

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|----------|--------|---|--|----------------|---|-----|------------------|--|--|-----|----------|----|-------------|------------------|---|------|------|--------------|--------------------|-------|------|--------|--------------------|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|---|---|---|
| Consec. Cast # <div style="text-align: center;">001</div> | | Vessel | | Proj. & Leg <div style="text-align: center;">MF9305</div> | | Event # <div style="text-align: center;">260</div> | | Vessel Sta. I.D. | | Instructions | | | | | | | | | | Sta. Designation | | | | | | | | | | | | | | | | | | | | | | | |
| Consec. Cast # | Latitude | | | N or S | Longitude | | | E or W | Date JD = <div style="text-align: center;">109</div> | | | Time GMT | | Dry Bulb | Wet Bulb | Bar. mb <div style="text-align: center;">1007.8</div> | S.S. | Vis. | Wind Dir. | Wind Sp. | Cloud | Type | Weath. | Bottom Depth, m | Sta. Name or I.D. | | | | | | | | | | | | | | | | | | |
| | Deg. | Min. | | | Deg. | | Day | | Mo. | Yr. | Hr. | Min. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 001 | 5 | 3 | 5 | 9 | N | 16 | 7 | 2 | 9 | 4 | 7 | W | 19 | APR | 93 | 03 | 38 | | 4 | 0 | | 3 | 3 | 0 | 8 | 3 | 7 | 1 | 9 | 0 | 2 | 2 | 8 | 2 | 2 | 1 | 6 | 1 | | | 0 | 3 | 6 |
| CTD Type & SN <u>91220</u> | | | | | Monitor Checks | | | | | Times JD/Time | | | | | Data Location | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Press. SN <u>25084</u> | | | | | on Deck | | | | | at Surface | | | | | Data on _____ | | | | | Tape/Diskette I.D. | | | | | File Name/Header | | | | | | | | | | | | | | | | | | |
| Temp. SN <u>701</u> | | | | | Press. _____ | | | | | _____ | | | | | at Surface _____ | | | | | _____ | | | | | _____ | | | | | | | | | | | | | | | | | | |
| Cond. SN <u>303</u> | | | | | Temp. _____ | | | | | _____ | | | | | Start Down _____ | | | | | _____ | | | | | _____ | | | | | | | | | | | | | | | | | | |
| _____ | | | | | Cond. _____ | | | | | _____ | | | | | at Bottom _____ | | | | | _____ | | | | | _____ | | | | | | | | | | | | | | | | | | |
| _____ | | | | | Other _____ | | | | | _____ | | | | | Start Up _____ | | | | | _____ | | | | | _____ | | | | | | | | | | | | | | | | | | |
| _____ | | | | | _____ | | | | | _____ | | | | | at Surface _____ | | | | | _____ | | | | | _____ | | | | | | | | | | | | | | | | | | |
| _____ | | | | | _____ | | | | | _____ | | | | | Data off _____ | | | | | _____ | | | | | _____ | | | | | | | | | | | | | | | | | | |
| Remarks <u>w/o 512</u> | | | | | | | | | | MOCNESS Test to 500m (collected CTD data for the back of it. Heck) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Pos. Bot. | T Rack | Trip Depth | Time @ | | Monitor Values | | | | Conv. Mon. Values-CTD | | | | Sample Bot. Data | | | Sal. Bot. # | Other Samp. | Pos. |
|--------------|-----------|---------------|--------|------|----------------|-------|-------|-------|-----------------------|-------|-------|------|------------------|--------|------|----------------|----------------|------|
| | | | Depth | Trip | Press. | Temp. | Cond. | Other | Press. - | Temp. | Cond. | Sal. | Therm-P | Avg Tw | Sal. | | | |
| 1 | | | | | | | | | | | | | | | | | | 1 |
| 2 | | | | | | | | | | | | | | | | | | 2 |
| 3 | | | | | | | | | | | | | | | | | | 3 |
| 4 | | | | | | | | | | | | | | | | | | 4 |
| 5 | | | | | | | | | | | | | | | | | | 5 |
| 6 | | | | | | | | | | | | | | | | | | 6 |
| 7 | | | | | | | | | | | | | | | | | | 7 |
| 8 | | | | | | | | | | | | | | | | | | 8 |
| 9 | | | | | | | | | | | | | | | | | | 9 |
| 10 | | | | | | | | | | | | | | | | | | 10 |
| 11 | | | | | | | | | | | | | | | | | | 11 |
| 12 | | | | | | | | | | | | | | | | | | 12 |

Initials WE/LAL
 ✓ LL

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|--|--------------------------|--|-----------------------|--|-------------------|--|----------------------|--|--|--|--------------|----------------------|--|----------|--|----------|---|-------------------|---|---------|-------------|-----------|--|----------|------|------------|--|--------|--|-----------------|--|-------------------|--|
| Consec. Cast # 002 | | Vessel MILLER FREEMAN | | Proj. & Leg MP9305 | | Event # 469 | | Vessel Sta. I.D. | | Instructions | | | | | | | | | | Sta. Designation | | | | | | | | | | | | | | |
| Consec. Cast # | | Latitude Deg. Min. | | N or S | | Longitude Deg. | | E or W | | Date JD = 113 Day Mo. Yr. | | | Time GMT Hr. Min. | | Dry Bulb | | Wet Bulb | | Bar. mb 1004.8 | | S. Vis. | | Wind Dir. | | Wind Sp. | | Cloud Type | | Weath. | | Bottom Depth, m | | Sta. Name or I.D. | |
| 002 | | 5451 | | 23 | | N | | 16822 | | 33 | | W | | 23 APR 93 | | | 0349 | | 46 | | 33 | | 0538 | | 2300 | | 0838 | | 1222 | | 190 | | | |
| CTD Type & SN 91220- | | | | Press. SN 25084 | | | | Temp. SN 701 | | | | Cond. SN 303 | | | | Monitor Checks on Deck at Surface Press. Temp. Cond. Other | | | | Times JD/Time Data on at Surface Start Down at Bottom Start Up at Surface Data off | | | | Data Location Tape/Diskette I.D. File Name/Header Cast 002-23 APR 0334 Remarks w/o 506 At drifting buoy site | | | | | | | | | | |
| Pos. | | Bot. | | T Rack | | Trip Depth | | Time @ Depth Trip | | Monitor Values Press. Temp. Cond. Other | | | | Conv. Mon. Values-CTD Press. Temp. Cond. Sal. | | | | Sample Bot. Data Therm-P Avg Tw Sal. | | | | Sal. Bot. # | | Other Samp. | | Pos. | | | | | | | | |
| 1 | | | | ✓ | | 500 | | 49:15 | | 50.3476 3.499 31.520 34.025 | | | | 50.531 3.646 30.627 33.045 | | | | | | | | 23 | | Cal | | 1 | | | | | | | | |
| 2 | | | | | | 50 00 60 | | | | 40.452 3.621 30.550 32.983 | | | | 30.448 3.963 30.702 32.884 | | | | | | | | | | Cal | | 2 | | | | | | | | |
| 3 | | | | | | 40 | | | | 20.119 3.937 30.708 32.863 | | | | 10.500 3.941 30.704 32.859 | | | | | | | | | | Cal | | 3 | | | | | | | | |
| 4 | | | | | | 30 | | | | | | | | | | | | | | | | | | Cal | | 4 | | | | | | | | |
| 5 | | | | | | 20 | | | | | | | | | | | | | | | | | | Cal | | 5 | | | | | | | | |
| 6 | | | | | | 10 | | | | | | | | | | | | | | | | | | Cal | | 6 | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | 7 | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | 8 | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | 10 | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | 11 | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | 12 | | | | | | | | |

Initials LL/WF
✓ LL

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|-----------------------|---------------------------------|-----------------|------------------------------|--------------|-----------------------|--------------------------|---------------------|----------|-----------------------|--------------|---------------------|---------------|------------------|----------|---|-------------|-------------|-----------|------------------|-----------|-----------|-----------|-----------------|-------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Consec. Cast # 003 | | Vessel MILLER FREEMAN | | Proj. & Leg MF9305 | | Event # 447 | | Vessel Sta. I.D. | | Instructions | | | | | | | | | | Sta. Designation | | | | | | | | | | | | | | | | | | | |
| Consec. Cast # | Latitude Deg. Min. | | N or S | Longitude Deg. | | E or W | Date JD = Day Mo. Yr. | | | Time GMT Hr. Min. | | Dry Bulb | | Wet Bulb | | Bar. mb 1017.9 | SS | Vis. | Wind Dir. | Wind Sp. | Cloud | Type | Weath. | Bottom Depth, m | Sta. Name or I.D. | | | | | | | | | | | | | | |
| 003 | 54 | 51 | 77N | 168 | 21 | 50W | 23 | A | P | R | 93 | 11 | 52 | 04 | 0 | 03 | 0 | 08 | 38 | 230 | 06 | 48 | 12 | 180 | 90 | | | | | | | | | | | | | | |
| CTD Type & SN 91220- | | | | Press. SN 25084 | | | | Temp. SN 701 | | | | Cond. SN 303 | | | | Monitor Checks on Deck at Surface Press. _____ Temp. _____ Cond. _____ Other _____ | | | | | | | | | | Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom 11:52 Start Up 11:57 at Surface _____ Data off _____ | | | | Data Location Tape/Diskette I.D. _____ File Name/Header Cast 003 - 23 Apr 1993 Remarks w/o 502 at Moaness | | | | | | | | | |
| Pos. No. | Bot. | T Rack | Trip Depth | Time @ | | Monitor Values | | | | Conv. Mon. Values-CTD | | | | Sample Bot. Data | | | Sal. Bot. # | Other Samp. | Pos. No. | | | | | | | | | | | | | | | | | | | | |
| | | | | Depth | Trip | Press. | Temp. | Cond. | Other | Press. - | Temp. | Cond. | Sal. | Therm-P | Avg Tw | Sal. | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | | ✓ | 500 | 11:52 | 11:57 | | | | | 503.337 | 3.504 | 31.526 | 34.027 | | | | 04 | | 1 | | | | | | | | | | | | | | | | | | | | |
| 2 | 28 | | 60 or 50 | | | | | | | 50.554 | 3.713 | 30.601 | 32.946 | | | | 26 | Chl | 2 | | | | | | | | | | | | | | | | | | | | |
| 3 | 32 | | 40 | | | | | | | | | | | | | | | Chl | 3 | | | | | | | | | | | | | | | | | | | | |
| 4 | 06 | | 30 | | | | | | | 30.593 | 3.868 | 30.690 | 32.902 | | | | | Chl | 4 | | | | | | | | | | | | | | | | | | | | |
| 5 | 30 | | 20 | | | | | | | 19.635 | 3.993 | 30.745 | 32.850 | | | | | Chl | 5 | | | | | | | | | | | | | | | | | | | | |
| 6 | 20 | | 10 | | | | | | | 10.477 | 4.136 | 30.846 | 32.831 | | | | | Chl | 6 | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | 7 | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | 8 | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | 9 | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | 10 | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | 11 | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | 12 | | | | | | | | | | | | | | | | | | | | |

