's l Céline | nitials | | | | | | | Comments | | Profile type: ROS TRM X-Niskin other? Watchkeeper(s): |
| 1 | | 394 | Bot-10 | | 3273 | | | | x | | | | | | | | | | |
| 2 | | 395 | 3000 | \bigvee | 3000 | | | | x | | | | | | | | | | Bottom Depth: 4 3234 m |
| 3 | | 396 | 2500 | \checkmark | 2501 | | | | x | | | | | | | | | | Transmisso Cleaned: (Y) / N |
| 4 | | 397 | 2000 | V | | | | | x | | | | | | | | | 2 | |
| 5 | | 398 | 1500 | 1 | 1502 | | | | x | | | | | | | | | 1 | Time UTC Local |
| 6 | 1 | 399 | 1250 | 1 | 1250 | | | | x | | | | | | | | | _ | Start 0445 2045 |
| 7 | | 400 | 1000 | 1 | (00) | | | | x | | | | | | | | Bottom cap leaky | _ | Bottom 0541 |
| 8 | | 401 | 800 | V | 800 | | | | x | | | | | | | | | - | End 0650 |
| 9 | | 402 | 600 | \bigvee | | | | | x | | | | | _ | | | | | |
| 10 | | 403 | 400 | | 400 | | | | x | | | | | | | | | _ | Positional Information |
| 11 | | 404 | 300 | V | 300 | | | | x | | | _ | | | | | | ᆂ | Lat: $48 \circ 58.21$ N Lon: $130 \circ 39.98$ W |
| 12 | | 405 | 250 | V | 249 | | | | x | | _ | | _ | | | | | _ มื | Lon: 130 • 39.98 w |
| 13 | | 406 | 2000 | | | ; | x | | | | | _ | | | | | | | |
| 14 | | 407 | 2000 | 1 | | _ | | | | | _ | | | _ | | | | -ti | Lat: 48 ° 55,21 N Lon: 130 ° 39.98 W |
| 15 | | 408 | 2000 | | | | | | | | | | | | | | | | Lon: 130 • 39.98 W |
| 16 | | 409 | 1000 | | - | | x | _ | | | _ | | | _ | | | | - | |
| 17 | | 410 | 1000 | É | | | | | | | | | | _ | | | | - 2 | Lat: $48 \circ 58.21$ N Lon: $130 \circ 39.99$ W |
| 18 | | 411 | 1000 | | | | | | 12.21 | | | _ | | | | | | _\ [`] | Lon: 150 • 39 99 w |
| 19 | | 412 | 500 | V | | | x | | | | _ | _ | | _ | | | 0 | - | |
| 20 | | 413 | 500 | Y | | | | | | | | | _ | _ | | | | - | Extra comments: |
| 21 | | 414 | 500 | H | | | | | | | | | | _ | - | | | | Sam + Céline |
| 22 | | 415 | 10 | 1 | | | x | | | | | | - | - | | | | _ | OUT-OF-ORDER |
| 23 | | 416 | 10 | Ĥ | | | | - | | | - | _ | | - | - | _ | | - | 1 - 4; 13 - 15; 5 - 7; 16 - 18; 8 - 9; |
| 24 | | 417 | 10 | V | | | | | | | | | | | | | 1- | | 19 - 21; 10 - 12; 22 - 24 |

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | ID: | 2015-01 | | Station: | | P13 | | 21 | Event #: | 48 | Ship: | Tully | UTC Date (d | 1d mmm yyyy): <u>//</u> _ <u>/<</u> &_ _ <u>/6/5</u> _ |
|----------|--------|--------|-----------|----|----------|-------|---------|----------|----------|----------|----|-----------|-------|-------------|--|
| | | | Rosette C | | ation | Samp | les Tak | en / Sar | npler's | nitials | | | | Comments | Profile type: |
| Niskin | Firing | Sample | Target | Co | nfirmed | Nut-F | Sal | Chl | HPLC | | | | | | ROS TRM X-Niskin other? |
| # | # | # | Pressure | √ | Pressure | | | | | | | | | | Watchkeeper(s): //B |
| 1 | 1 | 418 | 50 | 1 | 51 | x | | xx | xx | | | | | | |
| 2 | 2 | 419 | 5 | 1 | 5 | x | x | xx | xx | | | | | | Bottom Depth: <u>3033</u> m |
| 3 | | | | | | | | | | | | | | | Transmisso Cleaned: Y / N |
| 4 | | | | | | | | | | | _ | | | | |
| 5 | | | | | | | | | | | _ | | | | Time UTC Local |
| 6 | | | | | | | | | | | _ | | | | Start 1/26 03:26 |
| 7 | | | | | | | | | | | | | | | Bottom 1159 End (23) |
| 8 | | | | | | | | | | | | | | | End 123 |
| 9 | | | | | | | 1 | | | | | | | | Positional Information |
| 10 | | | | | | | | | | | _ | - | | | lat: 49 ° 2 (co N |
| 11 | | | | - | | | - | | | | | | | | ter 100 /3/ • 39 92 W |
| 12 13 | | | | - | | | | | <u>.</u> | | | | | | Lat: 49 ° 2 Go N Lon: 131 ° 39 92 W |
| | | | | | | | | | | | | | | | 5 Lat: 47 º 2 55 N |
| 14 15 | | | | 1 | | | | - | | | | | | | 55 Lat: 47 ° 2 55 N Lon: 131 ° 39 93 W |
| 16 | | | | | | | | | | | | | | | V |
| 17 | | | | | | | | | | | | | | | Lat: 49 • 2 59 N Lon: 131 • 39 98 W |
| 18 | | | | | | | | | | | | | | | <u>ш</u> Lon: /3/ • 37 98 м |
| 19 | | | | | | | | | | | | | | | |
| 20 | | | | | | | | - | | | | | | | Extra comments: |
| 21 | | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | | |
| 23 | | | | _ | | | | | | | | | | | |
| 24 | | | | | | | | 1 | | | | | | | |

Version: 25 Nov 2011

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

/

| | Wat | er Pr | opertie | es Gro | up | | Sai | mpli | ing l | Log | | Insti | itute | of Oce | an Sci | iences | , Ocean Sciences Di | ivis | ion, Sidne | y, BC | |
|-------------|--------|-------------|---------------------|---------|---------------|-----|------------------------|-------|----------|-----|----|-------|-------|--------|--------|--------|-----------------------|------|---|----------------|----------|
| | Cruise | D: | 2015-01 | Statio | 1: | P14 | | | Event | ¥: | 49 | | 5 | Ship: | Tull | ly | UTC Date (dd n | nmı | m <mark>yyyy): <u>14</u></mark> | _1_66 | 21 |
| Niskin # | | Sample # | Rosette O Target | | Samı Nut-F | | en / Sar Chl | 12.1 | Initials | Nd | | | | | | | Comments | < | Profile type: ROS TRM Watchkeeper | X-Niskin | other? |
| 1 | 1 | 420 | Bot-10 | 13359 | \ | | | | | x | | | | | | | p: 3358 5: 3316 all 5 | 27 | | | |
| 2 | 2 | 421 | Bot-10 | 73350 | 1 | | | | | x | | | | | | | - first | _ | Bottom Dept | h: <u>33</u> 1 | 0 |
| 3 | 3 | 422 | 3000 | 3000 | | | | | | x | | | | | | _ | | _ | Transmisso | Cleaned: | (Y)/ N |
| 4 | 4 | 423 | 3000 | / 3000 | | | | | | x | | | | | | | | _ | | | ~ |
| 5 | 5 | 424 | 2500 | 2500 | > | | | | | x | | | | | | | | | Time | UTC | Local |
| 6 | 6 | 425 | 2500 | 1 2500 | | | | | | x | * | | | | | | | | Start | 1713 | |
| 7 | 7 | 426 | 2000 | 1/2000 | | | | | | x | | | | | | | | _ | Bottom | 1809 | _ |
| 8 | 8 | 427 | 2000 | 1 7.000 | | | | | | x | | | | | | | | | End | 1912 | |
| 9 | 9 | 428 | 1500 | 1.1500 | | | | | | x | | | | | | | | | | | |
| 10 | 10 | 429 | 1500 | /1500 | | 1 | | | | x | | | | | | | | | Positional In | formation | |
| 11 | 11 | 430 | 1000 | 1,000 | | | | n. | | x | | | | | | | | + | Lat: 49 | · 7 | 40 |
| 12 | 12 | 431 | 1000 | 1000 | | | | | | x | | | | | | | | Star | Lat: 49 Lon: 132 | • 39 | |
| 13 | 13 | 432 | 800 | 1.800 | | | | | | x | | | | | | | | | | \mathbf{V} | |
| 14 | 14 | 433 | 800 | V 800 | | | | | | x | | | | | | | | | Lat: 4ዓ Lon: 132 | 07 | 40 |
| 15 | 15 | 434 | 600 | 1.600 | | | | | 4 | x | | | | | | | | Bott | Lon: 157 | • 35 | 94 |
| 16 | 16 | 435 | 600 | 1600 | | | | | | x | | | | | | | | | | V | |
| 17 | 17 | 436 | 400 | 405 | | | | | | x | | | | | | | | | Lat: 43 | 0] | 40 |
| 18 | 18 | 437 | 400 | 400 | | | | | | x | | | | | | | | End | Lon: 132 | 0 257 | 94 1 |
| 19 | 19 | 438 | 200 | V 200 | | | | | | x | | | | | | | 5 | | | | |
| 20 | 20 | 439 | 200 | 1200 | | | | 10.00 | | x | | | < | | | | | | Extra comm | ents: | |
| 20 | 20 | 440 | 50 | 1 50 | | | | | | x | | | | | | | | | Cast + Maur | | |
| 22 | 22 | 441 | 50 | 1 50 | | | | - | | x | | | | | | | | | 4 IOS | | \ |
| 23 | 23 | 441 | 50 | 1,50 | × | | xx | xx | - | | | | | | | | | | | ١ | |
| 23 | 23 | 442 | 5 | V 5 | | x | xx | xx | | | | | | | | | | | | | |

3358 - 336 B.Y

Version: 25 Nov 2011

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

| | Wat | er Pr | opertie | es Grou | р | | Sar | npli | i <mark>ng L</mark> o |)g | Ins | titute | of Oce | an Science | es, Ocean Science | | |
|-------------|-------------|-------------|---------------------|----------|---|----------------|-----------------|-------------------------|-----------------------|-----|-----|--------|--------|------------|-------------------|-------|---|
| | Cruise | ID: | 2015-01 | Station: | | P15 | | | Event #: | | 51 | S | hip: | Tully | UTC Date (| dd mm | myyyy): 14 2 2015 |
| Niskin # | Firing # | Sample # | Rosette O Target | | | es Take Sal | en / San Chl | n pler's HPLC | Initials | | | | | | Comments | | Profile type: ROS TRM X-Niskin other? Watchkeeper(s): |
| 1 | 1 | 444 | 50 | 150 | x | | xx | хх | | | | | | | | | |
| 2 | 2 | 445 | 5 | \sim | x | x | хx | хx | | | | | _ | | | | Bottom Depth: 3406 m |
| 3 | | | | | | | | | | | | | | | | | Transmisso Cleaned: (Y) / N |
| 4 | | | | | | | | | | | 54 | | | | | | 0 |
| 5 | | | | | | | | | | | | | | | | | Time UTC Local |
| 6 | | | | | | | | | | | | | | | | | Start 2327 1527 |
| 7 | | | | | | | | | | | | | | | | | Bottom 2359 |
| 8 | _ | | | | | | | | | | | | | | | | End 0036 |
| 9 | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | Positional Information |
| 11 | | | | | | | | | | | | | | | | t | Lat: 49 • 17.00 N |
| 12 | | | | | | | | | | | | | | | | \$ | Lat: 49 • 17.00 N Lon: 133 • 40.00 W |
| 13 | | | | | | | | | | | | | | | | | |
| 14 | | | | | | _ | | | | - 1 | | | | | | to t | Lat: 49° (2.01 N Lon: 133° 4007w |
| 15 | | | | | | | | | | | | | | | | 8 | Lon: 133° 4007W |
| 16 | | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | Lat: 49 ° 12.02 N Lon: 133 ° 40.01 W |
| 18 | | | | | | | | | | | _ | | _ | | | lů | Lon: 133 • 40.01 w |
| 19 | | | | | | | | | | | | | | | | | · · · · · · · · · · · · · · · · · · · |
| 20 | | | | | | | | | | | _ | | | | - | | Extra comments: |
| 21 | | | | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | |
| 24 | 1 | | | | | | | | | | | | | | | | |

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

| | Wat | er Pr | operti | es | Grou | р | | Sar | npl | ing | Log | J | Inst | itute | of Oc | ean Sci | iences, | , Ocean Science | s Divis | ion, Sidn | ey, BC | | |
|-------------|-------------|-------------|---------------------------------|--------------|----------|--------|--------------|----------|---------|-------|------|----|------|-------|-------|---------|---------|-----------------|---------|---------------------------------------|-------------------------|--------------|---------|
| | Cruise | ID: | 2015-01 | _ | Station: | - | P16 | | | Event | : #: | 52 | | | Ship: | Tull | у | UTC Date | (dd mmi | n∣yyyy): _ <u></u> | 52 | 105 | 5 |
| Niskin # | Firing # | Sample # | Rosette C Target Pressure | Co | | Sample | es Tak Cs | en / San | npler's | | | | | | | | | Comments | | Profile type ROS) TRM Watchkeep | : X-Niskin er(s): | other? | - |
| 1 | | 446 | 150 | \checkmark | 149 | | x | | | | | | | | | | | | | · | | | |
| 2 | | 447 | 150 | 1 | (| | х | | | | | | | | | | | | | Bottom De | oth:~320 | 20 | |
| 3 | | 448 | 150 | \checkmark | | | x | | | | | | | | | | | | | Transmiss | Cleaned: | (Y) I N | |
| 4 | | 449 | 150 | V | | | x | | | | | | | | | | | | | | | ~ | |
| 5 | | 450 | 150 | \checkmark | | | x | | | | | | | | | | | | | Time | UTC | Local | |
| 6 | | 451 | 150 | V | | | х | | | | | | | | | | | | | Start | 0.504 | 2104 | |
| 7 | | 452 | 100 | V | 100 | | x | | | | | | | | | | | | | Bottom | 508 | | |
| 8 | | 453 | 100 | 1 | [| | х | | | | | | | | | | | | | End | 0515 | | 1,1 |
| 9 | | 454 | 100 | J | | | x | | | | | | | | | | | _ | | | | | |
| 10 | | 455 | 100 | 1 | | | x | | | | | | | | | | _ | | | Positional | Information | _ | - A |
| 11 | | 456 | 100 | 1 | | | x | | | | | | | | | | | | t | Lat: 4 | 4.17. | 00 N | 1 |
| 12 | | 457 | 100 | 1 | | | x | | | | | | | | | | | | Sta | Lat: 4 Lon: 134 | • 40. | N 50 | 1 |
| 13 | | 458 | 50 | V | 50 | | x | | | | | | | | | | | _ | | | | | -1- |
| 14 | | 459 | 50 | V | | | x | | - C | | | | | | | | | | t | Lat: 4 ^C | 101+ | <u>.00</u> N | 1 |
| 15 | | 460 | 50 | V | | | x | | _ | | | | | | | | | | | Lat: 40 Lon: 13 | 4 . 40 | 02 N | 1 |
| 16 | | 461 | 50 | V | | | x | | | | | | | | | | | | | | | A | - 8 |
| 17 | | 462 | 50 | | | | x | | | | | | | | | | _ | | | Lat: 40 Lon: 13 | 1017 | <u>00</u> N | 4 |
| 18 | | 463 | 50 | J | | | x | | | | | | | | | | _ | | ū | Lon: 13 | 1 . 10 | .02 n | <u></u> |
| 19 | | 464 | 0 | V | 2 | | х | | | | | | | _ | | | _ | | | | | | - |
| 20 | | 465 | 0 | V | | | x | | | | | | | | | | | | | Extra com | nents: | | |
| 21 | | 466 | 0 | V | | | x | | | | _ | | | | | | | | | Shallow Ce | sium cast | | |
| 22 | | 467 | 0 | V | | | х | | | | | | | | | | | _ | | | | | |
| 23 | | 468 | 0 | V | | | x | | | | | | | | | | _ | _ | | | | | |
| 24 | | 469 | 0 | V | | | х | | | | | | | | | | | | | | | | |

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

| | Wat | er Pr | opertie | es Grou | р | | Sar | npli | ing l | Log |) | Insti | tute of | Ocea | n Science | es, Ocean Sciences | | |
|--------|--------|--------|-----------|------------|------|----------|---------|---------|----------|--------|--------|-------|---------|------|------------|--------------------|--------|--|
| | Cruise | ID: | 2015-01 | Station: | | P16 | | | Event | #: | 53 | | Shij | o: | Tully | UTC Date (d | ld mmi | m yyyy): 151_2_1_2015 |
| | | | Rosette C | peration | Samp | les Take | n / San | npler's | Initials | | | | | | 1 1 | Comments | | Profile type: |
| Niskin | Firing | Sample | | Confirmed | | DMSP | | Nut-F | | | HPLC | | | _ | | | | ROS TRM X-Niskin other? Watchkeeper(s): |
| # | # | # | Pressure | V Pressure | MR | tMA | d (1(+) | Celur | | Ludsay | Glam | | | _ | | | | |
| 1 | | 470 | 300 | V 300 | x | | | x | | | | | | | | | | |
| 2 | | 471 | 200 | 1 201 | x | x | x | x | | | | | | | | | _ | Bottom Depth: 13200 m |
| 3 | | 472 | 175 | 1 176 | x | x | x | x | | | | | | | | | | Transmisso Cleaned: 🔗 / N |
| 4 | | 473 | 100 | 100 | x | x | x | x | | x | | | | | | | | |
| 5 | | 474 | 75 | V75 | x | | | x | | x | | | | _ | | | | Time UTC Local |
| 6 | | 475 | 50 | V 50 | x | | | x | | хх | xx | | | | 1 33 | | | Start 0538 2138 |
| 7 | | 476 | 40 | V 40 | x | | | x | | x | | | | _ | | | | Bottom 0544 |
| 8 | | 477 | 30 | V 30 | x | | | x | | x | | | | _ | | | | End 0602 |
| 9 | | 478 | 25 | 125 | x | | | x | | x | | | | _ | | | | |
| 10 | | 479 | 20 | V ZI | хx | xx | xx | x | | хх | xx | | | _ | | | | Positional Information |
| 11 | | 480 | 15 | 14 | x | | | x | | x | | | | | - | | t | Lat: 49.17.01 N |
| 12 | | 481 | 10 | V 10 | x | | | - x x | | x | | | | | offer S | | St | Lon: 1, 34 • 40.01 w |
| 13 | | 482 | 5 | 15 | x | x | x | x | | хx | xx | | | | | | | |
| 14 | | 483 | 0 | VI | x | x | x | x | | x | | | | | | | | Lat: 49.17.01 N Lon: 134.40.01 W |
| 15 | | | | | | | | | | | | | | | | | 8 | Lon: 134 • 40.01 w |
| 16 | | | | | | | | | | | - F | | | _ | | | | |
| 17 | | | | | | | | | A. | | | | | | | | | Lat: 49 • 17.01 N |
| 18 | | | | | | | | | | | | | | | - T.c. | | ŭ | Lon: 131 • 40.01 W |
| 19 | | | | | | | | | | | | | | _ | | | | |
| 20 | | | | | | | | | | | | | | | _ | | | Extra comments: |
| 21 | | | | | | | | | | _ | | | | | | | | DMS cast |
| 22 | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | _ | | | | |
| 24 | | | | | | | | | | | | | | | | | | |

