

NCBF1C 06-29-2006 file name NCBF1A.MOR

WATER DEPTH= 499 m STATIC DEPTH OF TOP= 24 m DYNAMIC DEPTH OF TOP= 39.4m

| CURRENT PROFILE | | DEPTH (meters) | | -56 | 30 | 100 | 200 | 300 | 400 | 500 |
|-------------------|-----------|----------------|---------------|----------|-----------|---------------|------|-----|-----|-----|
| VELOCITY (cm/sec) | | | | 100 | 50 | 50 | 50 | 50 | 50 | 0 |
| NODE--CODE---- | LNN--- | depth---- | buoyancy----- | drag---- | horiz X-- | current----- | tilt | | | |
| # | meters | NODE | reserve | kgs | meters | cm/sec | degs | | | |
| 1 IO-34 | 1.2 39.4 | 190.0 | 150 | 4.4 | 105.1 | 50.0 | 1.3 | | | |
| 2 SWIVL | 0.2 40.6 | -2.1 | -40 | 0.1 | 105.1 | 50.0 | 1.4 | | | |
| 3 PINGR | 0.7 40.8 | -4.1 | -38 | 0.4 | 105.1 | 50.0 | 1.5 | | | |
| ROPE9 | 10.0 | 0.1 | | 1.1 | 183.9kg | (max tension) | | | | |
| 5 RCM-4* | 0.5 51.5 | -17.3 | -34 | 1.2 | 104.8 | 50.0 | 2.5 | | | |
| ROPE9 | 64.0 | 0.8 | | 6.8 | 166.7kg | (max tension) | | | | |
| 13 RCM-4 | 0.8 115.9 | -17.3 | -17 | 1.2 | 100.6 | 50.0 | 5.8 | | | |
| ROPE9 | 99.0 | 1.2 | | 10.3 | 150.4kg | (max tension) | | | | |
| 19 ADCP | 1.0 214.7 | 15.0 | -1 | 6.1 | 87.0 | 50.0 | 11.0 | | | |
| ROPE9 | 99.0 | 1.2 | | 9.9 | 166.1kg | (max tension) | | | | |
| 25 RCM-4 | 0.8 312.2 | -17.3 | -17 | 1.2 | 64.9 | 50.0 | 16.5 | | | |
| ROPE9 | 186.6 | 2.2 | | 11.9 | 150.8kg | (max tension) | | | | |
| 36 BEN17 | 0.6 488.9 | 23.0 | 108 | 0.1 | 2.5 | 5.6 | 18.3 | | | |
| 37 BEN17 | 0.6 489.4 | 23.0 | 85 | 0.1 | 2.3 | 5.3 | 16.2 | | | |
| 38 BEN17 | 0.6 490.0 | 23.0 | 62 | 0.1 | 2.2 | 5.0 | 14.5 | | | |
| 39 BEN17 | 0.6 490.6 | 23.0 | 39 | 0.1 | 2.0 | 4.7 | 13.2 | | | |
| 40 BEN17 | 0.6 491.2 | 23.0 | 16 | 0.1 | 1.9 | 4.4 | 12.1 | | | |
| 41 BEN17 | 0.6 491.8 | 23.0 | -7 | 0.1 | 1.8 | 4.1 | 11.1 | | | |
| 42 SWIVL | 0.2 492.4 | -2.1 | -30 | 0.0 | 1.6 | 3.8 | 11.2 | | | |
| 43 PINGR | 0.6 492.6 | -4.1 | -28 | 0.0 | 1.6 | 3.7 | 11.4 | | | |
| 44 RT661 | 0.9 493.1 | -24.0 | -24 | 0.0 | 1.5 | 3.4 | 12.4 | | | |
| ROPE8 | 6.0 | 0.2 | | 0.0 | 256.5kg | (max tension) | | | | |
| 48 BOTOM | 0.0 499.9 | 0.0 | 0 | 0.0 | 0.0 | 0.1 | 0.0 | | | |

ANCHOR FORCES: VERTICAL LOAD = 250 kg: HORIZONTAL LOAD = 55 kg
 WHOI SAFE ANCHOR WT. $[1.5X(ANCV+ANCH/.6)] = 512$ kg wet wt.// 588 kg dry wt.

