

Pump Cast: Station 32 Shallow Cast

| Pump ID | Flow S/N | Prev. End | Start (l) | End (l) | Calc. Diff |
|---------|----------|-----------|-----------|----------|------------|
| 1 | 19008653 | 60196.5 | 60196.5 | 61237.8 | 1041.3 |
| | 21973472 | 13073.8 | 13073.9 | 13431.6 | 357.7 |
| | 19008655 | 88743.6 | 88743.5 | 90164.2 | 1420.7 |
| 2 | 19008629 | 99186.9 | 99186.8 | 100398.0 | 1211.2 |
| | 19008630 | 40528.2 | 40528.1 | 40954.1 | 426.0 |
| | 19008631 | 139567.1 | 139567.0 | 141204.7 | 1637.7 |
| 3 | 19008656 | 114771.0 | 114771.0 | 115929.7 | 1158.7 |
| | 19008657 | 55275.3 | 55275.3 | 55716.1 | 440.8 |
| | 19008658 | 179227.3 | 179227.3 | 180822.2 | 1594.9 |
| 4 | 19008638 | 63897.2 | 63897.2 | 65088.6 | 1191.4 |
| | 19008639 | 40207.0 | 40207.0 | 40649.5 | 442.5 |
| | 19008640 | 105482.4 | 105482.4 | 107128.5 | 1646.1 |
| 5 | 20007741 | 80679.0 | 80679.0 | 81826.4 | 1147.4 |
| | 20007742 | 54551.0 | 54551.0 | 55066.4 | 515.4 |
| | 20007743 | 136716.8 | 136716.8 | 138382.2 | 1665.4 |
| 6 | 20008125 | 53986.7 | 53986.7 | 55071.9 | 1085.2 |
| | 20008126 | 42690.7 | 42690.7 | 43241.2 | 550.5 |
| | 20008127 | 97911.5 | 97911.5 | 99603.5 | 1692.0 |
| 7 | 20008095 | 42106.2 | 42106.2 | 43151.9 | 1045.7 |
| | 20008096 | 24148.8 | 24149.0 | 24676.1 | 527.1 |
| | 20008097 | 65803.0 | 65803.0 | 67386.0 | 1583.0 |
| 8 | 20007747 | 57691.3 | 57691.3 | 58545.8 | 854.5 |
| | 20007748 | 25259.5 | 25259.6 | 25716.6 | 457.0 |
| | 20007749 | 91062.1 | 91062.4 | 92382.2 | 1319.8 |
| 9 | | | | | |
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| 10 | | | | | |
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| 11 | | | | | |
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| 12 | | | | | |
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Dates Y/M/D and times in local time (and GMT)

GMT=LCL+ 9

Date 2013/12/11 to 12

Event 4415

Station 32

Cast 3

Water depth 4940m

Delay duration 01:20:00

Pump duration 04:00:00

Trigger time 09:34 (18:34)

Pumps on 10:54 (19:54)

Pumps off 14:54 (23:54)

CTD/first pump in water 09:32 (18:32)

Last pump in water 10:35 (19:35)

Time at target depth 10:36 (19:36)

Water below pinger No pinger.

Messenger drop No msgr.

Recovery begins 15:00 (00:00)

All aboard 16:03 (01:03)

Post deployment download information

| Pump ID | Nisk | Nom depth | GT# | Low (rest) voltage | Error msg | Vol pumped (l) |
|---------|------|-----------|------|--------------------|-----------|----------------|
| CTD | | 1780 | NA | | | |
| 1 | | 1750 | 9963 | 25.4 (30.0) | | 1625 |
| 2 | | 850 | 9964 | 28.5 (32.7) | | 1647 |
| 3 | | 450 | 9965 | 26.1 (30.7) | | 1647 |
| 4 | | 335 | 9966 | 30.4 (33.5) | | 1647 |
| 5 | | 200 | 9967 | 29.3 (32.5) | | 1647 |
| 6 | | 130 | 9968 | 26.9 (30.8) | | 1647 |
| 7 | | 95 | 9969 | 27.1 (36.3) | | 1643 |
| 8 | | 30 | 9970 | 25.9 (30.8) | | 1566 |
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Notes

No MAPRs on shallow cast. DBs on Pump 4.
 After cast, changed quick disconnect o-rings on 1S, 5Q and 8Q (stiff)
 Bad agreement of pump 1 flowmeters past few casts may
 have been due to leaky 1S o-ring?