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | ID: | 2015-01 | _ | Station: | | P16 | | | Event | t #: | 54 | | Ship: | | Tully | | UTC Date (dd)n | nmm yyyy): 15 2 201 |
|-------------|-------------|-------------|---------------------------------|--------------|----------|--------------------|-----|----|------------------------|-------|------|----|-------|-------|--------|-------|---------|----------------|---|
| Niskin # | Firing # | Sample # | Rosette C Target Pressure | Co | nfirmed | Samp OXY MBk | | | npler's Nut-C MB | | | | Gases | UBC | Céline | 1 | | Comments | Profile type: ROS TRM X-Niskin other? Watchkeeper(s): |
| 1 | | 484 | Bot-10 | | 3683 | x | | x | x | x | x | | xxxx | x | | | | | |
| 2 | | 485 | 3500 | 1 | 3500 | x | x | x | x | xx | x | | | | | | | | Bottom Depth: 2000 36-13 |
| 3 | | 486 | 3500 | 1 | 3500 | x | x | x | x | x | xxx | | | | | | | | Transmisso Cleaned: Y / N |
| 4 | - | 487 | 3000 | \checkmark | 2999 | x | xx | x | x | x | x | | xxxx | x | | | | | |
| 5 | | 488 | 2500 | 1 | 17499 | xx | x | x | x | x | × | | | | | | | | Time UTC Local |
| 6 | | 489 | 2000 | V | 2000 | x | xx | x | x | x | x | | xxxx | x | | | | | Start 0632 2232 |
| 7 | | 490 | 1500 | V | 1500 | x | x | x | x | x | x | | xxxx | x | x | | | | Bottom 0733 |
| 8 | | 491 | 1250 | V | ,1250 | x | xx | xx | xx | x | x | | xxxx | х | | | | | End 6853 |
| 9 | | 492 | 1000 | V | 1600 | x | x | x | x | x | x | | xxxx | x | x | | | | |
| 10 | | 493 | 800 | V | , 400 | x | | x | x | x | x | | xxxx | x | | | | | Positional Information |
| 11 | | 494 | 600 | \vee | 600 | x | | x | x | x | x | | xxxx | x | x | | | | + Lat: 49 .17.01 |
| 12 | | 495 | 400 | ~ | 400 | x | | x | x | x | x | | xxxx | x | | | | | Lat: 49 ° (7.07 |
| 13 | | 496 | 300 | V | 300 | хx | | x | | x | x | | xxxx | x | | | | | ▼ |
| 14 | | 497 | 250 | V | 250 | x | | x | | x | xxx | | | | | | 1 | 2 | 5 Lat: 49 · 17 01 |
| 15 | | 498 | 200 | \bigvee | 200 | x | | x | | x | x | | xxxx | x | x | | 1 Miles | | En: ビタ・レチ・01 1 Lon: ビジィ・ 4001 v |
| 16 | | 499 | 175 | 1 | 175 | xx | | x | | х | x | | _ | | | | | | |
| 17 | | 500 | 150 | V | ,150 | x | | x | | x | x | | xxxx | х | | | | | Lat: 49 . 17 01 |
| 18 | | 501 | 125 | V | ,175 - | x | | х | | x | x | | | | | | | | E Lon: /34 • 40 al V |
| 19 | | 502 | 100 | \checkmark | (00) | x | | x | | x | x | | xxxx | x | x | | | | |
| 20 | 1 | 503 | 75 | V | 75 | xx | | x | | x | x | | | | | | | | Extra comments: |
| 21 | | 504 | 50 | V | 50 | x | | хx | | x | x | | xxxx | x | | | | | Deep cast |
| 22 | | 505 | 25 | / | ,25 | x | | x | | x | x | | xxxx | x | | | | |] |
| 23 | | 506 | 10 | V | .10 | x | | x | | x | x | | xxxx | x | | | | | |
| 24 | | 507 | 5 | V | 5 | x | x | х | | x | x | | | | | | | | |

Version: 25 Nov 2011

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

Sampling Log Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC UTC Date (dd mmm yyyy): 15 02 2015 P16 Event #: _____56____ Ship: Tully Cruise ID: 2015-01 Station: Profile type: The Pump **Rosette Operation** Samples Taken / Sampler's Initials Comments ROS TRM X-Niskin Other?) TM | TM Niskin | Firing | Sample | Target Confirmed V Pressure Watchkeeper(s): # # # Pressure filt un-filt KS 508 40 х 1 х Bottom Depth: 3633 m 2 509 20 ΧХ XX Transmisso Cleaned: Y + N 10 3 510 х Х 4 UTC Local Time 5 19.1 1014 Start 6 1030 Bottom 7 1126 End 8 9 Positional Information 10 49. 17.01 Lat: N 11 Lat: Lon: 1340 40.00 w 12 V 13 Lat: Lon: 0 Ν 14 0 W 15 V 16 Lat: 49 º 17.01 N 17 Lon: 134 . 40 01 w 18 19 Extra comments: 20 TM pumping 21 22 23 24

Version: 25 Nov 2011

Water Properties Group

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

2

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

/

| | Wat | er Pro | opertie | es Grou | р | | Sar | npli | ing l | Log | | Instit | ute of C |)cean | Science | es, Ocean Science | s Divis | ion, Sidne | ey, BC | |
|-------------|-------------|------------------------------------|-----------|-------------------------|------|-----------|----------|-----------|----------|-----|----|----------|----------|-------|-----------------|-------------------|---------|--|-----------|----------|
| | Cruise | ID: | 2015-01 | Station: | | P16 | | P1 | Event # | #:l | 37 | | Ship: | | Tully | UTC Date (| dd mm | m yyyy): <u>/ </u> | 02 | 2014 |
| | i | | Rosette O | peration | Samp | les Take | en / San | npler's l | Initials | 4 | ï | Ť | ĩ | 1 | e e | Comments | | Profile type: ROS TRM | | |
| Niskin # | Firing # | Sample # | | Confirmed √ Pressure | | un-filt | Sai | Nut-Fr | | | | | | | | | | Watchkeepe | r(s): KS | |
| <i>#</i> | | т | Treasure | | 1 | Terr-inc. | | | | | | <u> </u> | _ | | | | | | | <i>b</i> |
| 1 | | 511 | 150 | | x | X | x | х | | | | | _ | | | | | | 0100 | |
| 2 | | 512 | 125 | | XX | xx | | | | | | | | | | | | Bottom Dep | | |
| 3 | | 513 | 75 | | x | x | | | | | | | _ | | | | | Transmisso | Cleaned: | Y / N |
| 4 | | 514 | 50 | | x | x | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | Time | UTC | |
| 6 | | | | | | | | | | | | | | | | | | Start | 11:34 | |
| 7 | | | | | | | | | | | | | | | | | | Bottom | • | |
| 8 | | | | | | | | | | | | | | | | | | End | 12:05 | |
| 9 | | a di tanan mangan katala karana ka | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | Positional Ir | formation | |
| 11 | | | | | | | | | | | | | | | | | | Lat: 49 | 0 17 | U/N |
| 12 | | | | | | | | | | | | | | | | | ctar | Lat: 49 Lon: (34 | • Y0 | . 0/ w |
| 13 | | | | | | | | | | | | | | | | | | | V | |
| 14 | | | | | | | | | | | | | | | 1-11-11-11-11-1 | | Ę | Lat: Lon: | 0 | N |
| 15 | | | | | | | | | | | | | | | | | | l on: | 0 | w |
| 15 | | | | | | | | | | | - | | | | | | | | V | |
| | | | | | | | | | | | | | | | | | | Lat: 49 Lon: 134 | 0 17 | 01 1 |
| 17 | | | | | | | | | | - | | | | | | | Pr. | | | |
| 18 | | | | | | | | | | | | | | | | | u | | 10 | .0[₩] |
| 19 | | | | | | | | | | | - | | | | | | | E | | |
| 20 | | | | | | | | | | | | | | | | | | Extra comm | | |
| 21 | | | | | | | | | | | | | | | | | | TM Shallow | Go-flos | |
| 22 | | | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | | | |

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

 \checkmark

| | Wat | er Pr | operti | | | | | | | ing | | | Insti | tute of | Ocea | n Scienc | ces, Ocean | Sciences | Divi | sion, Sidney, BC | |
|-------------|-------------|-------------|---------------------------------|---------|--------|------------|---------|----------|-------------------|----------|-----|----|-------|---------|------|----------|------------|----------|-------|--|----------|
| | Cruise | ID: | 2015-01 | Sta | ation: | | P16 | | - 2 | Event | #: | 39 | | Ship | | Tully | | | | nm yyyy): <u>/5</u> | 15 |
| Niskin # | Firing # | Sample # | Rosette O Target Pressure | Confirm | on | Samp TM | les Tak | en / Sar | npler's Nut-Fr | Initials | | | | | | | Comme | nts | | Profile type: | - |
| 1 | | 515 | 800 | | | x | x | x | x | | - 1 | | | | 1 | | | | = | Watchkeeper(s): K.S | MB |
| 2 | | 516 | 600 | | | xx | xx | | <u> </u> | | | | | | | | | | - | 2/22 | 2 |
| 3 | | 517 | 400 | | | x | x | | | | | | | | - | | | | - | Bottom Depth: 3632 | |
| 4 | | 518 | 200 | | | x | x | | | | | | | | | | | | - | Transmisso Cleaned: | Y / N |
| 5 | | | | | | | | | | | | | | | 1 | + | | | | - | |
| 6 | | | | | | | | | | | | | | | | | | | - | Time UTC | Local |
| 7 | | | | | | | | | | | | | | | | | | | - | Start 13.19 Bottom 13:50 | 0519 |
| 8 | | | | | | | | | | | | | | | | | | | - | | |
| 9 | | | | | | | | | | | | | | | - | | | | - | End 17:27 | |
| 10 | | | | | 2 | | | | | | | | | | | | | | - | Desilies all for all | |
| 11 | | | | | | | | | | | | | | | | | | | | Positional Information | 24 |
| 12 | | | | | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | - | | | | - 0 | Lat: 49 • 17.0 Lon: 134 • 40.0 | W |
| 14 | | | | | | | | | | | | | | | | | | | E | Lati & g y | |
| 15 | | | | | | | | | | | | | | | | | | | 3otte | | N |
| 16 | | | | _ | | | | | | | | | | | | | | | -1" | | W |
| 17 | | | | | | | | | | | | | | | | | | | | Lat. VQ . 17 (| 1 |
| 18 | | | | | | | | | | | | | | | | | | | | Lat: Y9 • 17.0 Lon: 134 • 40.0 | |
| 19 | | | | | | | | | | | | | | | | | | | - - | | <u>v</u> |
| 20 | | | | | | | | | | | | | | | | | | | | Extra comments: | |
| 21 | | | | | | | | | | | | | | | | | | | | TM Deep Go-flos | |
| 22 | | | | _ | | | | | | | | | | | | | | 10.0 | | | |
| 23 | | | | _ | | | | | | | | | | | | | | | | | |
| 24 | ersion: 25 | | | | | | | | | | | | | | | | | | | | |

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

| | vvat | er Pr | opertio | es | Grou | p | Sampi | - | 2 | te of Uc | ean Science | s, Ocean Science | es Division, Sianey, BC |
|----|-------------|--------|-----------|--------------|---------------------|---------------|---------------|----------|-----|-------------|-------------|------------------|---|
| | Cruise | ID: | 2015-01 | _ | Station: | P16 | | Event #: | _60 | Ship: _ | Tully | UTC Date | (dd mmm yyyy): <u>/</u> <u>_</u> <u>/</u> |
| | | 297 | Rosette C | | | Samples Taker | n / Sampler's | | | | | Comments | Profile type: |
| | Firing # | Sample | | | nfirmed Pressure | Cs | | | | | | | ROS TRM X-Niskin other? Watchkeeper(s): |
| # | | # | Pressure | | Pressure | | | <u> </u> | | | | | Watchkeeper(s): MS |
| 1 | | 519 | 500 | 4 | ,500 | x | | | | | | | |
| 2 | | 520 | 500 | V | | x | | | | _ | | | Bottom Depth: 3633 m |
| 3 | | 521 | 500 | V | | x | | | | _ | | | Transmisso Cleaned: (Y) / N |
| 4 | | 522 | 500 | V | <i>i</i> | x | | | | | | | |
| 5 | | 523 | 500 | V | 1 | x | | | | | | | Time UTC Local |
| 6 | | 524 | 500 | V | 1 | x | | | | | | | Start 14.35 06.35 |
| 7 | | 525 | /400 | | 400 | x | | | | | | | Bottom 14:43 |
| 8 | N | 526 | / 400 | 1 | | x | | | | | | | End H1 55 |
| 9 | | 527 | 400 | 1 | 1 | x | | | | | | | |
| 10 | | 528 | 400 | 1 | | x | | | | | | | Positional Information |
| 11 | | 529 | 400 | V | | × | | | | | | | E Lat: 49 . 17 01 N |
| 12 | | 530 | 400 | 1 | , + | x | | | | | | | Lat: 49 • 17 01 N Lon: 134 • 40 01 W |
| 13 | | 531 | / 300 | V | 300 | x | | | | | | | |
| 14 | | 532 | 300 | 1 | 1 | x | | | | | | | Lat: 49 • 17 0) N Lon: 134 • 40 01 W |
| 15 | | 533 | 300 | V | / | x | | | | | | | |
| 16 | | 534 | 300 | V | / | x | | | | | | | V |
| 17 | | 535 | 300 | V | / | x | | | | | | | Lat: 49 . 17. 01 N |
| 18 | | 536 | \ 300 | V | | x | | | _ | | | | Lon: 134 • 40 01 W |
| 19 | | 537 | 200 | 1 | , 200 | x | | | | | | | |
| 20 | | 538 | 200 | V | | x | | | | | | | Extra comments: |
| 21 | | 539 | 200 | 1 | / | x | | | | | | | Deep Cesium cast |
| 22 | | 540 | 200 | 1 | / | x | | | | | | | |
| 23 | | 541 | 200 | \checkmark | / | x | | | | | | | |
| 24 | 10.30-0 | 542 | 200 | V | 4 | x | | | | | | | |

Water Dreparties Croup

Sampling Log

Division Cidney DC · · . . .