Initials **SS/mc**
✓

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--------------------------|--|---|--|-------------------|--|----------------------|--|--|--|---|----------------------|--|----------|--|----------|---|-------------------|------------------|---------------------|--|-------------|--|-----------|--|----------|--|------------|--|--------|--|-----------------|--|-------------------|--|
| Consec. Cast # 004 | | Vessel MILLER FREEMAN | | Proj. & Leg MF9305 | | Event # 444 | | Vessel Sta. I.D. | | Instructions | | | | | | | | | | Sta. Designation | | | | | | | | | | | | | | | | |
| Consec. Cast # | | Latitude Deg. Min. | | N or S | | Longitude Deg. | | E or W | | Date JD = 113 Day Mo. Yr. | | | Time GMT Hr. Min. | | Dry Bulb | | Wet Bulb | | Bar. mb 1017.5 | | S.S. | | Vis. | | Wind Dir. | | Wind Sp. | | Cloud Type | | Weath. | | Bottom Depth, m | | Sta. Name or I.D. | |
| 004 | | 54 51 | | 16 3 | | N | | 168 21 | | 77 W | | 23 APR 93 | | | 14 00 | | 03 19 | | 02 8 | | 07 38 | | 220 | | 05 18 | | 1 | | 2180 | | 90 | | | | | |
| CTD Type & SN 91220- Press. SN 25084 Temp. SN 701 Cond. SN 303 | | | | Monitor Checks on Deck at Surface Press. _____ Temp. _____ Cond. _____ Other _____ | | | | | | | | Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____ | | | | Data Location Tape/Diskette I.D. _____ File Name/Header <u>Cast 004 - 23 Apr 1993</u> Remarks <u>W/O 100</u> <u>1400:49</u> | | | | | | | | | | | | | | | | | | | | |
| Pos. | | Bot. | | T Rack | | Trip Depth | | Time @ Depth Trip | | Monitor Values Press. Temp. Cond. Other | | | | Conv. Mon. Values-CTD Press. - Temp. Cond. Sal. | | | | Sample Bot. Data Therm-P Avg Tw Sal. | | | Sal. Bot. # | | Other Samp. | | Pos. | | | | | | | | | | | |
| 1 | | | | ✓ | | 100 | | | | | | | | 100.884 3.623 30.767 33.207 | | | | | | | 28 | | | | 1 | | | | | | | | | | | |
| 2 | | 29 | | | | 100 | | | | | | | | 100.908 3.626 30.770 33.208 | | | | | | | PROTOZOANS (LUGOLS) | | | | 2 | | | | | | | | | | | |
| 3 | | 28 | | | | 90 | | | | | | | | 90.053 3.495 30.606 33.152 | | | | | | | | | | | 3 | | | | | | | | | | | |
| 4 | | 22 | | | | 80 | | | | | | | | 80.105 3.415 30.488 33.097 | | | | | | | | | | | 4 | | | | | | | | | | | |
| 5 | | 6 | | | | 70 | | | | | | | | 70.336 3.535 30.560 33.066 | | | | | | | | | | | 5 | | | | | | | | | | | |
| 6 | | 30 | | | | 60 | | | | | | | | 60.856 3.618 30.618 33.056 | | | | No Sample | | | | | | | 6 | | | | | | | | | | | |
| 7 | | 20 | | | | 50 | | | | | | | | 50.944 3.716 30.676 33.032 | | | | | | | | | | | 7 | | | | | | | | | | | |
| 8 | | 2 | | | | 40 | | | | | | | | 40.962 3.748 30.642 32.970 | | | | | | | | | | | 8 | | | | | | | | | | | |
| 9 | | 23 | | | | 30 | | | | | | | | 30.925 3.752 30.621 32.941 | | | | | | | | | | | 9 | | | | | | | | | | | |
| 10 | | 26 | | | | 20 | | | | | | | | 20.469 3.911 30.705 32.884 | | | | | | | | | | | 10 | | | | | | | | | | | |
| 11 | | 25 | | | | 10 | | | | | | | | 10.509 4.149 30.857 32.832 | | | | | | | | | | | 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | 12 | | | | | | | | | | | |

Initials SS/ML

✓

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---------------------------------|--|-----------------------|---|----------------|--|------------------------------|--|---|----------------------|--|----------|--|---|--|-------------------|---|-----------|------------------|-------------|--|------------------|--|----------------|--|------------------|--|-------------|--|-------------------------|--|-------------------------|--|
| Consec. Cast # 006 | | Vessel MILLER FREEMAN | | Proj. & Leg MF9305 | | Event # 454 | | Vessel Sta. I.D. | | Instructions | | | | | | | | | | Sta. Designation | | | | | | | | | | | | | | |
| Consec. Cast # | | Latitude N or S Deg. Min. | | | Longitude E or W Deg. | | | Date JD = 113 Day Mo. Yr. | | | Time GMT Hr. Min. | | Dry Bulb | | Wet Bulb | | Bar. mb 1018.1 | | SS 5.5 | | Vis 2.0 | | Wind Dir. 220 | | Wind Sp. 04 | | Cloud Type 18 | | Weath. 1 | | Bottom Depth, m 2190 | | Sta. Name or I.D. 91 | |
| 006 | | 5452 N | | | 16822 W | | | 23 APR 93 | | | 18 11 | | 05 50 | | 4 0 | | 18 | | 28 | | 220 | | 04 | | 18 | | 1 | | 2190 | | 91 | | | |
| CTD Type & SN 91220- Press. SN 25084 Temp. SN 701 Cond. SN 303 | | | | | Monitor Checks on Deck at Surface Press. _____ Temp. _____ Cond. _____ Other _____ | | | | | Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____ | | | | | Data Location Tape/Diskette I.D. _____ File Name/Header Cost06-23 Apr 1825 Remarks 18 11 10 | | | | | | | | | | | | | | | | | | | |
| Pos. | | Bot. | | T Rack | | Trip Depth | | Time @ Depth Trip | | Monitor Values Press. Temp. Cond. Other | | | | Conv. Mon. Values-CTD Press. - Temp. Cond. Sal. | | | | Sample Bot. Data Therm-P Avg Tw Sal. | | | Sal. Bot. # | | Other Samp. | | Pos. | | | | | | | | | |
| 1 | | | | T | | 90 | | | | | | | | 90.032 3.365 30.462 33.111 | | | | | | | 16 | | | | 1 | | | | | | | | | |
| 2 | | 29 | | | | 90 | | | | | | | | 90.002 3.326 30.427 33.109 | | | | | | | | | MZ | | 2 | | | | | | | | | |
| 3 | | 28 | | | | 70 | | | | | | | | 70.267 3.703 30.675 33.034 | | | | | | | | | | | 3 | | | | | | | | | |
| 4 | | 28 | | | | 50 | | | | | | | | 50.403 3.721 30.610 32.948 | | | | | | | | | | | 4 | | | | | | | | | |
| 5 | | 6 | | | | 40 | | | | | | | | 40.274 3.712 30.595 32.945 | | | | | | | | | | | 5 | | | | | | | | | |
| 6 | | 30 | | | | 30 | | | | | | | | 30.220 3.741 30.617 32.946 | | | | | | | | | | | 6 | | | | | | | | | |
| 7 | | 20 | | | | 20 | | | | | | | | 20.155 3.734 30.605 32.945 | | | | | | | | | | | 7 | | | | | | | | | |
| 8 | | 26 | | | | 10 | | | | | | | | 10.185 3.903 30.738 32.938 | | | | | | | | | | | 8 | | | | | | | | | |
| 9 | | 23 | | | | 5 | | | | | | | | 5.189 3.919 30.747 32.934 | | | | | | | | | | | 9 | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | 10 | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | 11 | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | 12 | | | | | | | | | |

Initials SS/MC
✓

| Consec. Cast # | | Vessel | | Proj. & Leg | | Event # | | Vessel Sta. I.D. | | Instructions | | | | | | | | | | Sta. Designation | | | | | | | | |
|----------------------|------|----------|-------|--------------------|-----------|----------------|--------|------------------|----------|-----------------------|----------|------------------|----------|------------------|----------|-------------------------------------|---------|-------------|-----------|------------------|----------|------|------------|---|-----------------|---|-------------------|----|
| Consec. Cast # | | Latitude | | | Longitude | | | Date JD = | | | Time GMT | | Dry Bulb | | Wet Bulb | | Bar. mb | | Wind Dir. | | Wind Sp. | | Cloud Type | | Bottom Depth, m | | Sta. Name or I.D. | |
| | | Deg. | Min. | N or S | Deg. | Min. | E or W | Day | Mo. | Yr. | Hr. | Min. | | | | | mb | mb | Dir. | Sp. | Cloud | Type | Weath. | | | | | |
| 007 | | 54 | 51 | N | 168 | 21 | W | 23 | APR | 93 | 19 | 00 | 05 | 4 | 0 | 4 | 3 | 18 | 28 | 220 | 04 | 18 | 1 | 2 | 1 | 7 | 3 | 91 |
| CTD Type & SN 91220- | | | | Monitor Checks | | | | | | | | Times JD/Time | | | | Data Location | | | | | | | | | | | | |
| Press. SN 25084 | | | | on Deck at Surface | | | | | | | | Data on | | | | Tape/Diskette I.D. File Name/Header | | | | | | | | | | | | |
| Temp. SN 701 | | | | Press. _____ | | | | | | | | at Surface _____ | | | | Cas 007-23 Apr 1993 | | | | | | | | | | | | |
| Cond. SN 303 | | | | Temp. _____ | | | | | | | | Start Down _____ | | | | _____ | | | | | | | | | | | | |
| | | | | Cond. _____ | | | | | | | | at Bottom _____ | | | | _____ | | | | | | | | | | | | |
| | | | | Other _____ | | | | | | | | Start Up _____ | | | | Remarks 190635 | | | | | | | | | | | | |
| | | | | | | | | | | | | at Surface _____ | | | | w/o 90 | | | | | | | | | | | | |
| | | | | | | | | | | | | Data off _____ | | | | | | | | | | | | | | | | |
| Pos. | | T | | Time @ | | Monitor Values | | | | Conv. Mon. Values-CTD | | | | Sample Bot. Data | | | | Sal. Bot. # | | Other Samp. | | Pos. | | | | | | |
| Bot. | Rack | Depth | Depth | Trip | Press. | Temp. | Cond. | Other | Press. - | Temp. | Cond. | Sal. | Therm-P | Avg Tw | Sal. | | | | | | | | | | | | | |
| 1 | 29 | 11 | 90 | | | | | | 90.347 | 3.222 | 30.319 | 33.085 | | | | 16 | NZ | | 1 | | | | | | | | | |
| 2 | 28 | | 70 | | | | | | 69.957 | 3.765 | 30.677 | 32.973 | | | | | | | 2 | | | | | | | | | |
| 3 | 25 | | 50 | | | | | | 50.291 | 3.870 | 30.756 | 32.963 | | | | | | | 3 | | | | | | | | | |
| 4 | 6 | | 40 | | | | | | 40.250 | 4.089 | 30.925 | 32.956 | | | | | | | 4 | | | | | | | | | |
| 5 | 30 | | 30 | | | | | | 30.254 | 4.081 | 30.909 | 32.950 | | | | | | | 5 | | | | | | | | | |
| 6 | 20 | | 20 | | | | | | 20.194 | 3.902 | 30.727 | 32.915 | | | | | | | 6 | | | | | | | | | |
| 7 | 20 | 1 | 20 | | | | | | 20.305 | 3.921 | 30.791 | 32.912 | | | | | 08 | | 7 | | | | | | | | | |
| 8 | 26 | | 10 | | | | | | 10.141 | 3.895 | 30.686 | 32.884 | | | | | | | 8 | | | | | | | | | |
| 9 | 23 | | 5 | | | | | | 5.228 | 3.935 | 30.705 | 32.870 | | | | | | | 9 | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | 10 | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | 11 | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | 12 | | | | | | | | | |

Initials SS/mc
 ✓

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------|--|--------------------|--|-----------------------|--------------------------------------|----------------|--|------------------------------|--|---|----------------------|--|----------|--|--|--|-------------------|--|------|------------------|-----------|--|----------|---|-------|------|--------|-----------------|----|-------------------|--|
| Consec. Cast # 008 | | Vessel | | Proj. & Leg MP9305 | | Event # 467 | | Vessel Sta. I.D. | | Instructions | | | | | | | | | | Sta. Designation | | | | | | | | | | | |
| Consec. Cast # | | Latitude N or S | | | Longitude E or W | | | Date JD = 113 Day Mo. Yr. | | | Time GMT Hr. Min. | | Dry Bulb | | Wet Bulb | | Bar. mb 1018.9 | | S.S. | Vis. | Wind Dir. | | Wind Sp. | | Cloud | Type | Weath. | Bottom Depth, m | | Sta. Name or I.D. | |
| 008 | | 545178N | | | 1682122W | | | 23 APR 93 | | | 2231 | | 40 | | 32 | | 19 | | 28 | 135 | 04 | | 18 | 1 | 21 | 71 | | | 91 | | |
| CTD Type & SN 91220 | | | | | Monitor Checks on Deck at Surface | | | | | Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____ | | | | | Data Location Tape/Diskette I.D. _____ File Name/Header cast008-23Apr2027 | | | | | | | | | | | | | | | | |
| Press. SN 25084 | | | | | Press. _____ | | | | | | | | | | Remarks | | | | | | | | | | | | | | | | |
| Temp. SN 701 | | | | | Temp. _____ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cond. SN 303 | | | | | Cond. _____ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | Other _____ | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Pos. | Bot. | T Rack | Trip Depth | Time @ | | Monitor Values | | | | Conv. Mon. Values-CTD | | | | Sample Bot. Data | | | Sal. Bot. # | Other Samp. | Pos. |
|------|------|--------|------------|--------|------|----------------|-------|-------|-------|-----------------------|-------|--------|--------|------------------|--------|------|-------------|-------------|------|
| | | | | Depth | Trip | Press. | Temp. | Cond. | Other | Press. - | Temp. | Cond. | Sal. | Therm-P | Avg Tw | Sal. | | | |
| 1 | | | 90 | | | | | | | 90.466 | 3.335 | 30.395 | 33.062 | | | | MZ | 1 | |
| 2 | | | 70 | | | | | | | 69.847 | 3.684 | 30.661 | 33.036 | | | | MZ | 2 | |
| 3 | | | 50 | | | | | | | 50.655 | 3.777 | 30.664 | 32.956 | | | | MZ | 3 | |
| 4 | | | 40 | | | | | | | 40.920 | 3.847 | 30.720 | 32.958 | | | | MZ | 4 | |
| 5 | | | 30 | | | | | | | 30.275 | 4.078 | 30.907 | 32.951 | | | | MZ | 5 | |
| 6 | | | 20 | | | | | | | 20.472 | 3.906 | 30.717 | 32.905 | | | | MZ | 6 | |
| 7 | | | 20 | | | | | | | 20.404 | 3.902 | 30.712 | 32.902 | | | 33 | | 7 | |
| 8 | | | 10 | | | | | | | 9.877 | 3.976 | 30.737 | 32.863 | | | | MZ | 8 | |
| 9 | | | 05 | | | | | | | 4.851 | 4.109 | 30.824 | 32.835 | | | | MZ | 9 | |
| 10 | | | | | | | | | | | | | | | | | | 10 | |
| 11 | | | | | | | | | | | | | | | | | | 11 | |
| 12 | | | | | | | | | | | | | | | | | | 12 | |