1/4" Speelkg

WATER DEPTH= 499 m STATIC DEPTH OF TOP= 24 m DYNAMIC DEPTH OF TOP= 44.5m

| CURRENT PROFILE | | DEPTH (meters) | -56 | 30 | 100 | 200 | 300 | 400 | 500 |
|-----------------|-----------|-------------------|--------------|----------|---------------|-------------|------|-----|-----|
| | | VELOCITY (cm/sec) | 100 | 50 | 50 | 50 | 50 | 50 | 0 |
| NODE--CODE---- | LNN---- | depth---- | buoyancy---- | drag---- | horiz X-- | current---- | tilt | | |
| # | meters | NODE reserve | kgs | meters | cm/sec | degs | | | |
| 1 IO-34 | 1.2 44.5 | 190.0 142 | 4.4 | 120.7 | 50.0 | 1.3 | | | |
| 2 SWIVL | 0.2 45.7 | -2.1 -48 | 0.1 | 120.7 | 50.0 | 1.4 | | | |
| 3 PINGR | 0.7 45.9 | -4.1 -46 | 0.4 | 120.7 | 50.0 | 1.5 | | | |
| ROPE1 | 10.0 | -0.1 | 1.3 | 183.9kg | (max tension) | | | | |
| 5 RCM-4* | 0.5 56.6 | -17.3 -41 | 1.2 | 120.3 | 50.0 | 2.6 | | | |
| ROPE1 | 64.0 | -0.6 | 7.9 | 166.5kg | (max tension) | | | | |
| 13 RCM-4 | 0.8 120.9 | -17.3 -23 | 1.2 | 115.8 | 50.0 | 6.4 | | | |
| ROPE1 | 99.0 | -1.0 | 11.9 | 148.7kg | (max tension) | | | | |
| 19 ADCP | 1.0 219.5 | 15.0 -5 | 6.0 | 100.5 | 50.0 | 12.3 | | | |
| ROPE1 | 99.0 | -1.0 | 11.4 | 162.2kg | (max tension) | | | | |
| 25 RCM-4 | 0.8 316.3 | -17.3 -19 | 1.2 | 75.4 | 50.0 | 19.0 | | | |
| ROPE1 | 186.6 | -1.9 | 13.1 | 144.9kg | (max tension) | | | | |
| 36 BEN17 | 0.6 489.0 | 23.0 108 | 0.1 | 2.9 | 5.5 | 21.5 | | | |
| 37 BEN17 | 0.6 489.5 | 23.0 85 | 0.1 | 2.7 | 5.2 | 19.0 | | | |
| 38 BEN17 | 0.6 490.1 | 23.0 62 | 0.1 | 2.5 | 4.9 | 16.9 | | | |
| 39 BEN17 | 0.6 490.7 | 23.0 39 | 0.1 | 2.3 | 4.7 | 15.3 | | | |
| 40 BEN17 | 0.6 491.2 | 23.0 16 | 0.1 | 2.2 | 4.4 | 13.9 | | | |
| 41 BEN17 | 0.6 491.8 | 23.0 -7 | 0.1 | 2.0 | 4.1 | 12.8 | | | |
| 42 SWIVL | 0.2 492.4 | -2.1 -30 | 0.0 | 1.9 | 3.8 | 12.9 | | | |
| 43 PINGR | 0.6 492.6 | -4.1 -28 | 0.0 | 1.8 | 3.7 | 13.0 | | | |
| 44 RT661 | 0.9 493.2 | -24.0 -24 | 0.0 | 1.7 | 3.4 | 14.3 | | | |
| ROPE8 | 6.0 | 0.2 | 0.0 | 245.2kg | (max tension) | | | | |
| 48 BOTOM | 0.0 499.9 | 0.0 0 | 0.0 | 0.0 | 0.1 | 0.0 | | | |

ANCHOR FORCES: VERTICAL LOAD = 237 kg: HORIZONTAL LOAD = 60 kg
 WHOI SAFE ANCHOR WT. $[1.5X(ANCV+ANCH/.6)] = 505$ kg wet wt. // 580 kg dry wt.

