

### Pump Cast: Station 5 Deep

Pump ID	Flow S/N	Prev. End	Start (l)	End (l)	Calc. Diff
1	19008653	New Pump	28150.5	28521.7	371.2
	21973472	New Pump	1905.2	2962.8	1057.6
	19008655	New Pump	45071.2	46493.7	1422.5
2	19008629	62401.8	62401.8	63580.0	1178.2
	19008630	26858.0	26858.0	27313.1	455.1
	19008631	88786.5	88786.5	90416.4	1629.9
3	19008656	80203.4	80203.5	81249.0	1045.5
	19008657	42486.8	42486.9	42881.8	394.9
	19008658	129920.5	129920.6	131523.5	1602.9
4	19008638	29301.5	29301.6	30446.6	1145.0
	19008639	27484.9	27485.0	27936.2	451.2
	19008640	57832.6	57832.6	59437.1	1604.5
5	20007741	46377.9	46378.0	47471.4	1093.4
	20007742	38243.1	38243.2	38754.8	511.6
	20007743	85677.9	85677.9	87281.5	1603.6
6	20008125	19439.6	19439.6	20425.2	985.6
	20008126	25848.0	25848.0	26384.7	536.7
	20008127	46370.9	46370.9	47925.3	1554.4
7	20007747	25368.6	25368.7	26214.5	845.8
	20007748	12397.1	12397.2	12764.4	367.2
	20007749	45735.6	45735.6	46948.3	1212.7
8	20007750	68727.5	68727.6	69066.7	339.1
	20008101	43822.3	43822.4	43952.8	130.4
	20008102	121001.4	121001.4	121474.4	473.0
9					
10					
11					
12					

GMT=LCL+ 5

Dates Y/M/D and times in local time (and GMT)

Date 2013/11/03

Event 4065

Station 5

Cast 3

Water depth 2072m

Delay duration 02:00:00

Pump duration 04:00:00

Trigger time 03:41 (08:41)

Pumps on 05:41 (10:41)

Pumps off 09:41 (14:41)

CTD/first pump in water CTD - 3:42 (8:42)

Last pump in water 05:11 (10:11)

Time at target depth 05:18 (10:18)

Water below pinger ~8m

Messenger drop 07:41 (12:41)

Recovery begins 09:45 (14:45)

All aboard 11:00 (16:00)

**Notes**

Deep "shelf" station (2070m). Niskins deployed for Ra/Th (needed for bottom three depths b/c ODF rosette Ra/Th cast is only to 1000m.  
 Pump #4 : anomaly low voltage prior to deployment  
 Rotate pump #3 cable out of way  
 Check seal on Niskin #4, persistant leaking  
 Niskin#2 leaking very badly, had to be duct-taped ...  
 Flowmeter photos checked through end of station 5 by DCO.  
 Final wire out: not recorded, but likely 2045m

**Post deployment download information**

Pump ID	Nisk	Nom depth	GT#	Low (rest) voltage	Error msg	Vol pumped (l)
CTD		2055	NA			
1	1	2040	2439	28.3 (33.7)		1647
2	2	1800	2440	26.5 (32.2)		1647
3	3	1200	2441	25.0 (30.5)	Changed batt.	1613
4	4	600	2442	24.9 (30.0)	Changed batt.	1602
5	5	200	2443	31.5 (34.6)		1647
6	6	120	2444	24.7 (31.3)	Changed batt.	1532
7	7	75	2445	25.8 (31.6)		1398
8	8	15	2446	25.8 (32.2)		515