 Initials LL/WF

✓

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-----------------------|--------|----------------|-------------------|-------------|----------------|------------------------------|------------------|------------------|-----------------------|-------|--------------------|----------|------------------|--------|------|-----------|----------|-------|------------------|--------|-----------------|----|------------------------|--|----|
| Consec. Cast # 009 | | | Vessel | | Proj. & Leg | | Event# | Vessel Sta. I.D. | | Instructions | | | | | | | | | | Sta. Designation | | | | | | |
| Consec. Cast # | Latitude Deg. Min. | | N or S | Longitude Deg. | | E or W | Date JD = 114 Day Mo. Yr. | | | Time GMT Hr. Min. | | Dry Bulb | Wet Bulb | Bar. mb | SS | Vis. | Wind Dir. | Wind Sp. | Cloud | Type | Weath. | Bottom Depth, m | | Sta. Name or I.D. | | |
| 009 | 54 | 52 | 25 | N | 168 | 21 | 79 | W | 24 | APR | 93 | 00 | 39 | 40 | 3 | 2 | 19 | 28 | 135 | 04 | 18 | 1 | 21 | 31 | | 91 |
| CTD Type & SN 91220 | | | Monitor Checks | | | Times JD/Time | | | Data Location | | | | | | | | | | | | | | | | | |
| Press. SN 25084 | | | on Deck | | | at Surface | | | Data on | | | Tape/Diskette I.D. | | | | | | | | | | | | File Name/Header | | |
| Temp. SN 701 | | | Press. _____ | | | _____ | | | at Surface _____ | | | _____ | | | | | | | | | | | | Cast 009 - 24 Apr 0026 | | |
| Cond. SN 303 | | | Temp. _____ | | | _____ | | | at Bottom _____ | | | _____ | | | | | | | | | | | | _____ | | |
| _____ | | | Cond. _____ | | | _____ | | | Start Up _____ | | | _____ | | | | | | | | | | | | _____ | | |
| _____ | | | Other _____ | | | _____ | | | at Surface _____ | | | _____ | | | | | | | | | | | | _____ | | |
| _____ | | | _____ | | | _____ | | | Data off _____ | | | _____ | | | | | | | | | | | | _____ | | |
| Remarks max depth = 92. Cast 1-9 taken w/ fluorometer at max sensitivity (10X). It "maxed out" on all casts. (cast 11 onward have min sensitivity.) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pos. | Bot. | T Rack | Trip Depth | Time @ | | Monitor Values | | | | Conv. Mon. Values-CTD | | | | Sample Bot. Data | | | Sal. | Other | Samp. | S.D. | | | | | | |
| | | | | Depth | Trip | Press. | Temp. | Cond. | Other | Press. - | Temp. | Cond. | Sal. | Therm-P | Avg Tw | Sal. | Bot. # | | | | | | | | | |
| 1 | | | 90 | | | | | | | 90.561 | 3.196 | 30.303 | 33.093 | | | | | MZ | 1 | | | | | | | |
| 2 | | | 70 | | | | | | | 69.450 | 3.515 | 30.504 | 33.020 | | | | | MZ | 2 | | | | | | | |
| 3 | | | 50 | | | | | | | 49.759 | 3.788 | 30.681 | 32.966 | | | | | MZ | 3 | | | | | | | |
| 4 | | | 40 | | | | | | | 39.506 | 3.858 | 30.735 | 32.965 | | | | | MZ | 4 | | | | | | | |
| 5 | | | 30 | | | | | | | 29.734 | 3.888 | 30.757 | 32.965 | | | | | MZ | 5 | | | | | | | |
| 6 | | | 20 | | | | | | | 19.627 | 3.975 | 30.826 | 32.964 | | | | | MZ | 6 | | | | | | | |
| 7 | | | 20 | | | | | | | 19.660 | 3.974 | 30.825 | 32.965 | | | | 01 | | 7 | | | | | | | |
| 8 | | | 10 | | | | | | | 10.219 | 4.096 | 30.903 | 32.939 | | | | | MZ | 8 | | | | | | | |
| 9 | | | 05 | | | | | | | 4.673 | 4.167 | 30.917 | 32.887 | | | | | MZ | 9 | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | 10 | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | 11 | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | 12 | | | | | | | |

Initials LL/WF



| | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|----------|------------------------------|----------------|---------------------------|----|--------------------|-----------|------------------|---------------|--------------|------|----------|--|---------|----|------|-----------|----------|-------|------------------|--------|-----------------|-------------------|
| Consec. Cast # 010 | | Vessel MILLER PRESTON | | Proj. & Leg MF9305 | | Event # 489 | | Vessel Sta. I.D. | | Instructions | | | | | | | | | | Sta. Designation | | | |
| Consec. Cast # | Latitude | | N or S | Longitude | | E or W | Date JD = | | | Time GMT | | Dry Bulb | Wet Bulb | Bar. mb | SS | Vis. | Wind Dir. | Wind Sp. | Cloud | Type | Weath. | Bottom Depth, m | Sta. Name or I.D. |
| | Deg. | Min. | | Deg. | | | Day | Mo. | Yr. | Hr. | Min. | | | | | | | | | | | | |
| 010 | 54 | 51 | N | 168 | 20 | 43 | W | 24 | Apr | 1993 | 02 | 48 | 40 | 25 | 18 | 28 | 105 | 04 | 38 | 12 | 21 | 8 | 91 |
| CTD Type & SN 91220 | | | Monitor Checks | | | | | | Times JD/Time | | | | Data Location | | | | | | | | | | |
| Press. SN 25084 | | | on Deck | | | | | | Data on | | | | Tape/Diskette I.D. | | | | | | | | | | |
| Temp. SN 701 | | | at Surface | | | | | | at Surface | | | | File Name/Header | | | | | | | | | | |
| Cond. SN 303 | | | Press. _____ | | | | | | Start Down | | | | _____ | | | | | | | | | | |
| | | | Temp. _____ | | | | | | at Bottom | | | | _____ | | | | | | | | | | |
| | | | Cond. _____ | | | | | | Start Up | | | | _____ | | | | | | | | | | |
| | | | Other _____ | | | | | | at Surface | | | | Remarks <i>Fluorometer not in use on this cast (it was removed in order to adjust sensitivity setting)</i> | | | | | | | | | | |
| | | | | | | | | | Data off | | | | <i>w/o 100</i> | | | | | | | | | | |

| Pos. | Bot. | T Rack | Trip Depth | Time @ | | Monitor Values | | | | Conv. Mon. Values-CTD | | | | Sample Bot. Data | | | Sal. Bot. # | Other Samp. | Pos. |
|------|------|--------|------------|--------|------|----------------|-------|-------|-------|-----------------------|-------|--------|--------|------------------|--------|------|-------------|-------------|------|
| | | | | Depth | Trip | Press. | Temp. | Cond. | Other | Press. - | Temp. | Cond. | Sal. | Therm-P | Avg Tw | Sal. | | | |
| 1 | | | 100 | | | | | | | 99.928 | 3.495 | 30.625 | 33.169 | | | | | 1 | |
| 2 | | | 90 | | | | | | | 90.021 | 3.447 | 30.550 | 33.134 | | | | | 2 | |
| 3 | | | 80 | | | | | | | 79.826 | 3.373 | 30.433 | 33.074 | | | | | 3 | |
| 4 | | | 70 | | | | | | | 69.356 | 3.598 | 30.604 | 33.056 | | | | | 4 | |
| 5 | | | 60 | | | | | | | 60.052 | 3.743 | 30.702 | 33.030 | | | | | 5 | |
| 6 | | | 50 | | | | | | | 50.042 | 3.785 | 30.679 | 33.965 | | | | | 6 | |
| 7 | | | 40 | | | | | | | 39.945 | 3.801 | 30.682 | 32.959 | | | | | 7 | |
| 8 | | | 30 | | | | | | | 30.068 | 3.775 | 30.646 | 32.947 | | | | | 8 | |
| 9 | | | 20 | | | | | | | 19.851 | 3.779 | 30.627 | 32.926 | | | | | 9 | |
| 10 | | | 10 | | | | | | | 9.531 | 4.023 | 30.810 | 32.903 | | | | | 10 | |
| 11 | | | | | | | | | | | | | | | | | | 11 | |
| 12 | | | | | | | | | | | | | | | | | | 12 | |

Initials LL/WF
 ✓

| Consec. Cast # | | Vessel | | Proj. & Leg | | Event # | | Vessel Sta. I.D. | | Instructions | | | | | | | | | | Sta. Designation | | | | | | | | | | | | | | | |
|--|--|-----------|------|--------------------------|-----------|-------------|-----|------------------|-----|--------------|----------|------------------------|----------|-------|----------|--------------------|---------|-------|-----------|------------------|-----------|-------------|----------|---------|------------|--------|--------|------|-----------------|----|-------------------|-------|--|----|--|
| Consec. Cast # | | Latitude | | | Longitude | | | Date JD = | | | Time GMT | | Dry Bulb | | Wet Bulb | | Bar. mb | | S.S. Vis. | | Wind Dir. | | Wind Sp. | | Cloud Type | | Weath. | | Bottom Depth, m | | Sta. Name or I.D. | | | | |
| | | Deg. | Min. | N or S | Deg. | E or W | Day | Mo. | Yr. | Hr. | Min. | | | | | | | | | | | | | | | | | | | | | | | | |
| 011 | | 54 | 52 | 07N | 168 | 2199W | 24 | APR | 93 | 03 | 52 | | 4 | 6 | | 3 | 2 | 1 | 8 | 3 | 8 | 1 | 20 | 06 | 38 | 1 | 21 | 48 | | | 91 | | | | |
| CTD Type & SN <u>91220</u> | | | | Monitor Checks | | | | | | | | Times JD/Time | | | | Data Location | | | | | | | | | | | | | | | | | | | |
| Press. SN <u>25084</u> | | | | on Deck | | | | at Surface | | | | Data on _____ | | | | Tape/Diskette I.D. | | | | File Name/Header | | | | | | | | | | | | | | | |
| Temp. SN <u>701</u> | | | | Press. _____ | | | | _____ | | | | at Surface <u>3:36</u> | | | | _____ | | | | _____ | | | | | | | | | | | | | | | |
| Cond. SN <u>303</u> | | | | Temp. _____ | | | | _____ | | | | Start Down _____ | | | | _____ | | | | _____ | | | | | | | | | | | | | | | |
| _____ | | | | Cond. _____ | | | | _____ | | | | at Bottom _____ | | | | _____ | | | | _____ | | | | | | | | | | | | | | | |
| _____ | | | | Other _____ | | | | _____ | | | | Start Up _____ | | | | _____ | | | | _____ | | | | | | | | | | | | | | | |
| _____ | | | | _____ | | | | _____ | | | | at Surface _____ | | | | _____ | | | | _____ | | | | | | | | | | | | | | | |
| _____ | | | | _____ | | | | _____ | | | | Data off _____ | | | | _____ | | | | _____ | | | | | | | | | | | | | | | |
| Remarks <u>Fluorometer changed from maximum sensitivity (-10x) to minimum sensitivity starting w/ this cast. w/o 500</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pos. | | Bot. Rack | | Trip Depth | | Time @ | | Monitor Values | | | | Conv. Mon. Values-CTD | | | | Sample Bot. Data | | | | Sal. Bot. # | | Other Samp. | | Pos. | | | | | | | | | | | |
| | | | | | | | | Press. | | Temp. | | Cond. | | Other | | Press. - | | Temp. | | Cond. | | Sal. | | Therm-P | | Avg Tw | | Sal. | | | | | | | |
| 1 | | ✓ | | Bottom | | 00:00 05:00 | | | | | | | | | | 500.253 | | 3.483 | | 31.519 | | 34.041 | | | | | | | | 19 | | | | 1 | |
| 2 | | | | / | | | | | | | | | | / | | | | | | | | | | | | | | | | | | | | 2 | |
| 3 | | | | / | | | | | | | | | | / | | | | | | | | | | | | | | | | | | | | 3 | |
| 4 | | | | max Fluor (below 30m) | | | | | | | | | | | | 53.654 | | 3.811 | | 30.699 | | 32.961 | | | | | | | | | | Chlor | | 4 | |
| 5 | | | | 40 | | | | | | | | | | | | 40.393 | | 3.932 | | 30.766 | | 32.926 | | | | | | | | | | Chlor | | 5 | |
| 6 | | | | 30 | | | | | | | | | | | | 30.159 | | 3.955 | | 30.758 | | 32.899 | | | | | | | | | | Chlor | | 6 | |
| 7 | | | | 20 | | | | | | | | | | | | 20.062 | | 3.890 | | 30.653 | | 32.875 | | | | | | | | | | Chlor | | 7 | |
| 8 | | | | 10 | | | | | | | | | | | | 10.266 | | 4.146 | | 30.852 | | 32.828 | | | | | | | | | | Chlor | | 8 | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 10 | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 11 | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 12 | |

