National Oceanography Centre, Southampton

Cruise Report No. 20

RRS *Charles Darwin* Cruise 123C3-4
19 JUL - 15 SEP 2000

Atlantic Margin Environmental Surveys
and North Sea Environmental Surveys

Principal Scientist
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2007

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DOCUMENT DATA SHEET

AUTHOR	*PUBLICATION DATE*
BETT, B J et al	2007

TITLE

RRS *Charles Darwin* Cruise 123C3-4, 19 Jul - 15 Sep 2000. Atlantic Margin Environmental Surveys and North Sea Environmental Surveys.

REFERENCE

Southampton, UK: National Oceanography Centre, Southampton, 221pp.
(National Oceanography Centre Southampton Cruise Report, No. 20)

ABSTRACT

This cruise formed part of the continuing Atlantic Margin Environmental Survey (AMES). The objectives of the cruise were: 1) to continue the AMES process in the deep waters to the north and west of Scotland on behalf of the Department of Trade and Industry (DTI); 2) to carry out a seabed sampling programme in the Fladen Ground area of the North Sea on behalf of the DTI; and 3) to conduct commercially funded seabed surveys in areas adjacent to those addressed in objectives 1 and 2.

The cruise encompassed a number of survey areas: Ymir Ridge, Wyville Thomson Ridge (including Darwin Mounds area), Faroe Bank Channel, Faroe-Shetland Channel (axial transect), West Shetland Slope (bathymetric transect), West Shetland Slope (contourite body), Enterprise survey (northwest of Shetland), Texaco survey (deep Faroe-Shetland Channel), North of Shetland slope (Tranches 65-67), Statoil / BP survey (North of Shetland slope), Marathon survey (Brae oil field, central North Sea), and the Fladen Ground (central North Sea). In each of these areas seabed samples were obtained (Day grab, box core, Megacore, gravity corer) to study various environmental parameters (hydrocarbons, heavy metals, particle size) and macrobenthos communities. In the deep-water survey areas photographic and video observations (SOC WASP system) of the seabed and its fauna were also undertaken.

ACKNOWLEDGEMENTS:

The primary survey data presented herein were acquired during a wide area survey project undertaken in 2000 on behalf of the UK Department of Trade and Industry. The project was carried out as a joint venture between the George Deacon and Challenger Divisions of the Southampton Oceanography Centre and was managed by Geotek Ltd. Additional surveys were carried out on behalf of the oil companies Enterprise, Texaco, Statoil, BP and Marathon, also managed by Geotek Ltd.

KEYWORDS

AMES, Atlantic Margin Environmental Survey, benthic communities, barchans, box core, *Charles Darwin*, continental slope, contourites, coral, cruise 123C3-4 2000, *Darwin Mounds*, Day grab, Faroe Bank Channel, Faroe Plateau, Faroe-Shetland Channel, Fladen Ground, gravity core, heavy metals, hydrocarbons, *Lophelia pertusa*, macrobenthos, megacorer, NE Atlantic, North of Shetland, North Sea, particle size, photography, Rockall Trough, seabed, sediments, videotape recording, WASP, West of Shetland, Wyville Thomson Ridge, Ymir Ridge

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NEWTON, P.W.	CH.OFF	NODEN, J.D.	CH.OFF
MITCHELL, J.W.	2/0FF	OLDFIELD, P.T.	2/OFF
HOLMES, J.C.	3/0FF	HOLMES, J.C.	3/0FF
ADAMS, A.P.	CH.ENG	ADAMS, A.P.	CH.ENG
ROYSTON, J.E.	2/ENG	RYAN, P.A.	2/ENG.
COLLARD, G.	3/ENG	CONNOR, K.M.	3/ENG
PHILLIPS, C.J.	3/E	PHILLIPS, C.J.	3/E
AULD, G.O.	ETO	BAKER, J.G.L.	ETO
POOK, GA	CPO(D)	POOK, G.A.	CPO(D)
MacLEAN, A.	PO(D)	MacLEAN, A.	PO(D)
CRABB, G.	S.1A	CRABB, G.	S.1A
EDWARDS, T.R.	S.1A	EDWARDS, T.R	S.1A
DOLLERY, P.	S.1A	DOLLERY, P.	S.1A
PERKINS, JR.	S.1A	PERKINS, J.R.	S.1A
SMYTH, J.G.	MM.1A	SMYTH, J.G.	MM.1A
STAITE, E.D.	SCM	STAITE, E.D.	SCM
FAHEY, P.F.	CHEF	FAHEY, P.F.	CHEF
KUJAWIAK,A.	M/S	KUJAWIAK, A.	M/S
HALL, G.H.	STWD	ROBINSON, P.W.	STWD
MINGAY, G.M.	STWD	MINGAY, G.M.	STWD

3. ITINERARY

CD123 C3	Sailed Govan	19 July 2000
	Docked Lerwick	14 August 2000
CD123 C4	Sailed Lerwick	15 August 2000
	Docked Southampton	15 September 2000

Dates of particular survey elements

Ymir Ridge	21-25/7
Wyville Thomson Ridge & Faroe Bank Channel	26/7-3/8
Faroe Shetland Channel axial transect	3-4/8, 10-13/8, 26-30/8, 4/9
BP Bathysnap	4/8, 11/8
Enterprise survey (Tranche 4)	4-10/8
West of Shetland Transect	13/8
North of Shetland (Tranches 65-67)	16-17/8, 20-22/8, 24/8
Statoil / BP survey (Tranche 66)	17-20/8, 22-24/8
Texaco survey	25-26/8
West of Shetland contourite	29/8-1/9, 3-4/9
"FSC9" additional studies	1-3/9
FSC9 size structure study	2-3/9
Marathon / Brae surveys	5-7/9
Fladen Ground	7-12/9

4. OBJECTIVES

1. To continue the Atlantic Margin Environmental Survey process in the deep waters to the north and west of Scotland on behalf of the Department of Trade and Industry.

2. To carry out a seabed sampling programme in the Fladen Ground area of the North Sea on behalf of the Department of Trade and Industry.

3. To conduct commercially funded seabed surveys in areas adjacent to those addressed in objectives 1 and 2. *Note that reference to these commercially funded surveys is included here for completeness; these operations must be regarded as* **commercial-in-confidence** *and permission sought from the company concerned for any further use of this information.*

5. NARRATIVE

5.1. Diary

Friday 14 July
PSO joins the vessel and most of the scientific party arrive. Unloading of CD123 C2 and loading of C3 is completed by midday. Gear preparation and stowage begins.

Saturday 15 July
The Captain carries out a safety briefing and vessel familiarisation for the scientific party. Gear preparation and stowage are completed in advance of proposed sailing time of 17:00 BST. However, at around 13:30 it is discovered that the vessel's gate valve cannot be fully closed. Divers are called to make a visual inspection under the hull. In zero visibility conditions the diver believes that there is an obstruction in the gate valve, but he cannot identify or remove it. It is decided that the divers should return with an underwater video system the following day.

Sunday 16 July
Divers return to the vessel at around 10:00. On viewing the video footage it is clear that the valve seats have been damaged and they or the valve itself will have to be replaced. Options are sought regarding *in situ* replacement or dry docking. The charter's agent (GEOTEK) is informed of the situation, and it is not felt necessary to de-mobilise the scientific party.

Monday 17 July
Decision is made to attempt the replacement of the gate valve *in situ*. A shipyard team arrive to appraise and prepare the job.

Tuesday 18 July
A diving team arrives and successfully fits a 'bung' in the gate valve hull opening. The old gate valve is then removed. On inspection, a large adjustable spanner is found within the shroud of the gate valve. A new gate valve arrives and is initially pressure tested to 0.7 bars with blanking plates fitted. A further test to 30 bars is attempted, but one of the blanking plates fails. The new gate vale is returned to the shipyard for new blanking plates to be fitted.

Wednesday 19 July
The new gate valve, with more substantial blanking plates, is returned to the ship. A 30 bar pressure test is successfully completed. The valve is fitted and the 'bung' removed from the hull. The USBL probe is reassembled and deployed through the gate valve to confirm its continued operation. This test is successful and RRS *Charles Darwin* cruise 123 C3 sails from Govan at 19:00 BST.

Thursday 20 July
On passage to the first work site. At 09:30 the vessel heaves to and the 3.5 and 10kHz tow fish are deployed. The Principal Scientist briefs the survey party on the general conduct of the cruise and scientific working procedures. An emergency muster and boat drill is held. Final preparations for the first deployments are completed. Clocks are retarded one hour to GMT / UTC (all subsequent times are UTC).

Friday 21 July
Arrive at the start of an echo-sounding run for the trial site. During the run some topography is observed, corresponding with alongslope lineations imaged by TOBI during the 1998 AFEN survey (RRS *Charles Darwin* cruise 112). The WASP system is then deployed (as station 55201#1) in the area of lineations (site BGS1) carrying an acoustic release for trial prior to its use on the following mooring deployment. WASP is run for about one hour near bottom and the release tests successfully completed. A modified 'Bathysnap' mooring (see Figure 17) is then deployed (station 55202#1, site TRNSP) with an USBL transponder attached to enable calibration of the USBL acoustic navigation system. *Darwin* carries out a series of manoeuvres in the vicinity of the mooring to generate the necessary calibration data.

During the calibration manoeuvres, the WASP trial deployment is assessed. No video footage has been shot as a result of the standby switch being knocked to the "locked" position during insertion into the pressure case. To avoid recurrence of this problem, the switch is glued in the standby position. Telemetry during the WASP trial deployment suggested possible misfires of the stills camera; this is confirmed by the reduced amount of film run (10m versus 15m expected). There is also evidence of damage to film sprocket holes. The friction drag on the film take-up spool had seized causing the take-up to over-run the sprocket drive. This problem was overcome by delicate machining of the drive train, after which two full film loads were successfully run without incident.

On completion of the USBL calibration manoeuvres, the mooring was successfully released and recovered to the vessel. *Darwin* then steamed for the first site in the Ymir Ridge survey area at around 11:00. The Megacorer was deployed (as station 55203#1) at site YR1, recovering 7/8 good cores that provided hydrocarbon (HC), heavy metal (HM), particle size analysis (PSA) and geology (GEOL) samples. (Note that this, and subsquent, PSA samples were also used to generate total organic carbon and nitrogen samples). The three remaining cores were used for macrobenthos. Megacorer was redeployed as station 55203#2, but returned only one short core that was discarded and the corer quickly redeployed. Deployment 55203#3 yielded 7/8 good cores, all of which were taken for macrobenthos (together with the 3 from 55203#1). *Darwin* then moves upslope to site YR2 at c. 1,300m. The megacorer is deployed (55204#1), returning with only 3/8 short cores which are used for HC, HM and PSA. The second deployment, 55204#2, however, returns 8/8 good cores that are all used for macrobenthos.

Saturday 22 July
Darwin heads upslope to locate site YR3 at c. 1,200 m. The megacorer is deployed as station 55205#1, it returns with only two short good cores that are used for HC and PSA. The second attempt (55205#2) yields only one useful core, which is used for the HC sample. The third attempt (55205#3) yields no samples. Switch to the box core for attempt four (55205#4), but it gushed on recovery and was discarded. A further attempt with the box core (55205#5) also fails when the main warp fouls on the corer and the corer is not triggered at the seabed. Switch back to the Megacorer using only four tubes; deployed as 55205#6, it returns with four good long cores, all of which are taken for macrobenthos. The Megacorer is redeployed again as 55205#7, and again returns with four good long cores, all of which are taken for macrobenthos.

Move upslope to c. 1,100 m to locate site YR4 and deploy the megacorer (four tubes) as station 55206#1. On recovery there are four short cores, but one bubbles and is discarded, the

others generate HC, HM and PSA samples. In an attempt to improve sediment penetration, and thereby sampling success, additional weights (from the Day grab) are added to the coring head. The Megacore is redeployed as 55206#2 and returns with four good long cores, all of which are used for macrobenthos. At the next attempt (55206#3) only three short, but good, cores are recovered. One of these slips during removal and is used for GEOL; the remaining two are taken for macrobenthos. The last drop at this site (55206#4) produces four good long cores all of which are taken for macrobenthos.

Continue upslope to locate site YR5, c. 1,000m, and deploy Megacorer as station 55207#1. It returns with four good long cores. One of these has a turbid cloud probably associated with a burrow structure and is taken for GEOL; the other three cores yield HC, HM and PSA samples. Redeploy the corer as stn. 55207#2, it recovers 3/4 good long cores that are taken for macrobenthos. Redeployed as 55207#3 with six tubes fitted and returns 6/6 good long cores that are all taken for macrobenthos.

Continue upslope to area of potential iceberg ploughmarks, *en route* crossing a 75m deep 'moat' at the base of the Ymir Ridge slope. Echo-sound for 100m contours, ridge apex at c. 530m. Deploy WASP at site YRW1 (iceberg ploughmarks?) as station 55208#1. Recover WASP, full one-hour video and film run.

Sunday 23 July
Continue along the first transect, echo-sounding for 100m contours. At around deepest point on the northern flank of the ridge, deploy WASP at site YRW2 (possible cold-water influence area) as station 55209#1. Recover WASP, full one-hour video and film run.

Begin work on second transect line. Locate site YR6 at c. 700m and deploy box core as station 55210#1. It returns a good core that generates a full set of samples (HC, HM, PSA, GEOL and 0.1 m² macrobenthos). Move on to site YR7 at c. 600m and again deploy the box core (stn 55211#1), producing another good core and full set of samples (HC, HM, PSA, GEOL and 0.1 m² macrobenthos).

Crest the apex of the ridge and continue on to site YR8 at 600m. deploy box core as station 55212#1, which returns with a washed out sample and a damaged box. Redeploy as 55212#2, returning a good core generating a full set of samples (HC, HM, PSA, GEOL and 0.1 m² macrobenthos).

Continue on to site YR9 at c. 700m. Deploy box core as station 55213#1, it returns a good core generating a full set of samples (HC, HM, PSA, GEOL and 0.1 m² macrobenthos).

Recover USBL probe and make for a rendezvous with RRS *Discovery*, to discuss the progress of their operations in the *Darwin Mound* field and to obtain sidescan sonar charts of an additional small field of mounds to the northwest of the main east field.

Run back up the second transect to site YR10 at the apex of the ridge (c. 550m) and deploy the box core as station 55214#1. This recovers a good core yielding a full set of samples (HC, HM, PSA, GEOL and 0.1 m² macrobenthos).

Head for site YR11, c. 700m on the north side of the first transect, and deploy box core as station 55215#1. It recovers a good core of gravely sand and generates a full suite of samples (HC, HM, PSA, GEOL and 0.1 m² macrobenthos).

Move on to site YR12, c. 600m, and deploy box core as station 55216#1, it returns a good core, generating a full set of samples (HC, HM, PSA, GEOL and 0.1 m² macrobenthos).

Move on to site YR13, the apex of the ridge on the first transect line, and deploy the box core as station 55217#1. It recovers a full core but is badly shaken on recover and consequently discarded. Redeploy the box core as station 55217#2, recovering a good core that yields a full set of samples (HC, HM, PSA, GEOL and 0.1 m² macrobenthos).

Make for an echo-sounding run through the Ymir Ridge 'low' and area of complex TOBI fabric. Large "hummocks" are noted, but nothing particularly remarkable, target a low / channel adjacent to a steep slope (blue / low returns on 10kHz). Deploy WASP at this location (site YRW3) as station 55218#1, video and film run.

Monday 24 July
Relocate to deepened area in the mouth of the Ymir Ridge low and deploy WASP (site YRW4) as station 55219#1, video and film run.

Make for an 8-point echo sounding run through the region of 'TOBI features' to the NW of the survey area. On completion of the echo-sounding head for a coring site in the tongue of low backscatter fabric, just to the south of the mouth of the Ymir Ridge low. Deploy MEGA04 at site YR14 as station 55220#1. Deployment briefly halted at 100mab, when Bridge advises of possible engine room problem. The corer recovers 3/4 short cores that are taken for HC, HM and PSA. Deploy the BGS core at the same site as station 55220#2; it recovers a good 2.0m core.

Make for WASP site YRW5, the main "mound-like" structures of the 'TOBI features' in the NW of the survey area. Deploy WASP as station 55221#1 and run through the target area, film and video run.

Relocate to second TOBI feature area in the extreme NW of the survey area and deploy WASP at site YRW6 as station 55222#1. There are some problems with monitor telemetry mid-run. All film run, but only 25 minutes of DV, possibly a dislodged relay, this and other circuit boards checked on recovery.

Relocate to site YR15 (corresponding to WASP site YRW5) with intention of box coring. Deploy box core as station 55223#1, there is no pull out and the corer comes back upside down with the main warp fouled on the USBL transponder. The gear landed on its side and turned upright on deck. Modifications made to the beacon clamping arrangement to prevent recurrence. Redeploy box core as station 55223#2.

Tuesday 25 July
Recover box core; a good core yielding the full suite of samples (HC, HM, PSA, GEOL and MAC).

Relocate to site YR16 and deploy MEGA08 as station 55224#1, it recovers 8/8 good cores that are all taken for macrobenthos. Redeploy as 55224#2, again returning 8/8 good cores, generating HC, HM, PSA, GEOL and an additional four cores for macrobenthos. Deploy WASP in the near vicinity as site YRW7 (stn. 55225#1) and complete a half hour run.

Relocate to WASP site YRW8 (near YR2) and deploy as station 55226#1 and complete a second half hour run. Retract USBL probe in preparation for steam (30 nm) to final Ymir Ridge site. Head for WASP site YRW9, but worsening weather prevents 10 knot steaming. On arrival at site YRW9, the seas are too great and the site is abandoned, thereby ending operations in the Ymir Ridge area.

Head for the *Darwin Mounds* "mini field" area to begin an echo sounding run up the southern flank of the Wyville Thomson Ridge. *En route* cross a couple of the East Field *Darwin Mounds*. Continue echo sounding to the top of the WyvilleThomson Ridge, to locate southern flank transect stations. Weather / sea state unsuitable for deploying any equipment, so make to the east to echo-sound new Faroe-Shetland / Faroe Bank Channel transect, with intention of reviewing weather at around midnight.

Wednesday 26 July
Weather and seas abate sufficiently to restart work on arrival at the transect start point. Redeploy USBL probe. Deploy box core at c. 500m on new transect as site WTS1 (stn. 55227#1). Recovered box core contained some 10+kg of cobbles and gravel and had sustained damage - site abandoned for coring. In same vicinity deploy WASP (site WTS1) as station 55228#1; during the half hour run WASP covers a 200+m bathymetric range!

Continue downslope on new transect line to the 800 m contour to locate site WTS2. Deploy WASP as station 55229#1; film and video run. Reposition on WTS2 and deploy MEGA06 as 55230#1 resulting in damage to two tubes, and recovering no useful sample material. Try again with MEGA04 (stn. 55230#2); this yields 3/4 good cores (some cloudiness from gravel dislodgement) that are taken for macrobenthos. Redeploy as 55230#3, returning with water only, and one of the drop bars bent. Review of preceding WASPs shows that the sites have boulders on a cobble / gravel pavement - coring abandoned at this site.

Move further down new transect to locate 1000m contour and site WTS3. Deploy MEGA04 as station 55231#1, it returns 4/4 good long cores that are taken for HC, HM, PSA and GEOL. Redeploy as 55231#2, again returning 4/4 good cores that are all taken for macrobenthos. Redeploy as MEGA06 (stn. 55321#3), returning 6/6 good cores; five taken for macrobenthos and one sub-sampled for meiobenthos. WASP deployed at site WTS3 as station 55232#1, and carrying Bathysnap acoustic release (MORS OEM unit) and camera pressure case for wire test; film and video run.

Relocate to site FSC1200 (barchan dunes) and deploy MEGA04 as station 55233#1. It returns with 0/4 cores, probably having been pulled over on the bottom in a substantial set. Redeploy as 55233#2, returning 4/4 cores, but one slider not closed and that core lost before arrival on deck; the three remaining cores used for HC, HM and PSA. Third attempt with MEGA06 (stn. 55233#3) recovered 4/6 shorter cores, two of which were lost in handling the short sand columns, the remaining two taken for macrobenthos. Redeploy as station 55233#4.

Thursday 27 July
Core 55233#4 (site FSC1200) returns 4/6, one taken for GEOL and three for macrobenthos. Make one final attempt as station 55233#5, but it returns 0/6. Move on to site P in the gravel area of the Faroe Plateau. Deploy MEGA06 as station 55234#1, get 6/6 good cores, all of which are used for macrobenthos. Redeploy as 55234#2, and again get 6/6 good cores that are used for HC, HM, PSA and GEOL, with the remaining two taken for macrobenthos.

Relocate to site N2, likely in fine gravel, and deploy MEGA06 as 55235#1. It returns three short cores that are taken *in toto* for macrobenthos to prevent loss of sample in handling. Redeploy as 55235#2, it returns only one core which is similarly taken *in toto* for macrobenthos. The third attempt (stn. 55235#3) yields four good long cores that are taken for macrobenthos in the conventional manner. The final deployment (stn. 55235#4) again yields four good long cores that are taken for HC, HM, PSA and GEOL.

Relocate to new site WTS4 and deploy WASP as station 55236#1. Recover vehicle, film and video run.

Relocate to site FBC1200 and deploy MEGA06 as stn. 55237#1, it returns 6/6 good cores that are all taken as a macrobenthos sample. Redeploy corer as stn 55237#2; again it returns 6/6 good cores that are used for HC, HM, PSA, GEOL and a macrobenthos sample (2 cores).

Head for site FBC1000 and deploy MEGA06 as stn. 55238#1; it returns 5/6 good cores which generate HC, HM and PSA samples with the remaining 2 cores taken for macrobenthos. Redeploy corer (MEGA08) as stn. 55238#2; it returns 7/8 good cores, one used for GEOL the other six for macrobenthos.

Head for ridge crest WASP site WTW1. Arrive and deploy WASP as stn. 55239#1; recover; video and film run. Head for another ridge crest site - WTW2.

Friday 28 July
Deploy WASP as stn. 55240#1; recover; video and film run.

Head for site WTS5, c. 700m on the southern flank of the Wyville Thomson Ridge. Deploy box core as stn. 55241#1; it recovers a good core which generates a full set of samples (HC, HM, PSA, GEOL and MAC).

Relocate to site WTS6 and again deploy the box core as stn. 55242#1, a good core is recovered yielding a full set of samples (HC, HM, PSA, GEOL and MAC).

Continue on downslope to site WTS7 (c. 900m). Deploy MEGA06 as stn. 55243#1. It returns 5/6 good cores that are all taken for macrobenthos. The Megacore is redeployed as stn. 55243#2, producing 6 good cores; 3 taken for macrobenthos, 3 giving HC, HM and PSA samples (a geology sample is also taken from the PSA core).

Relocate to the *Darwin Mounds* 'mini-field' as site WTS8. Deploy Megacore as stn 55244#1; it recovers little more than water. Redeploy corer (MEGA04) as stn. 55244#2; it returns 4/4 good long cores which are used for HC, HM, PSA and GEOL. Switch to box core and deploy as stn. 55244#3, but it gushes at the surface on recovery and is discarded. Try again as stn. 55244#4; this yields a good core that is processed to produce 2 x 0.1m^2 macrobenthos samples

(A+B). Deploy BGS gravity core (3m) as stn 55244#5. During lowering of the core a set of longline floats are seen close to the ship's starboard side. The longline fouls on the 3.5kHz fish, which is raised and cleared. At this time the main engine cuts and it becomes clear that the longline has also fouled the main propeller. Various attempts are made to inspect and resolve the problem, however, a substantial mass of line is left around the propeller shaft. The USBL probe and 10kHz fish are recovered and *Darwin* sails (slowly, 5 knots) for Stornaway and divers to clear the shaft.

Saturday 29 July
En route to Stornaway. Arrive c. 13:00. A large lump of tangled longline is removed by divers c. 14:00, depart Stornaway c. 15:30. Make back towards the Faroe-Shetland Channel transect sites.

Sunday 30 July
Arrive Faroe-Shetland Channel transect area c. 02:00. Deploy 3.5 and 10kHz fish and start logging systems. Deploy USBL probe. Locate on first site - FSC300 and deploy Day grab as stn. 55245#1; this returns a good sample that is taken for macrobenthos. A second attempt (stn. 55245#2) returns a disturbed sample that is discarded. The third attempt (stn. 55245#3) returns a good sample that is used to generate a full set of environmental samples (HC, HM and PSA).

Relocate to site FSC500 and deploy the box core as stn. 55246#1, it returns a good core that provides a full set of samples (HC, HM, PSA, GEOL and 0.1m^2 macrobenthos).

Relocate to site FSC800 and deploy the Megacore (MEGA08) as stn.55247#1; it returns 3/6 cores that are taken for HC, PSA and GEOL. The corer is redeployed as stn 55247#2 and returns 5/6 good cores - one taken for HM the remaining 4 for macrobenthos. The third drop (stn. 55247#3) yields 4/6 good cores that are all taken for macrobenthos.

Relocate to FSC1000 and deploy MEGA008 as stn. 55248#1; it returns 5/8 short, but good cores - one of which is lost on deck. Three are taken for HC, HM and PSA and one for macrobenthos. The corer is redeployed (MEGA06) as stn. 55248#2, yielding 6/6 good cores, one taken for GEOL and 5 for macrobenthos. A third drop as stn. 55248#3 returns 5/6 good cores; of these three are taken for macrobenthos, one for GEOL and one for MEIOB.

Relocate to new site WTS9 and deploy MEGA06 as stn. 55249#1; it returns 6/6 good cores, though one is 'slipped' and is used for GEOL, the other five are taken for macrobenthos. A second drop (MEGA08; stn.55249#2) yields 6/8 good cores, three are used for HC, HM and PSA and three used for macrobenthos.

Deploy WASP in the vicinity of WTS9 as stn. 55250#1; film and video run.

Recover USBL and steam for ridge crest WASP site WTW6. Deploy USBL and then deploy WASP as stn. 55251#1; film and video run.

Monday 31 July
Begin an echo sounding run through an area apparently lacking in iceberg ploughmarks at the southeast extremity of the Wyville Thomson Ridge. Attempt to locate a '750m' site (to compare with WTS5 and 6). Three attempts at Megacoring (stn.s 55252#1-3) yield only short

somewhat disturbed cores from site WTS10. Samples are taken for HC and PSA from #3 and HM from #2 and the site abandoned for further coring. Deploy WASP at site WTS10 as stn. 55252#4 and run for 30 minutes near-bottom; film and video run.

Continue on an echo sounding transect to c. 900m and establish site WTS11. Deploy WASP as stn. 55253#1 and run for 30 minutes near-bottom; film and video run.

Reposition on site WTS11 and deploy MEGA04 as stn. 55253#2, it returns 4/4 good cores that generate HC, HM, PSA and GEOL samples. Redeploy box corer as stn. 55253#3 it returns hung up on its gimbals, with only a short core that gushes on recovery. Redeploy box corer as stn. 55253#4, again it returns only a short core that gushes on recovery - box not well seated on spade? Replace box and spade and try again as stn. 55253#5; this time a fair core is recovered, yielding a $0.1m^2$ macrobenthos sample.

Head for the *Darwin Mounds* 'mini-field' (vicinity of site WTS8). Deploy WASP as stn. 55254#1; recover WASP; film and video run. Deploy BGS gravity core at site WTS8 as stn. 55255#1, it recovers a 0.7m core.

Head for WASP site WTS5/6. Deploy WASP as stn. 55256#1 run for 30 minutes near-bottom; film and video run.

Head upslope to WASP ridge crest site WTW3. Deploy WASP as stn.55257#1 run for 30 minutes near-bottom; film and video run.

Move to next ridge crest WASP site (WTW4). Deploy WASP for a 30-minute run as stn. 55258#1.

Tuesday 1 August
Recover WASP (stn. 55258#1); film and video run.

Move to final ridge crest WASP site (WTW5) and deploy WASP for another 30-minute run as stn. 55259#1; film and video run.

Next occupy three sites (CT1-3) in an attempt to establish the seabed expression of the ultra-low backscatter ribbon on the northern flank of the Wyville Thomson Ridge. At site C1 (upslope of the 'black hole') deploy MEGA04 as stn. 55260#1, it returns 0/4, though all units have fired. Try again with only two tubes fitted, returning 0/2 - abandon site. At site CT2, within the 'black hole', deploy MEGA02 as 55261#1, it returns 1/2 good long core that is taken for BGS GEOL. Redeploy MEGA02 as stn. 55261#2 and get 2/2 good cores; one for SOC GEOL and one for HC. Relocate to site CT3, below the 'black hole', and deploy MEGA04 as stn. 55262#1; it returns 4/4 good cores that are used for BGS GEOL, SOC GEOL, HC and HM samples.

Relocate to site J and deploy MEGA04 as stn. 55263#1; it returns 4/4 good long cores despite practically towing the gear through the water during the deployment. There is then a close approach by a fishing boat that claims to be guarding a cable at this location and asks us to leave (the bridge has a chart showing an unfinished cable 20nm to the east?).

Move off to site L. Weather beginning to slow the speed of operations. Deploy MEGA06 at site L as stn. 55264#1; it returns 4/6 good long cores and two shorter cores; the longer 4 taken for macrobenthos, one of the shorter cores taken for GEOL the other discarded. Redeploy corer as stn. 55264#2, getting 5/6 cores, four taken as a macrobenthos sample and the fifth reserved as an environmental sample (but subsequently discarded). Redeploy corer as stn. 55264#3, returning 6/6 good cores, 2 taken for MAC, three for HC, HM and PSA, and the 6th sub-sampled for meiobenthos.

Relocate to new site WTS4. Deploy MEGA06 as stn. 55265#1, it returns 6/6 good cores, three for HC, HM, PSA and three for MAC. Redeploy corer (MEGA08) as stn. 55265#2; it returns 6/8 good cores and two rather shorter cores, one of which was subsequently lost on deck. The remaining short core was used for GEOL. Of the six good cores, five were taken for MAC and the 6th for MEIOB.

Relocate to site FSC1200 to better the existing 5-core sample for MAC. Deploy MEGA06 twice, stn.s 55266#1-2, neither yielding any useful material. Abandon further attempts at this site and relocate to site R2.

At site R2 deploy MEGA04 as stn. 55267#1.

Wednesday 2 August
Recover corer (stn. 55267#1), it returns 4/4 good cores that are all taken for MAC. Redeploy the corer as stn. 55267#2, it again yields 4/4 good cores that are taken for HC, HM, PSA and GEOL. Deploy the corer again as stn. 55267#3, it returns 2/4 cores that are both used for MAC. Deployed again (stn. 55267#4) it returns 3/4 good cores; two for MAC and one for MEIOB. The BGS gravity corer is then deployed and returns a 2.5m core.

Relocate to new site WTS12 and deploy MEGA06 as stn. 55268#1; it returns 6/6 good cores, all of which are taken for macrobenthos. Redeploy corer as stn. 55268#2, producing 4/6 good cores that are used for HC, HM, PSA and 1xMAC. Deploy corer again as stn. 55268#3, returning 5/6 good cores that are used for GEOL, MEIOB and 3xMAC. Then deploy WASP at site WTS12 for a one-hour run as stn. 55268#4; film and video run.

Relocate to site S. First drop (stn. 55269#1) of MEGA06 produces nothing but water. Redeploy MEGA04 as stn. 55269#2, it returns 3/4 cores that are used for HC, HM and PSA. For the third attempt, four additional Day grab weights are added to the Megacorer and it is deployed as stn. 55269#3. It returns 4/4 good cores that are all taken for macrobenthos. The forth attempt (stn. 55269#4) returns 3/4 good cores that are all taken for MAC.