Version: 25 Nov 2011

190

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | ID: | 2015-01 | | Station: | | P17 | | | Event #: | 63 | | Ship: | Tully | UTC Date (dd m | | | | |
|-------------|-------------|-------------|---------------------------------|--------------|----------|------|---------|-----|---------|----------|----------|---|-------|-------|----------------------------------|--------|---------------------|-----------------------------|------------|
| Niskin # | Firing # | Sample # | Rosette C Target Pressure | Co | | Samp | les Tak | | npler's | Initials | d | | | | Comments | | ROS TRI Vatchkee | e: M X-Niskin per(s): | other? |
| | | 543 | Bot-10 | 17 | 3763 | 1 | 1 | ľ | 1 | r r | < | | | | P= 3763 D: 3698 S: 3701 A 9.5 | 1 - | | 1.134 | |
| 2 | 2 | 544 | Bot-10 | 1 | 3763 | | | | · | | < | | | | | | Bottom De | pth: 365 | l m |
| 3 | 3 | 545 | 3000 | 17 | 3000 | | | | | | <u> </u> | | | | paused@ 3125 steering trouble | | | o Cleaned: | YYN |
| 4 | 4 | 546 | 3000 | 1 | 3000 | | | | 1 | | ĸ | | | | steering trouble |] _ | | | |
| 5 | 5 | 547 | 2500 | V | 2501 | | | | | | ĸ | | | | |]] | Time | UTC | Local |
| 6 | 6 | 548 | 2500 | \checkmark | 2501 | | | | | | ĸ | | | | | 5 | Start | 18:59 | 1059. |
| 7 | 7 | 549 | 2000 | V | 2001 | | | | | | ĸ | | | | | E | Bottom | 2003 | 1 |
| 8 | 8 | 550 | 2000 | V | 2000 | | | | | | ĸ | | | | | | Ind | 2124 | - 1 - 1 |
| 9 | 9 | 551 | 1500 | 1 | 1500 | | | | | | ĸ | | | | | | | | 317.10 |
| 10 | 10 | 552 | 1500 | V | (500 | | | | | | x | | | | | | | Information | 14 |
| 11 | 11 | 553 | 1000 | \checkmark | 1001 | | | | | | x | | | | | - te - | at: 4 | 7 · 21 | 01. N |
| 12 | 12 | 554 | 1000 | V | 1001 | | | | | | x | | | | | t | on: 135 | 9 • <u>21</u> • 40 | w. 21 |
| 13 | 13 | 555 | 800 | \bigvee | 801 | | | | | | × | | | | | | | • | |
| 14 | 14 | 556 | 800 | V | 801 | | | | | | x L | | | | | - ţ | <u>_at: 4</u> | 9 • 20 | 95 N |
| 15 | 15 | 557 | 600 | \lor | 600 | | | | | | x | | | | | | <u>.on:</u> | 9 • 20. 5 • 40. | () W |
| 16 | 16 | 558 | 600 | V | 600 | | | | | | x | _ | | | | 1 G | | | |
| 17 | 17 | 559 | 400 | V | 400 | | | | | | x | | | | | | _at: | 5 ° 20. | 95 N |
| 18 | 18 | 560 | 400 | 1 | 400 | | | | | | × | | | | | _ ñ[l | _on: | 5 0 40. | 22 W |
| 19 | 19 | 561 | 200 | 1 | 201 | | | | | | × | | | | | - r | | | |
| 20 | 20 | 562 | 200 | V | 201 | | | | | | x | | | | | - | Extra con | | |
| 21 | 21 | 563 | 50 | \vee | 50 | | | | | | x | | | | | - | Cast + Ma | ureen | |
| 22 | 22 | 564 | 50 | V | 50 | | | | | 1 | × | | | | | - | | | |
| 23 | 23 | 565 | 50 | | 50 | x | | xx | хx | | | | | | | - | | | |
| 24 | 24 | 566 | 5 | V | 2 | l x | x | X X | xx | | | | | | | | | | |

Version: 25 Nov 2011

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

| | Wat | er Pr | opertie | es | Grou | р | | Sar | | | | | | Ocea | n Science | es, Ocean Sciences | | |
|----------|--------|--------|-----------|------|----------|-------|---------|----------|---------|----------|----|----|----------|--------|-----------|--------------------|--------|--|
| | Cruise | ID: | 2015-01 | ŝ | Station: | | | | | | #: | 64 | Ship |): | Tully | | | yyy): 161212015 |
| | | | Rosette C | pera | ation | Sampl | es Take | en / San | npler's | Initials | | | | | | Comments | Pr | ofile type: |
| Niskin | Firing | Sample | Target | Cor | nfirmed | Nut-F | Sal | Chi | HPLC | | | | | | | | | OS TRM X-Niskin other? |
| # | # | # | Pressure | | Pressure | | | | | | | | | | | | | atchkeeper(s): 7 |
| 1 | 1 | 567 | 50 | 1 | 50 | x | | хx | xx | | | | | | | | | 0.11 |
| 2 | 2 | 568 | 5 | 1 | 4 | x | x | xx | хх | | | | | | | | | ottom Depth: <u>3832</u> m |
| 3 | | | | | | | | | | | | | | | | | Tr | ansmisso Cleaned: Y / (N |
| 4 | | | | | | | | | | | | | | | | | | ~ |
| 5 | | | | | | | | | | | | | | | _ | | | me UTC Local |
| 6 | | | | | | | | | | | | | | | | | | art 02)@ 1830 |
| 7 | | | | | | | | - | | | | | | | | | | ottom 0313 |
| 8 | | | | | | | | | | | | | | _ | | | | nd 05% |
| 9 | | | | | | | | | | | | | | _ | _ | E | | tel d'altre avec ettern |
| 10 | | | | | | | | | | | | | - | | _ | | | ositional Information |
| 11 | | | | | | | | | | | | | | | | | tart | at: 136 ° 40 04 W |
| 12 | | | | | | | | | | | | | | | | | 0 | |
| 13 | | | | + | | - | | | | - | | | _ | - | | | E I | at: $49 \cdot 26.03$ N on: $136 \cdot 40.04$ W at: $49 \cdot 25.95$ N on: $136 \cdot 39.87$ W |
| 14 | | | | + | | | | | | | | | | - | | | E Bott | on: 136 ° 39.87 w |
| 15 16 | 1 | | | | | | | | | | | | | | | | | |
| | | | | + | | | | | | | | | | | | | L | at: 49 · 25.07 N on: 136 · 39.82 W |
| 17 18 | | | | | | | | | | | e. | | 1.4 | | | | L End | on: 136 ° 39.82 w |
| 19 | | | | | | 1 | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | E | xtra comments: |
| 21 | | | | | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | |

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

| | Water Properties Group | | | | | | | Sai | mpli | ina L | _ O Q | In | stitute | . Changed | (Am 65 an Scien | ිදූ ces. Ocean Sciences | Divis | sion, Sidney, BC |
|------------------|------------------------|-------------|---------|-----|----------|----------------|-----|------------|---------------------------------------|----------|--------------|---------------|---------|-----------|--------------------|----------------------------|-------|--|
| | Cruise | | 2015-01 | | Station: | | P19 | | | | | <u> 166 "</u> | | | | | | myyyy): 16 FCB 2015 |
| Niskin # | Firing # | Sample # | | Con | | Sampl Nut-F | | | npler's HPLC | Initials | | | | | | Comments | (| Profile type: ROS) TRM X-Niskin other? Watchkeeper(s): |
| 28 | 1 | 569 570 | 50 5 | / | 05 | x x | x | x x x x | x x x x | | | | | | | Test find balled | | Bottom Depth: 3928 m |
| 3 | | | | | | | | | | | | | | | | ast sure if it | | Transmisso Cleaned: Y / N |
| 5 6 | | | | | | | | | | | | | | | | dated DSe battles 2+3 | | TimeUTCLocalStart10 - 1162 - 11 |
| 7 8 | | | | | | | | | | | | | | | | he standlas | | Bottom 10.45 End 11.39 |
| 9 10 | | | | | | | | | | | | | | | | | | Positional Information |
| 11 12 | | | | | | | | | | | | | | | | | Start | Lat: 49 • 29 99 N Lon: 137 • 40 11 W |
| 13 1 4 | | | | | | | | | | | | | | | | | t | Lat: 49 • 29 95 N Lon: 137 • 40 16 W |
| 15 16 | | | | | | | | | | | | | | | | | | ▼ |
| 17 18 | | | | | | | | | i i i i i i i i i i i i i i i i i i i | | | | | | | | P | Lat: 49 ° 29 9 2 N Lon: 137 ° 40 70 W |
| 19 20 | | | | | | | | | | | | | | | | | | Extra comments: Used biffly 2+3 |
| 21 22 | | | | | | | | | | | | | | | | | | Used aspect to 2 |
| 23 24 | | | | | | | | | | | | | | | | | | |

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

| | Wat | er Pr | operti | es | Grou | р | | Sai | mpl | ing | Log | ļ | Inst | itute | e of O | cean | Scien | ces, Ocea | n Sciences Div | visi | ion, Sidne | ey, BC | |
|-------------|-------------|-------------|---------------------------------|--------------|----------|-----------------------|----------------------|-----|------------------|----------|-------|-----|------|-------|--------|--------|--------|-----------|--------------------------------|------|---|-------------------|------------|
| | Cruise | ID: | 2015-01 | | Station: | | P20 | | | Event | t #:(| 67 | | | Ship: | | Tully | | UTC Date (dd m | ımn | n yyyy): <u>//</u> ////////////////////////////////// | FEB | _120K |
| Niskin # | Firing # | Sample # | Rosette C Target Pressure | Co | nfirmed | Sampl OXY OM/M5 | es Tak Sal | | npler's Nut-C | Initials | рН | | | Bases | UBC | Céline | Cr iso | | Comments |] (| Profile type: ROS TRM Watchkeepe | | other? |
| 1 | | 571 | Bot-10 | V | 4025 | x | | × | x | x | x | | | xx | x | | x | | p=4625 D=3950 S=3966 A=11.5 | | | | |
| 2 | | 572 | 3500 | V | 3500 | x | х | x | x | xx | x | | | xx | | | | | | | Bottom Dept | :h: <u>39(</u> 01 | <u> </u> |
| 3 | | 573 | 3500 | V | 3500 | x | x | x | x | x | xxx | | | | | | x | | | | Transmisso | Cleaned: | (Y) N |
| 4 | | 574 | 3000 | J | 3000 | x | хx | x | x | x | x | | | xx | x | | | | | | | | \bigcirc |
| 5 | | 575 | 2500 | 1 | 2501 | хx | x | x | x | x | x | | | xx | | | x | | 12.5 | | Time | итс | Local |
| 6 | | 576 | 2000 | \bigvee | 2001 | x | хx | x | x | x | x | - | | xx | x | | | | 1 | | Start | 18 20 | 1020 |
| 7 | | 577 | 1500 | \bigvee | 1500 | x | x | x | x | x | x | | | хх | х | x | x | | | | Bottom | 1926 | |
| 8 | | 578 | 1250 | V | 1250 | x | x | xx | xx | x | x | | | xx | x | | x | | | | End | 2052 | - |
| 9 | | 579 | 1000 | 1 | 1000 | x | хх | x | x | x | x | | | хx | x | x | | | | | | | |
| 10 | | 580 | 800 | V | 800 | x | x | x | x | x | x | | | xx | x | | x | | | | Positional In | formation | |
| 11 | | 581 | 600 | \checkmark | 600 | x | x | x | x | x | x | | | xx | x | x | | | <u></u> | t | Lat: 49 | • 34 | 06 N |
| 12 | | 582 | 400 | \checkmark | 401 | x | x | x | x | x | x | | | xx | x | | x | | | Sta | Lat: 49 Lon: 138 | • 40 | 07 W |
| 13 | | 583 | 300 | \bigvee | 300 | хх | x | x | | x | x | | | хx | x | | | | | | | | · · · · · |
| 14 | | 584 | 250 | \checkmark | 252 | x | х | x | | x | xxx | | | | | | x | | 6 | tom | Lat: 47 Lon: 138 | • 34 | 06 N |
| 15 | | 585 | 200 | \bigvee | 201 | x | x | x | | x | x | | | xx | x | x | | | | B | Lon: 138 | · 40 | 07 W |
| 16 | | 586 | 175 | \checkmark | 175 | x | x | x | | × | x | - | | | | _ | x | | | | | V | |
| 17 | | 587 | 150 | \bigvee | 150 | хх | x | x | | x | x | | | xx | x | | | | | _ | Lat: 47 | • 34 | 06 N |
| 18 | | 588 | 125 | 1 | 125 | x | x | x | | x | x | -) | | | | | x | | | Enc | Lon: (38 | 0 40 | 07 w |
| 19 | | 589 | 100 | 1 | 100 | x | x | x | | x | x | | | xx | х | x | | | | | | | |
| 20 | | 590 | 75 | \checkmark | 75 | x | x | x | | x | x | | | | | | x | | | | Extra comm | ents: | |
| 21 | | 591 | 50 | \checkmark | 51 | x | x | xx | | x | x | | | xx | x | | | | | | Deep cas | t | |
| 22 | | 592 | 25 | J | 25 | x | x | x | | x | x | | | xx | x | | x | | | | | | |
| 23 | | 593 | 10 | J | 10 | xx | x | x | | х | x | | | xx | x | | | × | | | | | |
| 24 | | 594 | 5 | V | 5 | x | x | x | | х | x | | | | | | | | | | | | |

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

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| Water Properties Group | | | | | | | Sar | | | | | | itute | of Oc | ean S | Science | s, Ocear | Scienc | es Divi | sion, Sidn | ey, BC | |
|------------------------|---|--------|----------|-----------|------|----------|----------|-------|-----------------------|----|---|---|----------|-------|-------|---------|----------|--------|------------------------------------|---|---|--------------------|
| | Cruise | ID: | Station: | | P20 | | | Event | :#:_(| 38 | | 2 | Ship: _ | Ţ | ully | | UTC Date | ddimn | זm <mark>(yyyy):</mark> <u>/ (</u> | 502 | ther? Pump | |
| | Cruise ID: <u>2015-01</u> Station: Rosette Operation | | | | | oles Tak | en / Sar | - | | | | | | | | | Comme | ents | | Profile type | : | Oum |
| Niskin | Firing | Sample | | Confirmed | TM | TM | 1 | | () Contract (Back Dr) | | | | | | | | | | | ROS TRM | X-Niskin | other? / |
| # | # | # | Pressure | | filt | un-filt | | | | | | | | | | | | | | Watchkeep | er(s): K.S. | . D.Y. |
| 1 | | 595 | 40 | V | xx | xx | | | | | | | | | | | | | | r | 211 | |
| 2 | | 596 | 20 | - | x | x | | | | | | | | | | | | | | Bottom Dep | oth: <u>396</u> | <u>>m</u> |
| 3 | | 597 | 10 | 1 | x | x | | | | | | | | | | | | | | Transmisso | Cleaned: | ~ Y-/-N |
| 4 | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | Time | UTC | Local |
| 6 | | | | | _ | | | _ | | | 1 | | | | | | | _ | <i></i> | Start | 21/0 | |
| 7 | | | | | | | | | | | | | | | | | | | | Bottom | 2245 | |
| 8 | | | | | | | ļ | | | | | | | | | | | | | End | 2245 | |
| 9 | | | | | | | | | | | | | | | | | _ | | | | | |
| 10 | _ | | | | | | | | | | | | | | | | | | | Positional | and the second se | 1 |
| 11 | | | | | | | | | | | - | | | | | | - | | | te Lat: Y9 | • 35. | <u> </u> |
| 12 | | 45 | | | | | | | | | | | | | | | | | | Lat: 79 Lon: 73 | 3 . 40 | 0 W |
| 13 | | | | | | | | | | | | | - | | | | | _ | | | | |
| 14 | | | | | | | | | | | | | | | | | | | | Lat: Lon: | 0 0 | <u> </u> |
| 15 | | | | | | | | | | | | | | | | | | | | mă Lon: | • | w |
| 16 | | | | | | | | - | | | | | | | | | | | | - lec | 24 | |
| 17 | | | | | | | - | | - | | | | | | | | | | | Lat: 49 Lon:/38 | <u> </u> | <u>OON</u> |
| 18 | | | | | | | | | | | | | _ | | | | | | | ш [Lon:/ <u>3</u> X | • 70 | , OE W |
| 19 | | | | | | - | | | - | - | | - | | | | | | | | C. La | | |
| 20 | | | | | | | | | - | - | | | | | | | | | | Extra com | | |
| 21 | | | | | | | | | 1 | - | - | | - | | | | | | | TM pumpii | ig | |
| 22 | | | | | | | | | | | | | <u>.</u> | | | | | | | | | |
| 23 | | | | | | | | | | | - | | - | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | | - | | | |

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| | Wat | er Pr | р | | Sai | mpli | ing | Log | ļ | Inst | itute of | ⁻ Ocea | an Scien | ces, Oc | ean Science | s Divis | ion, Sidn | ey, BC | _ | | | |
|--------|-----------------------------|--------|-----------|--------------|----------|------|----------|----------|---------|----------|----------|-------------------|----------|---------|-------------|---------|-----------|----------|----------|---------------------|--------------------|--------------|
| | Cruise ID: 2015-01 Station: | | | | | | P20 | | _ | Event | :#: | 29 | | Shi | p: | Tully | | UTC Date | (dd mmi | m yyyy): / | 5 02 | 2015 |
| | | | Rosette C | - | | | les Take | en / Sar | npler's | Initials | | | | | | | Co | omments | | Profile type | | |
| Niskin | Firing | Sample | | | | тм | ТМ | Sal | Nut-Fr | | | | | | _ | _ | | | | ROS TRM | X-Niskin | other? |
| # | # | # | Pressure | \checkmark | Pressure | filt | un-filt | | | | | | | | | | | | | Watchkeep | er(s): <u>KS</u> . | DY |
| 1 | 1 | 598 | -150 | 1 | 175 | xx | xx | x | x | | | | | | | | | | | | | / |
| 2 | | 599 | 125 | 1 | 43 | x | × | | | | | | | | _ | | | | | Bottom Dep | th: <u>396 -</u> | <u> </u> |
| 3 | | 600 | 75 | - | | x | × | | | | | | | | | | | | | Transmisso | Cleaned: | Y / N |
| 4 | | 601 | 50 | - | | x | x | | | | | l v | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | Time | UTC | Local |
| 6 | | | | | | | | | | | | | | | | | | | | Start | 2219 | |
| 7 | | | | | | | | | | | | | | | | | | | | Bottom | 2255 | 1405 |
| 8 | | | | | | | | | | | | | | | | | | | 1 | End | 2310 | |
| 9 | | | | | | | | | | | | | | | | | | | | | | |
| 10 | × | | | | | | | | | | | | | | | | | | | Positional | | |
| 11 | | | | | | | | | | | | | | | | | | | <u>t</u> | Lat: 49 Lon: 138 | • 33.0 | 79 N |
| 12 | | | | | | | | | | | | | | | _ | | | | \$ | Lon: (3X | • 40. | 0-6 w |
| 13 | | | | | | | | | | | | | | | | | | | | | V | |
| 14 | | | | | | | | | | | _ | | | | _ | | | | l | Lat: 🔄 | 9035 | 1 <u>4</u> N |
| 15 | | | | | | | - | - | | | | | | | | _ | | | a | Lat: 4 | 380 20 | 26 W |
| 16 | | | | - | | | | | | | | | | | _ | _ | | | _ | 1/9 | - 27 | <u> </u> |
| 17 | | | | - | | | - | | - | | | | | | | | | | - 2 | Lat: 49 Lon: 137 | • 55 . | -7/ N |
| 18 | | | | | | | | | | | | | | | | | | | u | Lon: (5/ | 90 | 07 W |
| 19 | | | | + | | | - | 1 | | - | - | | | | | _ | | | | E de la comp | | |
| 20 | | | | - | | | | | | | | | | | _ | - | | | | Extra com | | |
| 21 | | | | - | | | | | | | | - | | | | | | | | TM Shallov | v G0-1/05 | |
| 22 | | | - | - | | | | | | | | | | | | | | | | | | |
| 23 | | | | - | | | | | | | | | | | | | | | | | | |
| 24 | | | | _ | | | | | | | | | | | | | | | | L | | |