Initials LL/WF
✓

| Consec. Cast # | | Vessel | | Proj. & Leg | | Event # | | Vessel Sta. I.D. | | Instructions | | | | | | | | | | Sta. Designation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|--|----------|--|-------------|-----------|------------|--|------------------|--|----------------|----------|-----------------------|----------|------------------|----------|----------------|---------|-------------|----|------------------|------|--------|-----------|--------|----------|---------|------------|--------|--------|-------|-----------------|---|-------------------|-------|----|----|----|-------|----|---------|----|---------|----|--|----|------------|----|--|----|------------|----|--|----|-----------|--|--|--|----------|--|--|--|------------|--|--|--|----------|--|--|--|---------------|--|--------------------|--|------------------|--|----------------------|--|---------|--|
| Consec. Cast # | | Latitude | | | Longitude | | | Date JD = | | | Time GMT | | Dry Bulb | | Wet Bulb | | Bar. mb | | SS | | Vis. | | Wind Dir. | | Wind Sp. | | Cloud Type | | Weath. | | Bottom Depth, m | | Sta. Name or I.D. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Deg. | | Min. | | N or S | | Deg. | | E or W | | Day Mo. Yr. | | | Hr. Min. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 012 | | 54 | | 51 | | 71 | | N | | 168 | | 21 | | 53 | | W | | 24 | | | APR | | | 93 | | | 11 | | 26 | | 04 | | 10 | | 30 | | 17 | | 28 | | 09 | | 51 | | 02 | | 81 | | 21 | | 81 | | 91 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CTD Type & SN | | 91220- | | Press. SN | | 25084 | | Temp. SN | | 701 | | Cond. SN | | 303 | | Monitor Checks | | on Deck | | at Surface | | Press. | | | | Temp. | | | | Cond. | | | | Other | | | | Times | | JD/Time | | Data on | | | | at Surface | | | | Start Down | | | | at Bottom | | | | Start Up | | | | at Surface | | | | Data off | | | | Data Location | | Tape/Diskette I.D. | | File Name/Header | | Cust 012-24 Apr 1108 | | Remarks | |
| Pos. | | Bot. | | T Rack | | Trip Depth | | Time @ | | Monitor Values | | Conv. Mon. Values-CTD | | Sample Bot. Data | | Sal. Bot. # | | Other Samp. | | Pos. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | Depth | | Trip | | Press. | | Temp. | | Cond. | | Other | | Press. - | | Temp. | | Cond. | | Sal. | | Therm-P | | Avg Tw | | Sal. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | | 38 | | ✓ | | 400 | | 1130:30 1135:30 | | | | | | | | | | 400.111 | | 3.616 | | 31.447 | | 33.870 | | | | | | | | 7 | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | 29 | | | | 60 | | | | | | | | | | | | 50.656 | | 3.742 | | 30.661 | | 32.987 | | | | | | | | | | Chlor | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | 28 | | | | 40 | | | | | | | | | | | | 40.668 | | 3.645 | | 30.516 | | 32.918 | | | | | | | | | | Chlor | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | 25 | | | | 30 | | | | | | | | | | | | 30.571 | | 3.821 | | 30.612 | | 32.860 | | | | | | | | | | Chlor | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | 6 | | | | 20 | | | | | | | | | | | | 20.528 | | 3.977 | | 30.679 | | 32.788 | | | | | | | | | | Chlor | | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | 30 | | | | 10 | | | | | | | | | | | | 10.044 | | 4.266 | | 30.893 | | 32.758 | | | | | | | | | | Chlor | | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Initials SS/mr
✓

| Consec. Cast # | | Vessel | | Proj. & Leg | | Event# | | Vessel Sta. I.D. | | Instructions | | | | | | | | | | Sta. Designation | | | | | | | | |
|---|--------|----------|------------|-------------|--|----------------|--------|------------------|-------|--|----------|--------|----------|------------------|--|------|-------------|-------------|-------|------------------|----------|-------|------|-------|-----------------|-------------------|--|----|
| Consec. Cast # | | Latitude | | N or S | Longitude | | E or W | Date JD = | | | Time GMT | | Dry Bulb | | Wet Bulb | | Bar. mb | SS | Vis | Wind Dir. | Wind Sp. | Cloud | Type | Weth. | Bottom Depth, m | Sta. Name or I.D. | | |
| Deg. | | Min. | | | Deg. | | | Day | Mo. | Yr. | Hr. | Min. | | | | | 1014.2 | | | | | | | | | | | |
| 013 | 545939 | N | 166000 | 07 | W | 25 | A | P | R | 93 | 03 | 36 | 2 | 8 | 1 | 5 | 1 | 4 | 4 | 8 | 0 | 50 | 20 | 58 | 1 | 136 | | 92 |
| CTD Type & SN <u>91220-</u> Press. SN <u>25084</u> Temp. SN <u>701</u> Cond. SN <u>303</u> | | | | | Monitor Checks on Deck at Surface Press. _____ Temp. _____ Cond. _____ Other _____ | | | | | Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____ | | | | | Data Location Tape/Diskette I.D. _____ File Name/Header <u>cast013-25APR0331</u> Remarks <u>x/0135</u> | | | | | | | | | | | | | |
| Pos. | Bot. | T Rack | Trip Depth | Time @ | | Monitor Values | | | | Conv. Mon. Values-CTD | | | | Sample Bot. Data | | | Sal. Bot. # | Other Samp. | Pos. | | | | | | | | | |
| | | | | Depth | Trip | Press. | Temp. | Cond. | Other | Press. - | Temp. | Cond. | Sal. | Therm-P | Avg Tw | Sal. | | | | | | | | | | | | |
| 1 | | | 100 | | | | | | | 100.517 | 3.807 | 30.499 | 32.704 | | | | | | | 1 | | | | | | | | |
| 2 | | | 90 | | | | | | | 70.486 | 3.780 | 30.434 | 32.659 | | | | | | | 2 | | | | | | | | |
| 3 | | | 80 | | | | | | | 80.437 | 3.766 | 30.349 | 32.577 | | | | | | | 3 | | | | | | | | |
| 4 | | | 70 | | | | | | | 70.406 | 3.760 | 30.286 | 32.513 | | | | | 10 | | 4 | | | | | | | | |
| 5 | | | 60 | | | | | | | 60.397 | 3.814 | 30.257 | 32.430 | | | | | | | 5 | | | | | | | | |
| 6 | | | 50 | | | | | | | 50.422 | 3.884 | 30.291 | 32.406 | | | | | | Chlor | 6 | | | | | | | | |
| 7 | | | 40 | | | | | | | 40.634 | 3.941 | 30.323 | 32.393 | | | | | | Chlor | 7 | | | | | | | | |
| 8 | | | 30 | | | | | | | 31.003 | 4.026 | 30.307 | 32.301 | | | | | | Chlor | 8 | | | | | | | | |
| 9 | | | 20 | | | | | | | 19.981 | 4.086 | 30.336 | 32.276 | | | | | | Chlor | 9 | | | | | | | | |
| 10 | | | 10 | | | | | | | 10.135 | 4.242 | 30.422 | 32.229 | | | | | | Chlor | 10 | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | 11 | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | 12 | | | | | | | | |

Initials LL/WF
 ✓

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|--|-----------------------|--|------------------------------|--|----------------------|--|---------------------|--|--------------------------|--|----------------------|--|----------|--|--------------------------------------|--|--------------------------|--|------------------|--|------|--|-------------|--|----------|--|-------------|--|--------|--|-----------------|--|-------------------|--|---|--|--|--|--|--|--|--|---------|--|--|--|
| Consec. Cast # 014 | | Vessel | | Proj. & Leg MF9305 | | Event# 56f | | Vessel Sta. I.D. | | Instructions | | | | | | | | | | Sta. Designation | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Consec. Cast # | | Latitude Deg. Min. | | N or S | | Longitude Deg. | | E or W | | Date JD = Day Mo. Yr. | | Time GMT Hr. Min. | | Dry Bulb | | Wet Bulb | | Bar. mb 1014.0 | | S.S. | | Vis. | | Wind Dir. | | Wind Sp. | | Cloud Type | | Weath. | | Bottom Depth, m | | Sta. Name or I.D. | | | | | | | | | | | | | |
| 014 | | 5459 | | 55 | | N | | 16600 | | 17W | | 25APR93 | | 0413 | | 40 | | 25 | | 14 | | 48 | | 030 | | 20 | | 58 | | 1 | | 136 | | 92 | | | | | | | | | | | | | |
| CTD Type & SN 91220 | | | | Press. SN 25084 | | | | Temp. SN 701 | | | | Cond. SN 303 | | | | Monitor Checks on Deck at Surface | | | | Press. _____ | | | | Temp. _____ | | | | Cond. _____ | | | | Other _____ | | | | Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____ | | | | Data Location Tape/Diskette I.D. _____ File Name/Header CAST014-25APR0409 | | | | Remarks | | | |

| Pos. | Bot. | T Rack | Trip Depth | Time @ | | Monitor Values | | | | Conv. Mon. Values-CTD | | | | Sample Bot. Data | | | Sal. Bot. # | Other Samp. | Pos. |
|------|------|--------|------------|---------|------|----------------|-------|-------|-------|-----------------------|-------|--------|--------|------------------|--------|------|-------------|-------------|------|
| | | | | Depth | Trip | Press. | Temp. | Cond. | Other | Press. - | Temp. | Cond. | Sal. | Therm-P | Avg Tw | Sal. | | | |
| 1 | | ✓ | 100 | 4:14:00 | | | | | | 105.219 | 3.801 | 30.492 | 32.699 | | | | 27 | | 1 |
| 2 | | | 100 | | | | | | | 100.423 | 3.789 | 30.463 | 32.678 | | | | | Prot 202/15 | 2 |
| 3 | | | 90 | | | | | | | 89.963 | 3.785 | 30.435 | 32.655 | | | | | | 3 |
| 4 | | | 80 | | | | | | | 79.964 | 3.769 | 30.372 | 32.602 | | | | | | 4 |
| 5 | | | 70 | | | | | | | 70.908 | 3.767 | 30.352 | 32.585 | | | | | | 5 |
| 6 | | | 60 | | | | | | | 60.770 | 3.769 | 30.304 | 32.531 | | | | | | 6 |
| 7 | | | 50 | | | | | | | 50.809 | 3.819 | 30.246 | 32.418 | | | | | | 7 |
| 8 | | | 40 | | | | | | | 40.736 | 3.960 | 30.317 | 32.367 | | | | | | 8 |
| 9 | | | 30 | | | | | | | 30.285 | 3.998 | 30.291 | 32.305 | | | | | | 9 |
| 10 | | | 20 | | | | | | | 20.250 | 4.110 | 30.352 | 32.270 | | | | | | 10 |
| 11 | | | 10 | | | | | | | 10.311 | 4.193 | 30.397 | 32.247 | | | | | | 11 |
| 12 | | | | | | | | | | | | | | | | | | ✓ | 12 |