Relocate to new site WTS13 and deploy WASP for one hour as stn 55270#1; film and video run. Reposition on site WTS13 and begin coring. Deploy MEGA04 as stn. 55270#2, it returns 3/4 good cores that are used for HC, HM and PSA.

Thursday 3 August
At site WTS13 deploy MEGA06 as stn. 55270#3; it returns 5/6 good cores, all of which are taken for macrobenthos. Redeploy MEGA06 as stn. 55270#4, returning 5/6 good cores again; three taken for MAC, one for GEOL and one for MEIOB.

Relocate to new WASP site FB1 (possible area of barchans / gravel lineations), and deploy WASP for a one-hour run as stn. 55271#1; film and video run.

Relocate to site S for one final attempt with MEGA04 as stn. 55272#1; it returns 4/4 good cores, two taken for MAC, one for GEOL and one for MEIOB.

Locate on site WTS14 at 800m on a new transect. Deploy MEGA06 as stn. 55273#1, it returns 5/6 good cores (some cloudy through gravel dislodgement); all taken for MAC. Redeploy corer as stn. 55273#2, it again produces 5/6 cores with some gravel dislodgement; three taken for HC, HM and PSA and two for MAC. Deploy again (stn. 55273#3) but only recover one core that is added to the MAC sample.

Locate on site WTS15 at 500m on a new transect line and deploy the box corer as stn. 55274#1; it returns a good sample but a well bent box; 0.1m^2 MAC, HC, HM and PSA samples taken.

Relocate to last Faroe Bank Channel survey area site, WTS16. Deploy WASP as stn. 55275#1 for a one hour run (USBL fails early in the deployment, probable low battery). Recover WASP; film and video run. Reposition on site WTS16 and deploy MEGA06 as stn. 55275#2, it returns 5/6 cores (some with gravel dislodgement); one is too short to use, the remaining four are taken for macrobenthos. Redeploy corer as stn. 55275#3, producing 6/6 good cores that are used for HC, HM, PSA and 3xMAC. Deploy corer again (stn. 55275#4), it returns 5/6 good cores; one lost on deck, remainder provide GEOL, MEIOB and 2xMAC samples. End operations in the Faroe Bank Channel area.

Relocate to site FSC1, the southern-most of the Faroe-Shetland Channel axial transect sites. Deploy WASP as stn 55276#1 for a one-hour run.

Friday 4 August
Recover WASP (stn. 55276#1); film and video run. Reposition on site FSC1 and deploy MEGA06 as stn. 55276#2, it returns 4/6 good cores (one tube smashed), all taken for a macrobenthos sample. Redeploy Megacorer as stn. 55276#3, it returns 6/6 good cores, four taken for MAC, plus HC and PSA. Deploy again as 55276#4, returning 6/6 good cores, yielding HM, MEIOB and 3xMAC.

Recover USBL probe and steam for Bathysnap deployment site (BP1). Bathysnap deployed as stn. 55277#1. Mooring arrangement shown in Figure 17, camera set at 4.5-minute intervals. Recovery intended during second leg of this cruise (CD123 C4).

Begin commercial operations. Steam for Enterprise survey area (Tranche 4). Arrive in the survey area at c. 15:00 and deploy the USBL probe. Locate on site ET1 and deploy MEGA10 as stn. 55278#1, returning 9/10 good cores that are all taken for a macrobenthos sample. Redeploy MEGA10 as stn. 55278#2, returning 10/10 good cores that are taken for HC, HM, PSA, GEOL, MEIOB and 5xMAC samples.

Relocate to site ET2 and deploy MEGA12 (stn. 55279#1), returning 9/12 good cores, all of which are taken for a macrobenthos sample. Redeploy MEGA10 as stn. 55279#2, returning 9/10 good cores, providing HC, HM, PSA, GEOL, MEIOB and 4xMAC samples.

Relocate to site ET3 and deploy MEGA12 as stn. 55280#1, returning 11/12 good cores, yielding HC, HM, PSA and 8xMAC samples (a GEOL sample >4cm also taken from the PSA core).

Relocate to site ET4 and deploy MEGA12 as stn. 55281#1, returning 11/12 good cores, yielding HC, HM, PSA and 8xMAC samples.

Saturday 5 August
Relocate to site ET5 and deploy MEGA12 as stn. 55282#1, returning 11/12 good cores, producing HC, HM, PSA and 8xMAC samples.

Relocate to site ET6 and deploy MEGA12 as stn. 55283#1, returning 10/12 good cores, all of which are taken for a macrobenthos sample. Redeploy corer as stn. 55283#2, returning 9/12 good cores, producing HC, HM, PSA, MEIOB and 4xMAC samples.

Relocate to site ET7 and deploy MEGA12 as stn. 55284#1, returning 11/12 good cores, producing HC, HM, PSA and 8xMAC samples.

Relocate to site ET8 and deploy MEGA12 as stn. 55285#1, returning 10/12 good cores, all of which are taken for a macrobenthos sample. Redeploy corer as stn. 55285#2, returning 8/12 good cores, producing HC, HM, PSA, GEOL, MEIOB and 3xMAC samples.

Relocate to site ET9 and deploy MEGA12 as stn. 55286#1, producing 11/12 good cores, yielding a full set of samples (8xMAC, HC, HM and PSA).

Relocate to site ET10 and deploy MEGA12 as stn. 55287#1, returning 8/12 good cores all of which are taken for a macrobenthos sample. Redeploy MEGA08 as stn. 55287#2, returning 6/8 good cores, producing HC, HM, PSA, GEOL and 2xMEIOB samples.

Relocate to contourite area (between sites ET10 and ET11) and deploy WASP at site ETW1 as stn. 55288#1. Recover WASP having run 65 mins DV and 15m of Kodak VISION.

Relocate to site ET11 and deploy MEGA12 as stn. 55289#1.

Sunday 6 August
Recover corer (55289#1) returning 8/12 good, but somewhat shorter cores, producing HC, HM, PSA, GEOL and MEIOB samples (other cores lost on processing). Redeploy MEGA12 as stn. 55289#2, returning 8/12 rather short cores, which prove to be too short to process (no samples collected).

At c. 02:30 all operations hauled in deteriorating weather (taking waves over the starboard side in 30+ knot winds).

Monday 7 August
Waiting for weather and seas to abate.

Tuesday 8 August
Sea state abates sufficiently to restart coring operations at c. 01:00. Relocate to site ET11 and deploy MEGA12 as stn. 55290#1, returning 10/12 good cores, 9 taken for a macrobenthos

sample, the tenth for geology. Deployment repeated to improve positional accuracy. Redeploy MEGA10 as stn. 55290#2, returning 9/10 good cores, 8 taken for macrobenthos and one for geology.

Relocate to site ET12 and deploy MEGA12 as stn. 552911#1, returning 11/12 good cores, providing HC, HM, PSA and 8xMAC samples (a geology sample removed from remains of HM core).

Relocate to site ET13 and deploy MEGA12 as stn. 55292#1, returning only 5/12 good cores, producing HC, HM, PSA, MEIOB and GEOL samples. Redeploy as stn. 55292#2, returning 11/12 good cores, 10 taken as a macrobenthos sample and one for meiobenthos.

Relocate to ET14 and deploy MEGA12 as stn. 55293#1, returning 11/12 good cores, producing HC, HM, PSA and 8xMAC samples.

Relocate to site ET15 and deploy MEGA12 as stn. 55294#1, returning 11/12 good cores, producing HC, HM, PSA and 8xMAC samples.

Relocate to the vicinity of site ET13 and deploy WASP as site ETW2 (stn. 55295#1) for a one hour near-bottom run. Recover WASP having run 65 mins DV and 15m of Kodak VISION.

Relocate to site ET3 to attempt to better positional accuracy of previous coring attempt. Deploy MEGA12 as stn. 55296#1, returning 8/12 good cores all of which are taken for a macrobenthos sample. Redeploy MEGA10 as stn. 55296#2, returning 10/10 good cores, producing HC, HM, PSA, GEOL, MEIOB and 5xMAC samples.

Relocate to site ET4 to attempt to better positional accuracy of previous coring attempt. Deploy MEGA12 as stn. 55297#1, returning 11/12 good cores producing HC, HM, PSA and 8xMAC samples.

Relocate to vicinity of coring site ET8 and deploy WASP as site ETW3 (stn. 55298#1) for a 1-hour near-bottom run. Recover WASP having run 65 mins DV and 15m of Kodak VISION.

Wednesday 9 August
Relocate to site ET8 to attempt to better positional accuracy of previous coring attempt. Deploy MEGA12 as stn. 55299#1, returning 9/12 good cores, all of which are taken for a macrobenthos sample.

Relocate to site ET5 to attempt to better positional accuracy of previous coring attempt. Deploy MEGA12 as stn. 55300#1, returning 10/12 good cores, all of which are taken for a macrobenthos sample. Redeploy MEGA12 as stn. 55300#2, returning 10/12 good cores, producing HC, HM, PSA, GEOL and 6xMAC samples.

Relocate to site ET11 to attempt to better positional accuracy of previous coring attempt. Deploy MEGA12 as stn. 55301#1, returning 10/12 good cores, all of which are taken for a macrobenthos sample. Redeploy MEGA12 as stn. 55301#2 returning 12/12 good cores, producing HC, HM, PSA, SOC GEOL and 8xMAC samples.

Relocate to site ET13 to attempt to better positional accuracy of previous coring attempt. Deploy MEGA12 as stn. 55302#1, returning 10/12 good cores, all of which are taken for a macrobenthos sample.

Relocate to site ET15 to attempt to better positional accuracy of previous coring attempt. Deploy MEGA12 as stn. 55303#1, at around 600mwo the winch counter resets to zero and the deployment is aborted. Redeploy MEGA12 as stn. 55303#2, returning 11/12 good cores, producing HC, HM, PSA and 8xMAC samples.

Relocate to site ET12 to attempt to better positional accuracy of previous coring attempt. Deploy MEGA12 as stn. 55304#1, returning 9/12 fair cores, all of which are taken for a macrobenthos sample. Redeploy as stn. 55304#2, returning 10/12 good cores, producing HC, HM, PSA and 7xMAC sample.

Relocate downslope of coring site ET12 to attempt a 'long-distance' WASP over a series of seabed furrows. Deploy WASP as site ETW4 (stn. 55305#1) for about 2 hours and 30 minutes near-bottom, holding WASP >10m above the seabed (switching the cameras off) during transits between furrows. On recovery only some 48 mins of DV is found to have run as a result of a seawater leak into one of the batteries, the full 15m of Kodak VISION had nevertheless run.

Relocate to the vicinity of site ET3 and deploy WASP as site ETW5 (stn. 55306#1) for a one-hour near-bottom run. Recover WASP having run 65 mins DV and 15 m of Kodak VISION.

Thursday 10 August
Relocate to additional coring site ET16 and deploy MEGA12 as stn. 55307#1, returning 10/12 fair cores, producing MEIOB, GEOL and 8xMAC samples. Redeploy as stn. 55307#2, returning 11/12 good cores, producing HC, HM, PSA and 8xMAC samples.

Relocate to additional coring site ET17 and deploy MEGA12 as stn. 55308#1, returning 12/12 good cores, producing HC, HM, PSA, SOC GEOL and 8xMAC samples.

Return to the vicinity of site ET8 in an attempt to carry out a WASP deployment closer to the site than was previously possible (WASP site ETW3). Deploy WASP as site ETW6 (stn. 55309#1). Poor near-bottom altimeter telemetry prevents first attempts to begin the camera run. Consequently, when the run is eventually initiated little improvement in position is possible. Recover WASP having run 65 mins DV and 15m of Kodak VISION.

Recover USBL probe and secure the vessel for steaming. Leave Tranche 4 (ending Enterprise operations). End commercial operations.

At c. 11:00 make for the position of BP Bathysnap (site BP1).

At c. 20:00 successfully activate the Bathysnap pinger, but in very misty conditions and with darkness approaching abandon attempts to recover the mooring and head for Faroe-Shetland Channel axis site FSC2.

At site FSC2 deploy WASP as stn. 55310#1 for a one hour near-bottom run. Recover WASP; film and video run. Reposition on site FSC2 and deploy MEGA12 as stn 55310#2, it returns

5/12 good but rather short cores that are processed for HC, HM, PSA, MEIOB and GEOL. Redeploy MEGA08 as stn. 55310#3, it returns 8/8/ good cores that are all taken as a macrobenthos sample.

Relocate to site X2 (a WhiZ '99 site = FSC3) and deploy MEGA08 as stn. 55311#1, it returns 8/8 cores that are taken as a macrobenthos sample. Redeploy MEGA08 as stn. 55311#2, it returns 6/8 good cores that are used for HC, HM, PSA, 2xMEIOB and GEOL.

Return to the Bathysnap location (site BP1) and successfully release and recover the mooring. Head for site X3 (a WhiZ '99 site = FSC4).

At site FSC4 deploy MEGA08 as stn. 55312#1, it returns 8/8 good cores that are used to generate HC, HM, PSA, MEIOB and 4xMAC samples. Redeploy corer as stn. 55312#2, it returns a further 8/8 good cores, giving MEIOB, GEOL and 6xMAC samples.

Relocate to site FSC5 and deploy MEGA08 as stn. 55313#1, it returns 5/8 good cores that are used for HC, HM, PSA, 1xMAC and MEIOB. Corer redeployed as stn. 55313#2, returning 5/8 short but good cores - though one too short to process - four taken as a macrobenthos sample. Deploy again as stn. 55313#3, returning 5/6 good cores, four are taken for MAC and the fifth for MEIOB. Reposition on site FSC5 and deploy WASP as stn. 55313#4 for a one hour near-bottom run; film and video run.

Make for site FSC6.

Saturday 12 August
At site FSC6 deploy WASP as stn. 55314#1 for a one-hour near-bottom tow; film and video run. Reposition on site FSC6 and deploy MEGA08 as stn. 55314#2, it returns 8/8 good cores that are all taken for macrobenthos. Redeploy corer as stn. 55314#3, it returns 8/8 good cores that are taken for HC, HM, PSA, MEIOB and GEOL (two 'slipped' cores are discarded).

Relocate to site FSC7 and deploy MEGA08 as stn. 55315#1, it returns only 3/8 good cores which are used to generate HC, HM and PSA samples. Redeploy MEGA06 (stn. 55315#2) and recover 6/6 short but good cores, all six are taken for macrobenthos. Redeploy corer as stn. 55315#3, returning 6/6 good cores which yield 3xMAC, GEOL and 2xMEIOB. Deploy WASP as stn. 55315#4 for a one hour near-bottom run. Recover WASP, no video run (? monitor relay problem) but film run.

Relocate to site FSC8 and deploy MEGA08 as stn. 55316#1, it returns just 4/8 good cores that are taken for HC, HM, PSA and MEIOB. Redeploy corer as stn. 55316#2, returning only 2/8 good cores that are both taken for MAC. A third deployment is made as stn. 55316#3, returning 7/8 good cores that are used for 6xMAC and 1xMEIOB. Deploy WASP as stn. 55316#4 for a one hour near-bottom run; film and video run.

Sunday 13 August
Relocate to site FSC9 (the last of the axial transect sites) and deploy MEGA08 as stn. 55317#1, it returns 6/8 good cores that are all taken for macrobenthos. Redeploy corer as stn. 55317#2 returning 8/8 good cores yielding HC, HM, PSA, GEOL, 2xMEIOB and 2xMAC samples. Deploy WASP as stn. 55317#3 for a one-hour near-bottom tow; film and video run. Recover USBL probe.

Head for site ‘Tr1300’ (which turns out to be at 1400m) to finish this leg by starting some preliminary work on an extension of the West of Shetland transect out towards the Faroe-Shetland Channel axial transect. At site Tr1300 deploy MEGA06 as stn. 5518#1, it returns 6/6 good cores that are used for GEOL, MEIOB, PSA as previously and also microbiology, foraminiferans and a whole frozen core.

Relocate to site Tr1200 and deploy MEGA06 as stn. 55319#1, it returns 5/6 good cores yielding FORAM, MEIOB, MICROB, PSA and GEOL samples.

Relocate to site Tr1100 and deploy MEGA06 as stn. 55320#1, it returns 5/6 good cores that produce FORAM, MEIOB, MICRO, PSA and GEOL samples.

Relocate to site Tr1000 and deploy MEGA06 as stn. 55321#1, it returns 6/6 good cores giving FORAM, MEIOB, MICRO, PSA, GEOL and whole frozen core samples.

With no time remaining recover 3.5 and 10 kHz fish and steam for Lerwick at c. 15:30.

Monday 14 August
Arrive Lerwick c. 09:00 (BST), exchange of ship’s and scientific personnel takes place. All people, equipment and spares arrive eventually - there are flight delays resulting from bad weather. Newcomers to the scientific party are giving a safety and familiarisation briefing.

Tuesday 15 August
Sailed from Lerwick at c. 09:00 BST. A general science meeting held at c. 10:00.

Approach Tranches 65-67 at c. 20:00 BST, stop to deploy 3.5 and 10kHz fish and the USBL probe. Begin echo sounding towards the northwest corner of the survey area. Clocks retarded 1 hour to GMT/UTC.

Wednesday 16 August
Continue echo sounding run noting positions of 100m contours. Finish the run at c. 02:00 and proceed to site NW5, the first of the general survey sites in this area - intended to enhance the AFEN ’98 coverage to a level comparable to that of the AFEN ’96 West of Shetland survey. [Sites NW1-5 are established by random location].

Relocate to site NW5 and deploy MEGA12 as stn 55322#1, it returns 11/12 good cores yielding HC, HM, PSA and 8xMAC samples.

Relocate to site NW4 and deploy MEGA12 as stn. 55323#1, it returns 10/12 good cores, seven are taken for MAC and three for HC, HM and PSA (plus one for GEOL). Redeploy corer as stn. 55323#2, recovering 11/12 good cores, nine of which are taken for macrobenthos and the remaining two sampled for meiobenthos.

Relocate to site NW2 and deploy MEGA12 as stn 55324#1, it returns 10/12 good cores yielding HC, HM, PSA and 7xMAC samples. Redeploy the corer as stn. 55324#2 returning 10/10 good cores, giving 8xMAC, MEIOB and GEOL samples.

Relocate to site NW1 and deploy MEGA12 as stn. 55325#1 returning 10/12 good cores - one with a major burrow that is discarded; the remaining nine are taken for macrobenthos. Redeploy MEGA10 as stn. 55325#2, it returns 9/10 good cores giving HC, HM, PSA, MEIOB, GEOL and 4xMAC samples.

Relocate to site NW3 and deploy MEGA12 as stn. 55326#1, it returns 11/12 good cores giving HC, HM, PSA and 8xMAC samples (subsurface of HC core taken as a GEOL sample).

Relocate to WASP site NWW (1000-1200m stratum) and deploy WASP as stn 55327#1 for a one-hour near-bottom tow; film and video run.

Begin commercial operations. Make an echo sounding run up the central line of the Statoil / BP survey area (c. 19:30-21:00). End commercial operations.

Relocate to site NR2 (random selection in the 600-800m stratum) and deploy MEGA10 as stn. 55328#1, returning 9/10 good cores, all nine taken for macrobenthos. Redeploy corer as stn. 55328#2, recovering 8/10 good cores producing HC, HM, PSA, GEOL and 4xMAC samples.

Relocate to site NRW (general 600-800m stratum site) and deploy WASP as stn. 55329#1 for a one-hour near-bottom tow.

Thursday 17 August
Recover WASP (stn. 55329#1); film and video run.

Relocate to site NR3 and deploy MEGA08 as stn. 55330#1, it returns 6/8 good cores giving HC, HM, PSA and 3xMAC samples. Redeploy corer as stn. 55330#2, recovering 6/8 good cores giving 5xMAC and GEOL samples.

Relocate to site NR4 and deploy MEGA08 as stn. 55331#1, returning 4/8 good cores used for HC, HM, PSA and 1xMAC samples. Corer redeployed as stn. 55331#2 returning 5/8 good cores that yield 4xMAC and a GEOL sample. Third attempt as stn. 55331#1 with MEGA06 produces 5/6 good cores; four are taken for macrobenthos and one for meiobenthos.

Relocate to site NR1 and deploy MEGA08 as stn. 55332#1, it returns 5/8 good cores that are taken for HC, HM, PSA and 2xMAC; a somewhat disturbed 6th core is taken as GEOL. Redeploy corer as stn. 55332#2, returning 6/8 cores that are all taken for macrobenthos.

Begin commercial operations. At c. 09:30, begin echo sounding run along eastern transect line (SBB sites) for Statoil / BP survey. Begin operations with a deployment of the BGS gravity corer at site WFA1 (as station 55333#1), producing a good core of c. 2.4 m. Make a second deployment of the BGS gravity corer at site WFA3 (stn. 55334#1), again producing a good core of c. 2.4 m.

Begin operations on the main Statoil / BP coring programme on the central transect. At site SBA1 deploy MEGA10 (stn. 55335#1), it returns 10/10 good cores, yielding 9xMAC and GEOL samples. Redeploy corer (stn. 55335#2), returning 6/8 good cores, producing HC, HM, PSA and 3xMAC samples.

Relocate to site SBA2 and deploy MEGA10 (stn. 55336#1), returning 9/10 good cores, all of which are taken for a macrobenthos sample. Redeploy MEGA08 (stn. 55336#2), producing 7/8 good cores, providing HC, HM, PSA, GEOL and 3xMAC samples.

Relocate to site SBA3 and deploy MEGA10 (stn. 55337#1), returning 8/10 good cores, all of which are taken for a macrobenthos sample. Redeploy MEGA08 (stn. 55337#2), producing 7/8 good cores, providing HC, HM, PSA, GEOL and 3xMAC samples.

Reposition to a little way off site SBA3 and deploy WASP for a one-hour near-bottom run as station 55337#3.

Friday 18 August
Recover WASP, yielding 65 mins DV and 15m VISION.

Relocate to site SBA4 and deploy MEGA12 (stn. 55338#1), returning 11/12 good cores, used for HC, HM, PSA and 8xMAC samples (a GEOL sample also obtained from the remains of the PSA sample).

Relocate to site SBA5 and deploy MEGA12 (stn. 55339#1), returning 12/12 good cores, used for HC, HM, PSA, GEOL and 8xMAC samples.

Relocate to site SBA6 and deploy MEGA12 (stn. 55340#1), returning 11/12 good cores, used for HC, HM, PSA and 8xMAC samples.

Make brief (07:00-07:30) echo-sounding run to establish appropriate location for site SBB6.

Relocate to site SBB5 (SBB = western transect) and deploy MEGA12 (stn. 55341#1), returning 11/12 good cores, providing HC, HM, PSA and 8xMAC samples.

Relocate to SBB4 and deploy MEGA12 (stn. 55342#1), returning 9/12 good cores, all used for a macrobenthos sample. Redeploy as stn. 55342#2, returning 10/12 good cores, providing HC, HM, PSA, GEOL and 6xMAC samples.

Relocate to site SBB6 and deploy MEGA12 (stn. 55343#1), a repeated deployment to improve on previous position. The corer returns 12/12 good cores, providing HC, HM, PSA, GEOL and 8xMAC samples.

Relocate to site SBA6 and deploy MEGA12 (stn. 55344#1), returning 10/12 good cores, all used for a macrobenthos sample. Redeploy as stn. 55344#2, returning 10/12 good cores, producing HC, HM, PSA, GEOL and 6xMAC samples.

Relocate to vicinity of site SBA5 and deploy WASP for a one-hour near-bottom run as stn. 55345#1, yielding 65 mins DV and 15m VISION.

Make echo-sounding run (c. 22:00-23:00) to establish locations for 'SBC' transect.

Relocate to site SBB1 and deploy MEGA12 (stn. 55346#1).

Saturday 19 August
The Megacorer returns 9/12 good cores, all of which are used for a macrobenthos sample. Redeploy MEGA10 (stn. 55346#2), returning only 5/10 good cores, yielding HC, HM, PSA, GEOL and MEIOB samples.

Relocate to site SBB2 and deploy MEGA12 (stn. 55347#1), returning 12/12 good cores, providing HC, HM, PSA, GEOL and 8xMAC samples.

Relocate to site SBB3 and deploy MEGA12 (stn. 55348#1), returning 11/12 good cores, providing HC, HM, PSA and 8xMAC samples (a GEOL sample also taken from the remains of the PSA sample core).

Relocate to site SBC6; however, a number of fishing marker floats are present around the site and no attempt is made to sample the site.

Relocate to site SBC5 and deploy MEGA12 (stn. 55349#1), returning 9/12 good cores, all of which are taken for a macrobenthos sample. Redeploy MEGA10 (stn. 55349#2), returning 10/10 good cores, providing HC, HM, PSA, GEOL, MEIOB and 5xMAC.

Relocate to site SBC4 and deploy MEGA12 (stn. 55350#1), returning 10/10 good cores, all of which are taken for a macrobenthos sample. Redeploy (stn. 55350#2), returning 9/12 good cores, providing HC, HM, PSA, GEOL and 5xMAC samples.

Relocate to site SBC3 and deploy MEGA12 (stn. 55351#1), returning 11/12 good cores, providing HC, HM, PSA and 8xMAC samples.

Relocate to vicinity of site SBA3 to make a second WASP deployment at this site, However, the WASP control system fails to turn the camera off on deck and the deployment is postponed to check control system function (proves to be just false altimeter returns from wet deck).

Relocate to site SBC6, where previous visit had encountered fishing floats. No floats present; deploy MEGA12 (stn. 55352#1), returning 8/12 good cores that are all taken for a macrobenthos sample. Redeploy MEGA10 (stn. 55352#2), returning 9/10 good cores [though two with full length burrows that are discarded], providing HC, HM, PSA, GEOL and 3xMAC samples.

Relocate to the vicinity of site SBA3 and deploy WASP (stn. 55353#1) for a one-hour near-bottom run, yielding 65 mins DV and 15m VISION.

Relocate to site SBC2 and deploy MEGA12 (stn. 55354#1), returning 8/12 good cores which are all taken for a macrobenthos sample.

Sunday 20 August
Redeploy MEGA08 (stn. 55354#2) at site SBC2, returning 5/8 good cores, providing HC, HM, PSA, GEOL and MEIOB samples.

Relocate to site SBC1 and deploy MEGA12 as stn. 55355#1, returning 11/12 good cores, providing HC, HM, PSA and 8xMAC samples. End commercial operations.

Break off Statoil / BP operations and resume DTI operations at c. 01:30. Relocate to site BGS1 and deploy gravity core as stn. 55356#1, it returns a good core (c. 2.3m).

Move to site BGS4 and redeploy the gravity core as stn. 55357#1, again it returns a good core (c.2.2m).

Relocate to site NN4 (500-600m stratum) and deploy box core as stn. 55358#1 - it fails to trigger at the seabed (no samples). Redeploy the box core (stn. 55358#2), it returns a good core providing HC, HM, PSA, MAC ($0.1m^2$) and GEOL samples.

Relocate to site NN1 and deploy box core as stn. 55359#1, it returns a good core providing HC, HM, PSA, MAC ($0.1m^2$) and GEOL samples.

Begin commercial operations. Between c. 09:30 and 13:00, carry out echo sounding of additional Statoil / BP transects. End commercial operations.

Resume DTI operations at c. 13:00. Relocate to site NN2 and deploy box core as stn. 55360#1, it returns with a badly bent box and very disturbed sample that is discarded (no samples). Box replaced and the corer redeployed as stn 55360#2, it gushes its top water on recovery and is discarded (no samples). Try again as stn. 55360#3, resulting in a second bent box and still no samples. Switch to Day grab; first two deployments (stn.s 55360#4-5) both return with rocks in the jaws (no samples). The third attempt (stn. 55360#6) returns a good sample that is taken for macrobenthos. The following two deployments (stn.s 553607-8) both returns with rocks in the jaws (no samples). The next attempt (stn. 55360#9) produces an acceptable sample (grab rather full) that provides HC, HM and PSA samples.

Relocate to site NNW and deploy WASP (stn. 55361#1) for a one hour near-bottom tow.

Monday 21 August
Recover WASP (stn. 55361#1); film and video run.

Relocate to site NN3 and make nine deployments of the Day grab (stn.s 55362#1-9), only the forth attempt (stn. 55362#4) returns a fair sample that is taken for HC, HM and PSA.

Relocate to site NK4 (400-500m stratum) and make seven deployments of the Day grab (stn.s 55363#1-7), only the second attempt (stn. 55363#2) returns a good sample that is taken for macrobenthos.

Relocate to site NKW and deploy WASP (stn. 55364#1) for a one hour near-bottom tow; film and video run.

Relocate to site NK2 and make four deployments of the Day grab (stn.s 55365#1-4); the second (stn. 55365#2) yields a macrobenthos sample, and the forth (stn. 55365#4) HC, HM and PSA samples.

Relocate to site NK1 and make five deployments of the Day grab (stn.s 55366#1-5); the third (stn. 55366#3) yields a macrobenthos sample, and the fifth (stn. 55365#4) HC, HM and PSA samples.

Tuesday 22 August
Relocate to site NG3 (300-400m stratum) and deploy Day grab as stn. 55367#1, it returns a good sample that is taken for macrobenthos. Redeploy grab as stn. 55367#2, again it returns a good sample that is taken for HC, HM and PSA.

Relocate to site NGW and deploy WASP (stn. 55368#1) for a one hour near-bottom tow; film and video run.

Relocate to site NG1 and make eight deployments of the Day grab (stn.s 55369#1-8); only the forth (stn. 55369#4) returns a good sample that is taken for HC, HM and PSA samples.

Relocate to site NG2 and make five deployments of the Day grab (stn.s 55370#1-5); the forth (stn. 55370#4) yields a macrobenthos sample, and the fifth (stn. 55370#5) HC, HM and PSA samples.

Relocate to site NG4 and make four deployments of the Day grab (stn.s 55371#1-4); the second (stn. 55371#2) yields a macrobenthos sample, and the forth (stn. 55370#4) HC, HM and PSA samples.

Relocate to site NK3 and make three deployments of the Day grab (stn.s 55372#1-3); the second (stn. 55372#2) yields a macrobenthos sample, and the third (stn. 55372#3) HC, HM and PSA samples.

Begin commercial operations. Resume Statoil / BP operations at c. 17:00 with deployment of BGS gravity corer at site WFA2 (stn. 55373#1), returning a good core of c. 2.1m.

Relocate to site SBA2.5 and deploy MEGA12 (stn. 55374#1), returning 12/12 good cores, providing HC, HM, PSA, GEOL and 8xMAC samples.

Relocate to site SBA3.5 and deploy MEGA12 (stn. 55375#1), returning 11/12 cores all of which appeared to be disturbed and are therefore discarded (bar one retained for a GEOL sample). Redeploy corer (stn. 55375#2), returning 9/12 good cores all of which were used for a macrobenthos sample. Redeploy corer (stn. 55375#3), returning 8/12 good cores, providing HC, HM, PSA and 5xMAC samples.

Relocate to site SBA5.5 and deploy MEGA12 (stn. 55376#1).

Wednesday 23 August
The Megacorer returns 12/12 good cores, providing HC, HM, PSA, GEOL and 8xMAC samples.

Relocate to site SBD5 and deploy MEGA12 (stn. 55377#1), returning 11/12 good cores, providing HC, HM, PSA and 8xMAC samples.

Relocate to site SBE5 and deploy MEGA12 (stn. 55378#1), returning 10/12 good cores that are all taken for a macrobenthos sample. Redeploy corer (stn 55378#2), returning 11/12 good cores [though three lost to 'bubbling' on handling], providing HC, HM, PSA, GEOL, MEIOB and 3xMAC samples.