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| | Wat | er Pr | opertie | es | Grou | р | | Sar | npli | i ng l | Log | | Inst | titute | of Oce | ean S | Scien | ces, | Ocean Sciences Div | | |
|-------------|--------|-------------|---------------------------------|--------------|----------|--------------|---------------------|-----------------------|---------|---------------|-----|------|------|--------|--------|-------|-------|------|--------------------|------------|--|
| | Cruise | D: | 2015-01 | | Station: | | P20 | | | Event | #: | 70 |) | | Ship: | 1 | Fully | | UTC Date (dd m | nmn | n yyyy): 16 2 2015 |
| Niskin # | | Sample # | Rosette O Target Pressure | per Cor | ation | Sampl DMS | es Tak DMSP t | en / San DMSP d | npler's | | | HPLC | | | | | | | Comments | | Profile type: ROS) TRM X-Niskin other? Watchkeeper(s): |
| 1 | | 602 | 300 | Л | 300 | x | | | x | | | | | | | | | | SPIGOT LEAKING LE | _ | |
| 2 | | 603 | 200 | 5 | 200 | x | x | x | x | | | _ | | | | | | | e LESSE | 2 | Bottom Depth: <u>3695</u> m |
| 3 | | 604 | 175 | \bigcup | 177 | x | x | x | x | | | | | | | | | | | | Transmisso Cleaned: (Y / N |
| 4 | | 605 | 100 | 1 | (00 | x | x | x | x | | x | | | | | | | | | - | |
| 5 | | 606 | 75 | \checkmark | 25 | x | | | x | | x | | | | | | | | | | Time UTC Local |
| 6 | | 607 | 50 | 1 | 50 | x | | 1 | x | | хх | xx | | | | | _ | | | - | Start 2323 1523 |
| 7 | | 608 | 40 | \checkmark | 38 | x | | | x | | х | | | | | _ | | | | | Bottom 2328 |
| 8 | | 609 | 30 | | 21 | x | | | x | | x | | | | | | | | | _ | End 2346 |
| 9 | | 610 | 25 | \bigvee | 24 | x | | | x | | x | | | | | | | | | _ | |
| 10 | | 611 | 20 | V | 19 | xx | xx | xx | x | | хх | xx | | | | | | | | - | Positional Information |
| 11 | | 612 | 15 | 1 | 15 | x | | | x | | x | | | | | | | | | - t | Lat: 48.033.99 N Lon: 138.040.14 W |
| 12 | | 613 | 10 | 1 | 10 | x | | | xx | | х | | | | | | | | | _ t3 | Lon: 138° 40.14 W |
| 13 | | 614 | 5 |]] | 5 | x | x | x | x | | хх | xx | | | | | | | | | |
| 14 | | 615 | 0 | V | [| x | x | × | × | 10000 | x | | | | | | | | -NISEIN NOT | -to | Lat: $48 \circ 33.92$ N Lon: $138 \circ 40.16$ W |
| 15 | | | | | | | | | | | | | | | | | | - | CLOSED, | - m | Lon: 1 28 • 40.16 w |
| 16 | | | | | | | | | | | | - | | | | | | | | - | 1202 |
| 17 | | | | | | | | | | | | | | | | | | | | - 2 | Lat: 48 • 33.93 N |
| 18 | | | | | | | | | | | _ | - | | | | 2 | | | | _ <u> </u> | Lon: 138 • 40.16 W |
| 19 | | | | | | | - | | - | | | | | | | | | _ | | - | |
| 20 | | | | | | | | | | | - | | | | | | | | | - | Extra comments: |
| 21 | | | | | | | | | | | | | | | | | | | | - | DMS cast |
| 22 | | | | | | | | | | | | | | | | | | | | - | |
| 23 | | | | | | | | | | | | | | | | | | | | - | |
| 24 | | | | | | | | | | | | | | | | - | - | | | | |

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

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| Water Properties Grou | | | | | | | San | npli | ing L | .og | | Instit | ute of (| Ocear | Science | es, Ocean Sciences | Divis | ion, Sidney, BC | |
|-----------------------|-----------------------------------|--------|----------|------------|------|---------|----------|--------|---------|-----|----|--------|----------|-------|----------------|--------------------|--------------|-----------------------------------|-------------|
| | Cruise ID: <u>2015-01</u> Station | | | | | P20 | | | Event # | :: | 73 | | Ship | | Tully | UTC Date (| dd mm | m yyyy): <u>17</u> <u>2</u> | |
| | Rosette Operation | | | | Samp | les Tak | en / Sam | | | | | | | 4 | a a | Comments | | Profile type: ROS TRM X-Niskin | |
| Niskin | Firing | Sample | | Confirmed | TM | TM | Sal | Nut-Fr | | | | | | | | | | | |
| # | # | # | Pressure | √ Pressure | filt | un-filt | | | | | | | | | | | | Watchkeeper(s): | DY |
| 1 | | 616 | 800 | | x x | xx | x | x | | | | | | | | | | | |
| 2 | | 617 | 600 | | x | x | | | | | | | | | | | | Bottom Depth: 594 | <u>m</u> |
| 3 | | 618 | 400 | | x | x | | | | | | | | | | | | Transmisso Cleaned: | Y / N |
| 4 | | 619 | 200 | | x | x | | | | | | | | | | | | | |
| 5 | | 010 | 200 | | | | | | | | | | | | | | | Time UTC | Local |
| 6 | | | | | | | | | | | | | | | | | | Start 0130 | 5:SYPM |
| 7 | | | | | | | | | | | | 1 | | | | | | Bottom 0158 | |
| 8 | | | | | | | | | | | | | | | | | | End 0730 | |
| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | 11 | | | | | | | | | | | | | | | | Positional Information | |
| 11 | | | | | | | | | | | | | | | | | t | Lat: 149 . 33 | 86 N |
| 12 | | | | | | | | _ | | | | | | | | | tr | | IF w |
| 13 | | | | | | | | | | | | | | | | | | | 0.0 |
| 14 | | | | | | | | | | _ | | | | _ | | | | Lat: 4999. 33 Lon:138 . 40 | . 88 N |
| 15 | | | | _ | | | | | | | | | | | | | ă | Lon: (38 º 40 | <u>(8 m</u> |
| 16 | | | | | | | | | | | | | | - | | | | // 22 | × n |
| 17 | | | | _ | | | - | | | | | | | _ | | | | Lat: 429 • 33 Lon: 138 • 40 | S B N |
| 18 | | | | | | | | | | | | | | - | | | ū | I Lon: 1 3 • 40 | /8/W |
| 19 | | - | | | - | - | | | | | _ | _ | | | | | | le | |
| 20 | | | | | | | | | | | | | | - | | | | Extra comments: | - C |
| 21 | | | | | | | | | | | | | | - | | | | TM Deep Go-flos | |
| 22 | | | | | - | | | | | | | | | - | |)" | | | |
| 23 | | | | | | - | | | | | | | | - | | | | 22 | |
| 24 | | | | | | | | | | | 11 | | | | | | | | |

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

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| | Wat | er Pro | operti | es Grou | q | | Sar | npli | ng Log | Iı | nstitut | e of Oc | ean Scie | ences, | | Division, Sidney, BC |
|-------------|-------------|-----------------------------------|---------------------------------|-------------------------------------|-------|-----|-----|--------------------|---------------|----|---------|---------|----------|--------|-------------|---|
| | Cruise | ruise ID: <u>2015-01</u> Station: | | | | P21 | | E | Event #: | 76 | | Ship: _ | Tully | ñ | UTC Date (d | 1d mmm yyyy): 17 _ 2 15 |
| Niskin # | Firing # | Sample # | Rosette C Target Pressure | Peration Confirmed √ Pressure | Nut-F | | | npler's In HPLC | hitials Cs | 1 | | | | | Comments | Profile type: ROS_TRM_X-Niskin other? Watchkeeper(s): |
| 1 | 1 | 620 | 300 | V 300 | | | | | x | | _ | | | | | |
| 2 | 2 | 621 | 300 | 1 | | | | | x | | | | | | | Bottom Depth: <u>3959</u> m |
| 3 | 3 | 622 | 300 | 1 | | | | | x | | | | | | | Transmisso Cleaned: (Y) / N |
| 4 | 4 | 623 | 300 | \checkmark | | | | | x | | | | | | | |
| 5 | 5 | 624 | 300 | ~ | | | | | x | | _ | | | | | |
| 6 | 6 | 625 | 300 | 1 | | | | | x | | | | | 1 | | Start 0612 2212 |
| 7 | 7 | 626 | 150 | V 150 | | | | | x | | | | | _ | | Bottom 0646 |
| 8 | 8 | 627 | 150 | V | | | | 6 I | x | | | | | | F | End 0723 |
| 9 | 9 | 628 | 150 | Las | | | | | x | | | | | _ | | |
| 10 | 10 | 629 | 150 | V | | | | 2 | x | | 4 | 4 | | | × | Positional Information |
| 11 | 11 | 630 | 150 | М | | | | | x | | | | | | | t Lat: 49 • 37.98 |
| 12 | 12 | 631 | 150 | | | | | ų | x | | | | | 1 | | Lat: 99 0 57.90 |
| 13 | 13 | 632 | 50 | 150 | | | | | x | | | | | _ | | |
| 14 | 14 | 633 | 50 | | | | | $S_{22} = 0$ | x | | | | | 1 12 | | Lat: 49 • 34.00 Lon: 139 • 39.96 |
| 15 | 15 | 634 | 50 | \checkmark | | | | | x | | | | | | | B Lon: 139 . 39.96 |
| 16 | 16 | 635 | 50 | 1 | | | | - | x | | | | | | | |
| 17 | 17 | 636 | 50 | \sim | | Ĩ | | | x | | _ | | | | | Lat: 49 · 39.02 |
| 18 | 18 | 637 | 50 | J | x | | xx | xx | x | | | | | | ec | Eun: 139 • 40.05 |
| 19 | 19 | 638 | 5 | 15 | | | | | x | | | | | | | |
| 20 | 20 | 639 | 5 | 1 | | | | | x | | | | | - | | Extra comments: |
| 21 | 21 | 640 | 5 | V | | | | | x | | _ | _ | | _ | | Cast + Cesium |
| 22 | 22 | 641 | 5 | 1 | | | | | x | | | | | | | |
| 23 | 23 | 642 | 5 | V. | | | | | x | | | _ | | | | |
| 24 | 24 | 643 | 5 | V | x | x | xx | xx | x | | | | | | | |

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| | | 0 | 000.00 | ••• | 0100 | P | | | | | | | | | | | | | | H. F. | 0 21 |
|----|--------|-----|-----------|-----|----------|-------|--------|----------|---------|----------|----|-----|-----|-------|-------|-------|-----------------|------------|-----------------------|----------------------|----------------------------------|
| | Cruise | ID: | 2015-01 | - | Station: | | P22 | | | | #: | -78 | | Ship: | | Tully | UTC Date (d | dimmi | m yyyy): _. | II FEE | 2615 |
| - | | | Rosette C | per | ation | Sampl | es Tak | en / Sar | npler's | Initials | | a a | 312 | ar | r - 1 | | Comments | | Profile ty | pe: | - 46 0 |
| | | | Target | Co | nfirmed | | Sal | Chl | HPLC | Nut-C | | | | | | | | | ROS) IF | RM X-Niskin | Other? |
| # | # | # | Pressure | V | Pressure | | _ | | | | | | | | | | | | watchkee | eper(s): | <u>R</u> |
| | 1 | 644 | 600 | 1 | 601 | x | | | | x | | | | | | | Nutrients water | | | | |
| 2 | 2 | 645 | 50 | 1 | 49 | x | | xx | xx | | | | | | | | | | Bottom D | epth: 389 | <u>3 m</u> |
| 3 | 3 | 646 | 5 | 1 | 14 | x | x | xx | xx | | | | | | | | | | Transmis | so Cleaned: | YIN |
| | | 647 | 5 | 1 | 1 | | | | | × | | | | | | | Nutrients water | | | | |
| 4 | 4 | 047 | 5 | | × | X | | | | | | | | | | | | _ | Time | итс | Local |
| 5 | | | | | | | | | | - | | - | | 1.00 | - | | | - 3n | Start | 1058 | 0258 |
| 6 | | | | - | | | | | | | | | | | | | | | | 1131 | |
| 7 | | | | | | | | | | | | + | | | | | | | Bottom | | |
| 8 | | | | | | - | | | | | | | | | | | | | End | 1207 | |
| 9 | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | 1 | | | | | | | | | | | | | | | | Position | al Information | |
| 11 | | | | | | | | | | | | | | | | | | t | Lat: | 490 4 | 2-05 N |
| 12 | | | | | | | | | | _ | | | | | | | | sta Sta | Lon: | 10 0 3 | 1 95 W |
| 13 | | | | | | | | | | | | | | | | | | | | | 2 |
| 14 | | | | | | | | | | | | | | | | | | HC4 | Lat: | 19 0 42 | DS N |
| 15 | | | | | | | | | | | | | | | | | | Bot | Lon: / | 40 . 39 | 2 05 N 9 35 W 05 N 94 W |
| 16 | | | | | | - | | | | | | | | | | | | | | | |
| | | | | 1 | | 1 | | | | | | | | | | | | | Lat: 4 | 19 · 47 | 05 N 90 W |
| 17 | | | | - | | | | | | | f | | | 1 | | | | | Lon: | 4. 0 39 | 90 W |
| 18 | | | | + | | 1 | | | | | | | | | | | | | | 111 | |
| 19 | | | | | | ł | | | | | | | | | | | | | Extra co | mmonte: | |
| 20 | | | | + | | - | | | | | | | | | | | | | | | |
| 21 | | | | _ | | | | | | | | | | | | | | | Nut- | Daily Ca | 1 |
| 22 | | | | +- | | | | | | | | | | | | | | | Wate | Daily Ca for 2015 | - |
| 23 | | | | - | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | | | an /projects/wat | |

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

Version: 25 Nov 2011

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | ID: | 2015-01 | | Statio | n: | F | 23 | | | Event | #: | 80 | | Ship: _ | Т | ully | UTC Date (| dd mmr | m yyyy): <u>17 FEB 2017</u> |
|--------|---------|--------|-----------|----|--------|-----|-------|---------|---------|---------|----------|-----|------|------------|---------|---|------|------------|----------|---|
| | 21.0.00 | | Rosette C | - | | | | | n / San | npler's | Initials | | NO F | | | 5 | - 24 | Comments | | Profile type: ROS TRM X-Niskin other? |
| Niskin | Firing | Sample | Target | | | N | Nut-F | Sal | Chl | HPLC | DIC | | Sar | | | | | | (| ROS TRM X-Niskin other? |
| # | # | # | Pressure | | Pressu | Jre | MB | in list | MO | 10 | 14-14-5 | 60 | Sa | | | | | | | Watchkeeper(s): |
| 1 | 1 | 648 | 2005 | | 200 | 5 | | x | | | xxx | xxx | | | | | | | | 4450 |
| 2 | 2 | 649 | 2005 | 1 | < 1 | | | x | | | xxx | xxx | | | | | | | <u> </u> | Bottom Depth: 4050 m |
| 3 | 3 | 650 | 2005 | É. | | | | x | | | xxx | ххх | | | | | | | | Transmisso Cleaned: Y N |
| 4 | 4 | 651 | 2005 | 1 | | | | x | | | xxx | ххх | | | | | | | | |
| 5 | 5 | 652 | 2005 | 1 | 1 | | | x | | | xxx | ххх | | | | | | | | Time UTC Local |
| 6 | 6 | 653 | 2005 | 1 | 1 | | | x | | | | | | | | | | | | Start 1546 0746 |
| 7 | 7 | 654 | 2005 | 1 | | | | x | | | | | 3 | - } | | | | | | Bottom |
| 8 | 8 | 655 | 2005 | 1 | | | | x | | | | | × | 5 | | | | | | End 1652 |
| 9 | 9 | 656 | 2005 | / | | | | x | | | | | × | | | | | | | |
| 10 | 10 | 657 | 2005 | 1 | | | | x | | | - 4 | | x | 2 | | | | | | Positional Information |
| 11 | 11 | 658 | 2005 | 1 | | | | x | | | | | × | $ \rangle$ | | | | | t | Lat: 44 • 46 02 N |
| 12 | 12 | 659 | 2005 | 1 | | | | x | | | | | > | | | | | | ť | Lat: 49 • 46 02 N Lon: 141 • 40 03 W |
| 13 | 13 | 660 | 2005 | 1 | 1 | | | x | | | | | | | | | | | | |
| 14 | 14 | 661 | 2005 | 1 | / | | | x | | | | | | 2 | | | | | to | Lat: 47 • 45 98 N |
| 15 | 15 | 662 | 2005 | | | | | x | | | | | | | | | | | a | Lat: 49 • 45 98 N Lon: 141 • 33 34 W |
| 16 | 16 | 663 | 2005 | 1 | | | | х | | | | | | | | | | | | · · · · · · · · · · · · · · · · · · · |
| 17 | 17 | 664 | 2005 | 2 | 5 | | | x | | | | | * | | | | | | | Lat: 47 • 46 01 N Lon: 141 • 35 83 W |
| 18 | 18 | 665 | 2005 | 1 | | | | x | | | 1 | | × | 1 | | | | | ŭ | Lon: 141 • 35 83 w |
| 19 | 19 | 666 | 2005 | 1 | | | | x | | | | | > |) | | | | | | · · · · · · · · · · · · · · · · · · · |
| 20 | 20 | 667 | 2005 | 1 | | | | х | | | | | | | | | | | | Extra comments: |
| 21 | 21 | 668 | 2005 | 1 | | | | x | | | | | | | | | | | | Calibration cast |
| 22 | 22 | 669 | 2005 | 1 | , , | > | _ | х | | | | | | | | | | | | plus water for Sarah Z |
| 23 | 23 | 670 | 50 | V | | > | x | x | xx | xx | | | | | | | | | | |
| 24 | 24 | 671 | 5 | V | | | x | х | xx | xx | | | | | | | | | | po.oc.ca/sci/osap/projects/waterproperties/ |