Initials **SS/WF**
✓

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------|-----------------------|--------|--------------------|-----------------------|----|--|--------------------------|------------------|-----------------|--|----|--------------------------------------|----------|---|------|---|-------------|-------------|-------|--|--------|-----------------|-------------------|------------------|--|
| Consec. Cast # 015 | | Vessel | | Proj. & Leg MT9305 | | Event # 565 | | Vessel Sta. I.D. | | Instructions | | | | | | | | | | Sta. Designation | | | | | |
| Consec. Cast # | Latitude Deg. Min. | | N or S | Longitude Deg. | | E or W | Date JD = Day Mo. Yr. | | | Time GMT Hr. Min. | | Dry Bulb | Wet Bulb | Bar. mb | S.S. | Vls. | Wind Dir. | Wind Sp. | Cloud | Type | Weath. | Bottom Depth, m | Sta. Name or I.D. | | |
| 015 | 54 | 59 | N | 165 | 59 | W | 25 | APR | 93 | 05 | 16 | 25 | 21 | 14 | 48 | 04 | 01 | 47 | 81 | | | 136 | 92 | | |
| CTD Type & SN 91220 | | | Press. SN 25084 | | | Temp. SN 701 | | | Cond. SN 303 | | | Monitor Checks on Deck at Surface | | | | Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____ | | | | Data Location Tape/Diskette I.D. _____ File Name/Header CAST015-25apr0512 | | | | Remarks 40102 | |
| Pos. | Bot. | T Rack | Trip Depth | Time @ Depth Trip | | Monitor Values Press. Temp. Cond. Other | | | | Conv. Mon. Values-CTD Press. - Temp. Cond. Sal. | | | | Sample Bot. Data Therm-P Avg Tw Sal. | | | Sal. Bot. # | Other Samp. | Pos. | | | | | | |
| 1 | | | 100 | | | | | | | | | | | | | | | | | | | | 1 | | |
| 2 | | | 90 | | | | | | | | | | | | | | | | | | | | 2 | | |
| 3 | | | 80 | | | | | | | | | | | | | | | | | | | | 3 | | |
| 4 | | | 70 | | | | | | | | | | | | | | | | | | | | 4 | | |
| 5 | | | 60 | | | | | | | | | | | | | | | | | | | | 5 | | |
| 6 | | | 50 | | | | | | | | | | | | | | | | | | | | 6 | | |
| 7 | | | 40 | | | | | | | | | | | | | | | | | | | | 7 | | |
| 8 | | | 30 | | | | | | | | | | | | | | | | | | | | 8 | | |
| 9 | | | 20 | | | | | | | | | | | | | | | | | | | | 9 | | |
| 10 | | | 10 | | | | | | | | | | | | | | | | | | | | 10 | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | 11 | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | 12 | | |

| Consec. Cast # | | Vessel | | Proj. & Leg | | Event # | | Vessel Sta. I.D. | | Instructions | | | | | | | | | | Sta. Designation | | | | |
|----------------|--|----------|------|--------------|-----------|----------------|--------------|------------------|-----|--------------|----------|---------------|-------------|----------------------|------------|------|------|--------------|-------------|------------------|--------|--------------------|----------------------|----|
| Consec. Cast # | | Latitude | | N or S | Longitude | | E or W | Date JD = | | | Time GMT | | Dry Bulb | Wet Bulb | Bar. mb | S.S. | Vis. | Wind Dir. | Wind Sp. | Cloud Type | Weath. | Bottom Depth, m | Sta. Name or I.D. | |
| | | Deg. | Min. | | Deg. | | | Day | Mo. | Yr. | Hr. | Min. | | | | | | | | | | | | |
| 016 | | 54 | 21 | N | 166 | 23 | W | 27 | 04 | 93 | 13 | 24 | 05 | 0 | 04 | 1 | 9 | 73 | 7 | 015 | 15 | 862 | 650 | 96 |
| CTD Type & SN | | | | 91220 | | Monitor Checks | | | | | | Times JD/Time | | Data Location | | | | | | | | | | |
| Press. SN | | | | 25084 | | on Deck | | | | | | Data on | | Tape/Diskette I.D. | | | | | | | | | | |
| Temp. SN | | | | 701 | | at Surface | | | | | | at Surface | | File Name/Header | | | | | | | | | | |
| Cond. SN | | | | 303 | | Press. | | | | | | Start Down | | Cast 016-27 Apr 1993 | | | | | | | | | | |
| | | | | | | Temp. | | | | | | at Bottom | | | | | | | | | | | | |
| | | | | | | Cond. | | | | | | Start Up | | | | | | | | | | | | |
| | | | | | | Other | | | | | | at Surface | | Remarks | | | | | | | | | | |
| | | | | | | | | | | | | Data off | | w/o 512 m | | | | | | | | | | |

| Pos. | Bot. | T Rack | Trip Depth | Time @ | | Monitor Values | | | | Conv. Mon. Values-CTD | | | | Sample Bot. Data | | | Sal. Bot. # | Other Samp. | Pos. |
|------|------|--------|------------|--------|------|----------------|-------|-------|-------|-----------------------|-------|--------|--------|------------------|--------|------|-------------|-------------|------|
| | | | | Depth | Trip | Press. | Temp. | Cond. | Other | Press. - | Temp. | Cond. | Sal. | Therm-P | Avg Tw | Sal. | | | |
| 1 | 38 | ✓ | 300 | 1341 | 1346 | | | | | 298.301 | 3.816 | 30.389 | 33.648 | | | | 30 | | 1 |
| 2 | 29 | | 50 160 | | | | | | | 49.515 | 3.765 | 30.574 | 32.861 | | | | | Chyll | 2 |
| 3 | 28 | | 40 | | | | | | | 39.731 | 4.035 | 30.646 | 32.681 | | | | | Chyll | 3 |
| 4 | 25 | | 30 | | | | | | | 30.195 | 4.059 | 30.622 | 32.634 | | | | | Chyll | 4 |
| 5 | 2 | | 20 | | | | | | | 19.701 | 4.193 | 30.712 | 32.612 | | | | | Chyll | 5 |
| 6 | 30 | | 10 | | | | | | | 10.056 | 4.517 | 30.975 | 32.604 | | | | | Chyll | 6 |
| 7 | 22 | | | | | | | | | | | | | | | | | | 7 |
| 8 | | | | | | | | | | | | | | | | | | | 8 |
| 9 | | | | | | | | | | | | | | | | | | | 9 |
| 10 | | | | | | | | | | | | | | | | | | | 10 |
| 11 | | | | | | | | | | | | | | | | | | | 11 |
| 12 | | | | | | | | | | | | | | | | | | | 12 |

 Pg. _____ of _____
 Initials SS/mc

| | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|-----------------------|--------|--------|------------------------|----|----------------|--------------------------|------------------|-----|----------------------|----|----------|----------|------------------|------|------|-----------|----------|-------|------------------|--------|-----------------|-------------------|
| Consec. Cast # 017 | | Vessel | | Proj. & Leg MF 9305 | | Event # 640 | | Vessel Sta. I.D. | | Instructions | | | | | | | | | | Sta. Designation | | | |
| Consec. Cast # | Latitude Deg. Min. | | N or S | Longitude Deg. | | E or W | Date JD = Day Mo. Yr. | | | Time GMT Hr. Min. | | Dry Bulb | Wet Bulb | Bar. mb 995.0 | S.S. | Vis. | Wind Dir. | Wind Sp. | Cloud | Type | Weath. | Bottom Depth, m | Sta. Name or I.D. |
| 017 | 54 | 21 | N | 166 | 23 | 53 | W | 27 | APR | 93 | 22 | 36 | 55 | 50 | 953 | 70 | 27 | 16 | 86 | 2 | | 656 | 96 |

| | | | | | | | |
|------------------------|--|--------------------|--|------------------|--|---|--|
| CTD Type & SN 91220 | | Monitor Checks | | Times JD/Time | | Data Location | |
| Press. SN 25084 | | on Deck at Surface | | Data on _____ | | Tape/Diskette I.D. _____ | |
| Temp. SN 701 | | Press. _____ | | at Surface _____ | | File Name/Header Cast 017-27Apr 2143 | |
| Cond. SN 303 | | Temp. _____ | | Start Down _____ | | _____ | |
| _____ | | Cond. _____ | | at Bottom _____ | | _____ | |
| _____ | | Other _____ | | Start Up _____ | | Remarks w/o 509 | |
| _____ | | | | at Surface _____ | | | |
| _____ | | | | Data off _____ | | | |

| Pos. | Bot. | T Rack | Trip Depth | Time @ | | Monitor Values | | | | Conv. Mon. Values-CTD | | | | Sample Bot.Data | | | Sal. | Other | Pos. |
|------|------|--------|------------|--------|------|----------------|-------|-------|-------|-----------------------|-------|--------|--------|-----------------|--------|------|--------|---------|------|
| | | | | Depth | Trip | Press. | Temp. | Cond. | Other | Press. ~ | Temp. | Cond. | Sal. | Therm-P | Avg Tw | Sal. | Bot. # | Samp. | |
| 1 | | ✓ | 500 | | | | | | | 504.838 | 3.572 | 31.516 | 33.942 | | | | 35 | Unqok | 1 |
| 2 | | | 100 | | | | | | | 101.072 | 3.559 | 30.713 | 33.209 | | | | | Protoz. | 2 |
| 3 | | | 90 | | | | | | | 89.986 | 3.497 | 30.625 | 33.172 | | | | | Protoz. | 3 |
| 4 | | | 80 | | | | | | | 80.154 | 3.518 | 30.625 | 33.156 | | | | | Protoz. | 4 |
| 5 | | | 70 | | | | | | | 69.476 | 3.501 | 30.575 | 33.120 | | | | | Protoz | 5 |
| 6 | | | 60 | | | | | | | 60.458 | 3.487 | 30.511 | 33.061 | | | | | Protoz | 6 |
| 7 | | | 50 | | | | | | | 50.731 | 3.553 | 30.474 | 33.956 | | | | Chl | Protoz | 7 |
| 8 | | | 40 | | | | | | | 40.612 | 3.946 | 30.655 | 32.780 | | | | Chl | Protoz | 8 |
| 9 | | | 30 | | | | | | | 30.395 | 4.164 | 30.798 | 32.736 | | | | Chl | Protoz | 9 |
| 10 | | | 20 | | | | | | | 20.659 | 4.196 | 30.755 | 32.660 | | | | Chl | Protoz | 10 |
| 11 | | | 10 | | | | | | | 10.223 | 4.531 | 30.931 | 32.539 | | | | Chl | Protoz | 11 |
| 12 | | | | | | | | | | | | | | | | | | | 12 |

Initials U/WF

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------|--|-----------------------|--|-----------------------|--|-------------------|--|----------------------|--|--|--|-----------------|----------------------|--|----------|--------------------------------------|----------|---|------------------|------------------|----|-------------|------|-------------|-----------|------|----------|-------------|------------|--|--------|-------------|-----------------|--|-------------------|---|--|--|--|---|--|--|--|---------------------------------------|--|--|--|
| Consec. Cast # 018 | | Vessel | | Proj. & Leg M-9305 | | Event # 674 | | Vessel Sta. I.D. | | Instructions | | | | | | | | | | Sta. Designation | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Consec. Cast # | | Latitude Deg. Min. | | N or S | | Longitude Deg. | | E or W | | Date JD = 118 Day Mo. Yr. | | | Time GMT Hr. Min. | | Dry Bulb | | Wet Bulb | | Bar. mb 993.4 | | SS | | Vis. | | Wind Dir. | | Wind Sp. | | Cloud Type | | Weath. | | Bottom Depth, m | | Sta. Name or I.D. | | | | | | | | | | | | |
| 018 | | 5403 | | 96 | | N | | 1663532 | | W | | 28 APR 93 | | | 1232 | | 0700 | | 0600 | | 93 | | 27 | | VAR | | <5 | | 875 | | 0906 | | 1100 | | | | | | | | | | | | | | |
| CTD Type & SN 91220 | | | | Press. SN 25084 | | | | Temp. SN 701 | | | | Cond. SN 303 | | | | Monitor Checks on Deck at Surface | | | | Press. _____ | | | | Temp. _____ | | | | Cond. _____ | | | | Other _____ | | | | Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____ | | | | Data Location Tape/Diskette I.D. _____ File Name/Header Cast 018 - 28 Apr 1993 | | | | Remarks Log A6 taken at depth w/o 85m | | | |
| Pos. | | Bot. | | T Rack | | Trip Depth | | Time @ Depth Trip | | Monitor Values Press. Temp. Cond. Other | | | | Conv. Mon. Values-CTD Press. - Temp. Cond. Sal. | | | | Sample Bot. Data Therm-P Avg Tw Sal. | | | | Sal. Bot. # | | Other Samp. | | Pos. | | | | | | | | | | | | | | | | | | | | | |
| 1 | | | | | | No bottles used | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5 | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7 | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8 | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 12 | | | | | | | | | | | | | | | | | | | |

Initials SS/mc
✓

| | | | | | | |
|------------------------------|--------|------------------------------|----------------------|--------------------------------|--------------|------------------|
| Consec. Cast # <u>019</u> | Vessel | Proj. & Leg <u>ME9305</u> | Event# <u>677</u> | Vessel Sta. I.D. <u>101</u> | Instructions | Sta. Designation |
|------------------------------|--------|------------------------------|----------------------|--------------------------------|--------------|------------------|