Relocate to site SBE3 and deploy MEGA12 (stn. 55379#1), returning 11/12 good cores, producing HC, HM, PSA and 8xMAC samples.

Relocate to site SBD3 and deploy MEGA12 (stn. 55380#1), returning 9/12 good cores that are all taken for a macrobenthos sample. Redeploy corer (stn. 55380#2); however, in worsening weather and sea state the corer is dragged under the vessel and the deployment is aborted. All operations are halted at c. 10:00 awaiting weather. End commercial operations.

At c. 21:30 wind has dropped sufficiently to attempt work - steam for 'NU' sites area (800-1000m stratum).

Thursday 24 August
Locate on site NU1 and deploy MEGA12 (stn. 55381#1), returning 12/12 good cores, providing HC, HM, PSA, 8xMAC, MEIOB and GEOL samples.

Relocate to site NU2 and deploy MEGA12 (stn. 55382#1), it returns 10/12 good cores providing HC, HM, PSA, 6xMAC and MEIOB samples. Redeploy MEGA12 (stn. 55382#2), it returns 12/12 good cores providing 6xMAC, MEIOB, GEOL and live meiobenthos samples.

Relocate to site NU3 and deploy MEGA12 (stn. 55383#1), returning 11/12 good cores, providing HC, HM, PSA, 8xMAC and GEOL samples.

Relocate to site NU4 and deploy MEGA12 (stn. 55384#1), returning 12/12 good cores, providing HC, HM, PSA, 8xMAC and GEOL samples.

Relocate to site NU5 and deploy MEGA12 (stn. 55385#1), returning 9/12 good cores, providing a 9xMAC sample. Redeploy corer (stn. 55385#2), it returns 11/12 good cores that are taken for HC, HM, PSA, 7xMAC and GEOL.

Relocate to site NR5 (600-800m stratum) and deploy MEGA12 (stn. 55386#1), returning 12/12 good cores, providing HC, HM, PSA, 8xMAC and GEOL samples.

Relocate to site NR6 and deploy MEGA12 (stn. 55387#1), returning 9/12 good cores, providing a 9xMAC sample. Redeploy corer (MEGA10, stn. 55387#2), it returns 9/10 good cores that are taken for HC, HM, PSA, 5xMAC and GEOL.

Begin commercial operations. At c. 16:00 complete DTI operations and resume Statoil / BP operations. Relocate to site SBD3 and deploy MEGA08 (stn. 55388#1), returning 8/8 good cores, providing HC, HM, PSA, GEOL and 4xMAC samples. In the vicinity of SBD3 deploy WASP (stn. 55389#1) for an extended near-bottom run (i.e. using photographic capacity beyond one hour of video footage) as this site approximately corresponds with the buried edge of the North Sea Fan. WASP returns 65 mins DV and 30m VISION.

Relocate to site SBB3 and deploy BGS gravity corer (stn. 55390#1), returning a good core of c. 2.4 m. This completed all Statoil / BP operations (c. 24:00); end commercial operations and make for northern Faroe-Shetland Channel axis.

Friday 25 August
Begin commercial operations. Begin TEXACO operations at c. 10:00 UTC. At Site TX1, deploy BGS gravity corer as stn. 55391#1, recovering a good core of c. 2.5 m. During the processing of the core a muster and boat drill are held. Deploy MEGA08 as stn. 55391#2, recovering 8/8 good cores of silty sand over clay (28-36cm in length); all eight cores processed for a macrobenthos sample. Redeploy MEGA08 as stn. 55391#3, recovering 7/8 good cores of silty sand over clay (25-38cm in length); three cores processed for geochemistry (HC, HM and PSA) and four cores processed for macrobenthos. WASP deployed to run through the vicinity of site TX1 as stn. 55391#4; recovering 65 minutes of digital video and 15m of still photography footage. Video footage appears to show a small discrete patch of tubeworms. End commercial operations.

Suspend TEXACO operations and resume DTI operations at c. 18:00 UTC to permit next Texaco gravity core operation to be overseen by the BGS representative. Relocate to site FSC10 (addition to FSC axial transect) and deploy MEGA08 as stn. 55392#1, it returns 8/8 good cores providing 2xHC (duplicates for proposed inter-calibration study), HM, PSA, MEIOB and qualitative bulk meiobenthos samples. Redeploy MEGA08 as stn. 55392#2, it returns with only disturbed samples that are all discarded. Deploy MEGA08 again as stn. 55392#3, it returns 7/8 good cores that are taken for 2xHC, 4xMAC and MEIOB.

Saturday 26 August
At site FSC10, redeploy MEGA08 as stn. 55392#4; deployment aborted at c. 550mwo to permit a Russian seismic vessel to pass through the site.

Begin commercial operations. Suspend DTI operations and resume TEXACO operations at c. 01:30 UTC. Relocate to site TX2 and deploy BGS gravity corer as stn. 55393#1, recovering a good core of c. 2.5 m. Complete TEXACO operations at c. 04:00. End commercial operations.

Relocate to site FSC10 and deploy MEGA08 as stn. 55394#1, it returns 7/8 good cores that are taken for 2xHC, 4xMAC and GEOL (one slightly disturbed core is taken as part of a qualitative meiobenthos sample). Redeploy MEGA08 as stn. 55394#2, it returns 8/8 good cores that are taken for 2xHC, 4xMAC and FORAM (1cm sections to 5cm); the remaining core is added to the qualitative meiobenthos sample for this site. The MEGA08 redeployed as stn. 55394#3, it returns 8/8 good cores that are taken for 2xHC, a live meiobenthos sample and for material for the qualitative meiobenthos sample. Deploy WASP as stn. 55394#4 for a one-hour near-bottom tow; film and video run.

Relocate to site Tr1300 (West of Shetland transect) - slowly in worsening weather. Deploy MEGA08 as stn. 55395#1 returning 6/8 good cores that are all taken as a macrobenthos sample. Deploy MEGA06 as stn. 55395#2 returning 6/6 good cores that are taken for HC, HM, 3xMAC and MEIOB.

Relocate to site Tr1250 and deploy MEGA08 as station 55396#1.

Sunday 27 August
Recover MEGA08 (site Tr1250; stn. 55396#1), it returns 8/8 good cores that are taken for HC, HM, PSA, 4xMAC and MEIOB. Redeploy MEGA08 as stn. 55396#2, it returns 8/8 good

cores that are taken for 4xMAC, MEIOB, MICROB, FORAM (1cm sections, 0-10cm) and frozen whole samples.

Relocate to site Tr1200 and deploy MEGA08 as stn. 55397#1, returning only 4/8 good cores that are all taken as a macrobenthos sample. Redeploy MEGA08 as stn. 55397#2, it returns 7/8 good cores providing HC, HM, 4xMAC and MEIOB samples.

Relocate to site Tr1100 and deploy MEGA08 as stn. 55398#1, it returns 8/8 good cores that are taken for HC, HM, 5xMAC and MEIOB. Redeploy MEGA08 as stn. 55398#2, it returns 7/8 good cores that are taken for 5xMAC, MEIOB and whole frozen.

Relocate to site BGSAS2 and deploy the gravity core as stn. 55399#1, it returns a good core (c. 2.0m).

Relocate to site Tr1000 and deploy MEGA08 as stn 55400#1, it returns 5/8 good cores that are taken for HC, HM and 3xMAC. Redeploy MEGA08 (stn. 55400#2), again returning 5/8 good cores that are all taken as a macrobenthos sample.

Relocate to site Tr900 and deploy MEGA08 as stn. 55401#1, it returns 6/8 good cores that are all taken as a macrobenthos sample. Redeploy MEGA08 as stn. 55401#2, it returns 7/8 good cores that are taken for HC, HM, PSA, 2xMAC, MEIOB and MICROB. Deploy WASP as stn. 55401#3 for a one-hour near-bottom tow; film and video run.

Relocate to site Tr800 and deploy MEGA08 as stn. 55402#1, it returns 6/8 good cores that are all taken for macrobenthos. Redeploy MEGA08 as stn. 55402#2, it returns 8/8 good cores that are taken for HC, HM, PSA, 2xMAC, MEIOB, MICROB and FORAM (1cm section, 0-10cm).

Relocate to site S2 and deploy MEGA08 as stn. 55403#1, it returns 7/8 good cores that are taken for HC, HM, PSA and 4xMAC. Redeploy MEGA08 as stn. 55403#2, it returns 7/8 good cores that are taken for 4xMAC, MEIOB, MICROB and FORAM.

Relocate to site Tr650 and deploy MEGA08 as stn. 55404#1, it returns 4/8 good cores that are taken for HC and 3xMAC. Redeploy MEGA08 as stn. 55404#2.

Monday 28 August
Recover MEGA08 (site Tr650, stn. 55404#2), it returns 7/8 good cores that are taken for HM, PSA and 5xMAC.

Relocate to site Tr600 and deploy MEGA08 as stn. 55405#1, it returns 6/8 good cores that are taken for HC, HM, PSA and 3xMAC. Redeploy MEGA08 (stn. 55405#2) but it returns with no useful samples, possibly having been dragged over at the seabed. Try again (MEGA08, stn. 55405#3) and recover 5/8 good cores that are all taken for macrobenthos.

Relocate to site Tr550 and deploy MEGA08 as stn. 55406#1, it returns 7/8 good cores that are taken for HC, HM, PSA and 4xMAC. Redeploy MEGA08 (stn. 55406#2), it returns 5/8 good cores that are taken for 4xMAC and MEIOB.

Relocate to site L4 and deploy box core as stn. 55407#1, it returns a good core yielding a full set of samples (HC, HM, PSA and 0.1m^2 MAC).

Relocate to site Tr450 and deploy box core as stn. 55408#1, it returns a good core yielding a full set of samples (HC, HM, PSA and 0.1m^2 MAC).

Relocate to site L5 and make four deployments of the box core (stn.s 55409#1-4) with the forth attempt (55409#4) returning a good core that produces a full set of samples (HC, HM, PSA and 0.1m^2 MAC).

Relocate to site Tr350 and deploy box core as stn. 55410#1, it returns a good core yielding a full set of samples (HC, HM, PSA and 0.1m^2 MAC).

Relocate to site Tr300 and deploy Day grab four times (stn.s 55411#1-4), the second (55411#2; HC, HM, PSA and GEOL) and forth (55411#4; 0.1m^2 MAC) producing samples.

Relocate to site Tr250 and deploy Day grab four times (stn.s 55412#1-4), the second (55412#2; 0.1m^2 MAC) and forth (55412#4; HC, HM and PSA) producing samples.

Relocate to site Tr200 and deploy Day grab eight times (stn.s 55413#1-8), the second (55413#2; HC, HM and PSA) and eighth (55413#8; 0.1m^2 MAC) producing samples.

Relocate to site B5 and deploy Day grab nine times (stn.s 55414#1-9), the eighth (55414#8; HC, HM and PSA) and ninth (55414#9; 0.1m^2 MAC) producing samples.

Relocate to site Tr200 and deploy MEGA02 as stn. 55415#1, it returns 0/2 cores and the site is abandoned for further coring attempts.

Relocate to site Tr250 and deploy MEGA02 as stn. 55416#1, it returns 2/2 good cores that are taken for MEIOB and MICROB.

Tuesday 29 August

At site Tr250 and deploy MEGA02 as stn. 55416#2, it returns 1/2 good core that is taken for MEIOB. Redeploy MEGA02 (stn. 55416#3), it returns un-fired (no samples), site abandoned for further coring.

Relocate to site Tr300 and make four deployments of the MEGA02 (stn.s 55417#1-4), only the third attempt (stn. 55417#3; MEIOB, MICROB) produces useful material.

Relocate to site Tr350 and deploy MEGA04 as stn. 55418#1, it returns 3/4 good cores that are taken for MEIOB, MICROB and FORAM. Redeploy MEGA04 (stn. 55418#2), it returns 2/4 good cores that are taken for MEIOB and whole frozen.

Relocate to site L5 and deploy MEGA04 as stn. 55419#1, it returns 3/4 good cores that are taken for MEIOB, MICROB and FORAM. Redeploy MEGA04 (stn. 55419#2), it returns 4/4 good cores that are taken for 2xMEIOB and whole frozen.

Relocate to site Tr450 and deploy MEGA04 as stn. 55420#1, it returns 4/4 good cores that are taken for MEIOB, FORAM, whole frozen and qualitative meiobenthos. Redeploy

MEGA04 (stn. 55420#2), it returns 1/4 good core that is taken for MEIOB (a disturbed core is taken for qualitative meiobenthos).

Relocate to site L4 and deploy MEGA04 as stn. 55421#1, it returns 3/4 good cores that are taken for MEIOB, MICROB and whole frozen. Redeploy MEGA04 (stn. 55421#2), it returns 3/4 good cores that are taken for MEIOB and qualitative meiobenthos.

Coring warp noted to be slightly 'stranded' - termination remade and tested.

Relocate to site Tr550 and deploy MEGA04 as stn. 55422#1, it returns 3/4 good cores that are taken for MEIOB, FORAM and whole frozen.

Relocate to site Tr600 and deploy MEGA04 as stn. 55423#1, it returns 4/4 good cores that are taken for MEIOB, FORAM, whole frozen and qualitative meiobenthos. Redeploy MEGA04 (stn. 55423#2), it returns 4/4 good cores that are taken for MEIOB and qualitative meiobenthos.

Relocate to site Tr650 and deploy MEGA04 as stn. 55424#1, it returns 3/4 good cores that are taken for HC, MEIOB, FORAM, and qualitative meiobenthos. Redeploy MEGA04 (stn. 55424#2), it returns 2/4 good cores that are taken for HC and MEIOB.

Relocate to site S2 and deploy MEGA04 as stn. 55425#1, it returns 0/4 cores (no samples). Redeploy MEGA04 (stn. 55425#2), it returns 2/4 good cores that are taken for MEIOB, whole frozen and live meiobenthos.

Relocate to site BGSAS1 and deploy gravity core as stn. 55426#1, it returns a good core (c. 2.0m). During final phase of recovery the corer is dropped to the deck, flattening its cradle. Incident resulted from the main warp being allowed to develop significant slack as the weight of the corer was taken up on auxiliary winch - operators reminded of need for an even parallel recovery on both wires.

Relocate to site CS1 (contourite study) and deploy WASP for a one-hour near-bottom tow as stn. 55427#1; film and video run.

Reposition on site CS1 and deploy MEGA08 as stn. 55427#2, it returns 7/8 good cores that are taken for HC, HM, PSA, 3xMAC and SOC GEOL. Redeploy MEGA08 (stn. 55427#3), it returns 8/8 good cores that are taken for 7xMAC and GEOL.

Relocate to site Tr1000 and deploy MEGA08 as stn. 55428#1.

Wednesday 30 August
Recover MEGA08 (Tr1000, 55428#1), it returns 7/8 good cores that are taken for 5xMAC, MEIOB and SOC GEOL.

Relocate to site Tr900 and deploy MEGA08 as stn. 55429#1, it returns 8/8 good cores that are taken for 4xMAC, MEIOB, FORAM, whole frozen and SOC GEOL.

Relocate to site Tr800 and deploy MEGA08 as stn. 55430#1, it returns 8/8 good cores that are taken for 5xMAC, MEIOB, whole frozen and SOC GEOL.

Relocate to site CS2 and deploy WASP for a one-hour near-bottom tow as stn. 55431#1; film and video run.

Reposition on site CS2 and deploy MEGA08 as stn. 55431#2, it returns 5/8 good cores that are taken for HC, HM, PSA and 2xMAC. Redeploy MEGA10 (stn. 55431#3), it returns 8/10 good cores that are taken for 6xMAC, SOC GEOL and GEOL.

At c. 09:00-09:15 make a brief test launch and run of the lifeboat.

Relocate to site BGSS1 and deploy gravity core as stn. 55432#1, it returns a good core (c. 3.0m).

Relocate to site CS3 and deploy MEGA08 as stn. 55433#1, it returns 8/8 good cores that are all taken for macrobenthos. Redeploy MEGA08 (stn. 55433#2), it returns 8/8 good cores that are taken for HC, HM, PSA, 3xMAC, SOC GEOL and GEOL. Deploy WASP as stn. 55433#3 for a one-hour near-bottom tow; film and video run.

Relocate to site CS4 and deploy MEGA08 as stn. 55434#1, it returns 8/8 good cores that are all taken for macrobenthos. Redeploy MEGA08 (stn. 55434#2), it returns 7/8 good cores that are taken for HC, HM, PSA, 2xMAC, SOC GEOL and GEOL. Deploy WASP as stn. 55434#3 for a one-hour near-bottom tow; film and video run.

Reposition on site CS4 (aka BGSS3) and deploy gravity corer as stn. 55434#4, it returns a good core (c. 2.0m).

Thursday 31 August
Relocate to site CS5 and deploy MEGA08 as stn. 55435#1, it returns 8/8 good cores that are taken for HC, HM, PSA, 3xMAC, SOC GEOL and GEOL. Redeploy MEGA08 (stn. 55435#2), it returns 7/8 good cores that are all taken for macrobenthos.

Relocate to 'WAVE' site and deploy WASP as stn. 55436#3 for a one-hour near-bottom tow; film and video run; video shows.

Relocate to site BGSS4 and deploy gravity core as stn. 55437#1, it returns a rather poor core (c. 0.4m). Redeploy gravity core (stn. 55437#2), it returns a better core (c. 1.4m).

Relocate to site CS6 and deploy MEGA08 as stn. 55438#1, it returns 7/8 good cores that are taken for HC, HM, PSA, 3xMAC and SOC GEOL. Redeploy MEGA08 (stn. 55438#2), it returns 0/8 cores (no samples) - probably dragged over at the seabed. Try again with MEGA08 (stn. 55438#3), it returns 8/8 good cores that are taken for 7xMAC and GEOL.

Relocate to site CS7 and deploy MEGA08 as stn. 55439#1, it returns 8/8 good cores that are all taken for macrobenthos. Redeploy MEGA08 (stn. 55439#2), it returns 6/8 good cores that are taken for HC, HM, PSA, 1xMAC, SOC GEOL and GEOL.

Relocate to site CS8 and deploy MEGA08 as stn. 55440#1, it returns only 3/8 good cores that are all taken for macrobenthos. Redeploy MEGA08 (stn. 55440#2), it returns 8/8 good cores that are taken for HC, HM, 5xMAC and SOC GEOL.

Relocate to site CS9 and deploy MEGA08 as stn. 55441#1, it returns 6/8 good cores that are taken for 4xMAC, SOC GEOL and GEOL. Redeploy MEGA08 (stn. 55441#2), it returns 8/8 good cores that are taken for HC, HM, PSA and 5xMAC.

Relocate to 'WAVE2' site and deploy WASP as stn. 55442#3 for a one-hour near-bottom tow; film and video run.

Friday 1 September
Relocate to site CS10 and deploy MEGA08 as stn. 55443#1, it returns 8/8 good cores that are taken for HC, HM, PSA, 3xMAC, SOC GEOL and GEOL. Redeploy MEGA08 (stn. 55443#2), it returns 5/8 good cores that are all taken for macrobenthos.

Relocate to site CS11 and deploy MEGA08 as stn. 55444#1, it returns 0/8 good cores (no samples) - presumed to have been dragged over at the seabed. MEGA08 redeployed (stn. 55444#2), it returns 0/8 good cores (no samples) - again presumed to have been dragged over at the seabed. Redeploy MEGA08 (stn. 55444#3), it returns 6/8 good cores that are taken for HC, HM, 2xMAC, SOC GEOL and GEOL. Redeploy MEGA08 (stn. 55444#4), it returns 7/8 good cores that are taken for PSA and 6xMAC.

Relocate to site CS12 and deploy MEGA08 as stn. 55445#1, it returns 8/8 good cores that are taken for HC, HM, PSA and 5xMAC. Redeploy MEGA08 (stn. 55445#2), it returns 8/8 good cores that are taken for 6xMAC, SOC GEOL and GEOL.

Relocate to site CS13 and deploy MEGA08 as stn. 55446#1, it returns 7/8 good cores that are all taken for macrobenthos. Redeploy MEGA08 (stn. 55446#2), it returns 6/8 good cores that are taken for HC, HM, PSA, 1xMAC, SOC GEOL and GEOL. At c. 15:30 suspend operations on the contourite study and make for the FSC9 area for an intensive biological sampling programme.

Relocate to site 'FSC9' (aka TX1) deploy WASP as stn. 55447#1 for a one-hour near-bottom tow; film and video run.

Saturday 2 September
At site FSC9 make five MEGA10 deployments (stn.s 55447#2-6) for Benthic size structure study; sample recovery as follows:

Stn.	Gear	Cores	>500 um MAC	<500, >250 um MAC	MESOB	MEIOB
55447#2	MEGA10	7/10 good cores	5	3	1	1
55447#3	MEGA10	7/10 good cores	5	3	1	1
55447#4	MEGA10	8/10 good cores	6	3	1	1
55447#5	MEGA10	9/10 good cores	7	4	1	1
55447#6	MEGA10	7/10 good cores	5	3	1	1

Relocate to site 'FSC9' (aka TX1) deploy WASP as stn. 55447#7 for a one-hour near-bottom tow; film and video run.

At site FSC9 continue MEGA10 deployments (stn.s 55447#8-15) for Benthic size structure study.

Sunday 3 September
Complete site FSC9 MEGA10 deployments (stn.s 55447#8-15); sample recovery as follows:

Stn.	Gear	Cores	>500 um MAC	<500, >250 um MAC	MESOB	MEIOB
55447#8	MEGA10	9/10 good cores	7	4	1	1
55447#9	MEGA10	9/10 good cores	7	4	1	1
55447#10	MEGA10	8/10 good cores	6	3	1	1
55447#11	MEGA10	10/10 good cores	8	4	1	1
55447#12	MEGA10	5/10 good cores	-	-	1	1
55447#13	MEGA10	7/10 good cores	5	3	1	1
55447#14	MEGA10	8/10 good cores	6	3	1	1
55447#15	MEGA10	8/10 good cores	8	4	-	-

Relocate to site 'FSC9' (aka TX1) deploy WASP as stn. 55447#16 for a one-hour near-bottom tow; film and video run. Complete FSC9 area operations at c. 06:30; retract USBL probe and steam for contourite study area.

Relocate to site CS13 and deploy WASP as stn. 55448#1 for a one-hour near-bottom tow; film and video run.

Relocate to site CS14 and deploy MEGA08 as stn. 55449#1, it returns 0/8 cores (no samples) and with damage to the corer (three bottom closing slides broken and one core tube smashed). Redeploy MEGA08 (stn. 55449#2), it returns with 8/8 cores but with the main warp hung up on the corer preventing the head lifting fully. When the warp was released the cores were badly shaken and so discarded bar one that was retained for SOC GEOL.

Relocate to site CS7 and deploy box core as stn. 55450#1, it returned a core but the top water was not held; retained as a qualitative 0.25m^2 MAC sample.

Relocate to site CS5 and deploy WASP as stn. 55451#1 for a one-hour near-bottom tow; film and video run.

Monday 4 September
Relocate to site CS4 and deploy box core as stn. 55452#1, it returned a core but the top water was not held; retained as a qualitative 0.25m^2 MAC sample. Redeploy box core (stn. 55452#2), it returned a core but the top water again was not held; retained as a qualitative 0.25m^2 MAC sample.

Relocate to site CS3 and deploy box core as stn. 55453#1, it returned a good core; retained as a qualitative 0.25m^2 MAC sample. Redeploy box core (stn. 55453#2), it returned a core but the top water again was not held; retained as a qualitative 0.25m^2 MAC sample.

Relocate to site CS2 and deploy box core as stn. 55454#1, it returned a core but the top water was not held; retained as a qualitative 0.25m^2 MAC sample.

Relocate to site Tr300 and deploy MEGA02 as stn. 55455#1, it returned 2/2 good cores that were taken for MEIOB and FORAM.

Relocate to site Tr200 and deploy WASP as stn. 55456#1 for a one-hour near-bottom tow; film and video run. This completed all deep-water operations; 3.5 and 10kHz fish were recovered. *Darwin* steamed for the Brae oil field (North Sea) at c. 12:00.

Tuesday 5 September
Begin commercial operations. Arrive in Brae oil field c. 06:00 and receive 'operations manual' from East Brae platform by boat transfer. Unable to work at East Brae, pipe loading in progress, move on to Brae B platform.

At site B8 make two deployments of the Megacorer (stn.s 55457#1-2), both return empty (no samples). Carry out investigations of the main winch brake, c. 10:00-10:45. Make a third unsuccessful (no samples) attempt with the Megacorer (stn. 55457#3). Switch to Day grab and make seven unsuccessful (no samples) attempts (stn.s 55457#4-10). Switch to box corer and make three unsuccessful (no samples) attempts (stn.s 55457#11-13). Switch back to Day grab and make a further nine attempts (stn.s 55457#14-22), only the third (stn. 5545716) returns a useful sample that is taken for HC, HM and PSA. With dusk falling move off to more distant (from platform) sites.

At site XB2 make two deployments of the Day grab, both producing good samples: 55458#1, 0.1m^2 MAC; 55458#2, HC, HM and PSA. The Day grab clearly works better at night!

Relocate to site B6R and make four deployments of the Day grab, the first and forth yielding good samples: 55459#1, 0.1m^2 MAC; 55459#4, HC, HM and PSA.

Relocate to site B7R and make two deployments of the Day grab, the first (stn. 55460#1) is out of position and is discarded, the second (stn. 55460#2) returns a good sample that is taken for macrobenthos.

Wednesday 6 September
At site B7R make a final deployment of the Day grab (stn. 55460#3), it returns a good sample that is taken for HC, HM and PSA.

Relocate to site A2 and make two deployments of the Day grab, both yielding good samples: 55461#1, 0.1m^2 MAC; 55461#2, HC, HM and PSA.

Relocate to site XA2 and make three deployments of the Day grab, the second and third yielding good samples: 55462#2, HC, HM and PSA; 55462#3, 0.1m^2 MAC.

Relocate to site E1 and make two deployments of the Day grab, both yielding good samples: 55463#1, 0.1m^2 MAC; 55463#2, HC, HM and PSA.

Relocate to site XE2 and make two deployments of the Day grab, both yielding good samples: 55464#1, 0.1m^2 MAC; 55464#2, HC, HM and PSA.

Relocate to site XE1 and make three deployments of the Day grab, the first is abandoned as out of position, the next two yield good samples: 55465#2, 0.1m^2 MAC; 55465#3, HC, HM and PSA.

Relocate to site E4 and make two deployments of the Day grab, both yielding good samples: 55466#1, 0.1m^2 MAC; 55466#2, HC, HM and PSA.

Relocate to site E6 and make three deployments of the Day grab, the first (stn. 55467#1) produces a good macrobenthos sample but no USBL data is available, the next two deployments also yield good samples: 55467#2, HC, HM and PSA; 55465#3, 0.1m^2 MAC.

Relocate to site E8 and make two deployments of the Day grab, both yielding good samples: 55468#1, 0.1m^2 MAC; 55468#2, HC, HM and PSA.

Relocate to site A5 and make two deployments of the Day grab, both yielding good samples: 55469#1, 0.1m^2 MAC; 55469#2, HC, HM and PSA.

Relocate to site A7 and make two deployments of the Day grab, both yielding good samples: 55470#1, 0.1m^2 MAC; 55470#2, HC, HM and PSA.

Relocate to site A9 and make three deployments of the Day grab, the first and third of which yield good samples: 55471#1, 0.1m^2 MAC; 55471#3, HC, HM and PSA.

Relocate to site XA1 and make two deployments of the Day grab, both yielding good samples: 55472#1, 0.1m^2 MAC; 55472#2, HC, HM and PSA. With night falling move off to more distant (from platform) locations.

Relocate to site XB2 and deploy MEGA04 as stn. 55473#1, it returns 3/4 good cores that are taken for HC, HM and PSA.

Relocate to site B6R and deploy MEGA04 as stn. 55474#1, it returns 3/4 good cores that are taken for HC, HM and PSA.

Relocate to site B7R and deploy MEGA04 as stn. 55475#1, it returns 2/4 good cores that are taken for HC and PSA. Redeploy MEGA04 (stn. 55475#2), it returns empty (no samples).

Thursday 7 September
At site B7R deploy MEGA04 as stn. 55475#3, it returns 2/4 good cores one of which is taken for HM.

Relocate to site E1 and deploy MEGA04 as stn. 55476#1, it returns 3/4 good cores that are taken for HC, HM and PSA. Redeploy MEGA08 (stn. 55476#2), it returns 8/8 good cores that are all taken for macrobenthos.

Relocate to site B6R and deploy MEGA08 as stn. 55477#1, it returns empty (no samples).

Relocate to site XB1 and deploy Day grab as stn. 55478#1, it returns a good sample that is taken for HC, HM and PSA.

Relocate to site B3 and deploy Day grab as stn. 55479#1, it returns a good sample that is taken for HC, HM and PSA.

Relocate to site B5 and deploy Day grab as stn. 55480#1, it returns a good sample that is taken for HC, HM and PSA. This concludes operations in the Brae oil field (c. 07:00), *Darwin* heads for the first of the Fladen Ground study sites. End commercial operations.

Relocate to site T61 (Fladen Ground) and deploy Day grab as stn. 55481#1, it returns a good sample that is taken for HC, HM and PSA. Attempt a Megacorer deployment (stn. 55481#2), it returns disturbed and all cores are discarded (no samples), the corer having likely been dragged over at the seabed in deteriorating weather. At c. 12:00 suspend operations for weather (steady 40 knots of wind).

At c. 19:00 resume operations at site T62 with eleven deployments of the Day grab (stn.s 55482#1-11) these all return unfired or overfull (no samples). During this time various modifications to the grab are tried - removal of some then all leads, addition of 'outriggers' to the frame in an attempt to reduce sediment penetration, and deepening of trigger pads.

Friday 8 September
At site T62 the 12th deployment of the Day grab (stn. 55482#12) finally returns a useful sample that is taken for HC, HM and PSA.

Relocate to site T63 and deploy Day grab as stn. 55483#1, it returns a good sample that is taken for HC, HM and PSA.

Relocate to site T64 and make six deployments with the Day grab (stn.s 55484#1-6), the sixth (stn. 55484#6) returning a good sample that is taken for HC, HM and PSA.

Relocate to site T65 and make two deployments of the Day grab (stn.s 55485#1-2), the second of which (stn. 55485#2) returns a good sample that is taken for HC, HM and PSA.

Relocate to site T66 and make three deployments of the Day grab (stn.s 55486#1-3), the third of which (stn. 55486#3) returns a good sample that is taken for HC, HM and PSA.

Relocate to site T67 and make three deployments of the Day grab (stn.s 55487#1-3), the third of which (stn. 55487#3) returns a good sample that is taken for HC, HM and PSA.

Relocate to site T68 and deploy Day grab as stn. 55488#1, it returns a good sample that is taken for HC, HM and PSA.

Relocate to site T3-73 and make 15 deployments of the Day grab, sample retention was as follows:

Stn.	HC	HM	PSA
55489#2	Y	Y	Y
55489#8	Y	-	-
55489#9	Y	-	-
55489#13	Y	-	-
55489#15	Y	-	-

Relocate to site T3-75 and make two deployments of the Day grab (stn.s 55490#1-2), the second of which (stn. 55490#2) returns a good sample that is taken for HC, HM and PSA.

Relocate to site T3-77 and deploy Day grab as stn. 55491#1, it returns a good sample that is taken for HC, HM and PSA.