Version: 25 Nov 2011

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

| | Water Properties Group | | | | | | | Sai | npl | ing L | _og | | Instit | ute of | Ocea | n Scien | | n Sciences I | | | | | |
|--------|------------------------|--------|-----------|--------------|----------|----------|---------|----------|------|---------|-----|----|--------|--------|------|---------|-----------|--------------|------|--------------|------------------|------------|---|
| | Cruise | D: | 2015-01 | | Station: | | P24 | | - | Event # | ŧ: | 81 | | Ship |): | Tully | | UTC Date (do | | | | 201 | 2 |
| | | | Rosette (| | | | les Tak | en / Sar | - | | | | | | | | Comm | ents | | Profile type | : | | |
| Niskin | Firing | Sample | Target | | | Nut-F | Sal | Chi | HPLC | | | | | | | | | | | ROS TRM | X-Niskin | other? | _ |
| # | # | # | Pressure | \checkmark | Pressure | | | | | | | | | | | | | | | Watchkeep | er(s): 24 | | |
| 1 | 1 | 672 | 50 | V | 51 | × | | xx | xx | | | | | | | | | | | | | | |
| 2 | 2 | 673 | 5 | ./ | 5 | x | x | xx | xx | | | | | | | | | | | Bottom Dep | oth: <u>398</u> | <u>7</u> m | |
| 3 | - | 0/0 | | | | <u> </u> | ~ | | | | | | | | | | | | | Transmisso | Cleaned: | (N/1 | N |
| 4 | Ĩ. | | | | | | | | | | | | | | | | · · · · · | | | | | _ | |
| 5 | | | | | | | | | | | | | | | | | | | | Time | UTC | Local | |
| 6 | 1 | | | | | | | | | | | | | | | | | | | Start | 2038 | 1235 | È |
| 7 | | | | - | | 1 | | | | | | | | | | | | | | Bottom | 2111 | | |
| 8 | | | | | | | | | | | | | | | | | | | | End | 2146 | > | |
| 9 | | | | 1 | | | | | | | | | | | | | | | | | | | |
| 10 | | 2 | | 1 | | | | | | | | | | | | | | | | | Information | | |
| 10 | | | | | | | | | | | | | | | | | | | + | Lat: U | 7 . 50 | 7 5 | N |
| 12 | 1 | | | | | | | 1 | | | | | | | | | | | Stal | Lon: (G | 7 . 50 | -04 | w |
| 13 | | | | | | | | | | | | | | | | | 0 | | | | V | | |
| 14 | | | | | | | | | | | | | | | | | 12 | | tom | Lat: 4 | 9. 50 |).39 | N |
| 15 | | | | | | | | | | | | | | | | | | | Bo | Lon: 14 | 2. 41 | 0.09 | w |
| 16 | | | | | | | | | | | | | | | _ | | 4.7 | | | | | | |
| 17 | | | | | | | | | | | | | | | | | | | | Lat: | 1 • 5() • 40 |).36 | N |
| 18 | | | | | | | | | | | | | | | | × | | | | Lon: 14 | 0. 40 | 24 | w |
| 19 | | | | | | | | | | | | | | - | | | | | | r | | | _ |
| 20 | | | | | | | | | | | | | | | | | | | _ | Extra com | ments: | | |
| 21 | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | _ | _ | | | _ | | | | |
| 24 | | | | | | | | | | | | | | | | | | | | | | | |

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

Cide and DC

-

. .

| Water Properties Group | | | | | | | Sai | | ing l | | | | | f Oce | an Scie | ences, | | | ion, Sidney, BC | |
|------------------------|-------------------|--------|----------|--------------|----------|-------|--------|----------|---------|----------|----|----|---|-------|---------|--------|--------------------|----------|-----------------|---|
| | | | | | Station: | | P25 | | 2 | Event | #: | 81 | (| Sh | p: | Tully | | | dd mm | m yyyy): <u>18 2 15</u> |
| | Rosette Operation | | | | | Sampl | es Tak | en / Sar | npler's | Initials | | | | | 5 | | | Comments | | Profile type: ROS TRM X-Niskin other? |
| Niskin | Firing | Sample | Target | Cor | nfirmed | Nut-F | Sal | Chl | HPLC | | | | | | | | | | | ROS TRM X-Niskin other? |
| # | # | # | Pressure | | Pressure | | | | | | | | | | | | | | | Watchkeeper(s): |
| 1 | 1 | 674 | 50 | \bigvee | 50 | x | | xx | xx | | | | | | | | | | | |
| 2 | 2 | 675 | 5 | \checkmark | 5 | x | x | xx | xx | | | | | | | | | | | Bottom Depth: 4148 m |
| 3 | | | | | | | | | | | | | | | | | | | | Transmisso Cleaned: (V / N |
| 4 | | | | | | | | | | | | _ | | | _ | _ | | | | |
| 5 | | | | | | | | | | - | | _ | | | | _ | | | | Time UTC Local |
| 6 | | | | | | | | | | | | | | | - | | - 15 ₁₁ | | | Start 0155 1755 Bottom 0228 1 |
| 7 | | | | | 1 | | | | | | | | | - | _ | _ | | | | Bottom 0228 End 0701 |
| 8 | | | | - | | | | | | | | | | _ | | | - | | | |
| 9 | | | | | | | | | | | - | | | | - | _ | *: | | | Positional Information |
| 10 | | | | | | | | | | | | | | | | | - | | | lat: 49 • 59.97 N |
| 11 | | | | | | | | | | | | | | | | | | | tar. | Lon: 143. 36.30 W |
| 12 13 | | | | | | | | | | | | | | | | | - 74 | | | Lat: <u>49 ° 59.97</u> N Lon: 143 ° 36.30 W |
| 14 | | | | | | | | | | | | | | | 2. | | | | Ę | Lat: 50 • 0.01 N Lon: 143• 3639 W |
| 15 | | | 1 | | | | | | | | | | | | | | | | 1 da | Lon: 143. 36.39 W |
| 16 | | | | | | | | | | | | | | | | | | | | ▼ |
| 17 | | | | | | | | | | | | | | | | | | | | Lat: 50 • 0.03 N Lon: 143 • 36.57 W |
| 18 | | | | | | | | | | | | | | | | | | | ū | Lon: 147 . 36.57 W |
| 19 | | | | | | | | | | | | | | | | | _ | | | · |
| 20 | | | | | | | | | | | | | | | | | | | | Extra comments: |
| 21 | | | | | | | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | - | | | | - | | | |
| 23 | | | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | _ | | | | | | | |

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

| | Wat | er Pr | operti | es | Grou | р | | Sai | mpl | ing Lo |)g | Ins | titute o | of Ocea | n Scien | nces, Oc | ean Science | es Division | , Sidne | ey, BC | _ |
|-------------|--------|-------|---------------------|--------------|----------|----------------|--------|----------|----------|----------|-----------|-----|----------|---------|---------|----------|-------------|-------------|-------------------------|------------------------|--------|
| | Cruise | ID: | 2015-01 | | Station: | | P35 | | - | Event #: | 8 | 5 | Sh | nip: | Tully | | UTC Date | (dd mmm y | 'yy): <u>(</u> 8 | 2 2 | 15 |
| Niskin # | | | Rosette C Target | Cor | ation | Sampl Nut-F | es rak | en r Sar | liblet 2 | IIIIIaia | | | | | | Co | nments | Pro | file type: S TRM | X-Niskin r(s): ⊃Ƴ | |
| 1 | 1 | 676 | 50 | \bigvee | 50 | x | | xx | xx | | | | | | | | | | | 11 - | >1 |
| 2 | 2 | 677 | 5 | \checkmark | 5 | x | x | xx | xx | | | | | | | | | | | th: 415 | |
| 3 | | | | | | | | | | | | | | | _ | | | Tra | nsmisso | Cleaned: | Ø/N |
| 4 | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | 8 | | | | | | _ | | | Tir | 10 | UTC | Local |
| 6 | | | | | | | | | | | | | A | | 3 | | | Sta | | 0612 | |
| 7 | | | | | | | | | | | | | | | | | | | ttom | 0645 | |
| 8 | | | | | | | | | | | | | | | _ | | | En | d | 0719 | |
| 9 | | | | | | | | | | | | | | | | | | | | | a 22 |
| 10 | | | | | | | | | | | | | | | | | | Po | sitional l | nformation | |
| 11 | | | | | | | | | | | | | | | _ | | | | : 4 | 1054 | 88 N |
| 12 | | | | | | | | | | | | | | _ | | | | V | n: (4) | N • 59 -1• 18,- | 26 · W |
| 13 | | | | | | | | | | | _ | | | | _ | | | | | | 911 |
| 14 | | | | | | | | | | | | _ | | | | | | | : 90 | 4 • 59 4 • 18. ▼ | 04 N |
| 15 | | | | | | | | | | | | _ | | | | | | ŭ Lo | n: [40 | 4. 18. | 21 W |
| 16 | | | | | | | | - | | | | | | | - | | | | . (| | × |
| 17 | | | | | | | | | | ļ | _ | _ | | _ | | | | | <u> </u> | 0 29. | 06 N |
| 18 | | | | | | | | - | | | _ | | | | | | | ū [Lo | n: 199 | 0 / 8 1 |) () w |
| 19 | | | | | | | | | | | | | | | | | | r_ | | | |
| 20 | | | | | | | | | | | | | | | | | | Ex | tra comn | nents: | |
| 21 | | | | | | | | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | _ | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | | | | |

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | ID: | 2015-01 | | Station: | P26 | Event #: | 86 | _ Ship: | Tully | UTC Date | dd mmm | уууу): 🥂 🖓 | 2015 |
|-------------|--------|-------------|-----------|------|----------|--------------|------------------------|-----|---------|---------|----------|----------|--|--------------|
| Mickin | Line | | Rosette 0 | Oper | ation | Samples Take | n / Sampler's Initials | E E | | - F - F | Comments | | Profile type: ROS TRM X-Niski | |
| NISKIN # | Firing | Sample # | Pressure | | Pressure | | Plastics | | | | | 4 | Watchkeeper(s): | n other? |
| | | | | | r | | | | | | | | | 10 |
| 1 | 1 | 678 | Bot-10 | V | 4315 | | X | | | | | r | | |
| 2 | 2 | 679 | 4000 | V | 41001 | | <u> </u> | | | | | | Bottom Depth: <u>476</u> | |
| 3 | 3 | 680 | 3500 | 4 | 3500 | | X | | | | | | Transmisso Cleaned | : (Y)/ N |
| 4 | 4 | 681 | 3000 | ~ | 3000 | | X | | | | | V | | |
| 5 | 5 | 682 | 2500 | V | 2560 | | X | | | | | i | Time UTC | |
| 6 | 6 | 683 | 2000 | 1 | 2000 | | X | | | | | | Start 10.19 | 02/9 |
| 7 | 7 | 684 | 1500 | V | 1500 | | X | | | | | | Bottom 1/30 | |
| 8 | 8 | 685 | 1250 | V | 1250 | | x | | | | | | End 1255 | 7 |
| 9 | 9 | 686 | 1000 | V | 1000 | | x | | | | | | | |
| 10 | 10 | 687 | 800 | V | 800 | | x | | | | | P | Positional Informatio | |
| 11 | 11 | 688 | 600 | V | 599 | | x | | | | | Ľ | Lat: 49 • 59 Lon: 144 • 59 | 99 N |
| 12 | 12 | 689 | 400 | V | 6.00 | | X | | | _ | | sta | Lon: 144 • 59 | 96 W |
| 13 | 13 | 690 | 300 | V | 360 | | x | | | | | | · · · · · · · · · · · · · · · · · · · | |
| 14 | 14 | 691 | 250 | V | 251 | | x | | | | | to To | Lat: 49 • 59 | 33 N |
| 15 | 15 | 692 | 200 | V | 200 | | x | | | | | Bot | Lat: 49 • 59 Lon: 144 • 59 ▼ | SX W |
| 16 | 16 | 693 | 175 | V | 176 | | x | | | | | | V | |
| 17 | 17 | 694 | 150 | 1 | 150 | | x | | | | | | | |
| 18 | 18 | 695 | 125 | 1 | 125 | | x | | | | | End | Lat: 49 •59 Lon: 144 •59 | 98 W |
| 19 | 19 | 696 | 100 | V | 100 | | x | | | | | | | - G |
| 20 | 20 | 697 | 75 | V | 175 | | x | | | | | | Extra comments: - | no one |
| 21 | 21 | 698 | 50 | V | ,50 | 8 | x | | | | | | Plastics cast | ns trandist. |
| 22 | 22 | 699 | 25 | 1 | 25 | | x | | | | | | Extra comments: - Plastics cast dot Now Toole 4 con left 2 chencel sic Simpling, this washe Sciet. with offer s | Holsemply |
| 23 | 23 | 700 | 10 | V | . 10 | | x | | | | | | left a exact sie | NC out while |
| 24 | 24 | 701 | 5 | V | | | x | | | | | | scift, will patter a | DE INTO 24 |

Version: 25 Nov 2011

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

- Took onother control with the spray water only.

| Water | Properties | Group |
|-------|------------|-------|
|-------|------------|-------|

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | ID: | 2015-01 | | P26 | Event #: _ | 87 | Ship: | Tully | UTC Date (d | d mmm yyyy): <u> } Feb La }-</u> |
|-------------|-------------|-------------|------------------|--------------------------------------|---------------------------|-----------------|----|-------|-------|-------------|--|
| Niskin # | Firing # | Sample # | | eration Confirmed √ Pressure | Samples Taken / Sam Cs | oler's Initials | | | | Comments | Profile type: ROS TRM X-Niskin other? Watchkeeper(s): |
| 1 | | 702 | 500 ^µ | 500 | x | | | | | | |
| 2 | | 703 | 500 | | x | | | | | | Bottom Depth: 425(m |
| 3 | | 704 | 500 | / | x | | | | | | Transmisso Cleaned: (Y)/ N |
| 4 | | 705 | 500 | | x | | | | | | |
| 5 | | 706 | 500 l | 1 | x | | | | | | Time UTC Local |
| 6 | | 707 | 500 | | x | | | | | | Start 1326 0526 |
| 7 | | 708 | 400 | 400 | x | | | | | | Bottom 1334 |
| 8 | 1 | 709 | 400 ^C | 11 | x | | | | | | End 13477 |
| 9 | | 710 | 400 | 1/- | x | | | | | | |
| 10 | | 711 | 400 | 4 | x | | | | | | Positional Information |
| 11 | - | 712 | 400 | 4 | x | | | | | | te Lat: 49 • 59 99 N Lon: 144 • 59 99 W |
| 12 | | 713 | 400 l | | x | | | | | | B Lon: 144 ・ 59 99 w |
| 13 | | 714 | 300 (| 1,299 | x | | | | | | |
| 14 | | 715 | 300 (| 1 | x | | 3 | | | | Eat: 49 '• 59 99 N Lat: 49 '• 59 99 N Lon: 149 • 59 99 W |
| 15 | | 716 | 300 t | 1 | x | | | | | | b Lon: (44 • 59 99 W |
| 16 | | 717 | 300 U | 4 | x | | | | | | |
| 17 | | 718 | 300 | 1 | x | | | | | | Lat: 49 • 59 99 N Lon: 44 • \$9 99 W |
| 18 | | 719 | 300 | 1 | x | | | | | | ш Lon: НЧ • 59 99 w |
| 19 | | 720 | 200 | 200 | x | | _ | | | | |
| 20 | | 721 | 200 | | x | | | | | | Extra comments: |
| 21 | | 722 | 200 | | x | | | | | | Deep Cesium cast |
| 22 | | 723 | 200 | | x | | | | | | |
| 23 | | 724 | 200 | | x | | | | | | |
| 24 | | 725 | 200 | H | x | | | | | | |

Version: 25 Nov 2011

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | ID: | 2015-01 | - | Station: | _ | P26 | | 20 | Event # | - 88 | × | | Ship: | Tully | UTC Date Comments | (dd mmr | n yyyy): <u>/</u> 8 | FEA | 2015 |
|----|--------|--------|-----------|------------|----------|-------|---------|----------|---------|----------|------|----|---|-------|-------|----------------------|----------|---------------------|-----------------|----------------------|
| | | | Rosette O | pera | ation | Sampl | es Take | en / San | npler's | Initials | | | | | | Comments | | Profile type: | Th- | its Ring |
| | Firing | Sample | larget | JCor | ntirmea | | | Cr | | | | | | | | | 10 | POS TRM | X_Niekin | othor? |
| # | # | # | Pressure | √ | Pressure | | | | | <u>_</u> | | _ | | | | | <u> </u> | Watchkeepe | er(s): M | M |
| 1 | | 726 | 1000 | | | | | x | | | | | | | | | | 5 | 18 P | |
| 2 | | 727 | 750 | | | _ | | x | | | | | | | | | | Bottom Dep | th: <u>4250</u> |)m |
| 3 | | 728 | 500 | | | | | x | | | | | | | | | | Transmisso | Cleaned: | Y / N |
| 4 | | 729 | 150 | | | | | x | | | | | | | | | | | | RY - |
| 5 | | 730 | 100 | | | | | x | | | | _ | | | | | | Time | итс | Local |
| 6 | | 731 | 50 | | | | | x | | | | _ | | | | | | Start | 1403 | 0603 |
| 7 | | 732 | 5 | | | | | x | | | | | | | | | | Bottom | 1444 | 0644 |
| 8 | | | | | | | | | | | | 12 | | | | | | End | 1730 | 6936 |
| 9 | | | | _ | | | | | | | | _ | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | Positional II | | |
| 11 | | | | _ | | | | | | | | | _ | | | | t | Lat: 45 | 0 59 | 99 N |
| 12 | | | | | | | _ | | | 6 X | | | | | | | Sta | Lon: 14 | 10 55 | 9 <u>9 n</u> 99 w |
| 13 | | | _ | | | | _ | | | | | _ | | | | | | | • | |
| 14 | | | | | | | | | | | | - | _ | | | | tto | Lat: 49 | • 59 | 99 N 99 W |
| 15 | | | | | | | | | | | | | | | | | 8 | Lon: 144 | • 59 | 99 w |
| 16 | | _ | | _ | | | | | | | | _ | | | | | | | | |
| 17 | | | | | | | | | | | | - | _ | | | | | Lat: 49 | • 59 5 | 9 N |
| 18 | | | | _ | | | | | _ | | | | - | | | (S. | f | Lon: 144 | • 59 5 | 9 w |
| 19 | | | | | | | | | | | | _ | | | | | | | | |
| 20 | | | | _ | | | | | | | | | | | | | | Extra comm | ents: | |
| 21 | | | | | | | | | | | | | - | | | S. | | UBC in-situ | pumps to a | 1000 m |
| 22 | | | | | | | | | | 2 | | | | | | | | | | |
| 23 | | | | | | | | | _ | | | _ | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | | | |

Version: 25 Nov 2011

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | D: | 2015-01 | _ | Station: | | P26 | | Event #: _ | 89 | Ship: | Tully | UTC Date (dd m | | | |
|--------------------|-------------|--------|-----------|-----|---------------------|--------|-----|-----|----------------|-----|-------|-------|--|---|----------------|----------------|
| | | | Rosette C | | | Sample | | | ler's Initials | 1 | | i i | Comments | Profile type: ROS TRM | | |
| Niskin # | Firing # | Sample | Target | | nfirmed Pressure | | Nd | REE | | _ | | | Temprature | Watchkeepe | X-Niskin | other? |
| # | # | # | Pressure | I V | | | | | | | | | | | 13. 113 | |
| _1 | | 740 | 1000 | V | ,1000 | | x | x | | | | | 4.2 | | | |
| 2 | | 741 | 1000 | V | | | x | x | | | | | 4.0 ristin lecting on | 646 Bottom Dep | th: <u>425</u> | <u>1_m</u> |
| 3 | | 742 | 800 | V | 800 | | x | x | | | | | 4.2 | Transmisso | Cleaned: | (Y)/ N |
| 4 | | 743 | 800 | V | 10 | | x | x | | | | | 4.1 | | | |
| 5 | 8 | 744 | 600 | 1 | 600 | | x | x | | | | 12 | 4.5 | Time | UTC | Local |
| 6 | | 745 | 600 | V | | | x | x | | | | | 4.5 | Start | 18:15 | 10:15 |
| 7 | | 746 | 400 | V | 400 | | x | x | | | | | 4.7 | Bottom | 18 37 | |
| 8 | | 747 | 400 | V | 6 | | x | x | | | | | . 4.7 | End | 1854 | |
| 9 | | 748 | 200 | V | 200 | | x | x | | | | | 4,9 | | | |
| 10 | | 749 | 200 | V | | | x | x | | | | | . 4.9 | Positional I | nformation | |
| 11 | | 750 | 50 | ~ | 51 | | x | x | | | | | 7,7 | Lat: 49 | • 59 | 99 N |
| 12 | | 751 | 50 | 1 | r 1 | | x | x | | - 1 | | | 7.8 | Lon: 145 | • 0 | 07 W . |
| 13 | | 752 | 5 | - | 5 | | x | x | | | | | 7.9 | | V | 11 |
| 14 | | 753 | 5 | V | ri | | x | x | | | | | 7.9 | E Lat: 43 | • 59 | 98 N. |
| 15 | | 100 | | | | | | | | | | | | ton: 45 | • 0 | OI W |
| 16 | Sec. 1 | | | | | | | | | | | | - ** ¥/ | | V | <u>, i i j</u> |
| 17 | | | | 1 | | 1 | | | | | | - | | Lat: 49 | 0 69 | 95 N |
| Concession and the | | | | | - | | | | | | | | ······································ | Lat: 49 Lon: 145 Lon: 145 Lon: 145 Lon: 145 Lon: 145 Lon: 145 | . 45 | 99 W |
| 18 19 | | | | - | | | | | | | | | | | | 1 1 |
| | 1.0 | | | | | | | | | | | | | Extra comm | onte: | |
| 20 | - | | | | | 2 | | | | | | | | Maureen's d | | nd BEE |
| 21 | | | | | 1 - V | | | | | | | | | | ast for NU i | |
| 22 | | | | - | | | | | | | | | | | | |
| 23 | | | | - | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | |

Version: 25 Nov 2011

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

1

| | Wat | er Pr | operti | es Grou | р | | Sai | mpl | ing | Log | | Ins | stitul | e of O | cean | Scienc | ces, Oc | ean Science | s Divis | sion, Sidney, BC |
|----------|-----------|--------|-----------|------------|------|---------|----------|---------|----------|-----|-----|-----|--------|--------|------|--------|---------|-------------|---------|---|
| | Cruise | ID: | 2015-01 | Station: | | P26 | | - | Event | #: | 670 | 3 | _ | Ship: | | Tully | | UTC Date (| (dd mm | mlyyyy):(<u>8</u>) <u>(72)</u> 2015 Profile type: |
| | | | Rosette C | Operation | Samp | les Tak | en / Sar | npler's | Initials | | 0 | | | | | | Co | mments | | Profile type: |
| Niskin | Firing | Sample | Target | Confirmed | TM | TM | | 1 | 1 | | | | 1 | 1 | | | 1 | | | Profile type: ROS TRM X-Niskin other? Watchkeeper(s): |
| # | # | # | Pressure | √ Pressure | filt | un-filt | | | | | | | | | | | | | | Watchkeeper(s): |
| 1 | | 733 | 40 | X | xx | xx | | | | | | | | | | | | | | |
| 2 | _ | 734 | 20 | 1 | x | x | | | | | | | | | | | | | | Bottom Depth: 4250 m |
| 3 | | 735 | 10 | / | x | x | | | | | | | | | | | | | | Transmisso Cleaned: Y / N |
| 4 | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | 1 | | | | | | | | | | | | Time UTC Local |
| 6 | | | | | | | | | | | | | | | | | | | | Start 19:05 11:00 |
| 7 | | | | | | | | | | | | | | | | | | | × | Bottom 11:25 |
| 8 | | | | | | | | | | | | | | | | | | | | End 19:5611:56 |
| 9 | | _ | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | 2 | | | | | | | Positional Information |
| 11 | n'i n cin | | | | | | | | | | | | | | | | | | t | Lat: 49 ° 59.55 N |
| 12 | | | | | | | | | | | | | - | | | | | | ť | Lat: 49 ° 59.55 N Lon: 145 ° 60.00 W |
| 13 | | | | | | | | | | | | | | | | | | | | |
| 14 15 | | _ | | | - | | | | | | | | - | | | | | | | Lat: 97 ° 59 77 N |
| 16 | | | | | | | | | | - | - | | | | | | | | | Lat: 47 • 59 99 N Lon: 47 • 68 68 W 145 €00 000 |
| 17 | | | | | | | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | | | | | | pu | Lat: 27 • 57 75 N Lon: 1/2 • 9 9 9 W 1/45 00 00 |
| 19 | | | | | | | | | | | | | | 1 | | | | | | 145 OU OU |
| 20 | | | | | | | | | | | | | 4 | | | | | | | Extra comments: |
| 21 | | | | | | | | | | | | | | | | | | | | TM pumping |
| 22 | | | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | | | |

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

- 8

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | ID: | 2015-01 | _ | Station: | | P26 | | | Event | #: | 91 | | Ship | : | Tully | UTC Date | (dd mmr | myyyy): <u>18 2 2015</u> |
|-------------|-------------|-------------|---------------------------------|----|----------|-------------|-----------------|-----------------------|------------------|----------|-----|------|-------|------|---|-------|----------|---------|--|
| Niskin # | Firing # | Sample # | Rosette C Target Pressure | Co | | Samp DMS | les Tak DMSF | en / San DMSP d | npler's Nut-F | Initials | Chl | HPLC | Phyto | | | | Comments | | Profile type: ROS) TRM X-Niskin other? Watchkeeper(s): |
| 1 | | 754 | 300 | 1 | 300 | x | | | x | | | | | | | | | | |
| 2 | | 755 | 200 | 5 | 200 | x | x | x | xx | | | | | | | | | | Bottom Depth: <u>4252</u> m |
| 3 | | 756 | 175 | J | 175 | x | x | x | x | | | | | | | | | | Transmisso Cleaned: (Y) / N |
| 4 | | 757 | 100 | V | 102 | x | x | x | x | | x | | | | | | | | |
| 5 | | 758 | 75 | J | 75 | x | | | x | | x | | | | | | | | Time UTC Local |
| 6 | | 759 | 50 | V | 50 | x | | | x | | xx | xx | | | | | - u | | Start 2150 1350 |
| 7 | | 760 | 40 | V | 40 | x | | | x | | x | | | | | | | | Bottom 2155 |
| 8 | | 761 | 30 | 1 | 31 | x | | | x | | x | | | | | | | | End 2213 |
| 9 | | 762 | 25 | ~ | 25 | x | | | x | | x | | | | | | | | |
| 10 | | 763 | 20 | V | 20 | xx | xx | xx | x | 1 | xx | xx | | | _ | | | | Positional Information |
| 11 | | 764 | 15 | 1 | 14 | x | | | x | | x | | | | | | | t | Lat: 50 ° 0.01 N Lon: 144 ° 59.98 w |
| 12 | | 765 | 10 | J | (0) | x | | | x | l | x | | | | | | i. | St. | Lon: 144 • 59.98 w |
| 13 | | 766 | 5 | V | 5 | x | x | x | x | | xx | xx | xxx | | | | | | |
| 14 | | 767 | 0 | J | 2 | x | x | x | x | | x | | - | | _ | | | į | Lat: 50 ° 0.00 N |
| 15 | | | | | | | | | | | | | | | | | | ß | Lat: 50 • 0.00 N Lon: 144 • 59.98 W |
| 16 | | | | | | | | | | | | | 1 | | | | | | |
| 17 | | | | | | | | | | | | | | | | | | | Lat: 49. 59.99 N Lon: 1.1.4 • 59.99 W |
| 18 | | | | | | | | | | | | | | | - | | | l | Lon: 1 LU • 59.97 W |
| 19 | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | Extra comments: |
| 21 | | | | | | | | | - | | | | | | | | | | DMS cast |
| 22 | | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | - | | _ | | |
| 24 | | | | | | | | | | | | | | | | | | | |

Version: 25 Nov 2011

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

| | Wat | er Pr | opertie | es Grou | р | | Samp | oling | Log | Ir | nstitut | e of Oc | ean Science | es, Ocean Sciences | | |
|----------|------------|-------------|-----------|-----------------------|------------|----------|--------------|-------------|------------|--------|---------|---------|-------------|--------------------|------|---|
| | Cruise | ID: | 2015-01 | Station: | | P26 | | Even | t #: | N. | | Ship: _ | Tully | UTC Date (c | d mm | miyyyy): 18 02 12015 |
| Miekin | l Eiring l | Sample | Rosette O | peration Confirmed | Samp TM | | en / Sampler | 's Initials | (<u>×</u> | e T | ľ | í í | T F | Comments | | Profile type: ROS TRM X-Niskin other? PUMP |
| # | # | sample # | Pressure | √ Pressure | | unfilt | | | | | | | | | | Watchkeeper(s): |
| 1 | | 839 | VI | -40 | 1 | T | | | Î | 1 | T | | | | | |
| 2 | | 739 | UPC | 256 | XX | x | | | | | | | | | | Bottom Depth: 4250 m |
| 3 | | 839 | UBC | IOL | XX | <u>k</u> | | | | | | | | | | Transmisso Cleaned: Y / N |
| 4 | | 839 | UBC | 250ml | XX | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | Time UTC Local |
| 6 | | | | | | | | | | - | | | | | | Start 19:56 11:56 |
| 7 | | | | | | | | | | | | | | | | Bottom |
| 8 | | | | | | | | - | | | - | | | | | End 21:08 3:08 |
| 9 | 1 | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | _ | Positional Information |
| 11 | | | | | | | | | | - | | | | | tart | Lat: $47 \circ 54$, $57 \times N$ |
| 12 13 | | | | | | | | - | | | - | | | | | Lat: 49 • 59, 99 N Lon: 145 • 00.00 W |
| 14 | | | | | | | | | | | 1 | | | | | Lat: ° N |
| 15 | | | | | | | | | | | | | | | Bott | Lat: ° N Lon: ° W |
| 16 | | | | | | | | | | | | | | | 2 | |
| 17 | | | | | | | | 1 | | | | | | | - | Lat: 49 059,95 N Lon: 145 0.00,01 W |
| 18 | | | | | | | | | | | | | | | Enc | Lon: 145 . 00 . 01 W |
| 19 | | | | _ | - | | | | | | | | | | | |
| 20 | | | | | | 0 | | | | | | | | | | Extra comments: |
| 21 | - | | | | | | | | | | | | | | | TM pumping for UBC |
| 22 | | | | | | | | | | - | | | | | | |
| 23 | | _ | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | |

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | | 2015-01 | | Station: | • | P26 | | • | Event | #: - | 93 | , | | Ship: | Tully | UTC Date (de | 1 mmm yyyy): <u>181 2 201</u> 5 |
|--------|--------|--------|-----------|--------|----------|------|-----|----------|----|-------|----------|-----|---|-----|-------|-------|--------------|---------------------------------------|
| | Gruise | | Rosette C | Ope | - | Samp | | en / San | 0 | | S | | | ¥ | | | Comments | Profile type: |
| Niskin | Firing | Sample | | | onfirmed | OXY | | Nut-F | | | Alk į | рН | | Nut | | Gases | | ROS TRM X-Niskin other? |
| # | # | # | Pressure | V | Pressure | DY | LH | Came | CM | MR/RA | 1.1.5/14 | VGC | | 250 | 9am | LFISK | | Watchkeeper(s): DY |
| 1 | 1 | 768 | Bot-10 | | 14316 | x | | xx | x | x | x | x | | | x | xx | | |
| 2 | 2 | 769 | 4000 | | 1 | xx | xx | xx | x | x | x | x | | x | x | xx | | Bottom Depth: 4252 m |
| 3 | 3 | 770 | 3500 | | 3500 | x | x | xx | x | xx | x | x | | x | | xx | | Transmisso Cleaned: (Y) / N |
| 4 | 4 | 771 | 3000 | 1 | 3001 | x | x | xx | x | x | x | x | | x | x | xx | 21 | |
| 5 | 5 | 772 | 2500 | V | 2501 | x | x | xx | x | x | x | xxx | | x | | xx | | Time UTC Local |
| 6 | 6 | 773 | 2000 | V | 2001 | x | xx | xx | x | x | x | x | | х | x | xx | | Start 22481448 |
| 7 | 7 | 774 | 1500 | | 1500 | x | x | xx | х | x | x | x | | х | x | xx | | Bottom 0004 |
| 8 | 8 | 775 | 1250 | 0 | 1250 | хх | x | xx | x | x | x | x | | x | x | xx | | End 0136 |
| 9 | 9 | 776 | 1000 | V | 1000 | x | x | xx | x | x | x | x | | x | x | xx | | |
| 10 | 10 | 777 | 800 | V | 801 | x | | xxxx | хх | x | x | x | | | x | xx | | Positional Information |
| 11 | 11 | 778 | 600 | \lor | 601 | x | | xx | x | x | x | x | | | x | хх | | Lat: 49 • 59,99 N |
| 12 | 12 | 779 | 400 | ~ | 400 | x | | xx | x | x | x | x | | | x | xx | a | Lon: 144 • 59.99 w |
| 13 | 13 | 780 | 300 | | 300 | x | | xx | | x | x | x | | | × | xx | | |
| 14 | 14 | 781 | 250 | ~ | 251 | xx | | xx | | x | x | x | | | | | | Lat: 49 • 5999 N Lon: 145 • 0.00 W |
| 15 | 15 | 782 | 200 | 1 | 200 | x | | xx | | x | x | x | | - | x | xx | | |
| 16 | 16 | 783 | 175 | \sim | 175 | x | | XXXX | | x | x | x | | | | | | |
| 17 | 17 | 784 | 150 | | (150 | x | | xx | | x | x | x | | _ | x | xx | | 2 Lat: 49. 59.99 N |
| 18 | 18 | 785 | 125 | J | 125 | хx | | xx | | x | x | x | | | | | | E Lon: 1450 0:00 W |
| 19 | . 19 | 786 | 100 | 1 | 100 | x | | xx | | x | x | x | | | x | xx | | |
| 20 | 20 | 787 | 75 | V | 76 | x | | xx | | x | x | xxx | | | | | | Extra comments: |
| 21 | 21 | 788 | 50 | | 57 | x | | xx | | x | x | x | | | × | xx | | Deep cast |
| 22 | 22 | 789 | 25 | V | 25 | x | | xx | | x | x | x | | | x | xx | | |
| 23 | 23 | 790 | 10 | J | 10 | x | | xx | | x | x | x | - | | x | xx | | |
| 24 | 24 | 791 | 5 | V | 5 | x | x | xx | | x | х | x | | | | | | |

Version: 25 Nov 2011

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

| | Wat | ter Pr | opertie | es Grou | р | San | npling | | tute of C | Dcean | Sciences | , Ocean Science | s Divis | sion, Sidn | ey, BC | |
|-------------|-------------|-------------|---------------------------------|-------------------------------------|------------|-------------------|-----------------|---------------------------------------|-----------|-------|----------|-----------------|---------|--------------|-------------------------|----------|
| | Cruise | D: | 2015-01 | Station: | P26 | | Event | :#:94 | Ship: | | Tully | UTC Date | (dd mm | m yyyy): _/ | 9 02 | 2015 |
| Niskin # | Firing # | Sample # | Rosette O Target Pressure | Peration Confirmed √ Pressure | Samples Ta | iken / Samp Cr | oler's Initials | | | | | Comments | | Profile type | : Jn-situ 1 X-Niskin | pumps. |
| 1 | | 792 | 3500 | | | x | | | | | - | | | 1 | | |
| 2 | | 793 | 3000 | | | x | | | | | | - | | Bottom De | pth: <u>4252</u> | m |
| 3 | | 794 | 2750 | | | x | | | | (a) | | | | Transmisso | > Cleaned: | Y / N |
| 4 | | 795 | 2500 | | | x | | | | | | | | | | 8 B. |
| 5 | | 796 | 2000 | | | x | | | | | | | | Time | UTC | Local |
| 6 | | 797 | 1750 | | | x | | | | | e 1 🍋 | | | Start | 0145 | |
| 7 | - | 798 | 1500 | | | × | | · · · · · · · · · · · · · · · · · · · | | | | | | Bottom | 0307 | <u> </u> |
| 8 | | | | | | | | | | | <u></u> | | | End | 10074 | |
| 9 10 | | | | | | | | | | - | · | | | Positional | Information | 1. |
| 11 | | | | | ř | * | | | | | * | | | · / 0 | . 190 | 29 N |
| 12 | | | | | | | | | | | 1 | | Ctar | Lon: 14 | 5 001 | ov I'w |
| 13 | | | | | | 8 | | | | | 8 | | | | V | 1 . |
| 14 | 1 | | | | | | | | | | | | | Lat: | 0 | N |
| 15 | | | | | | | | | | | | | a | Lon: | 0 | w |
| 16 | | _ | | _ | | | | | _ | _ | 1 | | | | | |
| 17 | | | | | | | | | | | | | | Lat: | 0 | <u> </u> |
| 18 | | | | | | 1 | | - | | | | | lů | i Lon: | 0 | w |
| 19 | | | | - | | - | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | Extra com | nents: u pumps to 3! | 500 m |
| 21 22 | | | | - | | - | | | | | | - | _ | | i pumps to st | |
| 23 | | | | | | | | | | | | 2.8 | | | | |
| 24 | | | | | | | | | | | | | | | | |