1/4" Kevlar

Test
Designs

NCBF1B 06-29-2006 file name NCBF1A.MOR

WATER DEPTH= 499 m STATIC DEPTH OF TOP= 24 m DYNAMIC DEPTH OF TOP= 52.7m

| CURRENT PROFILE | | DEPTH (meters) | | -56 | 30 | 100 | 200 | 300 | 400 | 500 |
|-----------------|--------|-------------------|---------------|----------|-----------|--------------|---------------|------|-----|-----|
| | | VELOCITY (cm/sec) | | 100 | 50 | 50 | 50 | 50 | 50 | 0 |
| NODE--CODE---- | LNN--- | depth---- | buoyancy----- | drag---- | horiz X-- | current----- | tilt | | | |
| # | meters | NODE | reserve | kgs | meters | cm/sec | degs | | | |
| 1 IO-34 | 1.2 | 52.7 | 190.0 | 91 | 4.4 | 138.0 | 50.0 | 1.3 | | |
| 2 SWIVL | 0.2 | 53.9 | -2.1 | -99 | 0.1 | 138.0 | 50.0 | 1.4 | | |
| 3 PINGR | 0.7 | 54.1 | -4.1 | -96 | 0.4 | 138.0 | 50.0 | 1.5 | | |
| ROPEA | 10.0 | | -1.3 | | 1.1 | 183.9kg | (max tension) | | | |
| 5 RCM-4* | 0.5 | 64.8 | -17.3 | -91 | 1.2 | 137.6 | 50.0 | 2.5 | | |
| ROPEA | 64.0 | | -7.7 | | 6.8 | 165.3kg | (max tension) | | | |
| 13 RCM-4 | 0.8 | 129.1 | -17.3 | -66 | 1.2 | 133.3 | 50.0 | 6.2 | | |
| ROPEA | 99.0 | | -12.0 | | 10.2 | 140.5kg | (max tension) | | | |
| 19 ADCP | 1.0 | 227.7 | 15.0 | -37 | 6.0 | 117.9 | 50.0 | 12.7 | | |
| ROPEA | 99.0 | | -12.0 | | 9.7 | 143.0kg | (max tension) | | | |
| 25 RCM-4 | 0.8 | 324.0 | -17.3 | -40 | 1.2 | 91.2 | 50.0 | 21.5 | | |
| ROPEA | 186.6 | | -22.5 | | 10.1 | 115.5kg | (max tension) | | | |
| 36 BEN17 | 0.6 | 489.1 | 23.0 | 108 | 0.1 | 3.2 | 5.5 | 27.0 | | |
| 37 BEN17 | 0.6 | 489.6 | 23.0 | 85 | 0.1 | 3.0 | 5.2 | 22.7 | | |
| 38 BEN17 | 0.6 | 490.2 | 23.0 | 62 | 0.1 | 2.7 | 4.9 | 19.5 | | |
| 39 BEN17 | 0.6 | 490.7 | 23.0 | 39 | 0.1 | 2.5 | 4.6 | 17.0 | | |
| 40 BEN17 | 0.6 | 491.3 | 23.0 | 16 | 0.1 | 2.4 | 4.3 | 15.1 | | |
| 41 BEN17 | 0.6 | 491.9 | 23.0 | -7 | 0.1 | 2.2 | 4.1 | 13.6 | | |
| 42 SWIVL | 0.2 | 492.5 | -2.1 | -30 | 0.0 | 2.1 | 3.8 | 13.8 | | |
| 43 PINGR | 0.6 | 492.7 | -4.1 | -28 | 0.0 | 2.0 | 3.7 | 14.0 | | |
| 44 RT661 | 0.9 | 493.2 | -24.0 | -24 | 0.0 | 1.9 | 3.4 | 15.7 | | |
| ROPE8 | 6.0 | | 0.2 | | 0.0 | 195.0kg | (max tension) | | | |
| 48 BOTOM | 0.0 | 499.9 | 0.0 | 0 | 0.0 | 0.0 | 0.1 | 0.0 | | |

ANCHOR FORCES: VERTICAL LOAD = 187 kg: HORIZONTAL LOAD = 52 kg
 WHOI SAFE ANCHOR WT. $[1.5X(ANCV+ANCH/.6)] = 410$ kg wet wt.// 471 kg dry wt.

1/4" Wire