Relocate to site T4-51 and make two deployments of the Day grab (stn.s 55492#1-2), the second of which (stn. 55492#2) returns a good sample that is taken for HC, HM and PSA.

Relocate to site T4-49 and deploy Day grab as stn. 55493#1, it returns a good sample that is taken for HC, HM and PSA.

Saturday 9 September
Relocate to site ALBA4 and make three deployments of the Day grab (stn.s 55494#1-3), the third of which (stn. 55494#3) returns a good sample that is taken for HC, HM and PSA.

Relocate to site T4-47 and make two deployments of the Day grab (stn.s 55495#1-2), the second of which (stn. 55495#2) returns a good sample that is taken for HC, HM and PSA.

Relocate to site T4-45 and deploy Day grab as stn. 55496#1, it returns a good sample that is taken for HC, HM and PSA.

Relocate to site T4-71 and deploy Day grab as stn. 55497#1, it returns a good sample that is taken for HC, HM and PSA.

Relocate to site T3-69 and make two deployments of the Day grab (stn.s 55498#1-2), the second of which (stn. 55498#2) returns a good sample that is taken for HC, HM and PSA.

Relocate to site T3-67 and deploy Day grab as stn. 55499#1, it returns a good sample that is taken for HC, HM and PSA.

Relocate to site T3-65 and deploy Day grab as stn. 55500#1, it returns a good sample that is taken for HC, HM and PSA.

Relocate to site T3-63 and make two deployments of the Day grab (stn.s 55501#1-2), the second of which (stn. 55501#2) returns a good sample that is taken for HC, HM and PSA.

Relocate to site T3-61 and make three deployments of the Day grab (stn.s 55502#1-3), the third of which (stn. 55502#3) returns a good sample that is taken for HC, HM and PSA.

Relocate to site T3-59 and deploy Day grab as stn. 55503#1, it returns a good sample that is taken for HC, HM and PSA.

Relocate to site T3-55 and deploy Day grab as stn. 55504#1, it returns a good sample that is taken for HC, HM and PSA. Deploy MEGA06 (stn. 55504#2), it returns 3/6 cores taken for vertically sectioned HC, HM and PSA samples (0-2, 2-5, 5-10, 10-15, 15-20, 20-25 and 25-30cm). Redeployed MEGA06 (stn. 55504#3), it returned 5/6 good cores that were taken for MEIOB and Special chemistry.

Relocate to site T3-59 and deploy MEGA06 (stn. 55505#1), it returned only short disturbed cores all of which were discarded (no samples). Redeploy MEGA06 (stn. 55505#2), it returns

2/6 cores that are taken for vertically sectioned HC. Redeployed MEGA06 (stn. 55505#3), it returned 3/6 good cores that were taken for MEIOB and vertically sectioned HM and PSA.

Relocate to site T3-61 and deploy MEGA06 as stn. 55506#1, it returns 6/6 good cores that are taken for vertically sectioned HC, HM and PSA, Special chemistry and MEIOB.

Relocate to site T3-63 and deploy MEGA06 as stn. 55507#1, it returns only short disturbed cores that are all discarded (no samples). Redeploy MEGA06 (stn. 55507#2), it returns 6/6 good cores that are taken for vertically sectioned HC, HM and PSA, Special chemistry and MEIOB.

Relocate to site T3-65 and deploy MEGA06 as stn. 55508#1, it returns 6/6 good cores that are taken for vertically sectioned HC, HM and PSA, Special chemistry and MEIOB.

Relocate to site T3-67 and deploy MEGA06 as stn. 55509#1.

Sunday 10 September
Recover MEGA06 (T3-67, 55509#1), it returns with disturbed cores that are all discarded (no samples). Redeploy MEGA06 (stn. 55509#2), it returns 4/6 good cores that are taken for vertically sectioned HC, HM and PSA, and Special chemistry.

Relocate to site T3-69 and deploy MEGA06 (stn. 55510#1), it returns 3/6 cores taken for vertically sectioned HC, HM and PSA. Redeploy MEGA06 (stn. 55510#2), it returns 2/6 good cores that were taken for MEIOB and Special chemistry.

Relocate to site T3-71 and deploy MEGA06 (stn. 55511#1), it returns 2/6 cores one of which is taken MEIOB. Redeploy MEGA06 (stn. 55511#2), it returns 5/6 good cores that were taken for vertically sectioned HC, HM and PSA, and Special chemistry.

Relocate to site T3-73 and deploy MEGA06 (stn. 55512#1), it returns 5/6 cores that are all used to generate quintuplicate HC (0-2cm section) samples. Redeploy MEGA06 (stn. 55512#2), it returns 4/6 good cores that are taken for vertically sectioned HC, HM and PSA, and Radioisotopes. Redeploy MEGA04 (stn. 55512#3), it returns 2/4 good cores that were taken for HC and Radioisotopes. Redeploy MEGA04 (stn. 55512#4), it returns 2/4 good cores that were taken for HC and Radioisotopes. Redeploy MEGA04 (stn. 55512#5), it returns 3/4 good cores that were taken for HC, Radioisotopes and Special chemistry. Redeploy MEGA04 (stn. 55512#6), it returns 2/4 good cores that were taken for HC and Radioisotopes. Make three deployments (stn.s 55512#7-9) of the gravity core, all returning good cores (c. 1.7, 2.3 and 2.3m respectively).

Relocate to site T3-75 and deploy MEGA06 as stn. 55513#1, it returns 4/6 good cores that are taken for vertically sectioned HC, HM and PSA, and Special chemistry.

Relocate to site ALBA4 and deploy MEGA06 as stn. 55514#1, it returns 6/6 good cores that are taken for vertically sectioned HC, HM and PSA, Special chemistry and MEIOB.

Relocate to site T3-77 and deploy MEGA06 as stn. 55515#1, it returns 4/6 good cores that are taken for vertically sectioned HC, HM and PSA, and Special chemistry.

Relocate to site T3-80 (this site replaces T3-79 that was previously omitted as a result of the presence of a drill adjacent to the site) and deploy MEGA06 as stn. 55516#1, it returns 6/6 good cores that are taken for vertically sectioned HC, HM and PSA, Special chemistry and MEIOB. Deploy Day grab as stn. 55516#2, it returns a good sample that is taken for HC, HM and PSA. The USBL probe is recovered and *Darwin* steams for the northern end of the T6 line.

Relocate to site T6-1 and deploy MEGA06 (stn. 55517#1), it returns 2/6 cores that are taken for vertically sectioned HM and PSA. Redeploy MEGA06 (stn. 55517#2), it returns 5/6 good cores that are taken for vertically sectioned HC, Special chemistry and MEIOB.

Relocate to site T6-2 and deploy MEGA06 as stn. 55518#1, it returns 4/6 good cores that are taken for vertically sectioned HC, HM and PSA, and Special chemistry.

Relocate to site T6-3 and deploy MEGA06 (stn. 55519#1), it returns 3/6 cores that are taken for vertically sectioned HC and PSA, and Special chemistry. Redeploy MEGA06 (stn. 55519#2), it returns 4/6 good cores that are taken for vertically sectioned HM, and MEIOB.

Monday 11 September
Relocate to site T6-4 and deploy MEGA06 as stn. 55520#1, it returns 6/6 good cores that are taken for vertically sectioned HC, HM and PSA, and Special chemistry.

Relocate to site T6-5 and deploy MEGA06 as stn. 55521#1, it returns 5/6 good cores that are taken for vertically sectioned HC, HM and PSA, Special chemistry and MEIOB.

Relocate to site T6-6 and deploy MEGA06 as stn. 55522#1, it returns only disturbed cores that are all discarded (no samples). Redeploy MEGA06 (stn. 55522#2), it returns only short disturbed cores that are all discarded (no samples). Redeploy MEGA06 (stn. 55522#3), it returns 6/6 good cores that are taken for vertically sectioned HC, HM and PSA, Special chemistry and MEIOB.

Relocate to site T6-7 and deploy MEGA06 (stn. 55523#1), it returns 3/6 cores that are taken for vertically sectioned HM and PSA, and MEIOB. Redeploy MEGA06 (stn. 55523#2), it returns 2/6 good cores that are taken for vertically sectioned HC, and Special chemistry.

Relocate to site T6-8 and deploy MEGA06 as stn. 55524#1, it returns 6/6 good cores that are taken for vertically sectioned HC, HM and PSA, Special chemistry, MEIOB and MESOB. Redeploy MEGA08 (stn. 55524#2), it returns 8/8 good cores that are taken for 6x500 MAC, 6x250 MAC and MEIOB. Redeploy MEGA08 (stn. 55524#3), it returns only disturbed cores that are all discarded (no samples). Redeploy MEGA08 (stn. 55524#4), it returns 8/8 good cores that are taken for 8x500 MAC and 8x250 MAC.

Relocate to site T3-69 and deploy MEGA04 as stn. 55525#1, it returns only disturbed cores that are all discarded (no samples). Redeploy MEGA06 (stn. 55525#2), it returns 4/6 good cores that are taken for 2xHC, MEIOB and MESOB. Redeploy MEGA06 (stn. 55525#3), it returns only disturbed cores that are all discarded (no samples). Redeploy MEGA06 (stn. 55525#4), it returns 4/6 good cores that are taken for 2xHC, MEIOB and MESOB. Redeploy MEGA06 (stn. 55525#5), it returns 6/6 good cores that are taken for 2xHC, 3x500 MAC, 3x250 MAC and MEIOB. Redeploy MEGA06 (stn. 55525#6), it returns 3/6 good cores that

are taken for 2xHC and MEIOB. Redeploy MEGA06 (stn. 55525#7), it returns 5/6 good cores that are taken for 2xHC and MEIOB. Redeploy MEGA06 (stn. 55525#8), it returns 6/6 good cores that are taken for 6x500 MAC and 6x250 MAC.

Relocate to site T3-73 and deploy MEGA06 as stn. 55526#1, it returns 5/6 good cores that are taken for 3x500 MAC, 3x250 MAC, MEIOB and MESOB. Redeploy MEGA08 (stn. 55526#2), it returns 6/8 good cores that are taken for 4x500 MAC, 4x250 MAC, MEIOB and MESOB.

Relocate to site T3-77 and deploy MEGA08 as stn. 55527#1, it returns 7/8 good cores that are taken for 5x500 MAC, 5x250 MAC, MEIOB and MESOB. Redeploy MEGA08 (stn. 55527#2), it returns 4/8 good cores that are taken for 2x500 MAC, 2x250 MAC, MEIOB and MESOB.

Relocate to site T1-117 and deploy MEGA08 as stn. 55528#1, it returns 7/8 good cores that are taken for 5x500 MAC, 5x250 MAC, MEIOB and MESOB. Redeploy MEGA08 (stn. 55528#2), it returns 5/8 good cores that are taken for 3x500 MAC, 3x250 MAC, MEIOB and MESOB. Deploy Day grab as stn. 55528#3, it returns only a disturbed sample and is discarded (no samples). Redeploy Day grab (stn. 55528#4), it returns a good sample that is taken for HC, HM and PSA.

Relocate to site ALBA3 and deploy Day grab as stn. 55529#1, it returns only a disturbed sample and is discarded (no samples). Redeploy Day grab (stn. 55529#2), it returns a good sample that is taken for HC, HM and PSA. Deploy MEGA08 as stn. 55529#3, it returns only short, disturbed cores that are all discarded (no samples). Redeploy MEGA08 (stn. 55529#4), it returns 3/8 good cores that are taken for vertically sectioned HC, HM and PSA. In deteriorating weather Megacoring operations are halted.

Tuesday 12 September
Continuing in heavy weather - only Day grab operations are possible. Relocate to site ALBA2 and deploy Day grab as stn. 55530#1, it returns a good sample that is taken for HC, HM and PSA.

Relocate to site ALBA1 and deploy Day grab as stn. 55531#1, it returns a good sample that is taken for HC, HM and PSA.

Relocate to site T5-21 and deploy Day grab as stn. 55532#1, it returns a good sample that is taken for HC, HM and PSA.

Relocate to site T5-19 and deploy Day grab as stn. 55533#1, it returns only a disturbed sample that is discarded (no samples). Redeploy Day grab (stn. 55533#2), it returns a good sample that is taken for HC, HM and PSA.

Relocate to site T5-17 and deploy Day grab as stn. 55534#1, it returns a good sample that is taken for HC, HM and PSA.

Relocate to site T5-15 and deploy Day grab as stn. 55535#1, it returns a good sample that is taken for HC, HM and PSA.

Relocate to site T4-43 and deploy Day grab as stn. 55536#1, it returns only a disturbed sample that is discarded (no samples). Redeploy Day grab (stn. 55536#2), it returns a good sample that is taken for HC, HM and PSA.

Relocate to site T2-93 and deploy Day grab as stn. 55537#1, it returns a good sample that is taken for HC, HM and PSA.

Relocate to site T1-113 and deploy Day grab as stn. 55538#1, it returns a good sample that is taken for HC, HM and PSA.

Relocate to site T1-115 and deploy Day grab as stn. 55539#1, it returns only a disturbed sample that is discarded (no samples). Redeploy Day grab (stn. 55539#2), it returns only a disturbed sample that is discarded (no samples). Redeploy Day grab (stn. 55539#3), it returns a good sample that is taken for HC, HM and PSA.

Relocate to site T2-97 and deploy Day grab as stn. 55540#1, it returns a good sample that is taken for HC, HM and PSA.

Relocate to site T1-111 and deploy Day grab as stn. 55541#1, it returns only a disturbed sample that is discarded (no samples). Redeploy Day grab (stn. 55541#2), it returns a good sample that is taken for HC, HM and PSA.

Relocate to site T2-91 and deploy Day grab as stn. 55542#1, it returns a good sample that is taken for HC, HM and PSA. There being insufficient time remaining to attempt another station, the USBL probe is recovered, the deck is secured and *Darwin* steams for Southampton at c. 19:50.

Wednesday 13 September
Continuing *en route* to Southampton. Scientific party engaged in clearing, cleaning and packing.

Thursday 14 September
Continuing *en route* to Southampton.

Friday 15 September
Arrive Southampton in the very early hours, meeting up with departing science party of RRS *Discovery* cruise 250. With considerable effort, complete offloading of CD123 at 13:00 BST.

5.2. Conclusions

Ymir Ridge (see Figure 2)
Survey successfully completed to plan (with minor modifications). Notable points: WASP at YRW2, in an area of potential coldwater overflow shows highly rippled seabed indicative of strong flows, however, the fauna observed were all typical Rockall Trough inhabitants (i.e. warmwater fauna). Similarly WASPs at YRW3 and YRW4 showed no indication of the presence of a coldwater fauna. TOBI 'feature' areas, examined by WASPs YRW3, 5 and 6 are habitat rich (i.e. heterogeneous) and may warrant additional study. Some rather 'photogenic', and sometimes extensive, soft coral growths are present in these areas and were also noted further to the west (in Faroese waters) during SHRIMP deployments from RRS *Discovery* cruise 248 (Bett *et al*., 2001)[1].

Wyville Thomson Ridge (apex and southern flank; see Figure 3)
Survey successfully completed to plan (with minor modifications). Notable points: as noted from the 1999 survey (Bett *et al*., 2007)[2], the apex of the ridge is generally very rough ground and shows signs of fishing activity (lost / abandoned gear and trawl marks). One addition to the proposed plan was operations at site WTS8 - this is an apparently isolated pocket of *Darwin Mounds* imaged during the 1999 survey. The RRS *Discovery* cruise 248 programme did not include operations at this site. The WASP footage obtained from *Charles Darwin* shows the expected presence of *Lophelia* and xenophyophores, but also appears to show evidence of trawl damage to the coral communities. This was also a major finding of the *Discovery* cruise, particularly in relation to the *Darwin Mounds* East Field (that imaged during the 1999 survey) (see Wheeler et al., 2004)[3].

Faroe Bank Channel (see Figure 4)
Survey successfully completed to plan (with minor modifications). Notable points: this area is extremely rich in habitats which match very closely with the TOBI sidescan sonar mapping - and as such, work in this area is a premier example of the value of the joint assessment of the seabed by remote and direct techniques. Seabed sampling success was higher than anticipated pre-cruise and has provided a good set of samples that will permit the integrated approach to be extended to the macrobenthos "communities" of the area. Observations near the Faroe Plateau continue to emphasize the high-energy nature of this environment. In combination with the sidescan sonar data, WASP footage from sites FSC1200, R2, FBW1 and WTS13 will provide a very useful elucidation of the relationship between bottom water flow speeds and seabed sediment features (e.g. sand ribbons, larger and smaller barchan dunes etc.) (see Wynn, Masson and Bett, 2002[4]; Masson, Wynn and Bett, 2004[5]).

[1] Bett, B.J., Billett, D.S.M., Masson, D.G., Tyler, P.A., *et al*., 2001. RRS *Discovery* Cruise 248, 07 Jul-10 Aug 2000. A multidisciplinary study of the environment and ecology of deep-water coral ecosystems and associated seabed facies and features (The *Darwin Mounds*, Porcupine Bank and Porcupine Seabight). Southampton, UK, Southampton Oceanography Centre, 108pp. (Southampton Oceanography Centre Cruise Report, 36).

[2] Bett, B.J., Jacobs, C.J. and *et al*., 2007. RRS *Charles Darwin* Cruise 119C Leg B, 13 Aug - 14 Sep 1999. White Zone (WhiZ) environmental survey: seabed survey of the deep waters to the north and west of Shetland. Southampton, UK, National Oceanography Centre Southampton, 120pp. (National Oceanography Centre Southampton Cruise Report, 19).

[3] Wheeler, A.J., Bett, B.J., Billett, D.S.M., Masson, D.G. and Mayor, D., 2004. The impact of demersal trawling on NE Atlantic deepwater coral habitats: the case of the Darwin Mounds, United Kingdom. In, Barnes, P. (ed.) Benthic habitats and the effects of fishing. Bethesda MD, USA, American Fisheries Society, 807-817. (American Fisheries Society Symposium 41).

[4] Wynn, R.B., Masson, D.G. and Bett, B.J., 2002. Hydrodynamic significance of variable ripple morphology across deep-water barchan dunes in the Faroe-Shetland Channel. *Marine Geology*, **192**, 309-319.

[5] Masson, D.G., Wynn, R.B. and Bett, B.J., 2004. Sedimentary environment of the Faroe-Shetland and Faroe Bank Channels, NE Atlantic and the use of bedforms as indicators of bottom current velocity in the deep ocean. *Sedimentology*, **51**, 1207-1241.

Faroe-Shetland Channel (axial transect; see Figure 5)
Survey successfully completed to plan (with some additions). Notable points: an extremely valuable dataset has been generated for the assessment of along channel variation. Preliminary observations indicate that there is a very rapid change in the fauna and seabed characteristics among the northern-most stations (see Jones, Bett and Tyler, 2007[6]).

West of Shetland transect and contourite study (see Figure 6)
Survey successfully completed to plan (with a number of additions). Notable points: re-sampling of the transect (see e.g. Narayanaswamy, Bett and Gage, 2005)[7] was successfully completed, and indeed the transect was extended to meet the axial transect sites (via sites Tr1100, 1200, 1250 and 1300). The contourite study was also very successful; WASP footage from the contourite confirms that the unusual enteropneust (acorn worm) community (see Bett, 2001)[8] is present throughout the length of the contourite (sites CS1, Tr900, CS2, 3 and 4) but not beyond (sites CS5 and 13). This again provides a good example of the value of sidescan sonar mapping in the identification and assessment of deep-water habitats. Additional WASP deployments were made on the fringes of the contourite body (sites WAVE and WAVE2) these show the sand body 'thinning' out and will advance our understanding of sidescan fabric boundaries.

Enterprise survey (see Figure 7)
The commercial survey of areas of Tranche 4 was successfully completed. The survey encompassed studies of alongslope lineations on the West Shetland Slope, an ultra-low backscatter contourite at the base of the West Shetland Slope and the Faroe-Shetland Channel basin floor.

Texaco survey (see Figure 8)
The commercial survey of two deep-water sites in the Faroe-Shetland Channel axis was successfully completed. Notably a WASP run at site TX1 (aka 'FSC9') appeared to show a small patch what may have been tubeworms (Siboglinidae) potentially indicative of a cold seep. However, further WASP deployments in this location failed to reveal anything similar, suggesting that the 'feature' is highly localised / small.

Tranches 65-67 (North of Shetland; see figure 9)
Survey successfully completed to plan (with a number of additions). Notable points: this year's work has brought our knowledge of the North of Shetland area up to the same level of 'intensity' as the west of Shetland area (see e.g. Bett et al., 1999)[9]. Major biological differences between these areas (i.e. west and north of Shetland) are immediately apparent on viewing the WASP footage. Examples include, a) dense populations of large basket stars (Gorgonocephalidae) at mid-slope depths; and b) quite dense populations of large sea pens (Umbellulidae) in the deeper area; neither of these 'communities' have been encountered west

[6] Jones, D.O.B., Bett, B.J. and Tyler, P.A., 2007. Megabenthic ecology of the deep Faroe-Shetland Channel: a photographic study. *Deep-Sea Research Part I*, **54**, 1111-1128.
[7] Narayanaswamy, B.E., Bett, B.J. and Gage, J.D., 2005. Ecology of bathyal polychaete fauna at an Arctic-Atlantic boundary (Faroe-Shetland Channel, north-east Atlantic). *Marine Biology Research*, **1**, 20-32.
[8] Bett, B.J., 2001. UK Atlantic margin environmental survey: introduction and overview of bathyal benthic ecology. *Continental Shelf Research*, **21**, 917-956.
[9] Bett, B.J. et al., 1999. RRS *Charles Darwin* Cruise 112C, 19 May-24 Jun 1998. Atlantic Margin Environmental Survey: seabed survey of deep-water areas (17th round Tranches) to the north and west of Scotland. Southampton, UK, Southampton Oceanography Centre, 171pp. (Southampton Oceanography Centre Cruise Report, 25).

of Shetland. Also of note were some very marked trawl scars (probably very recent) at around 500m (see e.g. Bett, 2000)[10].

Statoil / BP survey (see Figures 10-11)
The commercial survey of a deep-water area North of Shetland (within the Tranches 65-67 survey area) was successfully completed. A highly abundant (1 indiv.m^{-2}) stalked sponge population was noted during the WASP run at site SBA5 in the heart of the silty sand contourite deposit. This fauna has clear similarities with that of a similar habitat at the southern end of the Faroe-Shetland Channel / eastern end of the Faroe Bank Channel (see Bett, 2007)[11].

Marathon / Brae survey (North Sea; see Figures 12-15)
The commercial survey of the Brae oil field area was successfully completed.

Fladen Ground (North Sea; see Figure 16)
An ambitious programme of work was proposed for the Fladen Ground area, such that it was impossible to complete in the time available; however, essentially all high priority work was successfully completed. The work encompassed numerous sampling objectives (see Narrative, Survey Design and Sample Catalogue sections for full details), including a detailed study benthic community body size structure as was also carried out at site FSC9 in the Faroe-Shetland Channel axial transect study. These unique samples sets have provided a very valuable insight into variations in shallow- and deep-water benthic community structure (Kaariainen & Bett, 2006)[12].

5.3. Acknowledgements

I would like to thank the ship's entire compliment for making this a successful and pleasant, if tough at times, cruise. I should particularly thank Alan Hughes, Roger Hollies, Gabriella Malzone and Steve Dewey for sticking with me through the full horror of 64 days aboard.

[10] Bett, B.J., 2000. Signs and symptoms of deepwater trawling on the Atlantic margin. In: Society for Underwater Technology. Man-Made Objects on the Seafloor 2000. (Papers presented at an international conference held London, 2-3 May 2000). London : Society for Underwater Technology. 107-118.

[11] Bett, B.J., 2007. Appendix I. Initial assessment of seabed observations made during the White Zone (WhiZ) Environmental Survey (Seabed survey of the deep waters to the north and west of Shetland, 13 August-14 September, 1999). In: Bett, B.J., Jacobs, C.J. and *et al*., 2007. RRS *Charles Darwin* Cruise 119C Leg B, 13 Aug - 14 Sep 1999. White Zone (WhiZ) environmental survey: seabed survey of the deep waters to the north and west of Shetland. Southampton, UK, National Oceanography Centre Southampton, 120pp. (National Oceanography Centre Southampton Cruise Report, 19).

[12] Kaariainen, J. and Bett, B.J., 2006. Evidence for benthic body size miniaturization in the deep sea. *Journal of the Marine Biological Association of the UK*, **86**, 1339-1345.

6. SURVEY DESIGN (see Figure 1)

In general, the primary objective of the various surveys planned is to establish a regional description of the current state of the seabed environment. This basic objective encompasses both the need for "baseline" environmental data and the need to identify larger-scale regional environmental patterns and processes. Other study area specific objectives are considered in the designs below. Where appropriate all of the proposed work will be carried out using the protocols developed for the AFEN 1996 and 1998 surveys. The various studies have been tailored to compliment the existing data and other information from the AFEN surveys and the DTI 1999 survey.

6.1. Ymir Ridge (see Figure 2)

The original survey design proposed aimed to address three objectives: a) provide a general description of the seabed environment of this area, b) investigate the possible occurrence of *Darwin Mounds* and / or seabed pockmarks within the area, and c) investigate the possible influence of coldwater overflows in the area. The first objective was tackled with two bathymetric transects (sites YR6-10 and YR1-5, 11-13), with sites located to augment and compliment the existing AFEN sites in the adjacent area. In advance of new TOBI sidescan data, objective two was to be tackled via an alongslope transect at a depth (c. 950m) corresponding to that of the known *Darwin Mounds* and maximum density of seabed pockmarks in the abutting area. New sidescan coverage (RRS *Charles Darwin* cruise 123C1-2) did not suggest the occurrence of further *Darwin Mounds* and / or seabed pockmarks; hence this planned element was omitted. Deep, cold waters from the Faeroe Bank Channel are known to overflow the Wyville Thomson Ridge and exit in to the Rockall Trough between the Ymir Ridge and Faroe Bank. Given the topographic and bathymetric setting it is possible that coldwater overflow may influence the seabed environment within the survey area. This possibility was investigated through WASP sites YRW2-4 and coring sites YR6, 11 and 14. Other operations included WASP and coring operations in an isolated area of iceberg ploughmarks (YRW1 and YR13), an area of TOBI / topographic features in the northwest of the area (YRW5-6 and YR15) and a general deepwater site (YRW7 and YR16).

6.2. Wyville Thomson Ridge (see Figure 3)

The sediment drift to the south of the ridge and the ridge crest itself are considered in this design. The *Darwin Mounds* east field (DTI survey 1999) falls within this area, but will be the subject of intensive study during RRS *Discovery* cruise 248 and will not be further addressed here. Experience during the AFEN 1998 and DTI 1999 surveys indicates that the southern flank of the Wyville Thomson Ridge has a very complex topography. Further investigation of this area was therefore proposed and carried out at Sites WTS5-8 (note that Site WTS8 falls within a small pocket of *Darwin Mounds*). On the ridge itself, sampling attempted during the DTI 1999 survey indicated that useful seabed samples are unlikely to be obtained on the ridge crest (broadly the area identified as an iceberg ploughmark zone by the DTI 1999 TOBI survey). On the northern flank of the ridge, useful sampling only became possible at a depth of around 1,000m (DTI 1999 sites FBC1000 and J). Consequently, the proposed survey design only includes additional photographic / video reconnaissance of the ridge crest (sites WTW1-6) to augment the existing coverage (DTI 1999 WASP sites). Other operations included WASP and coring operations at Sites WTS10 and 11.

6.3. Faeroe Bank Channel (see Figure 4)

This area is complex in both seabed type and associated biological communities (as determined during the DTI 1999 survey). The proposed design has two elements: a) completion of sampling at most of the previously established sites (DTI 1999 survey), and b) assessing additional sites to improve the areal description of the seabed / biological community types present. Sampling of the area of dense gravel on the Faeroe Plateau, was thought likely problematic, hence sampling was only proposed at site P (rather than N1 or Q). All of the other existing sites (FBC1000, FBC1200, L, N2, P, FSC1200, FSC1000, R2, FSC800, FSC500, FSC300) were sampled to complete the standard AFEN sample suite; in most instances this only required the collection of a macrobenthos sample. New sites were added (WTS1-4, 9, 12-16) to assist in completing the description of the spatial / bathymetric extent of the major seabed / biological community types, e.g. 'Sabellid / Sponge', 'Sponge' and 'Contourite-type'. The latter having possible affinities with the rather unique enteropneust community observed on the contourite sand sheet West of Shetland. Other operations included a WASP deployment at site FBW1 to provide additional coverage of the apparent ‘high energy’ habitats in this area.

6.4. Faeroe-Shetland Channel (see Figure 5)

A notable discovery of the AFEN 1996 survey was the consistent alongslope (SW to NE) variation in sediments and macrobenthos communities on the West Shetland Slope. The design proposed here attempts to detect and describe any similar trend along the floor of the Faeroe-Shetland Channel. Incorporating two existing sampling and / or WASP sites (X2 and 3, DTI 1999), a channel-axis transect of nine sites at approximately 10 nautical mile intervals was proposed. WASP coverage and full seabed sampling would be required at the seven new sites and biological sampling at two of the existing sites. These objectives were achieved (Sites FSC1-9) with an additional site (FSC10) also completed. Further to the original objectives an intensive biological sampling programme to investigate variations in benthic body size distributions was carried out at Site FSC9 (see Section 7).

6.5. West of Shetland transect (see Figure 6)

It was proposed that the existing transect stations B5-Tr1000 (AFEN 1996 and 1998) were re-sampled. Note that the 1998 sample set was not analysed as part of the AFEN survey, but was the subject of a successful AFEN-funded PhD study by Bhavani Narayanaswamy at the Dunstaffnage Marine Laboratory (SAMS). The transect was re-sampled using comparable protocols (see Section 7) and also extended in to deeper waters (Sites Tr1100-1300) to meet the Faroe-Shetland Channel axial transect (see above).

6.6. West of contourite study (see Figure 6)

One of the more novel findings of the 1996 AFEN survey was the discovery an extremely unusual community of sediment surface dwelling enteropneusts (acorn worms) on a contourite sand sheet at the base of the West Shetland Slope. Enteropneusts are typically burrowing organisms and no community / habitat of this type has been previously recorded. The work proposed would establish the existence and spatial extent of this novel community / habitat. It is conceivable that the original 1996 observations recorded some transient event that did not represent the 'normal' situation. However, note that some indications of a potentially similar community / habitat were noted during the DTI 1999 survey (Site S). An

alongslope transect of WASP and sampling sites through the heart of the contourite was proposed and successfully completed (Sites CS1, Tr900, CS2, 3 and 4), together with a detailed downslope sampling transect (Sites C3, 6-10). In addition, two further WASP and sampling sites (CS5 and 13) were established alongslope to the southwest and northeast of the apparent (on sidescan sonar) extremities of the contourite deposit. Two further WASP sites (WAVE and WAVE2) were located on the northwest edge of the contourite where sidescan sonar imagery appears to show fringing 'sand waves'.

6.7. Enterprise survey (see Figure 7)
The survey was based around 15 sites, ET1-15, as advised by GEOTEK (derived from Wendy Brown ECS Ltd). These sites provided a spread of sampling across the four TOBI sidescan sonar fabrics identified in the area. Similarly, six WASP deployments (ETW1-6) also provided coverage of the four seabed fabrics. Two additional sampling sites (ET16-17) were also occupied.