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

| | Wa | ter Pr | operti | es | Grou | р | Sa | mpli | ing | Log | _ | Inst | itute o | f Ocea | an Scienco | es, Ocean Science | s Divis | sion, Sidney, BC |
|-------------|---------------|-------------|---------------------------------|--------------|----------|------------|--------------------------|---------|-------|-----|----|------|---------|--------|------------|-------------------|---------|--|
| | Cruise | D: | 2015-01 | _ | Station: | P26 | | - | Event | #: | 75 | | Sh | ip: | Tully | UTC Date (| dd mm | mlyyyy): 19 2 2015 |
| Niskin # | Firing # | Sample # | Rosette C Target Pressure | Co | | Samples Ta | ken / Sa r Sam | mpler's | | | | | | | | Comments | | Profile type: ROS TRM X-Niskin other? Watchkeeper(s): |
| 1 | | 799 | 2000 | \checkmark | 2,000 | | x | | | | | | | | | | | |
| 2 | | 800 | 2000 | V | | | x | | | | | | | | | | | Bottom Depth: 4252 m |
| 3 | | 801 | 2000 | V | | | x | | | | | | | | | | | Transmisso Cleaned: 🔗 / N |
| 4 | | 802 | 2000 | V | | | x | | | | | | _ | _ | | | | 9 |
| 5 | | 803 | 1000 | 1 | 1000 | | x | | | | | | | | | | | Time UTC Local |
| 6 | 1.15 | 804 | 1000 | 1 | | | x | | | | | | | | | | | Start 0654 2254 |
| 7 | | 805 | 1000 | 1 | e. | | x | | | | | | | | | | | Bottom 0727 |
| 8 | | 806 | 1000 | V | | | x | | | | | | | | | | | End 0803 |
| 9 | | 807 | 500 | 4 | ,500 | | x | | | | | | | | | | | |
| 10 | | 808 | 500 | K | | | x | | | | | | | | | | | Positional Information |
| 11 | | 809 | 500 | V | , | | x | | | | | | | | _ | | t | Lat: 49 • 59 99 N Lon: 145 • 0.00 w |
| 12 | | 810 | 500 | V | | | x | | | | | | | | | | \$ | Lon: 145 ° O.00 w |
| 13 | | 811 | 10 | 4 | 10 | | x | | | | | | | | | | | V |
| 14 | | 812 | 10 | V | , | | x | | | | | | | | | | | Lat: $49 \cdot 59.99 \text{ N}$ Lon: $145 \cdot 0.00 \text{ W}$ |
| 15 | | 813 | 10 | 4 | | | x | | | | | | | | _ | | 8 | Lon: 145 . 0.00 w |
| 16 | | 814 | 10 | 1 | | | x | | | | | | | | _ | | | |
| 17 | | | | | | | | | | | | | | | | | | Lat: 49 • 59 99 N Lon: 144 • 59 99 W |
| 18 | _ | | | \square | | | | | | | | | | | | | l£ | Lon: 144 • 53 99 W |
| 19 | | | | \square | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | Extra comments: |
| 21 | | | | | | | | | | | | | | | | | | Sam's cast |
| 22 | | | | | | _ | | | | | | | | - | | | | |
| 23 | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | 1.1 | | | _ | - | _ | | | | |

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | D: | 2015-01 | | Station: | | P26 | | Event #: | 98 | Ship: | Tully | UTC Date | (dd mmi | n yyyy): | 19 FER | 2015 |
|-------------|-------------|-------------|---------------------------------|-----------|----------|------|------------------------|-----------|----------|-------|-----------|----------|----------|---------|--------------|-------------------|--------|
| Niskin # | Firing # | Sample # | Rosette (Target Pressure | Co | onfirmed | Samp | Dies Taken / Céline | Sampler's | | | | | Comments | | Profile type | e: /I X-Niskin | other? |
| 1 | 1 | 815 | Bot-10 | V | 445 | | x | x | × | _ | | | | | | | |
| 2 | 2 | 816 | 4000 | V | 4000 | | x | x | x | | | | | | Bottom De | pth: 425 | 2_m |
| 3 | 3 | 817 | 3500 | 1 | 3500 | | x | x | x | | | | | | Transmiss | o Cleaned: | (Y)/ N |
| 4 | 4 | 818 | 3000 | V | 3000 | | x | x | x | | | | | | | | |
| 5 | 5 | 819 | 2500 | V | 2500 | | x | x | x | | | | | | Time | υтс | Locai |
| 6 | 6 | 820 | 2000 | V | 2000 | | x | x | x | | | | | | Start | 1025 | 0225 |
| 7 | 7 | 821 | 1500 | 1 | ,1500 | | × | x | x | | | | | | Bottom | 1136 | |
| 8 | 8 | 822 | 1250 | V | 1250 | | x | x | x | | | | | | End | 1306 | |
| 9 | 9 | 823 | 1000 | 1 | 6001. | | x | x | x | | | | | | | | |
| 10 | 10 | 824 | 800 | 1 | .800 | | x | x | x | | | 71 | | | Positional | Information | 1 |
| 11 | 11 | 825 | 600 | V | 600 | | x | x | x | | | | | t | Lat: Li | • 55 | 99 N |
| 12 | 12 | 826 | 400 | V | 400 | | x | × | x | | | | | Sta | Lon: 14 | 4.59 | . 29 w |
| 13 | 13 | 827 | 300 | 1 | , 300 | | x | x | x | | | | | | | • | A |
| 14 | 14 | 828 | 250 | 1 | 250 | | x | x | x | | | 1.51 | | tom | Lat: 14 | 9 . 59 | 29 |
| 15 | 15 | 829 | 200 | | 200 | | x | x | x | | | | | Bot | Lon: 14 | 9 • 59 4 • 59 | 29 w |
| 16 | 16 | 830 | 175 | V | 175 | | х | x | x | | | a, lei i | | | | | |
| 17 | 17 | 831 | 150 | V | ISO | | x | x | x | | | | | | Lat: 4 | 1 . 59 | 99 1 |
| 18 | 18 | 832 | 125 | V | 125 | | x | x | x | 4.1.1 | | | * | Enc | | 4 . 57 | 99 w |
| 19 | 19 | 833 | 100 | V | 100 | | x | x | x | | | | | | | | |
| 20 | 20 | 834 | 75 | \bigvee | 75 | | x | x | x | | | | | | Extra com | ments: | |
| 21 | 21 | 835 | 50 | V | 50 | | x | x | x | | | | | | Céline & K | ohen's cast | |
| 22 | 22 | 836 | 25 | V | 25 | | x | x | x | | | | | | with cups | | |
| 23 | 23 | 837 | 10 | V | . 10 | | x | x | x | | | | | | | | |
| 24 | 24 | 838 | 5 | V | 5 | | x | x | x | | | | | | | | |

Version: 25 Nov 2011

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

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| | Wat | er Pr | operti | es Grou | р | | Sai | mpl | ing L | og | In | stitu | te of Oc | ean Scienc | es, Ocean Sciences | Division, Sidney, BC |
|-------------|-------------|-------------|---------------------------------|--|----|--------------------------|-----------------|-------------------|----------|----|----|-------|----------|------------|--------------------|--|
| | Cruise | ID: | 2015-01 | Station: | · | P26 | | | Event #: | 9' | 9 | | Ship: | Tully | UTC Date (c | 10 mmm 1999): 19 02 12015 |
| Niskin # | Firing # | Sample # | Rosette C Target Pressure | Operation Confirmed √ Pressure | TM | Ies Tak TM un-filt | en / Sar Sal | npler's Nut-Fr | Initials | | | | | | Comments | Profile type: ROS TRM X-Niskin other? Watchkeeper(s): KS MB |
| 1 | | 736 | 150- | 175 | xx | xx | x | x | | | | | | | | |
| 2 | | 737 | 125 | | x | x | | | | | | | | | | Bottom Depth: <u>インイン</u> m |
| 3 | | 738 | 75 | | x | x | | | | | | | | | | Transmisso Cleaned: YN- |
| 4 | | 739 | 50 | | x | x | - | | | | | | | | | |
| 5 | _ | | | | | | | | | | | - | | | | Time UTC Local |
| 6 | | | | | | | | | | | | | | | | Start 13118 05 520 |
| 7 | | | | | | | | | | | | | | | | Bottom/313 1923 1968 5 |
| 8 | | | | | | | | | | | - | - | | | | End 1357 5:57 |
| 9 10 | | | | | | | | | | | | | | | | Positional Information |
| 11 | | | | | | | | | | | | | | | | 110 66 21 |
| 12 | | | | | | | | | | | | | | | | $\frac{\text{Lat: } 47 \circ 77 \text{ N}}{\text{Lon: } 175 \circ 77 \text{ N}}$ |
| 13 | | | | | | | | | | | | | | | | 144 \$ 59.98 |
| 14 | | | | | | | | | | L | | | | | | Lat: 29 • 59 95 N Lon: 445 • 00 00 W |
| 15 | | | | | | | | | | | | | | | | B Lon: 445 00 00 w |
| 16 | | | ineq. | | | | -11 | | | - | - | - | | | × | ▼ |
| 17 | | | | | | | ^ | | | | _ | - | | | | Lat: 45 ° 59 58 N Lon: /74 ° 59 99 W |
| 18 | | | | | | _ | _ | | | | - | | | | | ш Lon: / УУ • 59 99 W |
| 19 | | | | | | | _ | | | | | | | | | |
| 20 | | | | | | 1 | | | | | | | | | | Extra comments: |
| 21 | | | | | | | | | | | | 1 | | | | TM Shallow Go-flos |
| 22 | _ | | | | | | | | | | | | | | | |
| 23 24 | - | | | | | | | | | | - | | | | | |
| 4 | | | | | | | | | | | | | | | | |

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

.

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

| | Wat | er Pr | operti | es | Grou | р | | Sai | mpl | ing | Log | J | Ins | stitute | e of O | cean | Scie | nces, (| Ocean Sciences Di | visi | ion, Sidney, BC |
|-------------|-------------|-------------|---------------------------------|-----|----------|----|---|-----------------|-------------------|----------|-----|-----|-----|---------|--------|------|-------------------|---------|-------------------|-------|---|
| | Cruise | ID: | 2015-01 | 1.1 | Station: | | 1 million 1 | | | | | 100 |) | - | Ship: | 121 | Tully | | | | m/yyyy): 19 02 2015 |
| Niskin # | Firing # | Sample # | Rosette C Target Pressure | Cor | nfirmed | ΤM | Ies Take TM un-filt | en / Sar Sal | npler's Nut-Fr | Initials | | | | | | | | | Comments | | Profile type: ROS TRM X-Niskin other? Watchkeeper(s): KS MB |
| 1 | | 840 | 800 | [] | | x | x | x | x | | | | | | | | | | | | |
| 2 | | 841 | 600 | - | | х | x | | | | | | | | | | | | | | Bottom Depth: <u>4250</u> m |
| 3 | | 842 | 400 | 1 | | x | x | | | | | | | | | | | | | - | Transmisso Cleaned: Y / N |
| <u>a</u> 4 | | 843 | 200 | 1 | | XX | xx | | | | _ | | | | | | | | | - | |
| 5 | | | | | | | | | | | | | | | | | 1 - L | | | - | Time UTC Local |
| 6 | | | | | | | | * | | | | | | | | | <u>.</u> | | | - | Start 14:30 6:30 |
| 7 | | | | | | | | - | | | | | | | | | | | | | Bottom 14:50 6:50 |
| 8 | | | | + | | | | | | | | | | | | | | | | - | End 15120 770 |
| 9 | | | | + | | - | 1 | | | | | | | | | | | | | - | فتشري المتحديد والمحديد والمحد |
| 10 | | | | | | | | | | | | | | | | | | | | - | Lat: US • SS · SS N |
| 11 | | | 1 | | | | | | | | | | | | | | a sec | | | tart | Lat: 49 • 59 98 N Lon: 144 • 59 95 w |
| 12 13 | | | | | | | | | | | | | | | | | 4. 1 | • | | - ° | Lon: (1) * 5/ */.7 W |
| 14 | | | - | | | | 1 | | - | | | 0 | | | | | | | | Ę | Lat: 45 0 59 5497 |
| 15 | | | | | | ĸ | ~ 2 | | | | | | | | | | <u>,</u> 1 | | | 3otto | Lat: 49 • 59 98N Lon:174 • 59 98W |
| 16 | | | | | | | с цё, | | | | | | | | | | ÷, 1 | | | 1 | V |
| 17 | | | | | | | | | | | | | | | | | | | | | Lat: 49 . 59.97 N |
| 18 | | | | | | | | | | | | 1 | | | | | | | | End | Lat: 49 • 59.98 N Lon: 144 • 59.58 W |
| 19 | | | | | | | | | | | | | | | (| | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | | | Extra comments: |
| 21 | | | | | | | | | | | | | | | | | | | | - | TM Deep Go-flos |
| 22 | | | | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | | | | |

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | ID: | 2015-01 | Station: | P26 | Event #: | 101 | Ship: | Tully | UTC Date (d | d mmm yyyy): 19 FEB 2015 |
|-------------|-------------|-------------|---------------------------------|-------------------------------------|---------------------|-----------------|-----|-------|--------|-------------|--|
| Niskin # | Firing # | Sample # | Rosette O Target Pressure | peration Confirmed √ Pressure | Samples Taken / Sam | pler's Initials | | | | Comments | Profile type: ROS TRM X-Niskin other? Watchkeeper(s): |
| 1 | | 844 | 150 | 1 150 | x | | | | | | |
| 2 | | 845 | 150 | 1 | x | | | | | | Bottom Depth: 4252 m |
| 3 | | 846 | 150 | 1 | x | | | | | | Transmisso Cleaned: 🕥 / N |
| 4 | | 847 | 150 | / | x | | | | | | |
| 5 | | 848 | 150 | 1 | x | | | | | | Time UTC Local |
| 6 | | 849 | 150 | 1 | x | | | | - 10 m | | Start 1533 0783 |
| 7 | | 850 | 100 | ~ 100 | x | | | | | | Bottom 1536 |
| 8 | | 851 | 100 | ~ | x | | | | | | End 1544 |
| 9 | | 852 | 100 | / | x | | 1 | | | | |
| 10 | | 853 | 100 | ~ | x | | | | | | Positional Information |
| 11 | | 854 | 100 | ~ | x | | | | | | Lat: 49 • 59 99 N Lon: 145 • 00.00 * * W |
| 12 | | 855 | 100 | | x | | | | | | b Lon: 145 ° 00.00 * * W |
| 13 | | 856 | 50 | 1 50 | x | | | | | | V |
| 14 | | 857 | 50 | / | x | | | | | | Lat: 49 59.99 N Lon: 145 00.00 W |
| 15 | | 858 | 50 | / | x | | | | | | E Lon: 145 ° 00.00 3 W |
| 16 | | 859 | 50 | 1 | x | | | | | | ▼ |
| 17 | | 860 | 50 | / | x | | | | | | Lat: 49 ° 59.99 N Lon: 145 ° 00.00 W |
| 18 | | 861 | 50 | / | x | | | | | | Lon: 145 . 00.00 W |
| 19 | | 862 | 25 | 15 | x | | | | | | |
| 20 | | 863 | .0-5 | 1 | x | | | | | | Extra comments: |
| 21 | | 864 | 05 | / | x | | | | | | Shallow Cesium cast |
| 22 | | 865 | 05 | / | x | | | | | | |
| 23 | | 866 | 05 | 1 | X | | | | | | |
| 24 | | 867 | 85 | / | x | | | | | | |

Version: 25 Nov 2011

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | ID: | 2015-01 | | Station: | | P5 | | - | Event #: _ | 115 | | | Ship: | Tull | У | UTC Date (d | d mmn | n yyyy): <u>22</u> | 1/68 | _ 205_ |
|----------|--------|-----|---------------------|------------|----------|----------------|--------|----------|-------------------|------------|-----|-----|---|-------|------|----------|---------------------------------------|-------|--------------------------------------|-------------|------------------------------|
| | | | Rosette C Target | Dper Co | ation | Sampl Nut-F | es Tak | en / Sar | npler's HPLC | nitials | | | | | | <u>+</u> | Comments | (| Profile type ROS TRM Watchkeep | X-Niskin | other? |
| # | # | # | Plessure | - | V | | | | <u></u> | | | 1 1 | | | | | | = | | 1165 | |
| 1 | 1 | 868 | 30 | V | | x | | xx | хх | | | | | | | | | | | | 1 |
| 2 | 2 | 869 | 5 | V | 5 | x | x | xx | ХХ | | | | | | | | | | Bottom Dep | | 10000 |
| 3 | | | ~ | | | | | | | | _ | | | | | | | | Transmisso | Cleaned: | <u>Y</u> /N |
| 4 | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | 4 | Time | UTC | Local |
| 6 | | | | | | | | | | | | - | | | | | | | Start | 1538 | 6738 |
| 7 | | | | | | | | | | | | | | | | | | - | Bottom | 1611 | |
| 8 | | | | | | | | | | | | | | | | | I I I I I I I I I I I I I I I I I I I | | End | 1645 | |
| 9 | | | | - | | | | | | | | | | | | | | | | | |
| 10 | | Y. | _ | | | | | | | | | | | | | | | | Positional | Information | |
| 11 | | | | 1 | | | | | | | | | | | | | | + | Lat: 48 | • 41 | 51 N 77 W 51 N 58 W |
| | | | | | | | | | | | | | - | | | | | Star | Lon: 127 | • 9 | -77; W |
| 12 13 | | | | + | | | | 1 | | | | | | | | | | | | ▼ | |
| | | | | | | | | | | | | | | | | | | Ę | Lat: 48 | 0 | SI N |
| 14 | | | | + | | | | | | | - | | | - | | | · | Bott | Lon: 127 | 0 7 | ~8 w |
| 15 | | | | - | | - | - | | | | | | | | =t. | | | | | V | |
| 16 | - | 3 | | + | | | | | | | - | | | | | | | | Lat: 40 | · 41 | LICI N |
| 17 | | | | | | | - | 1. | | | | | | | 3 | | | pu | Lan: 127 | • • • | 44 N 61 W |
| 18 | | | | - | | | | | | | | 1 | | | | | | | | | |
| 19 | | | | _ | | | | - | | | - | | | | - | | | | | | |
| 20 | _ | | | | | | 1 | | | | | | | | | | | | Extra comi | ments: | |
| 21 | | | | | | | | | | | _ | | | | | | | | | | |
| 22 | | | | - | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | | | | |