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|-----------|-----------|----------|-----------|----------|------------|----------------------|-----------|----------|-----------|------------|-----------|-----------|-------------------------|-----------|----------|-----------|----------|------------|-----------|-----------------|-------------------|----------|--------------|------------|------------|------------|
| Consec. Cast # | Latitude | | N or S | Longitude | | E or W | Date JD = <u>118</u> | | | Time GMT | | Dry Bulb | Wet Bulb | Bar. mb <u>993.0</u> | Ss | Vis | Wind Dir. | Wind Sp. | Cloud Type | Weath. | Bottom Depth, m | Sta. Name or I.D. | | | | | |
| | Deg. | Min. | | Deg. | Day | | Mo. | Yr. | Hr. | Min. | | | | | | | | | | | | | | | | | |
| <u>019</u> | <u>54</u> | <u>05</u> | <u>6</u> | <u>0</u> | <u>N</u> | <u>167</u> | <u>47</u> | <u>01</u> | <u>W</u> | <u>28</u> | <u>APR</u> | <u>93</u> | <u>14</u> | <u>24</u> | <u>07</u> | <u>0</u> | <u>06</u> | <u>5</u> | <u>93</u> | <u>27</u> | <u>V</u> | <u>A</u> | <u>R</u> | <u><5</u> | <u>872</u> | <u>808</u> | <u>101</u> |

| | | | | | | | | |
|--|----------------|-------|---------------|------------------|--------------------|-------|------------------|--|
| CTD Type & SN <u>91220</u> Press. SN <u>25084</u> Temp. SN <u>701</u> Cond. SN <u>303</u> | Monitor Checks | | Times JD/Time | | Data Location | | | |
| | on Deck | | at Surface | | Tape/Diskette I.D. | | File Name/Header | |
| | Press. _____ | | _____ | | Data on _____ | | _____ | |
| | Temp. _____ | | _____ | | at Surface _____ | | _____ | |
| | Cond. _____ | | _____ | | at Bottom _____ | | _____ | |
| Other _____ | | _____ | | Start Up _____ | | _____ | | |
| _____ | | _____ | | at Surface _____ | | _____ | | |
| _____ | | _____ | | Data off _____ | | _____ | | |
| Remarks <u>Log file taken at depth w/o 500m</u> | | | | | | | | |

| Pos. | Bot. | T Rack | Trip Depth | Time @ | | Monitor Values | | | | Conv. Mon. Values-CTD | | | | Sample Bot. Data | | | Sal. Bot. # | Other Samp. | Pos. |
|------|------|--------|------------|---------|---------|----------------|-------|-------|-------|-----------------------|-------|--------|--------|------------------|--------|------|-------------|-------------|------|
| | | | | Depth | Trip | Press. | Temp. | Cond. | Other | Press. - | Temp. | Cond. | Sal. | Therm-P | Avg Tw | Sal. | | | |
| 1 | 38 | ✓ | 200m | 1431.25 | 1436.25 | | | | | 197.007 | 3.752 | 30.803 | 33.069 | | | | 13 | | 1 |
| 2 | | | | | | | | | | | | | | | | | | | 2 |
| 3 | | | | | | | | | | | | | | | | | | | 3 |
| 4 | | | | | | | | | | | | | | | | | | | 4 |
| 5 | | | | | | | | | | | | | | | | | | | 5 |
| 6 | | | | | | | | | | | | | | | | | | | 6 |
| 7 | | | | | | | | | | | | | | | | | | | 7 |
| 8 | | | | | | | | | | | | | | | | | | | 8 |
| 9 | | | | | | | | | | | | | | | | | | | 9 |
| 10 | | | | | | | | | | | | | | | | | | | 10 |
| 11 | | | | | | | | | | | | | | | | | | | 11 |
| 12 | | | | | | | | | | | | | | | | | | | 12 |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------|-----------------------|----|--------------|--------------------------------------|-----------------------|--------------|--------------------------|---|----|----------------------|----|--|----------|------------------|-----|-----|-----------|----------|-------|------------------|--------|-----------------|-------------------|-----|
| Consec. Cast # 020 | | | Vessel MF | | Proj. & Leg MF9305 | | Event # 681 | Vessel Sta. I.D. | | Instructions | | | | | | | | | | Sta. Designation | | | | |
| Consec. Cast # | Latitude Deg. Min. | | N or S | Longitude Deg. | | E or W | Date JD = Day Mo. Yr. | | | Time GMT Hr. Min. | | Dry Bulb | Wet Bulb | Bar. mb 993.1 | Ss | Vis | Wind Dir. | Wind Sp. | Cloud | Type | Weath. | Bottom Depth, m | Sta. Name or I.D. | |
| 020 | 54 | 06 | 62 | N | 167 | 00 | 57 | W | 28 | APR | 93 | 16 | 34 | 07 | 106 | 193 | 27 | 030 | 08 | 86 | 21 | 1.56 | | 102 |
| CTD Type & SN 9/220 | | | | Monitor Checks on Deck at Surface | | | | Times JD/Time Data on _____ at Surface _____ Start Down 16:19 at Bottom _____ Start Up _____ at Surface _____ Data off _____ | | | | Data Location Tape/Diskette I.D. _____ File Name/Header Cast 020 - 28 Apr 16 17 | | | | | | | | | | | | |
| Press. SN 25084 | | | | Press. _____ | | | | | | | | Remarks Log file taken at depth w/ 502 | | | | | | | | | | | | |
| Temp. SN 701 | | | | Temp. _____ | | | | | | | | | | | | | | | | | | | | |
| Cond. SN 303 | | | | Cond. _____ | | | | | | | | | | | | | | | | | | | | |
| Other _____ | | | | Other _____ | | | | | | | | | | | | | | | | | | | | |

| Pos | Bot. | T Rack | Trip Depth | Time @ | | Monitor Values | | | | Conv. Mon. Values-CTD | | | | Sample Bot. Data | | | Sal. Bot. # | Other Samp. | Pos |
|-----|------|--------|------------|--------|-------|----------------|-------|-------|-------|-----------------------|-------|--------|--------|------------------|--------|------|-------------|-------------|-----|
| | | | | Depth | Trip | Press. | Temp. | Cond. | Other | Press. - | Temp. | Cond. | Sal. | Therm-P | Avg Tw | Sal. | | | |
| 1 | ✓ | B | 450m | 16:36 | 16:41 | | | | | 452.037 | 3.814 | 31.401 | 33.584 | | | | 32 | | 1 |
| 2 | | | | | | | | | | | | | | | | | | 2 | |
| 3 | | | | | | | | | | | | | | | | | | 3 | |
| 4 | | | | | | | | | | | | | | | | | | 4 | |
| 5 | | | | | | | | | | | | | | | | | | 5 | |
| 6 | | | | | | | | | | | | | | | | | | 6 | |
| 7 | | | | | | | | | | | | | | | | | | 7 | |
| 8 | | | | | | | | | | | | | | | | | | 8 | |
| 9 | | | | | | | | | | | | | | | | | | 9 | |
| 10 | | | | | | | | | | | | | | | | | | 10 | |
| 11 | | | | | | | | | | | | | | | | | | 11 | |
| 12 | | | | | | | | | | | | | | | | | | 12 | |

Initials SS/mc
✓

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------|--|------------------------------|--|------------------------|--------------------------------------|----------------|--|------------------------------|--|---|----------------------|--|----------|--|---|--|------------------|--|------|-------------------------|-----------|--|----------|--|------------|--|--------|--|-----------------|--|-------------------|--|
| Consec. Cast # 021 | | Vessel MT | | Proj. & Leg MT-9305 | | Event # 685 | | Vessel Sta. I.D. | | Instructions | | | | | | | | | | Sta. Designation 103 | | | | | | | | | | | | |
| Consec. Cast # | | Latitude Deg. Min. N or S | | | Longitude Deg. E or W | | | Date JD = 118 Day Mo. Yr. | | | Time GMT Hr. Min. | | Dry Bulb | | Wet Bulb | | Bar. mb 993.2 | | S.S. | Vis. | Wind Dir. | | Wind Sp. | | Cloud Type | | Weath. | | Bottom Depth, m | | Sta. Name or I.D. | |
| 21 | | 54 21 58 N | | | 166 24 05 W | | | 28 Apr 93 | | | 19 04 | | 04 9 | | 04 3 | | 93 | | 37 | 030 | 128 | | 62 | | 066 | | 1103 | | | | | |
| CTD Type & SN 91220 | | | | | Monitor Checks on Deck at Surface | | | | | Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____ | | | | | Data Location Tape/Diskette I.D. _____ File Name/Header Cast 021 - 28 Apr 1990 | | | | | | | | | | | | | | | | | |
| Press. SN 25084 | | | | | Press. _____ | | | | | Start Down _____ | | | | | Remarks 90 m w/o | | | | | | | | | | | | | | | | | |
| Temp. SN 701 | | | | | Temp. _____ | | | | | Start Up _____ | | | | | | | | | | | | | | | | | | | | | | |
| Cond. SN 303 | | | | | Cond. _____ | | | | | at Surface _____ | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | Other _____ | | | | | Data off _____ | | | | | | | | | | | | | | | | | | | | | | |

| Pos. | Bot. | T Rack | Trip Depth | Time @ | | Monitor Values | | | | Conv. Mon. Values-CTD | | | | Sample Bot. Data | | | Sal. Bot. # | Other Samp. | Pos. |
|------|------|--------|------------|--------|------|----------------|-------|-------|-------|-----------------------|-------|--------|--------|------------------|--------|------|-------------|-------------|------|
| | | | | Depth | Trip | Press. | Temp. | Cond. | Other | Press. - | Temp. | Cond. | Sal. | Therm-P | Avg Tw | Sal. | | | |
| 1 | | | 90 | | | | | | | 89.777 | 3.489 | 30.624 | 38.155 | | | | | mz | 1 |
| 2 | | | 70 | | | | | | | 69.831 | 3.527 | 30.576 | 33.094 | | | | | | 2 |
| 3 | | | 50 | | | | | | | 50.519 | 3.599 | 30.500 | 32.940 | | | | | | 3 |
| 4 | | | 40 | | | | | | | 40.339 | 3.977 | 30.637 | 32.727 | | | | | | 4 |
| 5 | | | 30 | | | | | | | 30.785 | 4.066 | 30.690 | 32.707 | | | | | | 5 |
| 6 | | | 20 | | | | | | | 20.485 | 4.220 | 30.807 | 32.696 | | | | | | 6 |
| 7 | | | 10 | | | | | | | 10.401 | 4.697 | 31.124 | 32.599 | | | | | | 7 |
| 8 | | | 5 | | | | | | | 5.034 | 4.653 | 31.042 | 32.557 | | | | | ✓ | 8 |
| 9 | | Sal. | 5 | | | | | | | 5.202 | 4.657 | 31.050 | 32.555 | | | | | 06 | 9 |
| 10 | | | | | | | | | | | | | | | | | | | 10 |
| 11 | | | | | | | | | | | | | | | | | | | 11 |
| 12 | | | | | | | | | | | | | | | | | | | 12 |