6.8. Texaco survey (see Figure 8)

The survey was based on two sites, TX1-2, as advised by GEOTEK. Site TX1 was surveyed in standard AFEN / DTI mode (sampling and WASP deployments) with the addition of a gravity core undertaken by the BGS representative aboard. Site TX2 was only assessed via gravity core. The initial WASP deployment at Site TX1 appeared to show a small patch what might have been tubeworms (Siboglinidae), consequently three additional WASP runs where undertaken around this site (designated Site 'FSC9') but revealed no further occurrence of tubeworms.

6.9. North of Shetland (Tranches 65-67) (see Figure 9)

The original survey design for Tranches 65-67, north of Shetland, assumed that this area would be essentially similar to the West Shetland Slope. Consequently, the 1998 AFEN survey of these Tranches was carried out in the form of a simple bathymetric transect. However, following comparative analysis of West Shetland Slope and North of Shetland data, it was clear that both the sediments and the macrobenthos of these two areas were quite distinct[13]. The difference appears to relate to the change from a channel to an open basin setting. The design proposed for the DTI2000 survey was to upgrade the existing north of Shetland dataset to match that available West of Shetland. A stratified random sampling programme was to be undertaken in the same manner as conducted West of Shetland during the 1996 AFEN survey. Six depth strata, matching those of the 1996 survey, were to be established around Tranches 65-67. Seabed sampling would then be carried out at three or four randomly selected locations within each depth stratum. Combined with the existing data from the AFEN 1998 survey, this would bring the sampling intensity up to the West of Shetland level. This was achieved with 3-5 samples set collected from each of six depth strata:

Stratum	Prefix	Environmental	Macrobenthos	WASP
300-400m	HG	4	3	1
400-500m	NK	3	4	1
500-600m	NN	4	3	1
600-800m	NR	4	4	1
800-1000m	NU	5	5	3
1000-1200m	NW	5	5	1

[13] Bett, B.J., 2001. UK Atlantic Margin Environmental Survey: introduction and overview of bathyal benthic ecology. *Continental Shelf Research*, **21**, 917-956.

WASP coverage was also achieved in all six strata, though note that the three WASP deployments in the 800-1000m stratum (prefix NU) were undertaken as part of the Statoil / BP survey detailed below (Sites SBA3, 5 and SBD3). In addition two gravity core deployments were undertaken at Sites BGS1 and 4.

6.10. Statoil / BP survey (see Figure 10 and 11)

The survey was based on an original grid design of 12 bathymetrically arranged seabed sampling sites, as advised by GEOTEK, aligned on three transects (prefixes A-C). This was achieved and a further 13 sites successfully sampled, including four located on new transects (prefixes D and E). Three WASP deployments were also successfully completed at Sites SBA3, 5 and SBD3. In addition four sites were sampled by gravity core, three (Sites WFA1-3) at locations requested by the Western Frontiers Alliance (as advised by GEOTEK) and a forth (Site SBB3) as selected by the BGS representative aboard.

6.11. Marathon / Brae oil field survey (see Figures 12-15)

The survey was to be based around three platforms in the Brae oil field ("A", "B" and "East") with positions for some 36 previously sampled sites being provided (as advised by GEOTEK). In the time available 19 sites were sampled, primarily with the Day grab but with some material also collected with the Megacorer:

	Day grab		Megacore	
	Enviro.	**Macro.**	**Enviro.**	**Macro.**
Brae "A"	6	6	-	-
Brae "B"	7	3	3	-
East Brae	6	6	1	1

6.12. Fladen Ground (see Figure 16)

An extremely ambitious programme of work was proposed for the Fladen Ground area and positions for some 78 sampling sites provided (as advised by GEOTEK). These sites are arranged on five transects (T1-5) originally sampled by the Marine Laboratory, Aberdeen[14] in 1989, and two other north-south transects (ALBA Sites and T6 Sites). In the time available some 40 sites were sampled, with effort prioritised to transects T3, 6 and ALBA:

Transect	**Day grab**	**Megacorer**						**Gravity core**
	Enviro	**Enviro**	**Spec**	**Radio**	**Macro**	**Meso**	**Meio**	
T3	12[a]	12[a,b]	12	1[a]	3	3	10	1[c]
T6	8	8	8	-	1	1	6	-
ALBA	4	2	-	-	-	-	-	-
T1	4	-	-	-	1	1	1	-
T2	3	-	-	-	-	-	-	-
T4	5	-	-	-	-	-	-	-
T5	4	-	-	-	-	-	-	-

[a] Five replicates collected at Site T3-73
[b] Five duplicates collected at Site T3-69 and five quintuplicates at Site T3-73
[c] Three replicates collected at Site T3-73

[14] Now Fisheries Research Services Marine Laboratory, Aberdeen (www.frs-scotland.gov.uk)

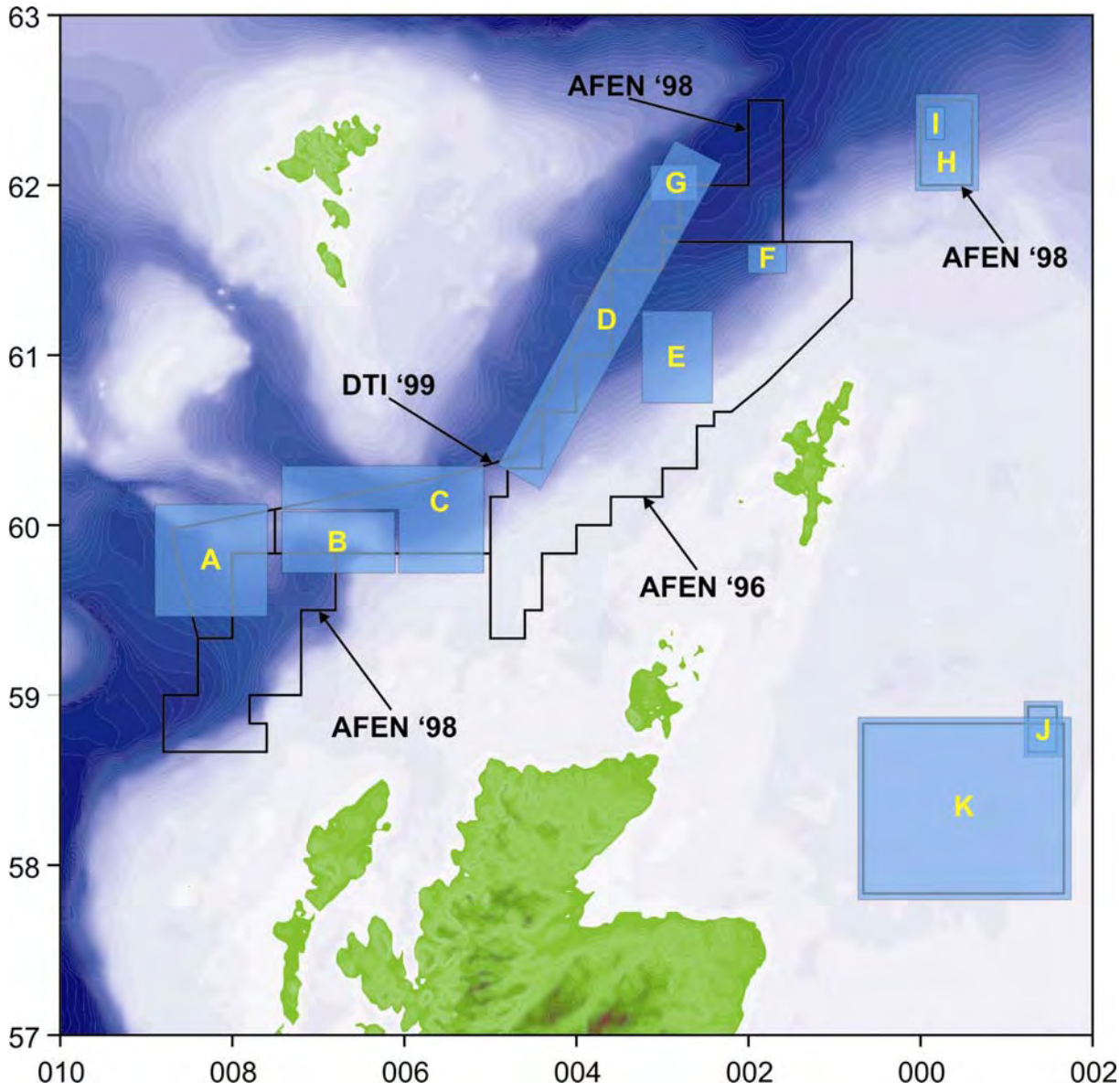


Figure 1. RRS *Charles Darwin* cruise 123 C3-4 survey areas (A-K), also indicated are previous Atlantic Margin Environmental Survey areas (AFEN 1996, CD101; AFEN 1998, CD112; DTI 1999, CD119).

Area	Survey	See figure(s)
A	Ymir Ridge	2
B	Wyville Thomson Ridge	3
C	Faroe Bank Channel	4
D	Faroe-Shetland Channel axial transect	5
E	West of Shetland transect and contourite study	6
F	Enterprise survey	7
G	Texaco survey	8
H	North of Shetland (Tranches 65-67)	9
I	Statoil / BP survey	10-11
J	Marathon / Brae survey	12-15
K	Fladen Ground	16

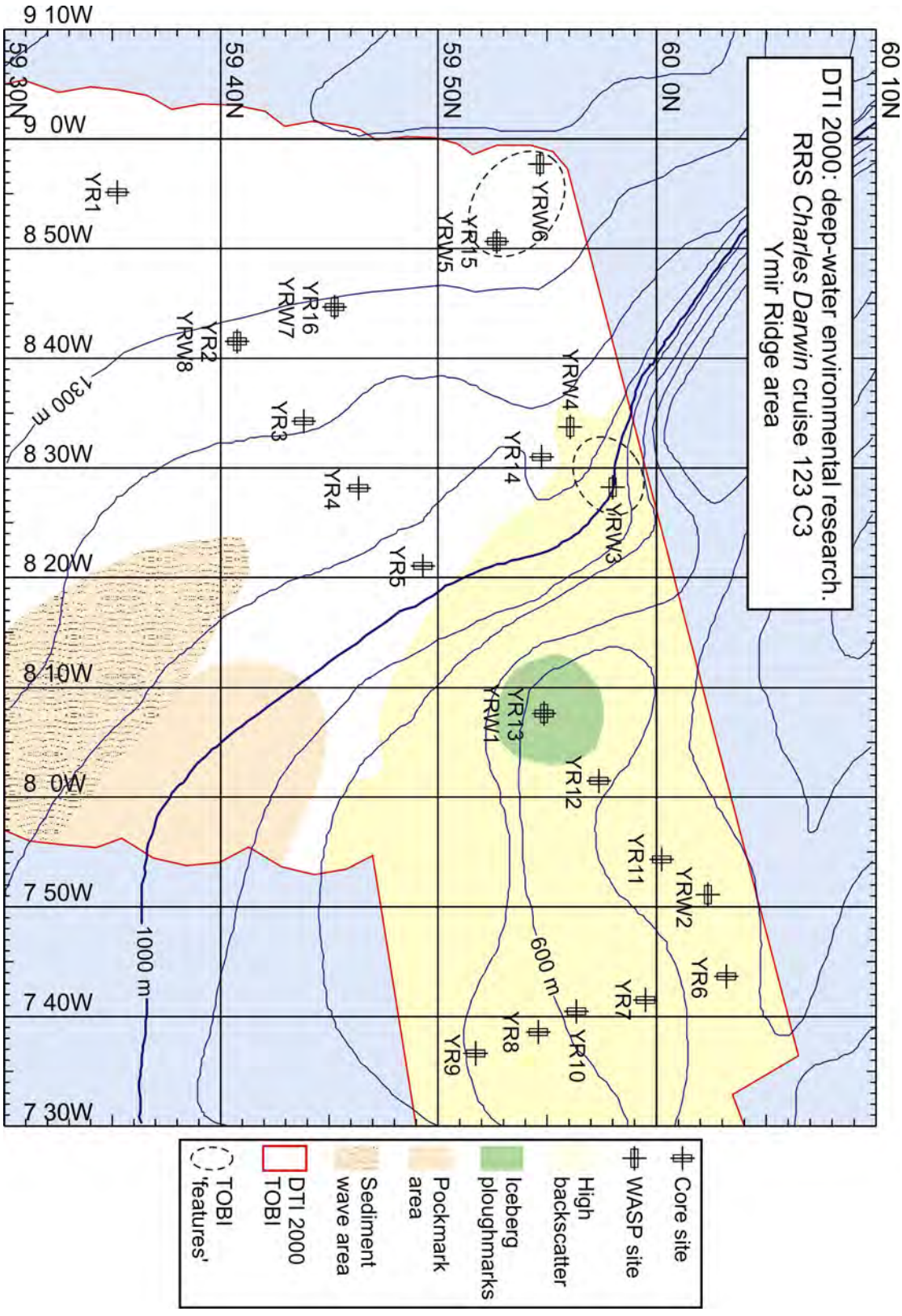


Figure 2. RRS *Charles Darwin* cruise 123, operations in Ymir Ridge area.

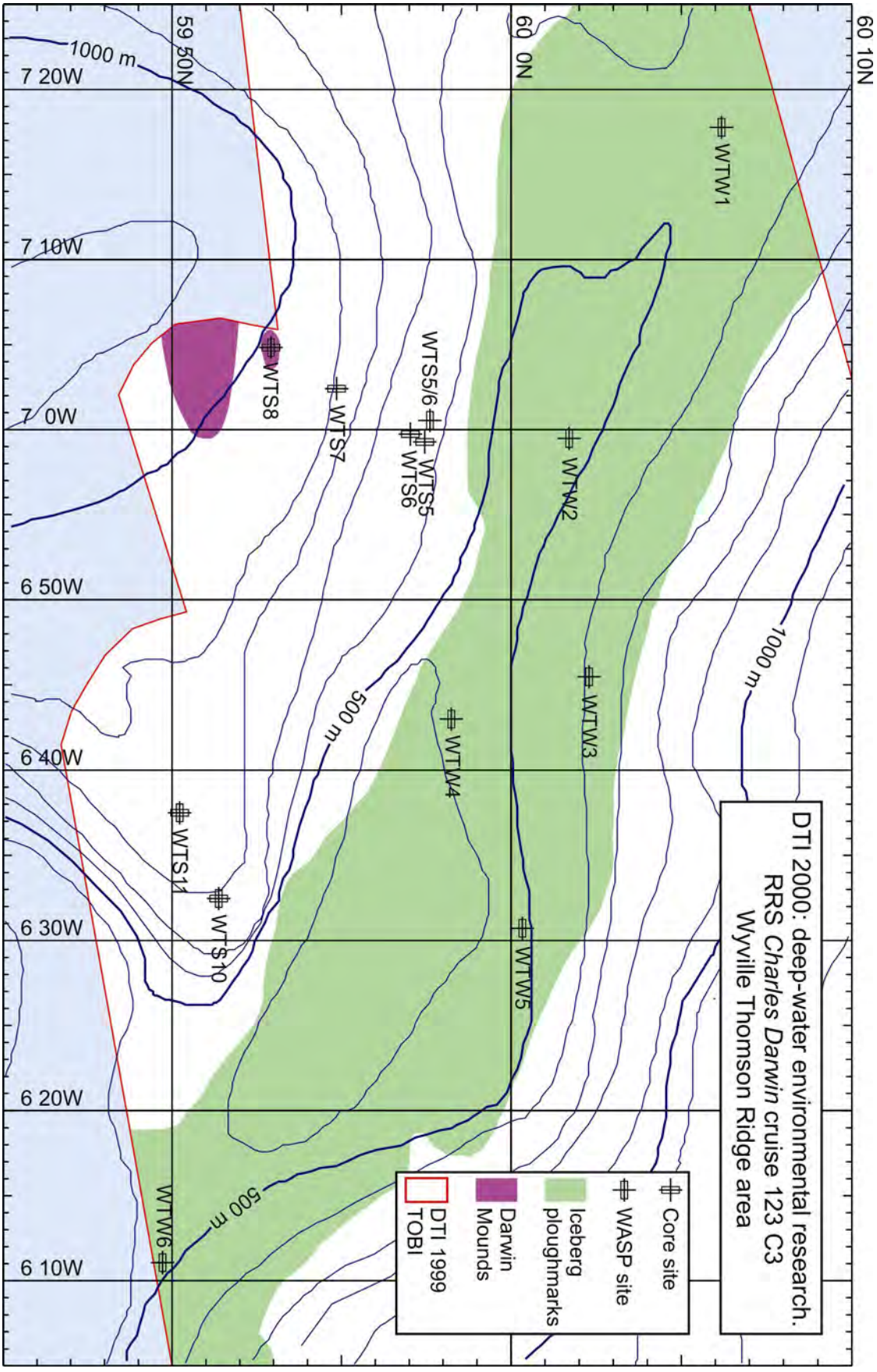


Figure 3. RRS *Charles Darwin* cruise 123, operations in Wyville Thomson Ridge area.

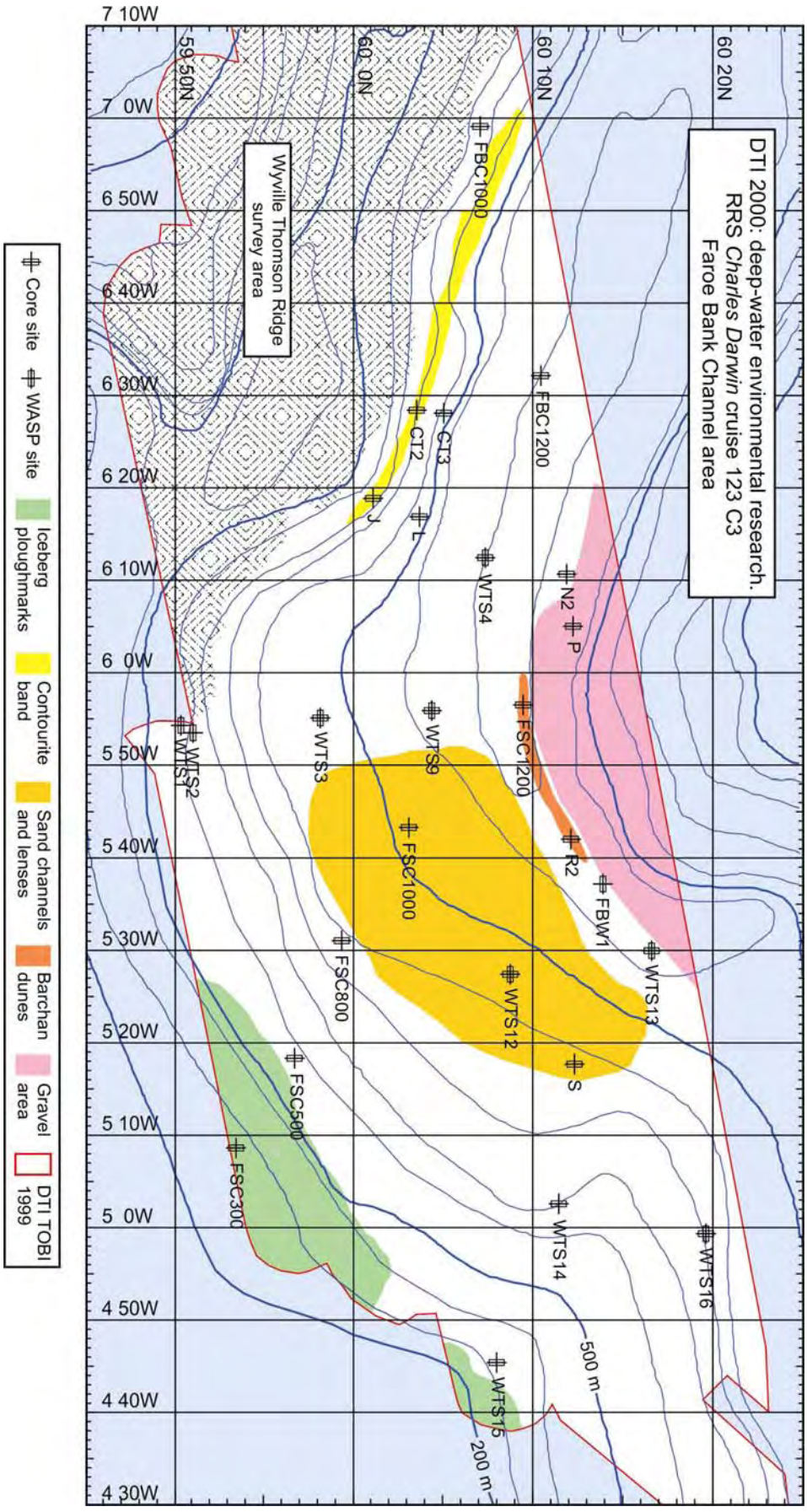


Figure 4. RRS *Charles Darwin* cruise 123, operations in Faroe Bank Channel area.

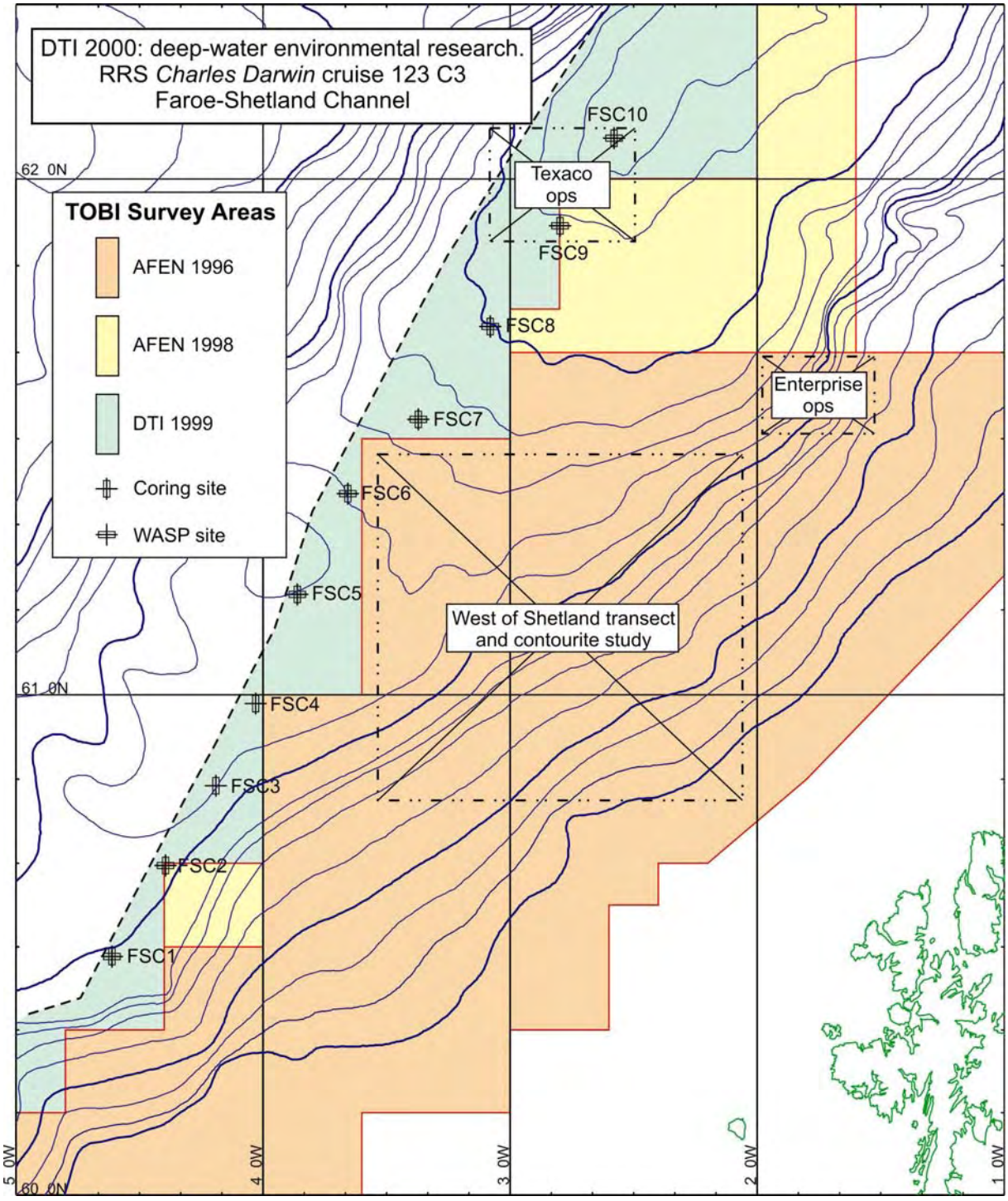


Figure 5. RRS *Charles Darwin* cruise 123, operations in Faroe-Shetland Channel area.

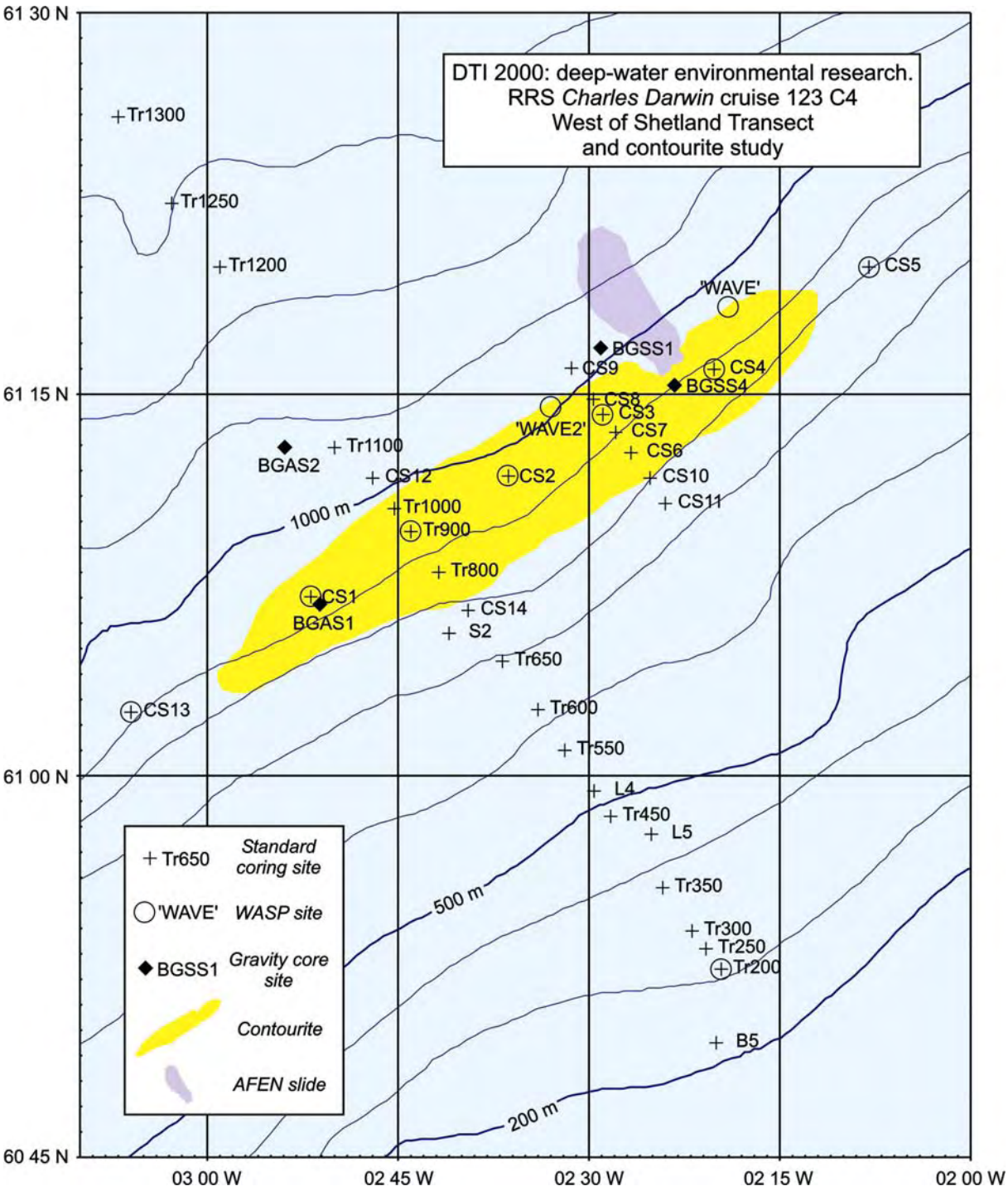


Figure 6. RRS *Charles Darwin* cruise 123, operations in West of Shetland area.

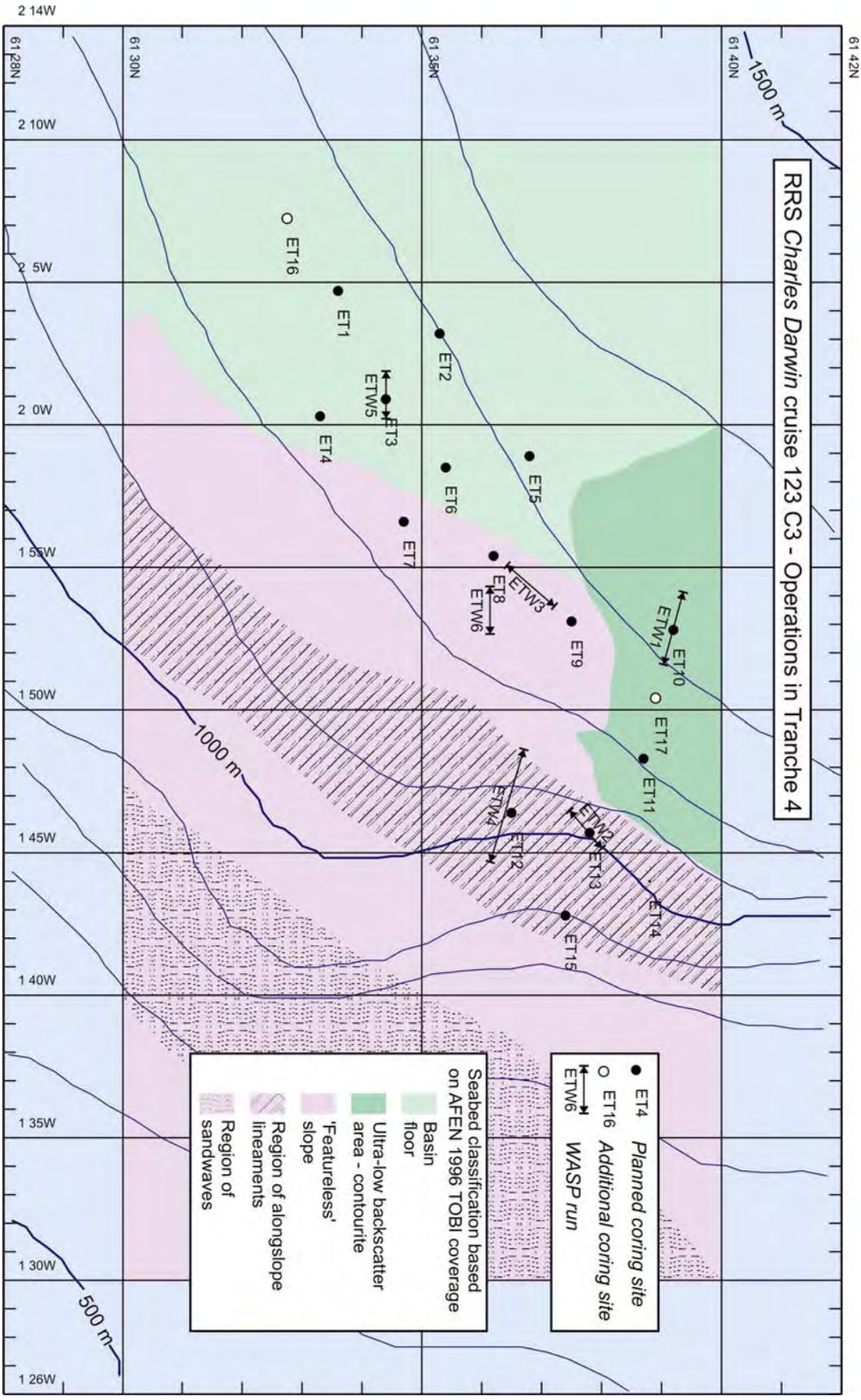


Figure 7. RRS *Charles Darwin* cruise 123, operations in Enterprise survey area.