Version: 25 Nov 2011

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

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | ID: | 2014-19 | Station: | P4 | Event #: | 118 | Ship: | Tully | UTC Date (| dd mmm yyyy): 22 <u>Feb 2015</u> |
|----|--------|--------|------------|----------------|---------------------|----------|-----|-------|-------|------------|--|
| | | | Rosette Op | | Samples Taken / Sam | | | î î r | 1 1 | Comments | Profile type: ROS TRM X-Niskin other? |
| | | Sample | Target | Confirmed √ | Cs | | | | | | Watchkeeper(s): |
| # | # | # | | P | | | | | | | |
| 1 | | 219 | 500 | 500 | x | | _ | | | | |
| 2 | | 220 | 500 - | 4 | x | | _ | | | | Bottom Depth: 1308 m |
| 3 | | 221 | 500 | 1 | x | | | | | | Transmisso Cleaned: Y/I N |
| 4 | | 222 | 500 | | x | | | | _ | | |
| 5 | | 223 | 500 | // | x | | | | | | Time UTC Local |
| 6 | | 224 | 500 | 1. | x | | | | | | Start 1917 1117 |
| 7 | | 225 | 400 | 400 | x | | | | | | Bottom 19.25 |
| 8 | | 226 | 400 | 4 | x | | | | | | End 1937 |
| 9 | | 227 | 400 | | x | | | | | - | |
| 10 | | 228 | 400 | | x | | _ | | | | Positional Information |
| 11 | | 229 | 400 | 11 | x | | | | | | Lat: 48 • 39 02 N Lon: 126 • 40 02 W |
| 12 | | 230 | 400 | | x | | | | | | b Lon: 126 • 40 02 W |
| 13 | | 231 | 300 | 4,300 | x | | | | | | |
| 14 | | 232 | 300 | 11 | x | | | | | | <u>Б</u> Lat: 48 ° 35 о <u>г</u> м |
| 15 | | 233 | 300 | Λ | x | | | | | | Lat: 48 • 39 62 Ν Lon: 126 • 40 61 W |
| 16 | | 234 | 300 | | x | | | | | | |
| 17 | | 235 | 300 | | x | | | | | | |
| 18 | | 236 | 300 | 1 | x | | | | | | Lon: 126 ° 37 77 W |
| 19 | | 237 | 200 | 200 | x | | | | | | |
| 20 | | 238 | 200 | V I | x | | | | | | Extra comments: |
| 21 | | 239 | 200 | | x | | | | | | Deep Cesium cast |
| 22 | | 240 | 200 | | x | | | | | | PAR ON |
| 23 | | 241 | 200 | 1 | x | | | | | | |
| 24 | | 242 | | 1 6 | x | | | | | | |

Version: 25 Nov 2011

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

| Water I | Properties | Group |
|---------|------------|-------|
|---------|------------|-------|

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | ID: | 2015-01 | - | Station: | | P4 | | -3 | Event | #: | 119 | | Shi | ip: | Tully | UTC Date (dd | mmm yy | yy): 22 2 2015 |
|-------------|-------------|-------------|---------------------------------|--------------|----------|-------------|------|------------------|------------------|----------|----|-----|-------|-----|-----|-------|----------------------|--------|---|
| Niskin # | Firing # | Sample # | Rosette C Target Pressure | Co | onfirmed | Samp DMS | DMSF | en / San DMSP | npler's Nut-F | Initials | | | Phyto | | | | Comments | RO | file type: S TRM X-Niskin other? chkeeper(s): |
| 1 | | 263 | 300 | Ų | 300 | x | | | x | | | | | | | | Vent Loose (slightly | | |
| 2 | | 264 | 200 | 5 | 200 | x | x | x | x | | | | | | | | | | tom Depth: (315 m |
| 3 | | 265 | 175 | 1 | 175 | x | x | x | x | | | | | | | | | Trar | nsmisso Cleaned: (Ŷ) / N |
| 4 | | 266 | 100 | 5 | 100 | x | × | × | x | | x | | | | | | | | X |
| 5 | | 267 | 75 | V | 74 | x | | | x | | x | | | | | | | Tim | e UTC Local |
| 6 | | 268 | 50 | \checkmark | 50 | x | | | x | | х | | | | | | | Star | + 2009 1209 |
| 7 | | 269 | 40 | | 40 | x | | | x | | x | | | | | | | Bot | * |
| 8 | | 270 | 30 | V | 29 | x | | | x | | x | | | | | | | End | 2033 |
| 9 | | 271 | 25 | ſ | 25 | x | | | x | | x | | | | | | (a) | | 4. |
| 10 | | 272 | 20 | \checkmark | 19 | xx | xx | xx | x | | хx | | | | | | | | itional Information |
| 11 | | 273 | 15 | 5 | 15 | x | | | x | | x | | | | | | | Lat: | 48 ° 38.99 N : 126 ° 39.99 W |
| 12 | | 274 | 10 | ~ | 10 | x | | | xx | | x | | | | | | | Lon | : 126° 39.99 W |
| 13 | | 275 | 5 | 1 | 5 | x | x | x | x | | x | | | | | | | | ▼ |
| 14 | | 276 | 0 | 1 | 1 | x | x | x | x | | x | | | | | | | E Lat: | 48 . 38.99 N |
| 15 | | 277 | 30 | 5 | 29 | | | | | | хx | xx | | | | | | B Lon | 48 · 38.99 N : 126 · 39.99 W |
| 16 | | 278 | 15 | 5 | 15 | | | | | 1 | хх | xx | | | | | | | ÷ 🗸 |
| 17 | | 279 | 5 | V | 6 | | | | | | хх | xx | xxx | | | | | Lat: | 48.38.99 N |
| 18 | | | | | | | | | | | | | | | | | | Lon | : 126 · 39.99 W |
| 19 | | | | | | | | | | | | | | | | | ÷ | | |
| 20 | | | | | | | | | | 1 | | | | | | | | Exti | ra comments: |
| 21 | | | | | | | | | | | | | | | | | | DMS | S cast - OUT-OF-ORDER |
| 22 | | | | | | | | | | | | | | | | | | | 15; 9-11; 16; 12-13; 17; 14 |
| 23 | | | - | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | | |

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

http://www.pac.dfo-mpo.gc.ca/sci/osap/projects/waterproperties/

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| | Wat | er Pro | opertie | es G | rou | р | | Sar | npli | ing L | og | | Institu | te of C |)cean | Scien | ices, (| Ocean Sciences | | | | |
|-------------|-------------|-------------|---------------------------------|----------|-------|----|--------------------------|---------|---------|---------|----|----|---------|---------|-------|-------|----------|----------------|-------|---|--------------------|---------------|
| | Cruise | ID: | 2015-01 | Stat | tion: | | P4 | | | Event # | : | 10 | | Ship: | | Tully | | | | | | <u> </u> |
| Niskin # | Firing # | Sample # | Rosette C Target Pressure | Confirme | ed | TM | es Take TM un-filt | | npler's | | | 1 | | | | | | Comments | | Profile type: ROS TRM Watchkeeper | X-Niskin_ | Sther? |
| 1 | | 871 | 175 | 1 | | x | x | x | x | | | | | | | | - | | | | 1 | |
| 2 | | 872 | 125 | X | | Χ | x | _ | | | | | | | | | | | | Bottom Dept | h:_ <u>/3/(</u> \$ | <u> </u> |
| 3 | | 873 | 75 | 1 | | xx | xx | | | | | | | | | | | | | Transmisso | Cleaned: | Y / N |
| 4 | | 874 | 50 | | | x | x | 12 | | | | | | _ | | | <u>.</u> | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | Time | UTC | Local |
| 6 | | | | | | | | 1 A 2 B | | | | | | _ | - | | | | | Start | 2115 | 1:15 |
| 7 | | | | | _ | - | | | | | | | | _ | | | 5 | | | Bottom | 21:25 | 1:40PM |
| 8 | | | | | | | | | | | | - | | - | - | | - | | | End | 490 | IC: TOWN |
| 9 | | | | | | | | | | | | - | | | | | 1. 1. | | | Positional In | formation | 14 |
| 10 | | | | | | | | | | | | _ | | - | | | 4 | | | | | |
| 11 | | | | | | | | | | | | | | | | | 1. | | Start | Lat: Lon: | 0 | ~ W |
| 12 | | | | | | | | | | | | | | | | - | - 2 | | | Lon. | ▼ | |
| 13 | | | | | | | | | | | | | | | | | 1 | | E | Lat: 48 | • 38. | 95 N |
| 14 | | | | | | | | • | 1 | | | | | | | | | | Bott | Lat: 48 Lon: 126 | • 39. | 96 W |
| 15 16 | ÷ | | | | | | | | | | | | | | | | 8. I | | | | V | 5 St. |
| 17 | | | | | | | | | | | | | | | | | *# | | | Lat: 48 | • 38 | -99 N 50 W |
| 18 | | | | | | | | 10 | | | | | | | | | | | Enc | Lon: | • 40. | 50 W |
| 19 | | | | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | | Extra comm | ents: | |
| 21 | | | | | | | | | | | | | | | | | | | | TM Shallow | Go-flos | |
| 22 | | | | | | | | | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | | _ | | | | | | | |
| 24 | | | | | | | | | | | | | | _ | | | | | | | | |

Sampling Log

Institute of Ocean Sciences, Ocean Sciences Division, Sidney, BC

| | Cruise | ID: | 2015-01 | _ Station: | | P4 | | e | | t #: | 12 | \ | _ 8 | hip: | Tully | | (dd/mmm/yyyy): <u>22</u> <u>2</u> <u>20</u> |
|-------------|-------------|-------------|---------------------------------|------------|-----|----|-------------------|----------|----|------|-----|-------|-----|--------|-------|----------|---|
| Niskin # | Firing # | Sample # | Rosette C Target Pressure | Confirmed | Оху | | en / San Nut-C | | | pH | Sam | gases | (| Celine | | Comments | Profile type: ROS) TRM X-Niskin other? Watchkeeper(s): >> |
| 1 | | 243 | Bot-10 | 1321 | x | x | x | | x | x | x | x | | | | | |
| 2 | | 244 | 1250 | 1 1250 | x | x | x | x | xx | x | x | x | | | | | Bottom Depth: 1315 m |
| 3 | | 245 | 1250 | V 1250 | xx | x | x | хх | x | x | | | | | * | | Transmisso Cleaned: (Y) / N |
| 4 | | 246 | 1000 | 1000 | x | x | x | хх | x | x | x | x | | x | | | ¥ |
| 5 | | 247 | 800 | 1 800 | x | x | x | x | x | x | x | x | | | | | Time UTC Local |
| 6 | | 248 | 600 | J 600 | x | xx | xx | эс. - | x | xxx | x | x | | x | | | Start 2149 1349 |
| 7 | | 249 | 400 | 1 400 | x | x | x | | x | x | x | x | | | | | Bottom 2212 |
| 8 | | 250 | 300 | 1300 | x | x | | | x | x | x | x | | | | | End 2249 |
| 9 | | 251 | 250 | V 250 | x | x | | | x | x | | | | | | | |
| 10 | | 252 | 200 | 1200 | x | x | | _ | x | x | x | x | | | | | Positional Information |
| 11 | | 253 | 175 | J 175 | x | x | | | x | x | | | | | | | Lat: 48 • 38,99 K |
| 12 | | 254 | 150 | 1 150 | x | x | | | x | x | x | x | | | | | b Lon: 126 • 39.99 V |
| 13 | | 255 | 125 | 125 | x | xx | | | x | x | | | 1 | | | | V |
| 14 | | 256 | 100 | J 100 | x | x | | | x | x | x | x | | x | | | Lat: 48° 38,99 Lon: 126° 39,99 v |
| 15 | | 257 | 75 | V75 | xx | x | | | x | x | | | | | | | B Lon: 12.6 . 39.99 v |
| 16 | | 258 | 50 | 149 | x | x | | | x | x | x | x | | | | | V |
| 17 | | 259 | 25 | V 24 | x | x | | | x | xxx | x | x | | | | | Lat: 48 • 39.01 |
| 18 | | 260 | 10 | VID | x | x | | | x | x | x | x | | x | | | Lon: 126 ° 40.02 V |
| 19 | | 261 | 5 | 15 | x | × | | x | x | x | | | | | | | |
| 20 | | 262 | 1250 | 11250 | _ | | | | | | | | | x | | | Extra comments: |
| 21 | | 870 | 1000 | 1000 | | | | | | | | x | | | | | Deep cast - OUT-OF-ORDER |
| 22 | | | | | | | | | | | | | | | | | 1 - 3; 20 - 21; 4 - 19 |
| 23 | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | |

Version: 25 Nov 2011

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

| | Wat | er Pr | opertie | es Grou | р | | Sai | mpli | ing I | Log | J | Insti | tute of (| Ocear | Scien ce | es, Ocean Sciences D | ivis | ion, Sidne | ey, BC | |
|-------------|--------|-------|---------------------|----------|------------|----------|----------|---------|----------|-----|-----|-------|-----------|-------|-----------------|----------------------|------|--|--------------|-----------------------|
| | Cruise | ID: | 2015-01 | Station: | | P4 | | | Event | #: | 122 | | Ship | | Tully | UTC Date (dd | mmr | n yyyy): <u>27</u> | 52 | -16 |
| Niskin # | | | Rosette C Target | - | Samp TM | oles Tak | en / Sar | npler's | Initials | | | | | 1 | | Sour Did Not | | Profile type: ROS TRM Watchkeepe | X-Niskin | other? |
| | | | | | i | | 1 | r | | | r r | | | 1 | 1 | 3 | F | | 10 | |
| 1 | | 875 | (800 | | X | X | X | × | | | | | | - | | | | Bottom Dep | th: 137 | 5m |
| 2 | | 876 | 600 | | X | X | | | | | | | | 1 | | | | Transmisso | | Y / N |
| 3 | | 877 | 400 | | XX | XX | | | | | | | | 1 | | | | Transmisse | oleanea. | 1 7 14 |
| 4 5 | | 878 | 200 | | X | x | | | 2 | | | | | | | | | Time | 23.00 UTC | D IS:00 |
| 6 | | | | | | | | | | | | | | | | | | Start | | |
| 7 | | | | | | | | | | | | | | | | | | Bottom | | 2 |
| 8 | | | | | | | | | | | | | | | | | | End | 3:54 | 1 15:54 |
| 9 | | | | | | | | | | | | | | | | | | | | C |
| 10 | | | | | | | | | | | | | | | | | | Positional I | nformation | , |
| 11 | | | | | | | | | | | | | | | | | | | | |
| 12 | 1.1 | | | | | | | | | | | | | | | | Star | Lon: 17.6 | • 3 | 8.95 N 8.95 W ? |
| 13 | | | | | | | 1 | | | | - | | | | | 10 0 0 | | | | 2 |
| 14 | | | | | | | | | _ | | | | | | | | E | Lat: | 0 | N |
| 15 | | | | | 1 | | | | | | | | | | | | Bott | Lon: | 0 | w |
| 16 | | | | | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | | Lat: Y8 | • 37 | 395 N |
| 18 | | | | | | | | | | | | 1.1 | | | | | End | Lon: 126 | · · 37 | 895 N 1.49 W |
| 19 | | | | | | | | | | | | | - | 1 | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | Extra comn | nents: | |
| 21 | | | | | | | | | | | | | | | | | | TM Deep G | o-flos | |
| 22 | | | | | | | | | | | | | | | | | | 800 m | - ded | NOT |
| 23 | | | | | | 8 | | | | | | | | | | | | <u> </u> | Cle | se. |
| 24 | | | | | | | | | | | | | | | | | | | | |

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

| | Wat | er Pro | opertie | es Grou | р | Sam | pling | Log | Insti | itute of Oc | ean Scie | | es Division, Sidney, BC |
|-------------|--------|------------|---------------------|----------|------------|------------|----------------|--------|-------|-------------|----------|----------|--|
| | Cruise | ID: | 2015-01 | Station: | P3 | | Event | #:_/23 | | Ship: | Tully | UTC Date | (dd mmm yyyy): <u>23</u> 02 2015 |
| Niskir # | | | Rosette O Target | peration | Samples Ta | ken / Samp | ler's Initials | | | | | Comments | Profile type: In-Situ. props ROS TRM X-Niskin other? Watchkeeper(s): |
| 1 | | 879 | 750 | | | x | | | | | | 2. 1. E | Bottom Depth: <u>80 8</u> m |
| 2 | | 880 881 | 625 425 | | | x | | | | | | | Transmisso Cleaned: Y / N |
| 4 | | 882 | 300 | | | x | | | | | | | Time UTC Local |
| 5 | | 883 884 | 100 50 | | | x | | | | | | | Time UTC Local Start 11:30 17:30 |
| 6 7 | | 885 | 5 | | | x | | | (9) | | | ÷ | Bottom 02:00 |
| 8 | | | | | | | | | | | | | End 0500 |
| 9 10 | | | | | | | | | | | | | Positional Information |
| 11 | | | | | | | | | | | | - | Lat: 48 • 37.51 N Lon: 126 • 20101 W |
| 12 | | | | | | | | | | | | | |
| 13 14 | | | | | | | | | | | | | Lat: 48 • 37 57 N Lon: 126 • 20,01 W |
| 15 | | | | | | | | | | | | | <u> </u> |
| 16 17 | | | | | | | | | | - | | | Lat: ° N Lon: ° W |
| 18 | | | | | | | | | | | | | |
| 19 | | | | | | - | - | | | | | | Extra comments: |
| 20 21 | | | | | | | | | | | | | UBC in-situ pumps to 750 m |
| 22 | | | | 12 | | | | | | | | | |
| 23 24 | | | | | | | | | | | | | |

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