Initials mc/ss
✓

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|-----------------------|--------|--------|------------------------------|---|-----------------------|--------------------------|------------------|---|----------------------|---|----------|----------|---------|------|------|-----------|----------|-------|------------------|--------|-----------------|-------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Consec. Cast # <u>022</u> | | Vessel | | Proj. & Leg <u>MF9305</u> | | Event # <u>687</u> | | Vessel Sta. I.D. | | Instructions | | | | | | | | | | Sta. Designation | | | | | | | | | | | | | | | | | | | | | | |
| Consec. Cast # | Latitude Deg. Min. | | N or S | Longitude Deg. | | E or W | Date JD = Day Mo. Yr. | | | Time GMT Hr. Min. | | Dry Bulb | Wet Bulb | Bar. mb | S.S. | Vis. | Wind Dir. | Wind Sp. | Cloud | Type | Weath. | Bottom Depth, m | Sta. Name or I.D. | | | | | | | | | | | | | | | | | | | |
| 022 | 5 | 4 | 21 | 7 | 9 | N | 1 | 6 | 6 | 2 | 4 | 3 | 6 | W | 28 | APR | 93 | 20 | 3 | 9 | 6 | 2 | 5 | 5 | 9 | 3 | 3 | 7 | 0 | 3 | 0 | 0 | 9 | 8 | 6 | 2 | 6 | 5 | 4 | 1 | 0 | 3 |

| | | | | | | | | | | | | | |
|----------------------------|--|----------------|--|------------|--|------------------|--|--------------------|--|-----------------------------|--|--|--|
| CTD Type & SN <u>91220</u> | | Monitor Checks | | | | Times JD/Time | | | | Data Location | | | |
| Press. SN <u>25084</u> | | on Deck | | at Surface | | Data on _____ | | Tape/Diskette I.D. | | File Name/Header | | | |
| Temp. SN <u>701</u> | | Press. _____ | | _____ | | at Surface _____ | | _____ | | <u>Cast 022 28 Apr 2023</u> | | | |
| Cond. SN <u>303</u> | | Temp. _____ | | _____ | | Start Down _____ | | _____ | | _____ | | | |
| _____ | | Cond. _____ | | _____ | | at Bottom _____ | | _____ | | _____ | | | |
| _____ | | Other _____ | | _____ | | Start Up _____ | | _____ | | Remarks | | | |
| _____ | | _____ | | _____ | | at Surface _____ | | _____ | | _____ | | | |
| _____ | | _____ | | _____ | | Data off _____ | | _____ | | _____ | | | |

| Pos. | Bot. | T Rack | Trip Depth | Time @ | | Monitor Values | | | | Conv. Mon. Values-CTD | | | | Sample Bot.Data | | | Sal. | Other | Pos. |
|------|------|--------|------------|--------|------|----------------|-------|-------|-------|-----------------------|-------|--------|--------|-----------------|--------|------|--------|-------|------|
| | | | | Depth | Trip | Press. | Temp. | Cond. | Other | Press. ~ | Temp. | Cond. | Sal. | Therm-P | Avg Tw | Sal. | Bot. # | Samp. | |
| 1 | B | ✓ | 90 | 27.38 | | | | | | 95.278 | 3.511 | 30.638 | 33.170 | | | | | 25 | 1 |
| 2 | | | 90 | | | | | | | 89.811 | 3.499 | 30.613 | 33.156 | | | | | m2 | 2 |
| 3 | | | 70 | | | | | | | 69.825 | 3.553 | 30.602 | 33.099 | | | | | | 3 |
| 4 | | | 50 | | | | | | | 50.061 | 3.667 | 30.527 | 32.903 | | | | | | 4 |
| 5 | | | 40 | | | | | | | 40.089 | 4.096 | 30.753 | 32.746 | | | | | | 5 |
| 6 | | | 30 | | | | | | | 29.772 | 4.193 | 30.807 | 32.719 | | | | | | 6 |
| 7 | | | 20 | | | | | | | 20.234 | 4.394 | 30.942 | 32.682 | | | | | | 7 |
| 8 | | | 10 | | | | | | | 9.952 | 4.619 | 30.055 | 32.596 | | | | | | 8 |
| 9 | | | 5 | | | | | | | 5.216 | 4.668 | 31.090 | 32.592 | | | | | ↓ | 9 |
| 10 | | | | | | | | | | | | | | | | | | | 10 |
| 11 | | | | | | | | | | | | | | | | | | | 11 |
| 12 | | | | | | | | | | | | | | | | | | | 12 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|--|-----------------|--|------------------------------|------------------|--|--|----------------------------|--|--|----------|---------------------|----------|------------------|----------|----------------|---------|--------------|------|------------------|------|--|-----------|---------------|----------|--|------------|--------------------|--------|--|-----------------|------------------|-------------------|--|--|
| Consec. Cast # <u>023</u> | | | | Vessel <u>MILLER FREEMAN</u> | | | | Proj. & Leg <u>MF 9305</u> | | | | Event # <u>696</u> | | Vessel Sta. I.D. | | | | Instructions | | | | | | | | | | Sta. Designation | | | | | | | |
| Consec. Cast # | | Latitude N or S | | | Longitude E or W | | | Date JD = | | | Time GMT | | Dry Bulb | | Wet Bulb | | Bar. mb | | S.S. | | Vis. | | Wind Dir. | | Wind Sp. | | Cloud Type | | Weath. | | Bottom Depth, m | | Sta. Name or I.D. | | |
| 023 | | 542230N | | | 1662313W | | | 28 APR 93 | | | 2200 | | 59 | | 54 | | 94 | | 27 | | 02 | | 70 | | 85 | | 11 | | 635 | | 105 | | | | |
| CTD Type & SN <u>91220-</u> | | | | Press. SN <u>25084</u> | | | | Temp. SN <u>701</u> | | | | Cond. SN <u>303</u> | | | | Monitor Checks | | | | Times JD/Time | | | | Data Location | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | on Deck | | | | at Surface | | | | Data on | | | | Tape/Diskette I.D. | | | | File Name/Header | | | |
| | | | | | | | | | | | | | | | | Press. _____ | | | | Start Down _____ | | | | _____ | | | | _____ | | | | | | | |
| | | | | | | | | | | | | | | | | Temp. _____ | | | | at Bottom _____ | | | | _____ | | | | _____ | | | | | | | |
| | | | | | | | | | | | | | | | | Cond. _____ | | | | Start Up _____ | | | | _____ | | | | _____ | | | | | | | |
| | | | | | | | | | | | | | | | | Other _____ | | | | at Surface _____ | | | | _____ | | | | _____ | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | Data off _____ | | | | Remarks | | | | | | | | | | | |

| Stn. # | Bot. | T Rack | Trip Depth | Time @ | | Monitor Values | | | | Conv. Mon. Values-CTD | | | | Sample Bot. Data | | | Sal. Bot. # | Other Samp. | Pos. |
|--------|------|--------|------------|--------|------|----------------|-------|-------|-------|-----------------------|-------|-------|------|------------------|--------|------|-------------|-------------|------|
| | | | | Depth | Trip | Press. | Temp. | Cond. | Other | Press. - | Temp. | Cond. | Sal. | Therm-P | Avg Tw | Sal. | | | |
| 1 | | | 90 | | | | | | | | | | | | | | | 1 | |
| 2 | | | 90 | | | | | | | | | | | | | | | 2 | |
| 3 | | | 70 | | | | | | | | | | | | | | | 3 | |
| 4 | | | 50 | | | | | | | | | | | | | | | 4 | |
| 5 | | | 40 | | | | | | | | | | | | | | | 5 | |
| 6 | | | 30 | | | | | | | | | | | | | | | 6 | |
| 7 | | | 20 | | | | | | | | | | | | | | | 7 | |
| 8 | | | 10 | | | | | | | | | | | | | | | 8 | |
| 9 | | | 5 | | | | | | | | | | | | | | | 9 | |
| 10 | | | | | | | | | | | | | | | | | | 10 | |
| 11 | | | | | | | | | | | | | | | | | | 11 | |
| 12 | | | | | | | | | | | | | | | | | | 12 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|-----------------------|--------------------------|--------------------------------------|------------------------|----|------------------|--------------------------|------------------|--|----------------------|---|----------|---|----------|---|---------|------|------|-----------|------------------|-------|------|--------|-----------------|-------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Consec. Cast # <u>024</u> | | Vessel MILLER FREEMAN | | Proj. & Leg MPA 305 | | Event # 705 | | Vessel Sta. I.D. | | Instructions | | | | | | | | | | Sta. Designation | | | | | | | | | | | | | | | | | | | |
| Consec. Cast # | Latitude Deg. Min. | | N or S | Longitude Deg. | | E or W | Date JD = Day Mo. Yr. | | | Time GMT Hr. Min. | | Dry Bulb | | Wet Bulb | | Bar. mb | S.S. | Vis. | Wind Dir. | Wind Sp. | Cloud | Type | Weath. | Bottom Depth, m | Sta. Name or I.D. | | | | | | | | | | | | | | |
| 024 | 54 | 22 | N | 166 | 23 | 32 | W | 28 | A | P | R | 9 | 3 | 2 | 3 | 3 | 0 | 6 | 3 | 6 | 0 | 9 | 4 | 3 | 7 | 0 | 4 | 0 | 0 | 6 | 7 | 6 | 1 | 6 | 2 | 8 | 1 | 0 | 3 |
| CTD Type & SN <u>91220-</u> | | | Monitor Checks on Deck at Surface | | | Times JD/Time | | | Data Location | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Press. SN <u>25084</u> | | | Press. _____ | | | Data on _____ | | | Tape/Diskette I.D. _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Temp. SN <u>701</u> | | | Temp. _____ | | | at Surface _____ | | | File Name/Header <u>cast024-28apr226</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cond. SN <u>303</u> | | | Cond. _____ | | | Start Down _____ | | | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| _____ | | | Other _____ | | | at Bottom _____ | | | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| _____ | | | _____ | | | Start Up _____ | | | Remarks <u>4/6=90</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| _____ | | | _____ | | | at Surface _____ | | | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| _____ | | | _____ | | | Data off _____ | | | _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Pos. No. | Bot. | T Rack | Trip Depth | Time @ | | Monitor Values | | | | Conv. Mon. Values-CTD | | | | Sample Bot. Data | | | Sal. Bot. # | Other Samp. | Pos. No. |
|----------|------|--------|------------|--------|------|----------------|-------|-------|-------|-----------------------|-------|--------|--------|------------------|--------|------|-------------|-------------|----------|
| | | | | Depth | Trip | Press. | Temp. | Cond. | Other | Press. - | Temp. | Cond. | Sal. | Therm-P | Avg Tw | Sal. | | | |
| 1 | | | 90 | | | | | | | 91.860 | 3.534 | 30.669 | 33.187 | | | | 24 | | 1 |
| 2 | | | 90 | | | | | | | 89.725 | 3.527 | 30.657 | 33.180 | | | | | | 2 |
| 3 | | | 70 | | | | | | | 69.449 | 3.516 | 30.591 | 33.128 | | | | | | 3 |
| 4 | | | 50 | | | | | | | 56.295 | 3.620 | 30.514 | 32.936 | | | | | | 4 |
| 5 | | | 40 | | | | | | | 39.768 | 3.956 | 30.622 | 32.733 | | | | | | 5 |
| 6 | | | 30 | | | | | | | 29.836 | 4.146 | 30.745 | 32.692 | | | | | | 6 |
| 7 | | | 20 | | | | | | | 20.424 | 4.363 | 30.933 | 32.702 | | | | | | 7 |
| 8 | | | 10 | | | | | | | 10.101 | 4.686 | 31.138 | 32.626 | | | | | | 8 |
| 9 | | | 5 | | | | | | | 5.119 | 4.892 | 31.259 | 32.566 | | | | | | 9 |
| 10 | | | | | | | | | | | | | | | | | | | 10 |
| 11 | | | | | | | | | | | | | | | | | | | 11 |
| 12 | | | | | | | | | | | | | | | | | | | 12 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|----------------|--|--|--|------------|--|---|--|--------------------------|--|---|--|---------------------------|--|--|--|---------------------|--|------------------|--|-------------|--|-----------------|--|-------------------|--|
| Consec. Cast # | | Vessel | | Proj. & Leg | | Event # | | Vessel Sta. I.D. | | Instructions | | | | | | | | | | Sta. Designation | | | | | | | |
| 025 | | MILLER FREEMAN | | | | 719 | | | | | | | | | | | | | | | | | | | | | |
| Consec. Cast # | | Latitude | | Longitude | | Date JD = | | Time GMT | | Dry Bulb | | Wet Bulb | | Bar. mb | | Wind Dir. | | Wind Sp. | | Cloud Type | | Weath. | | Bottom Depth, m | | Sta. Name or I.D. | |
| 025 | | 5407.55 N | | 1671423 W | | 29 APR 93 | | 0506 | | 66 | | 59 | | 95 | | 380 | | 601 | | 286 | | 21 | | 573 | | 104 | |
| CTD Type & SN 91220- Press. SN 25084 Temp. SN 701 Cond. SN 303 | | | | Monitor Checks on Deck Press. _____ Temp. _____ Cond. _____ Other _____ | | | | at Surface Press. _____ Temp. _____ Cond. _____ Other _____ | | | | Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____ | | | | Data Location Tape/Diskette I.D. _____ File Name/Header CAST025-29apr93 | | | | Remarks w/o | | | | | | | |
| Pos | | Bot. | | T Rack | | Trip Depth | | Time @ | | Monitor Values | | | | Conv. Mon. Values-CTD | | | | Sample Bot. Data | | | | Sal. Bot. # | | Other Samp. | | Pos | |
| 1 | | | | | | 54030 | | | | Press. Temp. Cond. Other | | | | Press. - Temp. Cond. Sal. | | | | Therm-P Avg Tw Sal. | | | | 12 | | | | 1 | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | 5 | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | 7 | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | 8 | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | 10 | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | 11 | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | 12 | |

Initials _____

✓

[illegible]