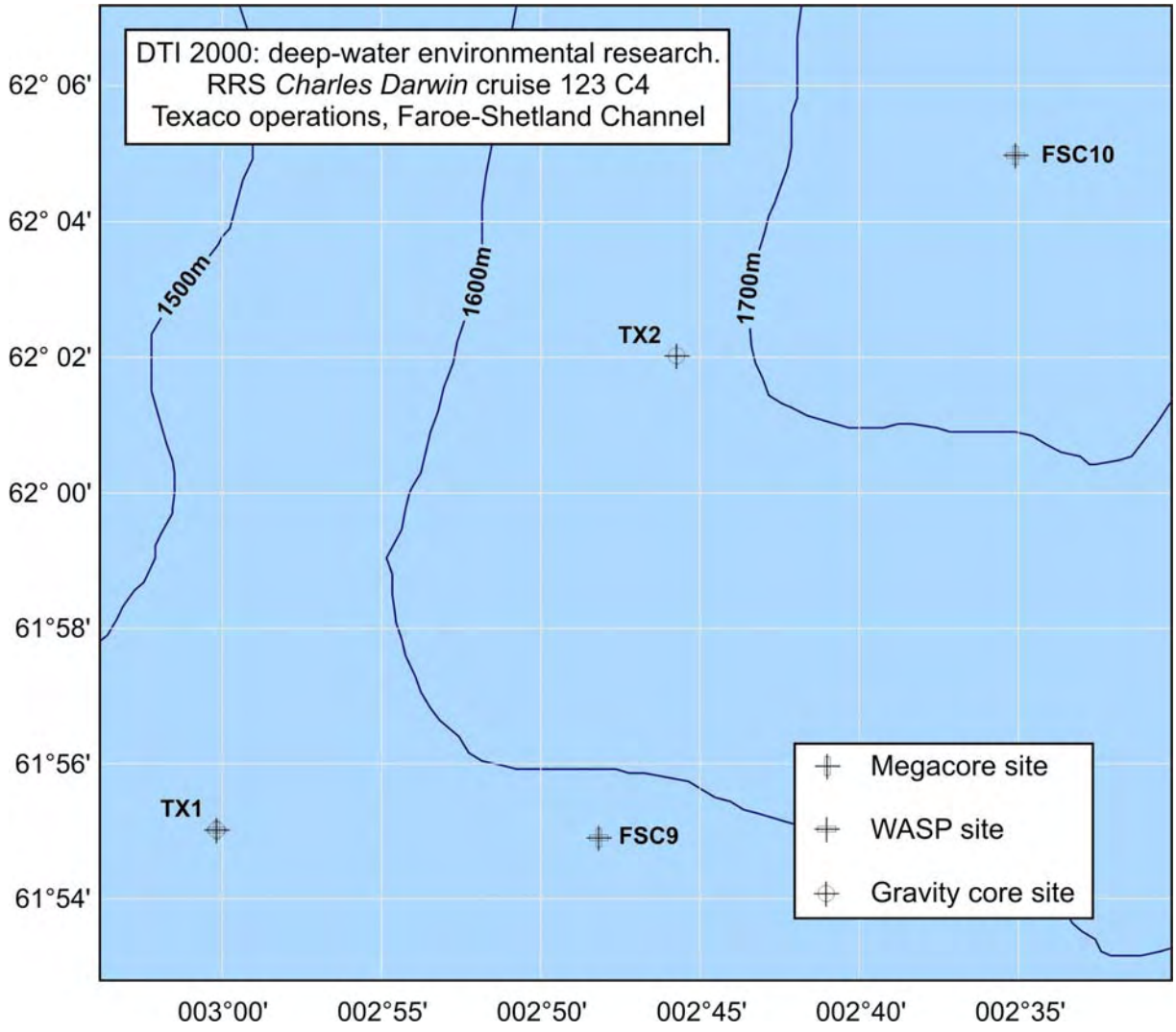


Figure 8. RRS *Charles Darwin* cruise 123, operations in Texaco survey area.

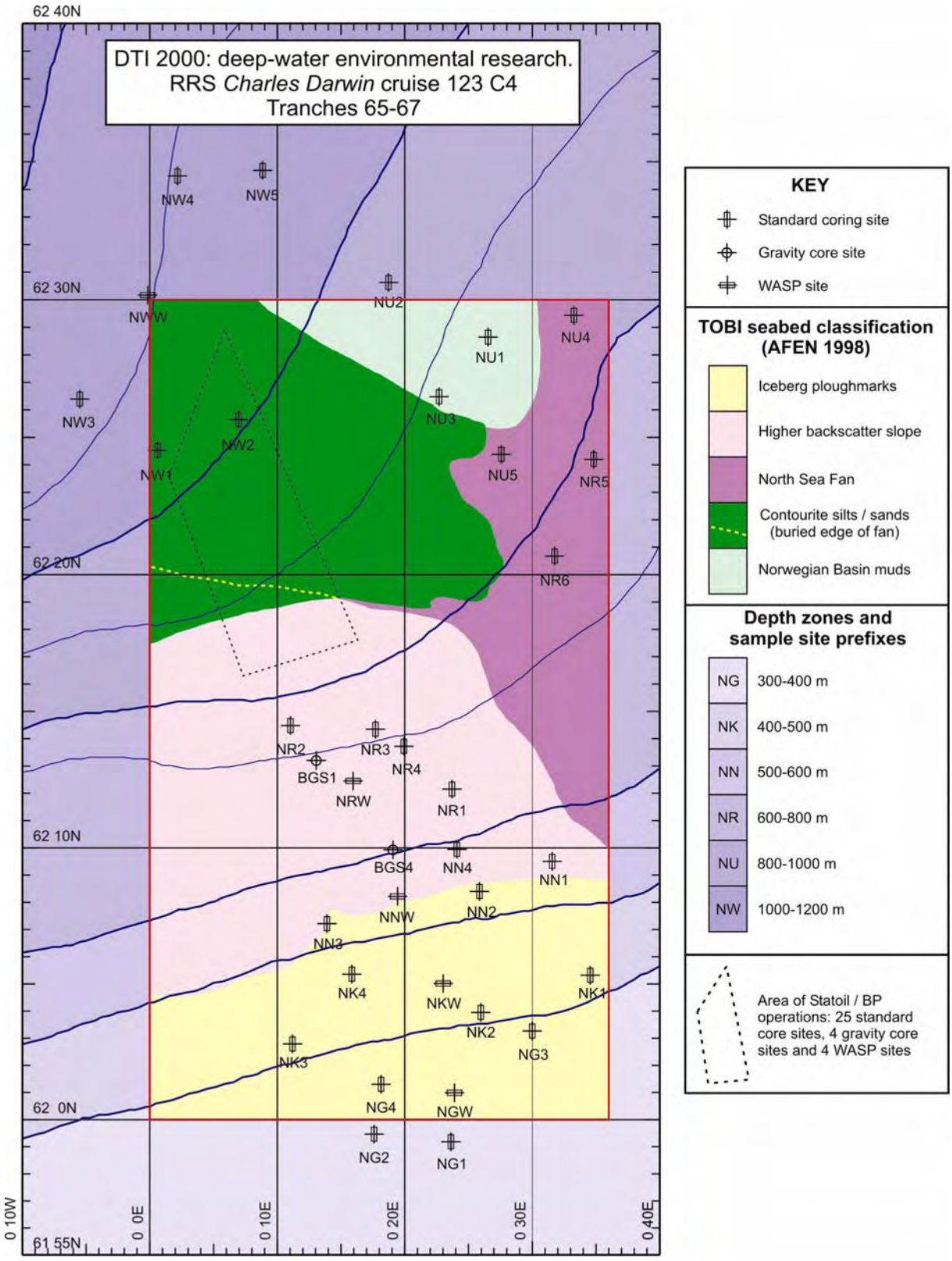


Figure 9. RRS *Charles Darwin* cruise 123, operations in North of Shetland area (Tranches 65-67).

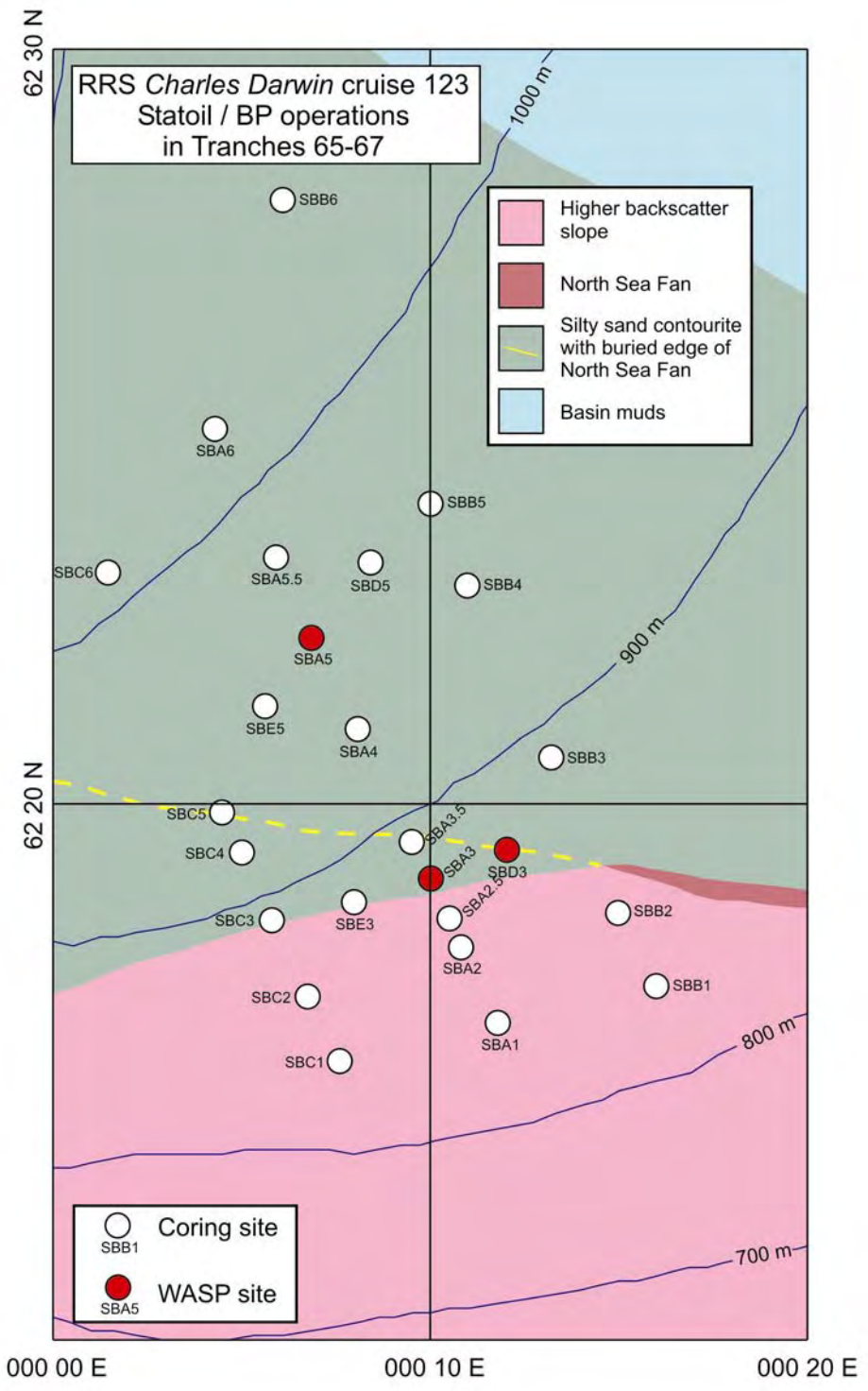


Figure 10. RRS *Charles Darwin* cruise 123, operations in Statoil / BP survey area.

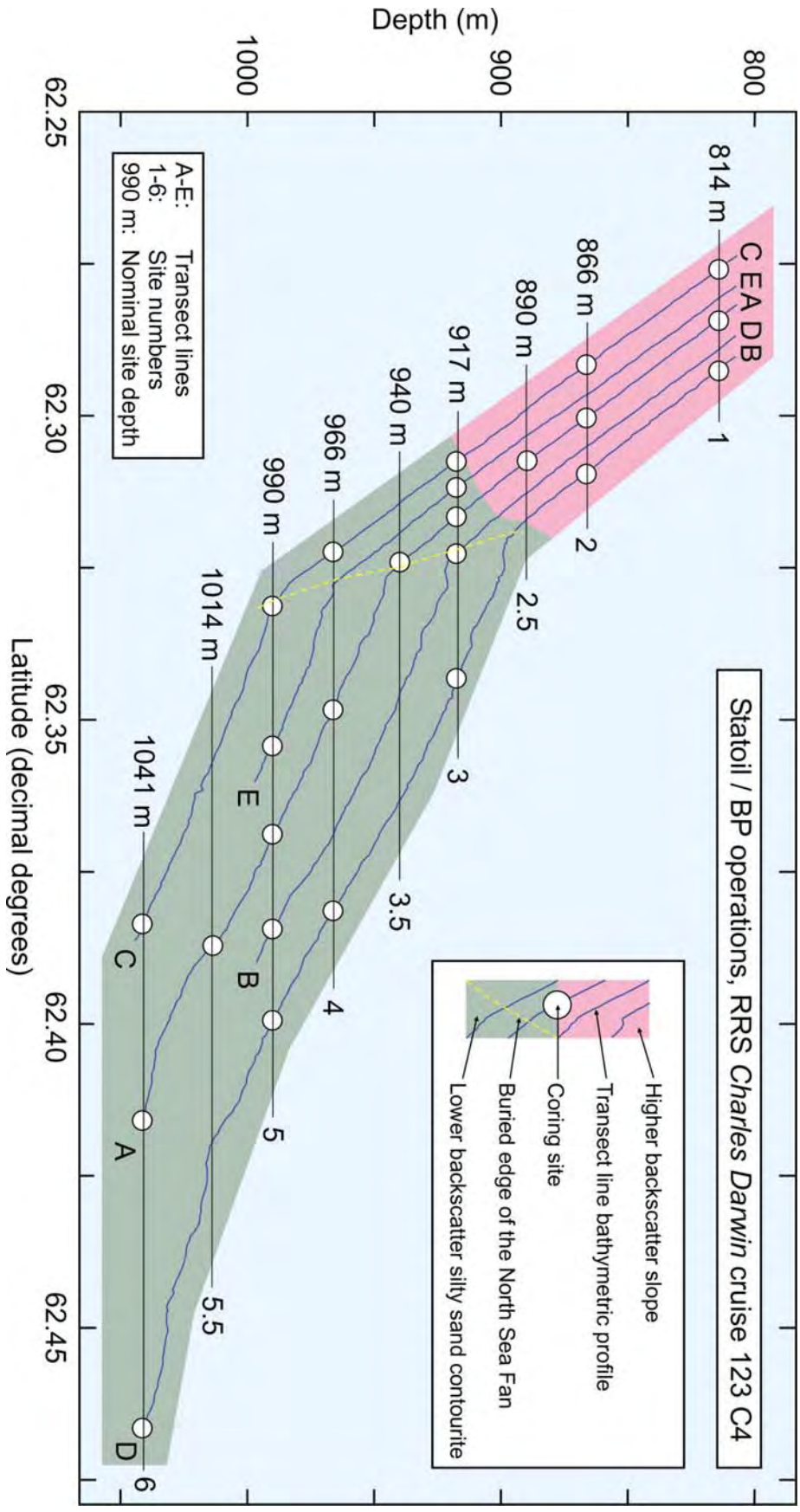


Figure 11. RRS *Charles Darwin* cruise 123, operations in Statoil / BP survey area, shown in bathymetric profile form.

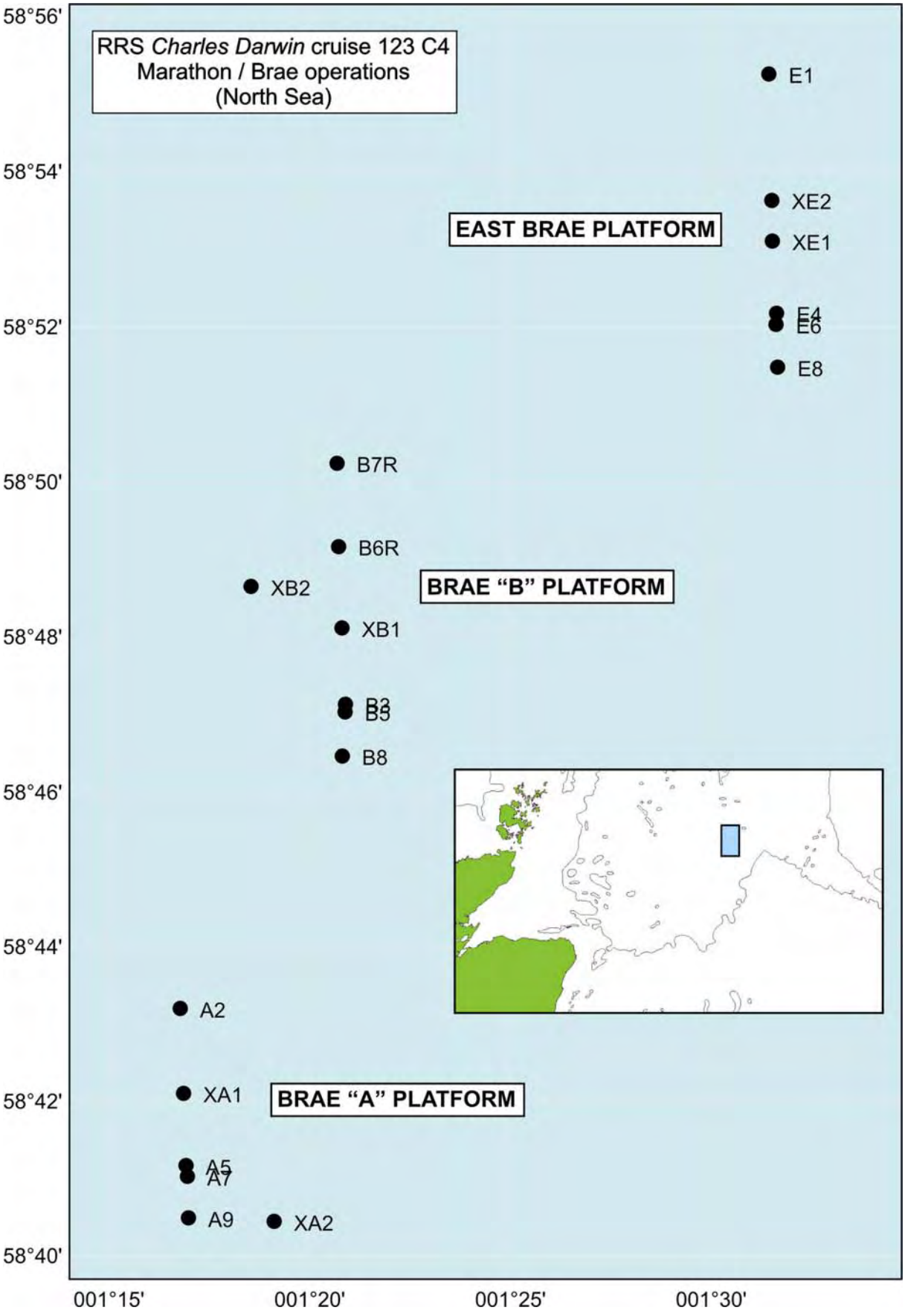


Figure 12. RRS *Charles Darwin* cruise 123, operations in Marathon / Brae survey area.

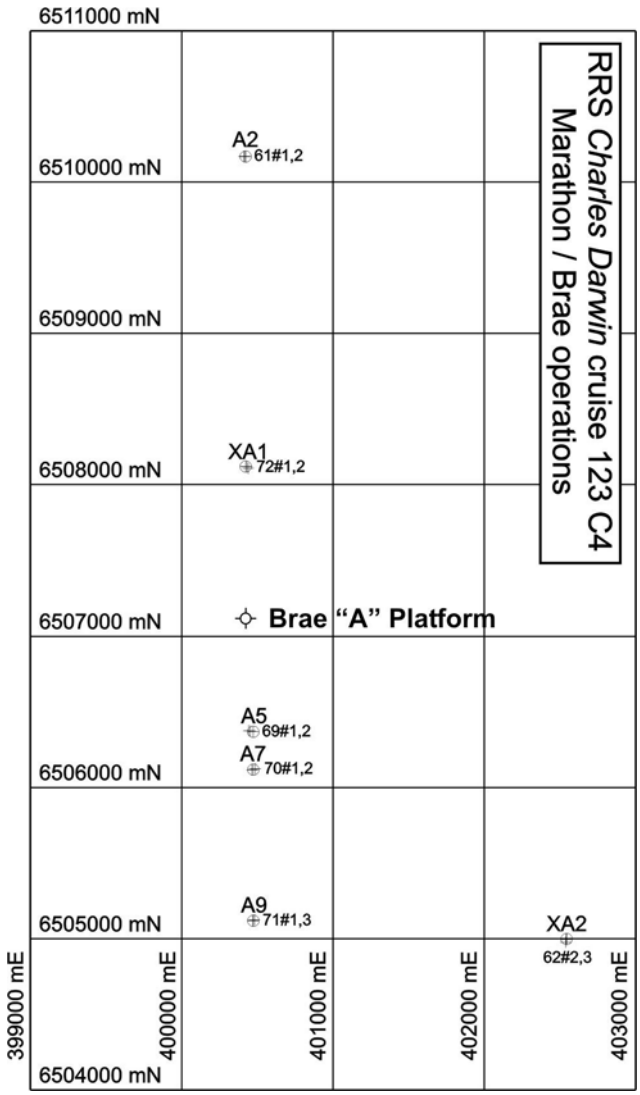


Figure 13. RRS *Charles Darwin* cruise 123, operations in Marathon / Brae survey area, showing detail of Brae "A" Platform survey.

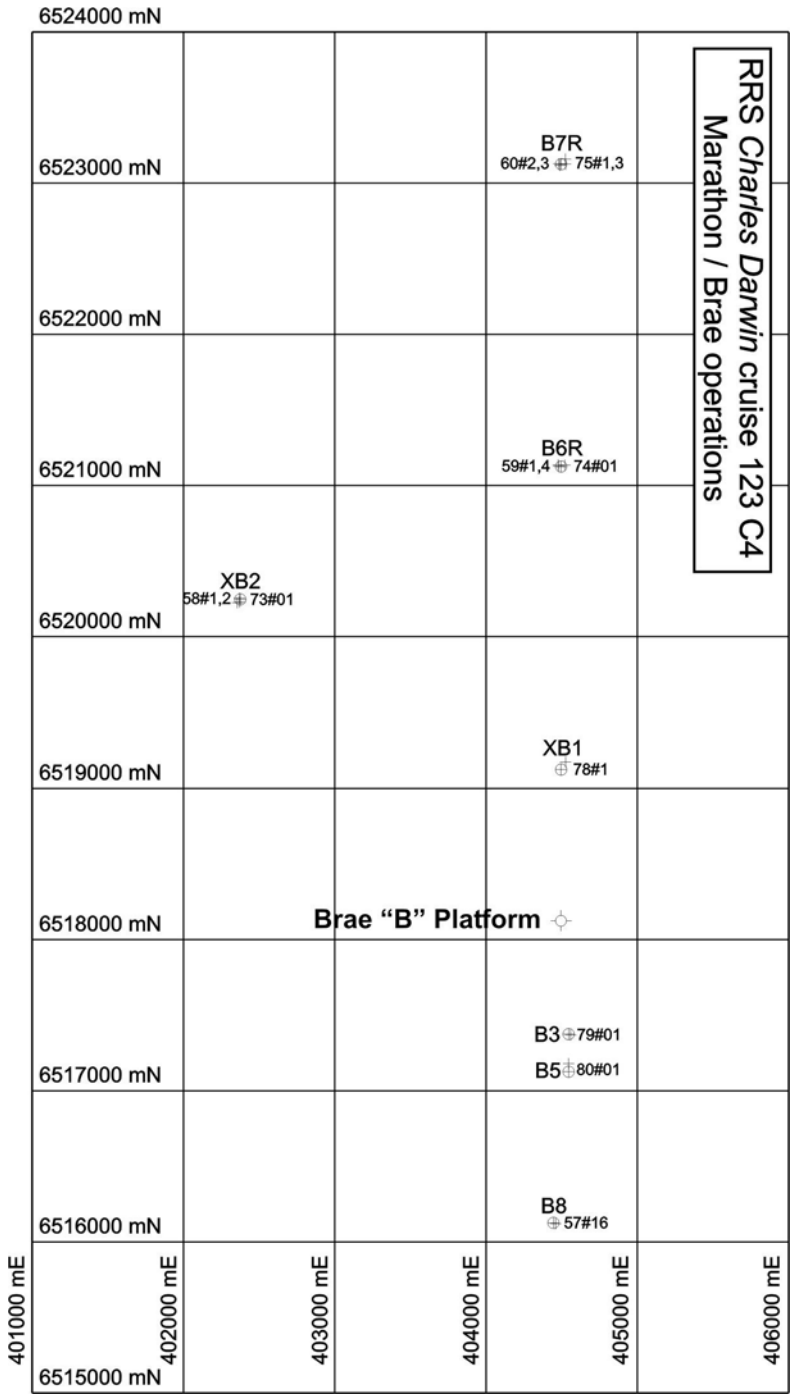


Figure 14. RRS *Charles Darwin* cruise 123, operations in Marathon / Brae survey area, showing detail of Brae "B" Platform survey.

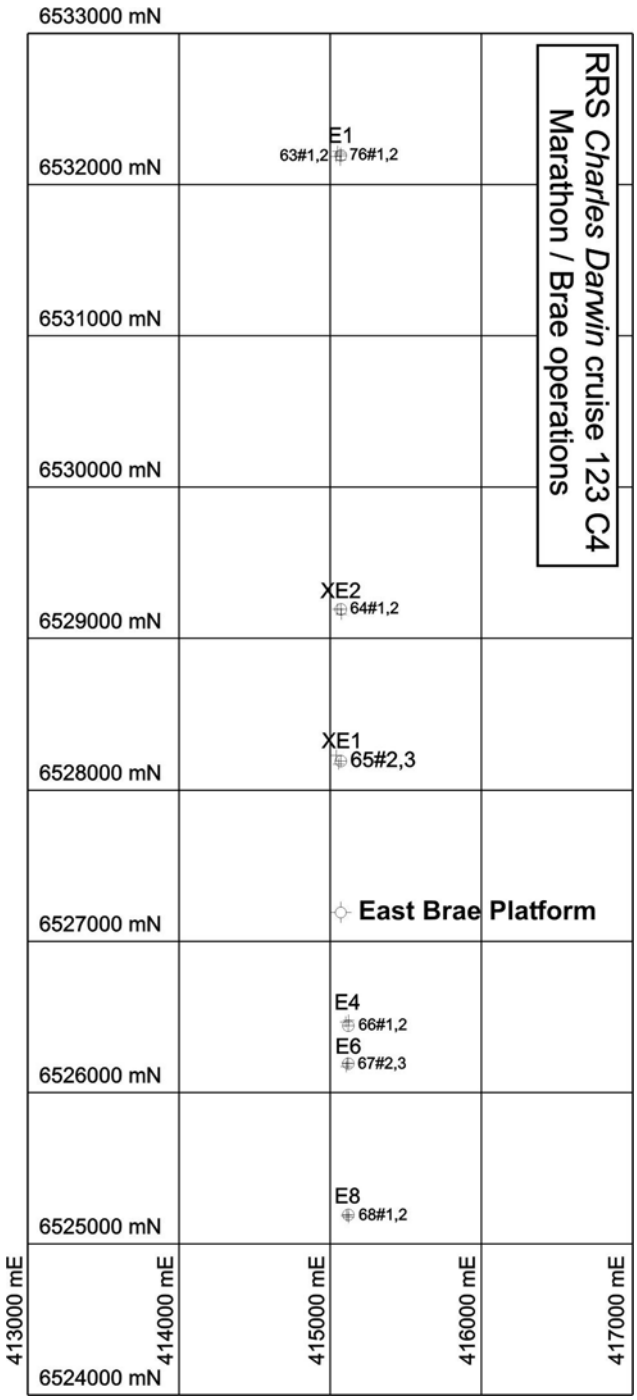


Figure 15. RRS *Charles Darwin* cruise 123, operations in Marathon / Brae survey area, showing detail of East Brae Platform survey.

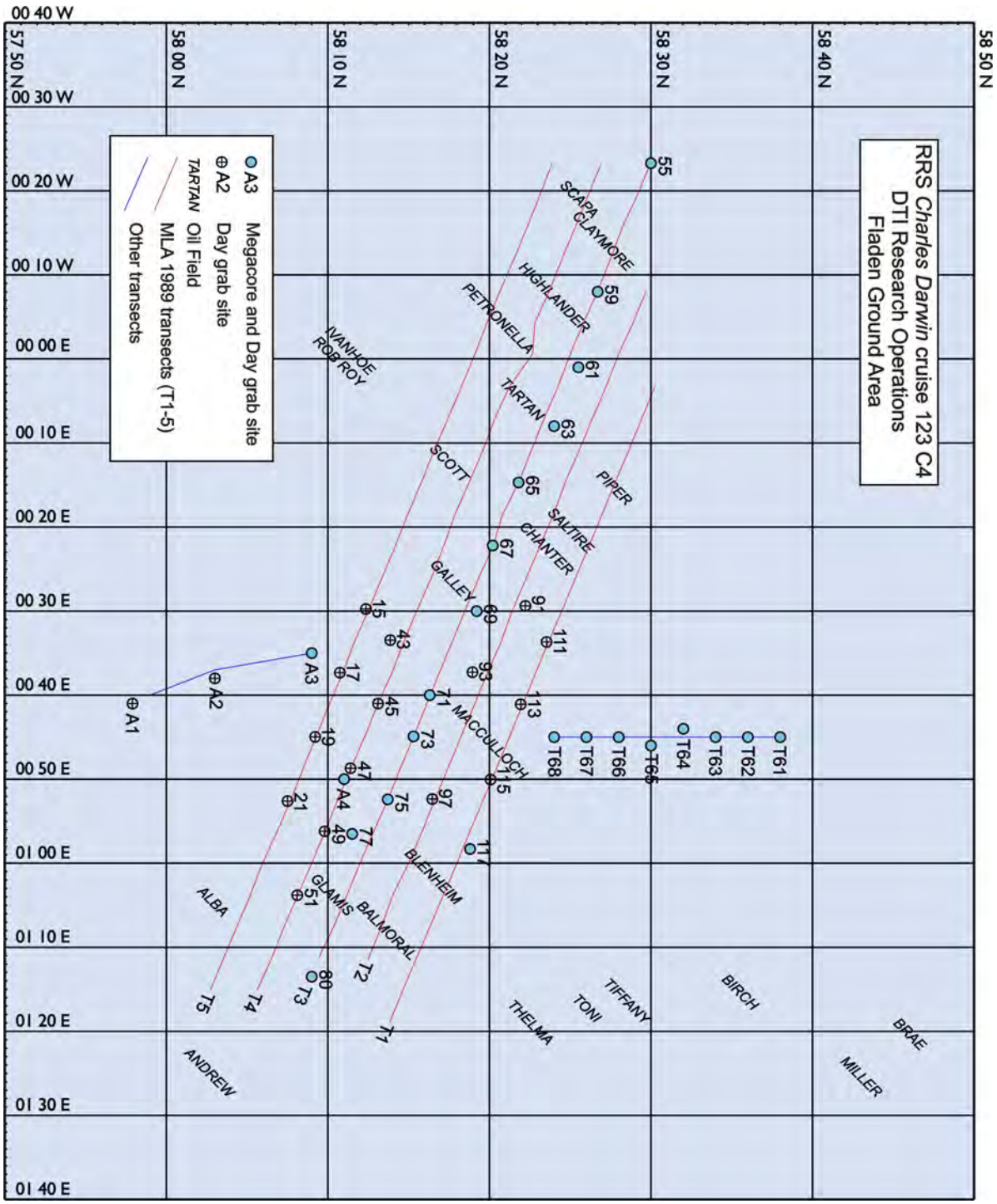


Figure 16. RRS *Charles Darwin* cruise 123, operations in Fladen Ground area.