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|------|--------------------------|------------|-------------|------------------|----------------|----------------|-------------------------------------|-------|-----------------------|----------------------|------------------|----------|--------------------|----------|------------------------|------------------|-------------|------|------------------|-----------|--|----------|--|------------|--|--------|-----------------|--|-------------------|--|
| Consec. Cast # <u>27</u> | | Vessel MILLER FREEMAN | | Proj. & Leg | | Event # | | Vessel Sta. I.D. | | Instructions | | | | | | | | | | Sta. Designation | | | | | | | | | | | |
| Consec. Cast # | | Latitude N or S | | | Longitude E or W | | | Date JD = <u>119</u> Day Mo. Yr. | | | Time GMT Hr. Min. | | Dry Bulb | | Wet Bulb | | Bar. mb 996.0 | | S.S. | Vis. | Wind Dir. | | Wind Sp. | | Cloud Type | | Weath. | Bottom Depth, m | | Sta. Name or I.D. | |
| 027 | | 541333N | | | 1664611W | | | 29 APR 93 | | | 1254 | | 058 | | 052 | | 9637 | | 3 | 7 | 3400 | | 4862 | | 1281 | | 106 | | | | |
| CTD Type & SN <u>91220-</u> | | Monitor Checks | | | | | | | | | | Times JD/Time | | Data Location | | | | | | | | | | | | | | | | | |
| Press. SN <u>25084</u> | | on Deck | | | | | at Surface | | | | | Data on _____ | | Tape/Diskette I.D. | | File Name/Header | | | | | | | | | | | | | | | |
| Temp. SN <u>701</u> | | Press. _____ | | | | | Temp. _____ | | | | | at Surface _____ | | _____ | | Cast 027 - 29 Apr 1238 | | | | | | | | | | | | | | | |
| Cond. SN <u>303</u> | | Temp. _____ | | | | | Cond. _____ | | | | | at Bottom _____ | | _____ | | _____ | | | | | | | | | | | | | | | |
| _____ | | Other _____ | | | | | Start Up _____ | | | | | at Surface _____ | | _____ | | Remarks | | | | | | | | | | | | | | | |
| _____ | | _____ | | | | | Data off _____ | | | | | _____ | | _____ | | _____ | | | | | | | | | | | | | | | |
| St. No. | Bot. | T Rack | Trip Depth | Time @ | | Monitor Values | | | | Conv. Mon. Values-CTD | | | | Sample Bot. Data | | | Sal. Bot. # | Other Samp. | Pos. | | | | | | | | | | | | |
| | | | | Depth | Trip | Press. | Temp. | Cond. | Other | Press. - | Temp. | Cond. | Sal. | Therm-P | Avg Tw | Sal. | | | | | | | | | | | | | | | |
| 1 | | 3rd only | ~ 400 | | | | | | | 392.455 | 3.775 | 31.445 | 33.707 | | | | 21 | | 1 | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | 3 | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | 4 | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | 5 | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | 6 | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | 7 | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | 8 | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | 9 | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | 10 | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | 11 | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | 12 | | | | | | | | | | | | |

Initials

✓

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---------------------------------|-----|-----------------------|---|---------|--|--------------------------|--|---|--|--|----------|--|--|--|------------------|-------------|-------------|------------------|-----------|--|----------|--|------------|--|--------|--|-----------------|--|-------------------|--|
| Consec. Cast # 28 | | Vessel MILLER FREEMAN | | Proj. & Leg MP9305 | | Event # | | Vessel Sta. I.D. | | Instructions | | | | | | | | | | Sta. Designation | | | | | | | | | | | | |
| Consec. Cast # | | Latitude N or S Deg. Min. | | | Longitude E or W Deg. | | | Date JD = Day Mo. Yr. | | | Time GMT Hr. Min. | | Dry Bulb | | Wet Bulb | | Bar. mb 997.1 | | S.S. | Vis. | Wind Dir. | | Wind Sp. | | Cloud Type | | Weath. | | Bottom Depth, m | | Sta. Name or I.D. | |
| 028 | | 54 21 46 N | | | 166 24 24 W | | | 29 APR 93 | | | 19 04 | | 06 20 | | 05 29 | | 73 | | 7 | 11 | 510 | | 862 | | 666 | | 111 | | | | | |
| CTD Type & SN 91220- Press. SN 25084 Temp. SN 701 Cond. SN 303 | | | | | Monitor Checks on Deck at Surface Press. _____ Temp. _____ Cond. _____ Other _____ | | | | | Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____ | | | | | Data Location Tape/Diskette I.D. _____ File Name/Header Cast 028-29 APR 1993 Remarks _____ | | | | | | | | | | | | | | | | | |
| St. No. | | Bot. Rack | T | Trip Depth | Time @ Depth Trip | | Monitor Values Press. Temp. Cond. Other | | | | Conv. Mon. Values-CTD Press. Temp. Cond. Sal. | | | | Sample Bot. Data Therm-P Avg Tw Sal. | | | Sal. Bot. # | Other Samp. | Pos. | | | | | | | | | | | | |
| 1 | | X | 500 | 1904 1909 | | | | | | 503.023 36.22 31.519 33.917 | | | | | | | 9 | | 1 | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | 3 | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | 4 | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | 5 | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | 6 | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | 7 | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | 8 | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | 9 | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | 10 | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | 11 | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | 12 | | | | | | | | | | | | | |

Initials

✓

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|-------------------------|--------------------------|-----------------|-----------------------|------|----------------|------------------------------|------------------|----------------------|-----------------------|----------|--------------------------------------|----------|------------------|-------------|------|-------------|---|----------|------------------|------|--------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Consec. Cast # 029 | | Vessel MILLER FREEMAN | | Proj. & Leg MF9305 | | Event # 744 | | Vessel Sta. I.D. | | Instructions | | | | | | | | | | Sta. Designation | | | | | | | | | | | | | | | | | |
| Consec. Cast # | Latitude Deg. Min. S | | N or S | Longitude Deg. W | | E or W | Date JD = 120 Day Mo. Yr. | | Time GMT Hr. Min. | | Dry Bulb | | Wet Bulb | | Bar. mb | S.S. | Vis. | Wind Dir. | Wind Sp. | Cloud | Type | Weath. | Bottom Depth, m | Sta. Name or I.D. | | | | | | | | | | | | | |
| 029 | 54 | 08 | N | 166 | 10 | 87 | W | 30 | A | P | R | 9 | 3 | 0 | 0 | 4 | 9 | 9 | 8 | 2 | 9 | 8 | 2 | 7 | 2 | 4 | 0 | 0 | 4 | 7 | 6 | 2 | 8 | 3 | 1 | 1 | 5 |
| CTD Type & SN 91220- | | | Press. SN 25084 | | | Temp. SN 701 | | | Cond. SN 303 | | | Monitor Checks on Deck at Surface | | | | | | Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____ | | | | | | Data Location Tape/Diskette I.D. _____ File Name/Header _____ Cast 029-30Apr8001 | | | | | | | | | | | | | |
| | | | | | | Press. _____ | | | Temp. _____ | | | Cond. _____ | | | Other _____ | | | Remarks max depth = 75m Therms didn't trip 40 77 | | | | | | | | | | | | | | | | | | | |
| St. No. | Bot. | T Rack | Trip Depth | Time @ | | Monitor Values | | | | Conv. Mon. Values-CTD | | | | Sample Bot. Data | | | Sal. Bot. # | Other Samp. | Pos | | | | | | | | | | | | | | | | | | |
| | | | | Depth | Trip | Press. | Temp. | Cond. | Other | Press. - | Temp. | Cond. | Sal. | Therm-P | Avg Tw | Sal. | | | | | | | | | | | | | | | | | | | | | |
| 1 | | / | 50 | | | | | | | | | 49.599 | 4.172 | 30.418 | 32.272 | | | | 1 | | | | | | | | | | | | | | | | | | |
| 2 | | | 50 | | | | | | | | | 49.518 | 4.172 | 30.419 | 32.274 | | | | 2 | | | | | | | | | | | | | | | | | | |
| 3 | | | 50 | | | | | | | | | 49.517 | 4.170 | 30.411 | 32.266 | | | | 3 | | | | | | | | | | | | | | | | | | |
| 4 | | | 30 | | | | | | | | | 29.692 | 4.160 | 30.366 | 32.233 | | | | 4 | | | | | | | | | | | | | | | | | | |
| 5 | | | 30 | | | | | | | | | 29.711 | 4.162 | 30.363 | 32.227 | | | | 5 | | | | | | | | | | | | | | | | | | |
| 6 | | | 30 | | | | | | | | | 29.686 | 4.162 | 30.368 | 32.234 | | | | 6 | | | | | | | | | | | | | | | | | | |
| 7 | | | 10 | | | | | | | | | 9.750 | 4.202 | 30.375 | 32.213 | | | | 7 | | | | | | | | | | | | | | | | | | |
| 8 | | | 10 | | | | | | | | | 9.723 | 4.196 | 30.371 | 32.214 | | | | 8 | | | | | | | | | | | | | | | | | | |
| 9 | | | 10 | | | | | | | | | 9.769 | 4.212 | 30.383 | 32.212 | | | | 9 | | | | | | | | | | | | | | | | | | |
| 10 | | X | 50 | 000600 | | | | | | | | 49.699 | 4.170 | 30.413 | 32.268 | | | | 17 | | | | | | | | | | | | | | | | | | |
| 11 | | / | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| 12 | | / | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|----------|------------------------------|--------|---|----|--------------------|-----------|------------------|-----|--------------|------|---|----------|---------|------|-----------------------------|-----------|----------|-------|-----------------------------|--------|-----------------|-------------------|--|---|-----|-----|
| Consec. Cast # <u>031</u> | | Vessel <u>MILLER FREEMAN</u> | | Proj. & Leg | | Event # <u>756</u> | | Vessel Sta. I.D. | | Instructions | | | | | | | | | | Sta. Designation <u>125</u> | | | | | | | |
| Consec. Cast # | Latitude | | N or S | Longitude | | E or W | Date JD = | | | Time GMT | | Dry Bulb | Wet Bulb | Bar. mb | S.S. | Vis. | Wind Dir. | Wind Sp. | Cloud | Type | Weath. | Bottom Depth, m | Sta. Name or I.D. | | | | |
| | Deg. | Min. | | Deg. | | | Day | Mo. | Yr. | Hr. | Min. | | | | | | | | | | | | | | | | |
| 031 | 54 | 01 | 09 W | 166 | 32 | 50 W | 30 | A | P | R | 9 | 3 | 10 | 16 | 06 | 2 | 05 | 8 | 98 | 3 | 8 | 350 | 08 | 66 | 2 | 195 | 125 |
| CTD Type & SN <u>91220-</u> | | | | Monitor Checks on Deck at Surface | | | | | | | | Times JD/Time Data on _____ at Surface _____ Start Down _____ at Bottom _____ Start Up _____ at Surface _____ Data off _____ | | | | Data Location | | | | | | | | | | | |
| Press. SN <u>25084</u> | | | | | | | | | | | | | | | | Tape/Diskette I.D. _____ | | | | | | | | File Name/Header <u>Cast 031 - 30 Apr 1007</u> | | | |
| Temp. SN <u>701</u> | | | | Press. _____ Temp. _____ Cond. _____ Other _____ | | | | | | | | | | | | Remarks <u>Wire out 1PG</u> | | | | | | | | | | | |
| Cond. SN <u>303</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Bot. # | Bot. Rack | T | Trip Depth | Time @ | | Monitor Values | | | | Conv. Mon. Values-CTD | | | | Sample Bot. Data | | | Sal. Bot. # | Other Samp. | Pos |
|--------|-----------|---|------------|--------|------|----------------|-------|-------|-------|-----------------------|-------|--------|--------|------------------|--------|------|-------------|-------------|-----|
| | | | | Depth | Trip | Press. | Temp. | Cond. | Other | Press. - | Temp. | Cond. | Sal. | Therm-P | Avg Tw | Sal. | | | |
| 1 | 5 | | | | | | | | | 189.257 | 39.77 | 30.724 | 32.756 | | | | 05 | | 1 |
| 2 | - | | | | | | | | | | | | | | | | | | 2 |
| 3 | 1 | | | | | | | | | 79.552 | 4.197 | 30.599 | 32.444 | | | | 35 | | 3 |
| 4 | | | | | | | | | | | | | | | | | | | 4 |
| 5 | | | | | | | | | | | | | | | | | | | 5 |
| 6 | | | | | | | | | | | | | | | | | | | 6 |
| 7 | | | | | | | | | | | | | | | | | | | 7 |
| 8 | | | | | | | | | | | | | | | | | | | 8 |
| 9 | | | | | | | | | | | | | | | | | | | 9 |
| 10 | | | | | | | | | | | | | | | | | | | 10 |
| 11 | | | | | | | | | | | | | | | | | | | 11 |
| 12 | | | | | | | | | | | | | | | | | | | 12 |

 Initials SS/m