7. SAMPLING EQUIPMENT & PROTOCOLS

7.1. Sampling Equipment

Day Grab

A standard 0.1 m² Day grab, supplied by RVS[15], was employed during the cruise; it was generally rigged and deployed in the conventional manner. A total of 228 Day grab deployments were made during the cruise, of which 107 produced useful samples (i.e. 47% success). The failures can be categorised as follows:

Rock in jaw	36%
Disturbed	33%
Over-penetrated	14%
Not fired	14%
Other	3%

The predominance of failure through obstruction of the jaws ('rock in jaws') is common to the earlier AFEN '96[16] and '98[17] surveys. The problem of over-penetrations was not encountered during these earlier surveys and stems from the North Sea operations of the current cruise. Over-penetration was particularly notable in the Fladen Ground area and a range of modifications were made to the Day grab to improve its effectiveness: (i) removal of all ballast weights; (ii) addition of our-riggers to the base of the grab frame; and (iii) addition of deeper trigger pads.

Box core

A modified USNEL-type 0.25 m² spade box core, supplied by RVS, was used during the survey; it was rigged and deployed in the conventional manner. A total of 46 box core deployments were made during the cruise, of which 27 produced useful samples (i.e. 59% success). The failures can be categorised as follows:

Washed out	47%
Disturbed	37%
Warp fouled	16%

Not retaining core top water ('washed out') was the predominant cause of failure; particularly in the contourite sand deposits West of Shetland.

[15] Now the National Marine Facilities Division at the National Oceanography Centre, Southampton.

[16] Bett, B.J. et al., 1997 RRS *Charles Darwin* Cruise 101C Leg 2, 14 Jul-20 Aug 1996. Atlantic Margin Environmental Survey: seabed survey of the shelf edge and slope west of Shetland. Southampton, UK, Southampton Oceanography Centre, 127pp. (Southampton Oceanography Centre Cruise Report, 7)

[17] Bett, B.J. et al., 1999. RRS *Charles Darwin* Cruise 112C, 19 May-24 Jun 1998. Atlantic Margin Environmental Survey: seabed survey of deep-water areas (17th round Tranches) to the north and west of Scotland. Southampton, UK, Southampton Oceanography Centre, 171pp. (Southampton Oceanography Centre Cruise Report, 25).

Megacorer

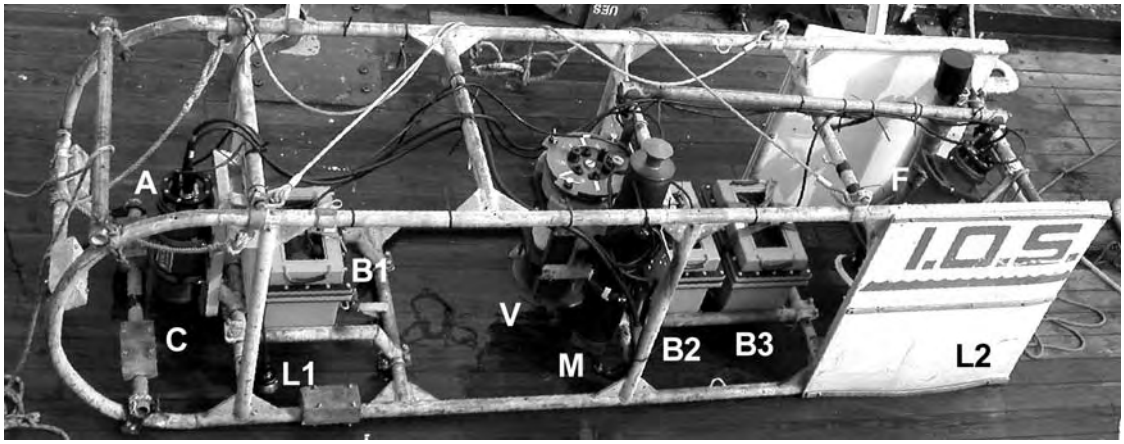
A Bowers & Connelly Megacorer, supplied by the DEEPSEAS Group[18], equipped with up to twelve 10cm internal diameter cores was used during the survey. Generally the corer was rigged and deployed in the conventional manner, with the number of coring units on the head and the ballast load varied to suit seabed conditions. A total of 397 Megacorer deployments were made during the cruise, of which 353 produced useful samples (i.e. 89% success). The total failures can be categorised as follows:

No / short samples	64%
Disturbed	30%
Aborted	7%

Overall, the Megacorer continued to prove itself as a reliable workhorse for deep-water surveys.

WASP

The WASP camera platform, supplied by the DEEPSEAS Group, was used during the cruise. Briefly, WASP is a self-contained, off-bottom, towed camera vehicle that provides still and video footage of the seabed, and is capable of operation to 6,000m water depth on a simple mechanical cable (i.e. conducting or fibre-optic cable not required). As deployed during this cruise, WASP was fitted with: OSIL Mk7 (stills) camera, OSIL 1200J flash gun, SOC OceanCam6000V (digital video) camera, 2 x 250W DSPL video lamps, 3 x DSPL 24V batteries, Simrad Mesotech 200kHz altimeter, and a SOC acoustic telemetry system (10kHz). Data from the altimeter is telemetered to a ship borne display enabling the operator to make fine adjustments of the amount of cable deployed with the aim of keeping the vehicle at c. 3m above the seabed. The still and video cameras are both automatically activated by the altimeter when the range to the seabed is <10m. For all deployments made during the cruise, the still camera was loaded with 30m of Kodak Vision 250D (colour negative film) and the video camera loaded with a 63 minute MiniDV tape.



WASP vehicle, showing locations of A-altimeter, C-still camera, L-video lamps, B-batteries, V-video camera, M-monitor (acoustic telemetry) and F-flashgun.

[18] www.soc.soton.ac.uk/obe/PROJECTS/DEEPSEAS/

The acoustic telemetry from WASP was monitored using a "Waterfall" display system (PC-based continuous display of acoustic signals) fed from a receiver box (providing timing and signal attenuation controls) connected to a submerged transducer (ship's PES fish).

WASP was deployed 65 times made during the cruise, in all cases returning still film and in all but two cases video film.

Gravity corer

A gravity corer (500 kg bomb, 3m barrel), supplied by BGS, was used during the cruise. The corer was deployed 21 times: one deployment (stn. 55244#5) was aborted; two produced only short cores (stn.s 55255#1 and 55437#1); the remainder produced good cores, 1.4-3.0m in length.

Bathysnap (see Figure 17)

A Bathysnap time-lapse camera system was deployed opportunistically during the cruise on behalf of BP and Geotek Ltd. This short-term deployment (stn. 55277#1; 4-11 August) was undertaken as a system demonstration. A schematic of the mooring and camera system as deployed is shown in Figure 17.

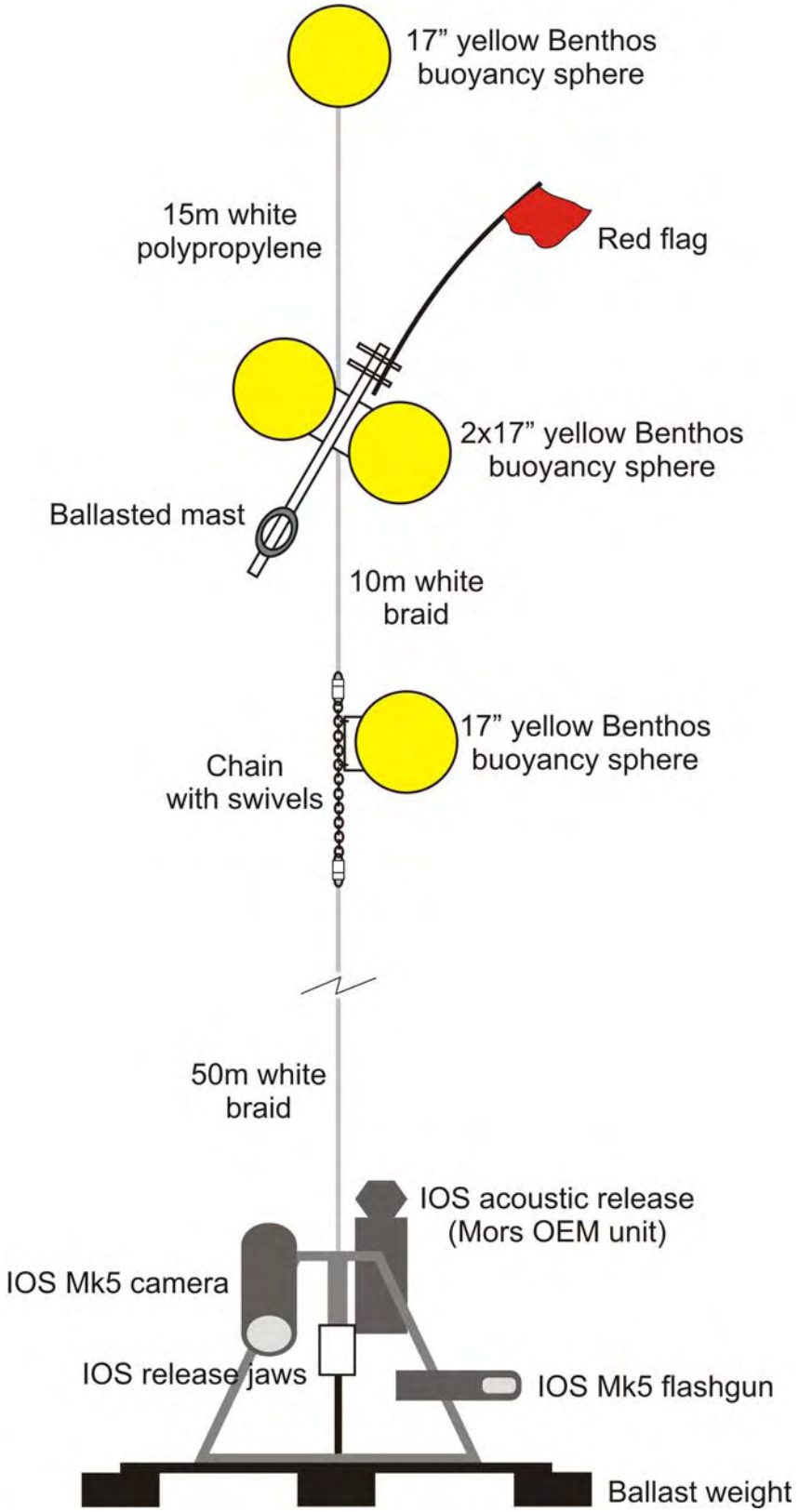


Figure 17. Bathysnap[19] system and mooring sketch as deployed at site BP1 (stn. 55277#1).

[19] Bett, BJ., 2003. Time-lapse photography in the deep sea. *Underwater Technology*, **25**, 121-127.

7.2. Sampling Protocols

'Standard' sampling protocol

As far as possible standard sampling protocols followed (or were consistent with) those of earlier 'Atlantic Margin Environmental Survey' cruises (AFEN '96[20], AFEN '98[21], DTI '99[22]). Of necessity, variant protocols were followed for samples from the Megacorer, box corer and Day grab.

Megacorer

On recovery of the corer, the function of each coring unit was checked and recorded. Core lengths were measured and recorded and any surface and profile features noted. Sample acceptance was based on the following criteria: cores >10cm in length; core surfaces essentially level; and, the sediment-water interface intact. The latter criterion was partly relaxed where localised disturbance had been caused by the dislodgement of gravel during core penetration. Acceptable cores were removed from the corer and transferred to the ship's laboratories for subsequent processing. In all cases, processing began with the careful removal of the supernatant water using gentle overflow, pump siphon and / or syringe as appropriate to the sediment type.

For macrobenthos samples, cores were further processed as follows. Cores were extruded (by plunger from below) and the 0-10cm horizon sectioned off. Corresponding horizons from successive cores were pooled to produce a nominal sample size of eight cores. Macrobenthos samples were then elutriated through a 500µm mesh sieve. The resultant residue was fixed and preserved in 10% borax buffered formalin.

Hydrocarbon samples were processed by extruding the cores into a pre-cleaned metal collar and sectioning off the 0-2 cm horizon. The samples were preserved, in pre-cleaned glass pots, by freezing at -20ºC.

Heavy metal samples were processed by extruding the cores into a pre-cleaned polycarbonate collar and sectioning off the 0-2cm horizon. The samples were preserved, in pre-cleaned polycarbonate pots, by freezing at -20ºC.

Particle size samples were processed by extruding the cores into a polycarbonate collar and sectioning off the 0-5cm horizon. The samples were preserved, in polythene bags, by freezing at -20ºC. This material was also used to provide a total organic carbon and nitrogen sample.

Box corer

On recovery of the corer, its function was checked and recorded. If, on inspection through the top vents, the core appeared to be acceptable, the box and spade were dismounted and moved to a clear deck space. Sample acceptance was based on the following criteria: cores >10cm in length; core surfaces essentially level (excepting relief deemed to be natural); sediment surface covering the full cross-sectional area of the box (excepting limited, 5cm or less, lateral

[20] Bett, B.J. et al., 1997 RRS *Charles Darwin* Cruise 101C Leg 2, 14 Jul-20 Aug 1996. Atlantic Margin Environmental Survey: seabed survey of the shelf edge and slope west of Shetland. Southampton, UK, Southampton Oceanography Centre, 127pp. (Southampton Oceanography Centre Cruise Report, 7)

[21] Bett, B.J. et al., 1999. RRS *Charles Darwin* Cruise 112C, 19 May-24 Jun 1998. Atlantic Margin Environmental Survey: seabed survey of deep-water areas (17th round Tranches) to the north and west of Scotland. Southampton, UK, Southampton Oceanography Centre, 171pp. (Southampton Oceanography Centre Cruise Report, 25).

[22] Bett, B.J., Jacobs, C.J. et al., 2007. RRS *Charles Darwin* Cruise 119C Leg B, 13 Aug - 14 Sep 1999. White Zone (WhiZ) environmental survey: seabed survey of the deep waters to the north and west of Shetland. Southampton, UK, National Oceanography Centre Southampton, 120pp. (National Oceanography Centre Southampton Cruise Report, 19)

compression); and, essentially clear supernatant water (limited resuspension, particularly following a recovery that crashed the box core off the ship's hull was deemed acceptable). Processing of acceptable cores started with the division of the core's surface into macrobenthos and chemistry areas. A metal insert of either 0.1m² or 0.15m² was pushed into the sediment with one of its edges against one side of the box. The open sediment area and that enclosed by the insert were then separately drained of supernatant water using a pump siphon. The overlying water from the 0.1m² area (whether enclosed or open) was drained through a 500µm sieve and any residue subsequently combined with the 0-10cm sediment layer (see below). The overlying water from the 0.15m² area (whether enclosed or open) was drained to waste. Once drained, the surface of the core was examined and a record made of any surface features and / or fauna of note.

For macrobenthos samples, cores were further processed as follows. The front of the box was removed and the sediment underlying the 0.1m² area trowelled out from the 0-10cm horizon. Macrobenthos samples were then elutriated through a 500µm sieve mesh. The resultant residue was fixed and preserved in 10 % borax buffered formalin.

Hydrocarbon samples were collected from the 0.15m² area using a pre-cleaned metal scoop to a nominal depth of 2cm. The samples were preserved, in pre-cleaned glass pots, by freezing at -20ºC.

Heavy metal samples were collected from the 0.15m² area using a pre-cleaned plastic scoop to a nominal depth of 2cm. The samples were preserved, in pre-cleaned polycarbonate pots, by freezing at -20ºC.

Particle size samples were collected from the 0.15m² area using a plastic scoop to a nominal depth of 5cm. The samples were preserved, in polythene bags, by freezing at -20ºC. This material was also used to provide a total organic carbon and nitrogen sample.

Day grab

On recovery of the grab, its function was checked and recorded. Sample acceptance was based on the following criteria: grab fully closed; grab holding or only slowly leaking supernatant water.

Macrobenthos samples were then processed by elutriating the complete contents of the grab though a 500µm sieve mesh. The resultant residue was fixed and preserved in 10% borax buffered formalin.

Hydrocarbon samples were collected from the grab using a pre-cleaned metal scoop to a nominal depth of 2cm. The samples were preserved, in pre-cleaned glass pots, by freezing at -20ºC.

Heavy metal samples were collected from the grab using a pre-cleaned plastic scoop to a nominal depth of 2cm. The samples were preserved, in pre-cleaned polycarbonate pots, by freezing at -20ºC.

Particle size samples were collected from the grab using a plastic scoop to a nominal depth of 5cm. The samples were preserved, in polythene bags, by freezing at -20ºC. This material was also used to provide a total organic carbon and nitrogen sample.

Additions to the standard sampling protocol

Additional macrobenthos material

(a) At numerous sites (see sample catalogue, Section 8) a larger macrobenthos sample size was retained, i.e. more than the notional sample size of 8-cores from the Megacorer or 0.1m^2 from the box corer, was achieved. Note also the replicate material available from some sites (see e.g. Enterprise survey, Section 8.7). Please consult the Station List (Section 9) for full details).

(b) Small macrobenthos passing through a 500µm mesh but retained on a 250µm mesh (otherwise treated as per standard 500µm samples). Small macrobenthos were routinely collected on the West of Shetland transect (Sites B5-Tr1000) to provide continuity with earlier transect surveys (AFEN '96 and '98). Small macrobenthos were also collected in the benthic body size study (see below).

(c) Qualitative macrobenthos. Given persistent difficulties in obtaining quantitative material from the West of Shetland contourite area, and the potentially novel nature of this habitat, qualitative samples were retained (0.25m^2 samples from Sites CS2, 3, 4 and 7).

Benthic body size study

Intensive biological sampling to investigate variations in benthic body size distributions was carried out in the deep Faroe-Shetland Channel (Site FSC9) and in the Fladen Ground (sampling effort spread across Sites T1-117, T3-69, 73, 77 and T6-8). In both of these locations samples were collected for:

i) Larger (>500µm) macrobenthos; (methods as above)
ii) Smaller (<500 >250µm) macrobenthos; (methods as above)
iii) Mesobenthos (i.e. of body sizes intermediate to macro- and meio-benthos); sampled with a single unsieved Megacore sample (80cm^2) sectioned to the 0-10cm sediment horizon (sample preservation as for macrobenthos).
iv) Meiobenthos; sampled from a single Megacore sample using three 20mm internal diameter syringes (total area c. 10cm^2) sectioned to the 0-5cm sediment horizon (sample preservation as for macrobenthos).

Full details of these methods, subsequent sample processing and the results of the study are given in Kaariainen & Bett (2006)[23].

Meiobenthos

(a) Standard samples (methodology as per body size study above) were collected opportunistically in the Faroe Bank Channel, Enterprise survey area, North of Shetland and in Fladen Ground. They were also collected routinely (i.e. at all sites) on the Faroe-Shetland Channel and West of Shetland transects (see table below).

Survey	Sites	Samples
Faroe Bank Channel	FSC1000, L, R2, S, WTS3, 4, 12, 13, 15	9
Faroe-Shetland Channel axial transect	FSC1-10	14
West of Shetland transect	Tr250, 300, 350, 450, 550, 600, 650, 800, 900, 1000, 1100, 1200, 1250, 1300, L4, 5, S2	31
Enterprise survey (Tranche 4)	ET1, 2, 3, 6, 8, 10, 11, 13, 16	10
North of Shetland area (Tranches 65-67)	NR4, NU1, 2, NW1, 2, 2, SBB1, SBC2, 5, SBE5	11
Fladen Ground (North Sea)	ALABA4, T3-55, 59, 61, 63, 65, 69, 71, 80, T6-1, 3, 5, 6, 7, 8	15

[23] Kaariainen, J. & Bett, B.J., 2006. Evidence for benthic body size miniaturization in the deep sea. *Journal of the Marine Biological Association of the UK*, **86**, 1339-1345.

(b) Qualitative material was also collected from some West of Shetland transect sites (Tr450, 600, 650 and L4) and Faroe-Shetland Channel Site FSC10 by resuspending the superficial sediments in 'spare' Megacores, decanting off this suspension and preserving it as per macrobenthos samples (see above).

(c) Live material: A number of cores ((Sites FSC10, NU2, S2) were retained for live study of the meiobenthos. About 10cm of the sediment column from 'spare' Megacores and a similar depth of supernatant was extruded in to a polycarbonate tube. The tube was then bunged from below and stored in a larger container filled with supernatant water from other cores and maintained at near-habitat temperature (typically 0°C).

Foraminifera

Samples intended for the study of foraminiferans were collected at Site FSC10 and at all sites from 300m and deeper on the West of Shetland transect (Tr300, 350, 450, 550, 600, 650, 800, 900, 1000, 1100, 1200, 1250, 1300, L4, 5, S2). Samples from single Megacores were sectioned in to 1cm sediment horizons (0-5 or 0-10cm) and preserved as per macrobenthos samples (see above).

Microbiology

Microbiology samples were collected opportunistically on behalf of Michael Maggiulli of the Technische Universitaet, Berlin[24]. It is hoped this material will contribute to a European Union funded programme concerned with microbial biodiversity in deep-sea sediments. Material was retained from a number of the West of Shetland transect sites (Tr250, 300, 350, 800, 900, 1000, 1100, 1200, 1250, 1300, L5, S2). Superficial sediment material from Megacores was retained both cool (c. 4ºC) and Formalin preserved from each of these site.

Hydrocarbons

(a) Five replicate sets of duplicate hydrocarbon samples were taken at sites FSC10 (deep Faroe-Shetland Channel) and T3-69 (Fladen Ground, North Sea), i.e. two standard hydrocarbon samples (see above) from separate cores were collected from five separate deployments of the Megacorer at each location.

(b) A quintuplicate set of hydrocarbon samples was taken from site T3-73 (Fladen Ground, North Sea), i.e. five standard hydrocarbon samples (see above) were collected from a single deployment of the Megacorer.

Sediment profile chemistry

A detailed study of the vertical distribution of standard sample parameters (hydrocarbons, heavy metals and particle size) was undertaken across a number of sites in the Fladen Ground area (Sites T3-55, 59, 61, 63, 65, 67, 69, 71, 73, 75, 77, 80, T6-1 to 8, ALBA3 and 4). Megacore samples were sectioned in to 0-2, 2-5, 5-10, 10-15, 15-20, 20-25 and 25-30cm sediment horizons and then treated as per standard sampling protocol (see above).

'Speciality' chemicals

Additional material for the study of various organic compounds was collected across a number of sites in the Fladen Ground area (Sites T3-55, 59, 61, 63, 65, 67, 69, 71, 73, 75, 77, 80, T6-1 to 8 and ALBA 4). Megacore samples were treated as per the standard hydrocarbon sampling protocol (see above) to produce this material.

[24] Michael Maggiulli, technische Universitaet Berlin, Inst. Fuer Land- und Seeverkehr, FG Maritime Technik, Mueller-Breslau-Str. D-10623 Berlin, Germany. Tel. +49 30 31184280, Fax. +49 30 31184200, e-mail maggiu@vws.tu-berlin.de

Radioisotopes

Samples intended for the study of radioisotopes were collected from five replicate deployments of the Megacorer at Site T3-73 (Fladen Ground, North Sea). In each case the Megacore sample was sub-cored using a BGS gravity core liner and the c. 0-30cm sediment horizon retained.

Geology

(a) Gravity cores were collected at a number of sites visited during the cruise:

Survey	Sites	Samples
Ymir Ridge	YR14	1
Wyville Thomson Ridge	WTS8	1
Faroe Bank Channel	R2	1
West of Shetland contourite study	BGSAS1, 2, BGS1, 3, 4	6
Texaco survey	TX1, 2	2
North of Shetland area (Tranches 65-67)	BGS1, 4, SBB3, WFA1, 2, 3	6
Fladen Ground (North Sea)	T3-73	3

This material was processed by the BGS representative aboard (C3, Tappin; C4, Tulloch); further information on this material should be sought from the British Geological Survey[25]. Typically gravity cores were split, sampled for organic geochemistry, subject to geotechnical tests, visually logged, photographed and archived.

(b) Other material for geological study was obtained variously from Day grab, box core and Megacorer samples at numerous survey sites (see Sections 8 and 9). Day grab material provided the opportunity for visual logging and collection of bulk superficial sediment samples. Box core samples were typically assessed from sub-cores taken with a complete or half-round section of gravity core liner. Megacorer samples were typically assessed by extruding the sediment column in to a second Megacorer tube that had previously been sectioned vertically in to two half-round profiles. The geological samples were generally subject to:

(i) visual examination (e.g. grain size; colour; sorting; grain shape and roundness; foraminiferan content; carbonate content; depth of any oxidation band; evidence for bioturbation; thickness; photographed)
(ii) geotechnical testing (e.g. hand-held penetrometer and hand-held shear vane)
(iii) sampling (e.g. for bulk density, dry density and moisture content)
(iv) archiving (e.g. material retained).

Additionally a number of samples intended for geological study were also retained by SOC (see Sections 8 and 9).

Frozen cores

A number of intact whole cores were frozen as general archive material from several of the West of Shetland transect sites (Tr350, 450, 550, 600, 800, 900, 1000, 1100 1250, 1300, L4, 5, S2).

[25] www.bgs.ac.uk see BGS Technical Report CR/01/22

8. SAMPLE CATALOGUE

The following tables list the various samples retained in the course of RRS *Charles Darwin* cruise 123 C3-4. Samples are listed by site within each of the main survey areas:

8.1. Ymir Ridge
8.2. Wyville Thomson Ridge
8.3. Faroe Bank Channel
8.4. Faroe-Shetland Channel axial transect
8.5. West of Shetland transect
8.6. West of Shetland contourite study
8.7. Enterprise survey (Tranche 4)
8.8. Texaco survey (Faroe-Shetland Channel axis)
8.9. North of Shetland area (Tranches 65-67)
8.10. Statoil / BP survey (North of Shetland)
8.11. Brae survey (North Sea)
8.12. Fladen Ground (North Sea)

For detailed information on individual samples / deployments please consult the Station List (Section 9).

Prior to the start of the survey 'proper' an opportunistic deployment of the WASP vehicle was undertaken in association with the USBL system calibration. This operation (stn. 55201#1; Site BGS1; see Chart 13) was undertaken at the request of the British Geological Survey.

8.1. Ymir Ridge

SITE	HC	HM	PSA	TOC/N	MAC	GEOL	DV	VISION
YR1	✓	✓	✓	✓	0.079	✓	--	--
YR2	✓	✓	✓	✓	0.063	--	--	--
YR3	✓	✓	✓	✓	0.063	--	--	--
YR4	✓	✓	✓	✓	0.079	✓	--	--
YR5	✓	✓	✓	✓	0.071	✓	--	--
YR6	✓	✓	✓	✓	0.1	✓	--	--
YR7	✓	✓	✓	✓	0.1	✓	--	--
YR8	✓	✓	✓	✓	0.1	✓	--	--
YR9	✓	✓	✓	✓	0.1	✓	--	--
YR10	✓	✓	✓	✓	0.1	✓	--	--
YR11	✓	✓	✓	✓	0.1	✓	--	--
YR12	✓	✓	✓	✓	0.1	✓	--	--
YR13	✓	✓	✓	✓	0.1	✓	--	--
YR14	✓	✓	✓	✓	--	--	--	--
YR15	✓	✓	✓	✓	0.1	✓	--	--
YR16	✓	✓	✓	✓	0.094	✓	--	--
YRW1	--	--	--	--	--	--	65 mins	15 m
YRW2	--	--	--	--	--	--	65 mins	15 m
YRW3	--	--	--	--	--	--	65 mins	15 m
YRW4	--	--	--	--	--	--	65 mins	15 m
YRW5	--	--	--	--	--	--	65 mins	15 m
YRW6	--	--	--	--	--	--	65 mins	15 m
YRW7	--	--	--	--	--	--	30 mins	7 m
YRW8	--	--	--	--	--	--	30 mins	7 m

8.2. Wyville Thomson Ridge

SITE	HC	HM	PSA	TOC/N	MAC	GEOL	DV	VISION
WTS5	✓	✓	✓	✓	0.1	✓	--	--
WTS6	✓	✓	✓	✓	0.1	✓	--	--
WTS5/6	--	--	--	--	--	--	30 mins	7 m
WTS7	✓	✓	✓	✓	0.063	✓	--	--
WTS8	✓	✓	✓	✓	2 x 0.1	✓	65 mins	15 m
WTS10	✓	✓	✓	✓	--	✓	30 mins	7 m
WTS11	✓	✓	✓	✓	0.1	✓	30 mins	7 m
WTW1	--	--	--	--	--	--	65 mins	15 m
WTW2	--	--	--	--	--	--	65 mins	15 m
WTW3	--	--	--	--	--	--	30 mins	7 m
WTW4	--	--	--	--	--	--	30 mins	7 m
WTW5	--	--	--	--	--	--	30 mins	7 m
WTW6	--	--	--	--	--	--	65 mins	15 m

Key:
HC Hydrocarbon sample
HM Heavy metal (elemental analysis) sample
PSA Particle size analysis sample
TOC/N Total organic C and N sample
MAC Macrobenthos (m^2)
GEOL Sample for BGS
DV Digital video footage
VISION 35 mm footage

8.3. Faroe Bank Channel

SITE	HC	HM	PSA	TOC/N	MAC	GEOL	DV	VISION
FBC1000	✓	✓	✓	✓	0.063	✓	('99)	('99)
FBC1200	✓	✓	✓	✓	0.063	✓	('99)	('99)
FSC300	✓	✓	✓	✓	0.1	✓	('99)	('99)
FSC500	✓	✓	✓	✓	0.1	✓	('99)	('99)
FSC800	✓	✓	✓	✓	0.063	✓	('99)	('99)
FSC1000	✓	✓	✓	✓	0.071	✓	('99)	('99)
FSC1200	✓	✓	✓	✓	0.039	✓	('99)	('99)
J	('99)	('99)	('99)	('99)	0.031	--	('99)	('99)
L	✓	✓	✓	✓	0.079	✓	('99)	('99)
N2	✓	✓	✓	✓	0.063	✓	('99)	('99)
P	✓	✓	✓	✓	0.063	✓	('99)	('99)
R2	✓	✓	✓	✓	0.063	✓	('99)	('99)
S	✓	✓	✓	✓	0.071	✓	('99)	('99)
WTS2	--	--	--	--	0.024	--	30 mins	7 m
WTS3	✓	✓	✓	✓	0.071	✓	65 mins	15 m
WTS4	✓	✓	✓	✓	0.063	✓	65 mins	15 m
WTS9	✓	✓	✓	✓	0.063	✓	65 mins	15 m
WTS12	✓	✓	✓	✓	0.079	✓	65 mins	15 m
WTS13	✓	✓	✓	✓	0.063	✓	65 mins	15 m
WTS16	✓	✓	✓	✓	0.071	✓	65 mins	15 m
CT2	✓	--	--	--	--	✓	--	--
CT3	✓	✓	--	--	--	✓	--	--
FBW1	--	--	--	--	--	--	65 mins	15 m
WTS1	--	--	--	--	--	--	30 mins	7 m
WTS14	✓	✓	✓	✓	0.063	--	--	--
WTS15	✓	✓	✓	✓	0.1	--	--	--

Key:

HC	Hydrocarbon sample	MAC	Macrobenthos (m^2)
HM	Heavy metal (elemental analysis) sample	GEOL	Sample for BGS
PSA	Particle size analysis sample	DV	Digital video footage
TOC/N	Total organic C and N sample	VISION	35 mm footage
('99)	Material available from DTI 1999 survey[26]		

[26] Bett, B.J., Jacobs, C.J. and *et al*., 2007. RRS *Charles Darwin* Cruise 119C Leg B, 13 Aug - 14 Sep 1999. White Zone (WhiZ) environmental survey: seabed survey of the deep waters to the north and west of Shetland. Southampton, UK, National Oceanography Centre Southampton, 120pp. (National Oceanography Centre Southampton Cruise Report, 19).

8.4. Faroe-Shetland Channel axial transect

SITE	HC	HM	PSA	TOC/N	MAC	GEOL	MEIOB	DV	VISION
FSC1	✓	✓	✓	✓	0.086	✓	✓	65 mins	15 m
FSC2	✓	✓	✓	✓	0.063	✓	✓	65 mins	15 m
FSC3	✓	✓	✓	✓	0.063	✓	✓	('99)	('99)
FSC4	✓	✓	✓	✓	0.079	✓	✓	('99)	('99)
FSC5	✓	✓	✓	✓	0.071	-	✓	65 mins	15 m
FSC6	✓	✓	✓	✓	0.063	✓	✓	65 mins	15 m
FSC7	✓	✓	✓	✓	0.071	✓	✓	-	15 m
FSC8	✓	✓	✓	✓	0.063	✓	✓	65 mins	15 m
FSC9	✓	✓	✓	✓	0.063	✓	✓	65 mins	15 m
FSC10	5x2	✓	✓	✓	0.094	✓	✓	65 mins	15 m

FSC9	L MAC	S MAC	MESO	MEIO
#2	0.039	0.024	✓	✓
#3	0.039	0.024	✓	✓
#4	0.047	0.024	✓	✓
#5	0.055	0.031	✓	✓
#6	0.039	0.024	✓	✓
#8	0.055	0.031	✓	✓
#9	0.055	0.031	✓	✓
#10	0.047	0.024	✓	✓
#11	0.063	0.031	✓	✓
#12	-	-	✓	✓
#13	0.039	0.024	✓	✓
#14	0.047	0.024	✓	✓
#15	0.063	0.031	-	-

Key:
- HC — Hydrocarbon sample
- HM — Heavy metal (elemental analysis) sample
- PSA — Particle size analysis sample
- TOC/N — Total organic C and N sample
- ('99) — Material available from DTI 1999 survey
- S MAC — Smaller macrobenthos (>250µm, m^2)
- MEIOB — Meiobenthos ($10cm^2$)
- MAC — Macrobenthos (m^2)
- GEOL — Sample for BGS
- DV — Digital video footage
- VISION — 35 mm footage
- L MAC — Larger macrobenthos (>500µm, m^2)
- MESO — Mesobenthos ($80cm^2$)

8.5. West of Shetland transect

SITE	HC	HM	PSA	TOC/N	M500	M250	MEIOB	MICRO	FORAM	FROZEN	GEOL	S GEOL	DV	VISION
B5	✓	✓	✓	✓	0.1	0.1	-	-	-	-	✓	-	-	-
Tr200	✓	✓	✓	✓	0.1	0.1	-	-	-	-	-	-	65 mins	15 m
Tr250	✓	✓	✓	✓	0.1	0.1	2	✓	-	-	-	-	-	-
Tr300	✓	✓	✓	✓	0.1	0.1	2	✓	✓	-	✓	-	-	-
Tr350	✓	✓	✓	✓	0.1	0.1	2	✓	✓	✓	-	-	-	-
L5	✓	✓	✓	✓	0.1	0.1	2	✓	✓	✓	-	-	-	-
Tr450	✓	✓	✓	✓	0.1	0.1	2	-	✓	✓	-	-	-	-
L4	✓	✓	✓	✓	0.1	0.1	2	-	✓	✓	-	-	-	-
Tr550	✓	✓	✓	✓	0.063	0.063	2	-	✓	✓	-	-	-	-
Tr600	✓	✓	✓	✓	0.063	0.063	2	-	✓	✓	-	-	-	-
Tr650	3	✓	✓	✓	0.063	0.063	2	-	✓	-	-	-	-	-
S2	✓	✓	✓	✓	0.063	0.063	2	✓	✓	✓	-	-	-	-
Tr800	✓	✓	✓	✓	0.063	0.063	2	✓	✓	✓	-	✓	-	-
Tr900	✓	✓	✓	✓	0.063	0.063	2	✓	✓	✓	✓	✓	65 mins	15 m
Tr1000	✓	✓	✓	✓	0.063	0.063	2	✓	✓	✓	✓	✓	-	-
Tr1100	✓	✓	✓	✓	0.079	-	2	✓	✓	✓	✓	-	-	-
Tr1200	✓	✓	✓	✓	0.063	-	2	✓	✓	-	✓	-	-	-
Tr1250	✓	✓	✓	✓	0.063	-	2	✓	✓	✓	✓	-	-	-
Tr1300	✓	✓	✓	✓	0.071	-	2	✓	✓	✓	✓	-	-	-

Key:

HC	Hydrocarbon sample	S GEOL	SOC geology
HM	Heavy metal (elemental analysis) sample	GEOL	Sample for BGS
PSA	Particle size analysis sample	DV	Digital video footage
TOC/N	Total organic C and N sample	VISION	35 mm footage
M250	Macrobenthos (250µm, m^2)	M500	Macrobenthos (500µm, m^2)
MEIOB	Meiobenthos ($10cm^2$)	MICRO	Microbiology
FORAM	Foraminiferans	FROZEN	Whole frozen core

8.6. West of Shetland contourite study

SITE	HC	HM	PSA	TOC/N	M500	Q MAC	GEOL	S GEOL	DV	VISION
CS1	✓	✓	✓	✓	0.079	-	✓	✓	65 mins	15 m
CS2	✓	✓	✓	✓	0.063	✓	✓	✓	65 mins	15 m
CS3	✓	✓	✓	✓	0.086	✓	✓	✓	65 mins	15 m
CS4	✓	✓	✓	✓	0.079	✓	✓	✓	65 mins	15 m
CS5	✓	✓	✓	✓	0.079	-	✓	✓	65 mins	15 m
CS6	✓	✓	✓	✓	0.079	-	✓	✓	-	-
CS7	✓	✓	✓	✓	0.071	✓	✓	✓	-	-
CS8	✓	✓	-	-	0.063	-	-	✓	-	-
CS9	✓	✓	✓	✓	0.071	-	✓	✓	-	-
CS10	✓	✓	✓	✓	0.063	-	✓	✓	-	-
CS11	✓	✓	✓	✓	0.063	-	✓	✓	-	-
CS12	✓	✓	✓	✓	0.086	-	✓	✓	-	-
CS13	✓	✓	✓	✓	0.063	-	✓	✓	65 mins	15 m
CS14	-	-	-	-	-	-	-	✓	-	-
WAVE	-	-	-	-	-	-	-	-	65 mins	15 m
WAVE2	-	-	-	-	-	-	-	-	65 mins	15 m

Key:

HC	Hydrocarbon sample	S GEOL	SOC geology
HM	Heavy metal (elemental analysis) sample	GEOL	Sample for BGS
PSA	Particle size analysis sample	DV	Digital video footage
TOC/N	Total organic C and N sample	VISION	35 mm footage
M500	Macrobenthos (500µm, m^2)	Q MAC	Qualitative macrobenthos

8.7. Enterprise survey (Tranche 4)

	SAMPLES IN RANGE (<93 m)						SAMPLES OUT OF RANGE (>93 m)					OP. SAMPLES		
SITE	**HC**	**HM**	**PSA**	**TOC/N**	**MAC**	**A MAC**	**HC**	**HM**	**PSA**	**TOC/N**	**MAC**	**MEIOB**	**GEOL**	**WASP**
ET1	✓	✓	✓	✓	✓	✓						✓	✓	
ET2	✓	✓	✓	✓	✓	✓						✓	✓	
ET3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	ETW5
ET4	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓			
ET5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	
ET6	✓	✓	✓	✓	✓	✓						✓	✓	
ET7	✓	✓	✓	✓	✓									
ET8	✓	✓	✓	✓	✓	✓					✓	✓	✓	ETW6
ET9	✓	✓	✓	✓	✓									ETW3
ET10	✓	✓	✓	✓	✓							✓✓	✓	ETW1
ET11	✓	✓	✓	✓	✓✓		✓	✓	✓	✓	✓✓	✓✓	✓✓	
ET12	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	ETW4
ET13	✓	✓	✓	✓	✓						✓	✓	✓	ETW2
ET14	✓	✓	✓	✓	✓								✓	
ET15	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓		✓	
ET16	✓	✓	✓	✓	✓✓							✓	✓	
ET17	✓	✓	✓	✓	✓								✓	

Key:

In range (<93 m)	USBL navigation indicates sample from within 0.5 cables of target location
Out range (>93 m)	USBL navigation indicates sample from out with 0.5 cables of target location
OP. Sample	Samples collected opportunistically
Sites ET1-15	Planned sites (advised by GEOTEK, from Wendy Brown ECS Ltd)
Sites ET16, 17	Additional sites (added to planned site pattern at sea)

HC	Hydrocarbon sample
HM	Heavy metal (elemental analysis) sample
PSA	Particle size analysis sample
TOC/N	Total organic carbon and nitrogen sample
MAC	Macrobenthos sample 8+ cores (0.063 m2+)
A MAC	Additional macrobenthos material (<8 cores)
MEIOB	Meiobenthos sample
GEOL	Geology sample (BGS)
WASP	Video and still

8.8. Texaco survey (Faroe-Shetland Channel axis)

STN	SITE	HC	HM	PSA	TOC/N	MAC	G CORE	DV	VISION
55391#1	TX1						2.5m		
55391#2	TX1					0.063			
55391#3	TX1	✓	✓	✓	✓	0.031			
55391#4	TX1							65 mins	15m
55393#1	TX2						2.5m		
55447#1	'FSC9'							65 mins	15m
55447#7	'FSC9'							65 mins	15m
55447#16	'FSC9'							65 mins	15m

Key:

HC	Hydrocarbon sample	MAC	Macrobenthos (m^2)
HM	Heavy metal (elemental analysis) sample	G CORE	Gravity core (BGS)
PSA	Particle size analysis sample	DV	Digital video footage
TOC/N	Total organic C and N sample	VISION	35 mm footage

Note: site 'FSC9' is equivalent to site TX1

8.9. North of Shetland area (Tranches 65-67)

SITE	HC	HM	PSA	TOC/N	MAC	GEOL	MEIOB	DV	VISION
NG1	✓	✓	✓	✓	-	✓	-	-	-
NG2	✓	✓	✓	✓	0.1	✓	-	-	-
NG3	✓	✓	✓	✓	0.1	✓	-	-	-
NG4	✓	✓	✓	✓	0.1	✓	-	-	-
NGW	-	-	-	-	-	-	-	65 mins	15 m
NK1	✓	✓	✓	✓	0.1	-	-	-	-
NK2	✓	✓	✓	✓	0.1	-	-	-	-
NK3	✓	✓	✓	✓	0.1	-	-	-	-
NK4	-	-	-	-	0.1	-	-	-	-
NKW	-	-	-	-	-	-	-	65 mins	15 m
NN1	✓	✓	✓	✓	0.1	✓	-	-	-
NN2	✓	✓	✓	✓	0.1	-	-	-	-
NN3	✓	✓	✓	✓	-	-	-	-	-
NN4	✓	✓	✓	✓	0.1	-	-	-	-
NNW	-	-	-	-	-	-	-	65 mins	15 m
NR1	✓	✓	✓	✓	0.063	✓	-	-	-
NR2	✓	✓	✓	✓	0.102	✓	-	-	-
NR3	✓	✓	✓	✓	0.063	✓	-	-	-
NR4	✓	✓	✓	✓	0.071	✓	✓	-	-
NRW	-	-	-	-	-	-	-	65 mins	15 m
NU1	✓	✓	✓	✓	0.063	✓	✓	-	-
NU2	✓	✓	✓	✓	0.094	✓	✓	-	-
NU3	✓	✓	✓	✓	0.063	✓	-	-	-
NU4	✓	✓	✓	✓	0.063	✓	-	-	-
NU5	✓	✓	✓	✓	0.126	✓	-	-	-
[N.B. WASP coverage available from Statoil / BP Sites SBA3, 5 and SBD3]									
NW1	✓	✓	✓	✓	0.102	✓	✓	-	-
NW2	✓	✓	✓	✓	0.118	✓	✓	-	-
NW3	✓	✓	✓	✓	0.063	✓	-	-	-
NW4	✓	✓	✓	✓	0.126	✓	✓	-	-
NW5	✓	✓	✓	✓	0.063	-	-	-	-
NWW	-	-	-	-	-	-	-	65 mins	15 m

BGS1	Gravity core (2.3 m)
BGS4	Gravity core (2.3 m)

Key:

HC	Hydrocarbon sample	MAC	Macrobenthos (m^2)
HM	Heavy metal (elemental analysis) sample	GEOL	Sample for BGS
PSA	Particle size analysis sample	DV	Digital video footage
TOC/N	Total organic C and N sample	VISION	35 mm footage
MEIOB	Meiobenthos ($10cm^2$)		

8.10. Statoil / BP survey (North of Shetland)

SITE	HC	HM	PSA	TOC/N	MAC	GEOL	MEIOB	DV	VISION
SBA1	✓	✓	✓	✓	0.094	✓	-	-	-
SBA2	✓	✓	✓	✓	0.094	✓	-	-	-
SBA2.5	✓	✓	✓	✓	0.063	✓	-	-	-
SBA3	✓	✓	✓	✓	0.086	✓	-	130 mins	30 m
SBA3.5	✓	✓	✓	✓	0.11	✓	-	-	-
SBA4	✓	✓	✓	✓	0.063	✓	-	-	-
SBA5	✓	✓	✓	✓	0.063	✓	-	65 mins	15 m
SBA5.5	✓	✓	✓	✓	0.063	✓	-	-	-
SBA6	✓	✓	✓	✓	0.126	✓	-	-	-
"SBA6"	✓	✓	✓	✓	0.063	✓	-	-	-
SBB1	✓	✓	✓	✓	0.071	✓	✓	-	-
SBB2	✓	✓	✓	✓	0.063	✓	-	-	-
SBB3	✓	✓	✓	✓	0.063	✓	-	-	-
SBB4	✓	✓	✓	✓	0.118	✓	-	-	-
SBB5	✓	✓	✓	✓	0.063	-	-	-	-
SBB6	✓	✓	✓	✓	0.063	✓	-	-	-
SBC1	✓	✓	✓	✓	0.063	-	-	-	-
SBC2	✓	✓	✓	✓	0.063	✓	✓	-	-
SBC3	✓	✓	✓	✓	0.063	-	-	-	-
SBC4	✓	✓	✓	✓	0.118	✓		-	-
SBC5	✓	✓	✓	✓	0.11	✓	✓	-	-
SBC6	✓	✓	✓	✓	0.086	✓	-	-	-
SBD3	✓	✓	✓	✓	0.102	✓	-	65 mins	30 m
SBD5	✓	✓	✓	✓	0.063	-	-	-	-
SBE3	✓	✓	✓	✓	0.063	-	-	-	-
SBE5	✓	✓	✓	✓	0.103	✓	✓	-	-
WFA1	Gravity core (2.4 m)								
WFA3	Gravity core (2.4 m)								
WFA2	Gravity core (2.1 m)								
SBB3	Gravity core (2.4 m)								

Key:
- HC — Hydrocarbon sample
- HM — Heavy metal (elemental analysis) sample
- PSA — Particle size analysis sample
- TOC/N — Total organic C and N sample
- MEIOB — Meiobenthos ($10cm^2$)
- MAC — Macrobenthos (m^2)
- GEOL — Sample for BGS
- DV — Digital video footage
- VISION — 35 mm footage

8.11. Brae survey (North Sea)

	Day grab				Megacore			
SITE	**HC**	**HM**	**PSA**	**MAC**	**HC**	**HM**	**PSA**	**MAC**
A2	✓	✓	✓	0.1	--	--	--	--
A5	✓	✓	✓	0.1	--	--	--	--
A7	✓	✓	✓	0.1	--	--	--	--
A9	✓	✓	✓	0.1	--	--	--	--
XA1	✓	✓	✓	0.1	--	--	--	--
XA2	✓	✓	✓	0.1	--	--	--	--
B3	✓	✓	✓	--	--	--	--	--
B5	✓	✓	✓	--	--	--	--	--
B8	✓	✓	✓	--	--	--	--	--
XB1	✓	✓	✓	--	--	--	--	--
XB2	✓	✓	✓	0.1	✓	✓	✓	--
B6R	✓	✓	✓	0.1	✓	✓	✓	--
B7R	✓	✓	✓	0.1	✓	✓	✓	--
E1	✓	✓	✓	0.1	✓	✓	✓	0.063
E4	✓	✓	✓	0.1	--	--	--	--
E6	✓	✓	✓	0.2	--	--	--	--
E8	✓	✓	✓	0.1	--	--	--	--
XE1	✓	✓	✓	0.1	--	--	--	--
XE2	✓	✓	✓	0.1	--	--	--	--

Key: HC Hydrocarbon sample
HM Heavy metal (elemental analysis) sample
PSA Particle size analysis sample
MAC Macrobenthos (m^2)

8.12. Fladen Ground (North Sea)

Summary table

GEAR	DAY GRAB			MEGACORE								G.CORE
SAMPLE	HC	HM	PSA	HC	HM	PSA	SPEC	RADIO	MEIOB	MESO	MAC	GEOL
SECTION (cm)	0-2	0-2	0-2	0-30	0-30	0-30	0-2	0-30	0-5	0-10	0-10	0-30
T3-55	✓	✓	✓	✓	✓	✓	✓	-	✓	-	-	-
T3-59	✓	✓	✓	✓	✓	✓	✓	-	✓	-	-	-
T3-61	✓	✓	✓	✓	✓	✓	✓	-	✓	-	-	-
T3-63	✓	✓	✓	✓	✓	✓	✓	-	✓	-	-	-
T3-65	✓	✓	✓	✓	✓	✓	✓	-	✓	-	-	-
T3-67	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	-
T3-69	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	-
T3-71	✓	✓	✓	✓	✓	✓	✓	-	✓	-	-	-
T3-73	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
T3-75	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	-
T3-77	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	-
T3-80	✓	✓	✓	✓	✓	✓	✓	-	✓	-	-	-
T6-1	✓	✓	✓	✓	✓	✓	✓	-	✓	-	-	-
T6-2	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	-
T6-3	✓	✓	✓	✓	✓	✓	✓	-	✓	-	-	-
T6-4	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	-
T6-5	✓	✓	✓	✓	✓	✓	✓	-	✓	-	-	-
T6-6	✓	✓	✓	✓	✓	✓	✓	-	✓	-	-	-
T6-7	✓	✓	✓	✓	✓	✓	✓	-	✓	-	-	-
T6-8	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	-
ALBA4	✓	✓	✓	✓	✓	✓	✓	-	✓	-	-	-
ALBA3	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-
ALBA2	✓	✓	✓	-	-	-	-	-	-	-	-	-
ALBA1	✓	✓	✓	-	-	-	-	-	-	-	-	-
T1-111	✓	✓	✓	-	-	-	-	-	-	-	-	-
T1-113	✓	✓	✓	-	-	-	-	-	-	-	-	-
T1-115	✓	✓	✓	-	-	-	-	-	-	-	-	-
T1-117	✓	✓	✓	-	-	-	-	-	✓	✓	✓	-
T2-91	✓	✓	✓	-	-	-	-	-	-	-	-	-
T2-93	✓	✓	✓	-	-	-	-	-	-	-	-	-
T2-97	✓	✓	✓	-	-	-	-	-	-	-	-	-
T4-43	✓	✓	✓	-	-	-	-	-	-	-	-	-
T4-45	✓	✓	✓	-	-	-	-	-	-	-	-	-
T4-47	✓	✓	✓	-	-	-	-	-	-	-	-	-
T4-49	✓	✓	✓	-	-	-	-	-	-	-	-	-
T4-51	✓	✓	✓	-	-	-	-	-	-	-	-	-
T5-15	✓	✓	✓	-	-	-	-	-	-	-	-	-
T5-17	✓	✓	✓	-	-	-	-	-	-	-	-	-
T5-19	✓	✓	✓	-	-	-	-	-	-	-	-	-
T5-21	✓	✓	✓	-	-	-	-	-	-	-	-	-

Key:
HC Hydrocarbon sample
HM Heavy metal (elemental analysis) sample
PSA Particle size analysis sample
SPEC 'Speciality' chemicals
RADIO Radioisotopes
MAC Macrobenthos
MESO Mesobenthos
MEIOB Meiobenthos
G.CORE Gravity core

Detailed table

GEAR	DAY GRAB			MEGACORE																										G.CORE
SAMPLE	HC	HM	PSA	HC							HM							PSA							SPEC	RADIO	MEIOB	MESOB	MACROB 0-10 cm		GEOL
S/F	0-2	0-2	0-2	0-2	2-5	5-10	10-15	15-20	20-25	25-30	0-2	2-5	5-10	10-15	15-20	20-25	25-30	0-2	2-5	5-10	10-15	15-20	20-25	25-30	0-2	Full	0-5	0-10	500µm	250µm	Full
T3-55	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	-	-	-	-
T3-59	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	-	-	-	-
T3-61	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	-	-	-	-
T3-63	✓	✓	✓	✓	✓	✓	✓	✓	✓	25-27	✓	✓	✓	✓	✓	✓	25-27	✓	✓	✓	✓	✓	✓	25-27	✓	-	✓	-	-	-	-
T3-65	✓	✓	✓	✓	✓	✓	✓	✓	✓	25-27	✓	✓	✓	✓	✓	✓	25-27	✓	✓	✓	✓	✓	✓	25-27	✓	-	✓	-	-	-	-
T3-67	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-
T3-69	✓	✓	✓	5 dup 1 norm	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	6 rep	2 rep	0.071	0.071	-
T3-71	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	25-29	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	-	-	-	-
T3-73	5 rep	✓	✓	5 rep 5 quin	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	5 rep	2 rep	2 rep	0.055	0.055	3 rep
T3-75	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-
T3-77	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	2 rep	2 rep	0.055	0.055	-
T3-80	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	-	-	-	-
T6-1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	-	-	-	-
T6-2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-
T6-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	-	-	-	-
T6-4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-
T6-5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	-	-	-	-
T6-6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	-	-	-	-
T6-7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	-	-	-	-
T6-8	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	2 rep	2 rep	0.11	0.11	-
ALBA4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	-	-	-	-
ALBA3	✓	✓	✓	✓	✓	✓	✓	✓	✓	25-27	✓	✓	✓	✓	✓	✓	25-29	✓	✓	✓	✓	✓	✓	25-26	-	-	-	-	-	-	-
ALBA2	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ALBA1	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T1-111	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T1-113	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T1-115	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T1-117	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2 rep	2 rep	0.079	0.079	-
T2-91	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T2-93	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T2-97	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T4-43	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T4-45	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T4-47	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T4-49	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T4-51	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T5-15	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T5-17	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T5-19	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
T5-21	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Key:

HC	Hydrocarbon sample	MACROB	Macrobenthos	SPEC	'Speciality' chemicals	S/F	Section / Faction	dup	duplicates
HM	Heavy metal (elemental analysis)	MESOB	Mesobenthos	RADIO	Radioisotopes		sediment horizon (cm)	quin	quintuplicates
PSA	Particle size analysis	MEIOB	Meiobenthos	G.CORE	Gravity core		sieve mesh (µm)	rep	replicates

9. STATION LIST

9.1. Station data

The following listing details basic station information and the primary survey samples collected. Further information is given in Section 9.2, which provides a comment on each deployment and lists other samples collected.

Station Station and series number. The first five digits are the station number, which is separated from the series number by the hash (#) mark. The station number increments by one each time the vessel locates to another nominal site, regardless of whether that site has been sampled previously. The series number increments by one for each deployment made at a station.

Site Site name. The site name identifies a particular nominal survey location. Site names are unique within the cruise but do not uniquely identify particular deployments.

Ops Operations undertaken on behalf of the Department of Trade and Industry (DTI) and commercial concerns (COMM) are indicated; please note that information associated with the latter should be regarded as *commercial-in-confidence* - you must seek their consent to make any use of this information.

Gear type Gear deployed.

BGS CORE	Gravity corer (BGS model)
BOX CORE	USNEL-type spade box corer (0.25m^2)
DAY GRAB	Day grab (0.1m^2)
MEGAxx	Megacorer with xx core units fitted
MOORING	Stn. 55202#1 (Site TRNSP); a simple mooring used for USBL calibration exercise Stn. 55277#1 (Site BP1); Bathysnap (moored time-lapse camera) system, see Section 7.
WASP	Wide-Angle Seabed Photography vehicle with video and still cameras fitted

Date Date on which deployment was made (note that towed gear and mooring deployments may span two dates).

Time The time or times given relate to sample / data collection. In the case of grabs and cores the time given is that of bottom contact. In the case of WASP and moorings the times reflect the duration of near- or on-bottom operations. All times given are UTC / GMT.

Nav. Navigation type: SHIP = ship's position (DGPS); GEAR = deployed gear's position (DGPS plus USBL).

Position Sample position / track. In the case of grabs, cores and moorings, the position given is that of the vessel or gear at the time of bottom contact. In the case of WASP, the positions given are the start and end points of the track of near-bottom operations. Consult the corresponding deployment track chart in Section 10 for details of individual WASP tows. All positions are given in degrees and decimal minutes based on the WGS84 datum.

Depth The depth or depths given relate to sample / data collection. In the case of grabs, cores and moorings the depth given is that below the vessel at the time of bottom contact. In the case of WASP the depths reflect the range covered during the time of near- or on-bottoms operations. For WASP these are the range of depths covered below the vessel [and/or derived from USBL data] between the times given. All depths given are in corrected metres.

HC Hydrocarbon. Y, sample for hydrocarbon analysis collected (-, no sample collected).

HM Heavy metals. Y, sample for elemental analysis collected (-, no sample collected).

PS Particle size. Y, sample for particle size analysis collected (-, no sample collected).

MAC Macrobenthos. Y, sample for macrobenthos analysis collected (-, no sample collected).

(m^2) Macrobenthos sample size (i.e. seabed surface area sampled).

Please consult Section 9.2 for full details of all samples collected.

Station number	Site name	Ops	Gear type	Date 2000	Time (UTC)	Navig ation	Position Lat	Long	Depth (m)	HC	HM	PSA	MAC	(m²)
55201#1	BGS1	DTI	WASP	21/07	03:15:00	Ship	58 58.70N	7 34.07W	630					
		DTI		21/07	04:21:00	Ship	58 58.58N	7 35.54W	680					
55202#1	TRNSP	DTI	MOORING	21/07	05:51:00	Ship	58 58.72N	7 36.82W	518					
		DTI		21/07	09:40:00	Ship	58 58.72N	7 36.82W	518					
55203#1	YR1	DTI	MEGA08	21/07	17:05:00	Gear	59 34.66N	8 55.38W	1389	Y	Y	Y	Y	0.023
55203#2	YR1	DTI	MEGA08	21/07	18:47:00	Gear	59 34.69N	8 55.02W	1387	N	N	N	N	
55203#3	YR1	DTI	MEGA08	21/07	20:02:00	Ship	59 33.65N	8 55.59W	1389	N	N	N	Y	0.055
55204#1	YR2	DTI	MEGA08	21/07	22:53:00	Gear	59 40.28N	8 41.58W	1285	Y	Y	Y	N	
55204#2	YR2	DTI	MEGA08	22/07	00:21:00	Gear	59 40.55N	8 42.12W	1291	N	N	N	Y	0.063
55205#1	YR3	DTI	MEGA08	22/07	03:06:00	Gear	59 44.10N	8 33.36W	1172	Y	N	Y	N	
55205#2	YR3	DTI	MEGA08	22/07	04:25:00	Gear	59 43.83N	8 33.84W	1179	N	Y	N	N	
55205#3	YR3	DTI	MEGA08	22/07	05:39:00	Gear	59 43.59N	8 33.90W	1181	N	N	N	N	
55205#4	YR3	DTI	BOX CORE	22/07	07:00:00	Gear	59 43.87N	8 33.86W	1181	N	N	N	N	
55205#5	YR3	DTI	BOX CORE	22/07	08:18:00	Gear	59 43.76N	8 34.20W	1186	N	N	N	N	
55205#6	YR3	DTI	MEGA04	22/07	09:44:00	Gear	59 43.83N	8 34.20W	1186	N	N	N	Y	0.031
55205#7	YR3	DTI	MEGA04	22/07	10:56:00	Gear	59 43.90N	8 34.02W	1183	N	N	N	Y	0.031
55206#1	YR4	DTI	MEGA04	22/07	12:33:00	Gear	59 46.49N	8 28.02W	1095	Y	Y	Y	N	
55206#2	YR4	DTI	MEGA04	22/07	14:09:00	Gear	59 46.27N	8 27.94W	1092	N	N	N	Y	0.031
55206#3	YR4	DTI	MEGA04	22/07	15:20:00	Gear	59 46.37N	8 28.02W	1094	N	N	N	Y	0.016
55206#4	YR4	DTI	MEGA04	22/07	16:26:00	Gear	59 46.27N	8 28.08W	1094	N	N	N	Y	0.031
55207#1	YR5	DTI	MEGA04	22/07	18:17:00	Gear	59 49.13N	8 21.70W	998	Y	Y	Y	N	
55207#2	YR5	DTI	MEGA04	22/07	19:23:00	Gear	59 48.97N	8 22.14W	1004	N	N	N	Y	0.024
55207#3	YR5	DTI	MEGA06	22/07	20:29:00	Gear	59 49.06N	8 21.56W	995	N	N	N	Y	0.047
55208#1	YRW1	DTI	WASP	22/07	22:35:00	Gear	59 55.17N	8 7.32W	532					
		DTI		22/07	23:42:00	Gear	59 56.33N	8 6.06W	431					
55209#1	YRW2	DTI	WASP	23/07	02:45:00	Gear	60 1.86N	7 50.87W	708					
		DTI		23/07	03:53:00	Gear	60 2.50N	7 51.27W	723					
55210#1	YR6	DTI	BOX CORE	23/07	05:09:00	Gear	60 3.31N	7 45.12W	677	Y	Y	Y	Y	0.1
55211#1	YR7	DTI	BOX CORE	23/07	06:26:00	Gear	59 59.74N	7 43.08W	584	Y	Y	Y	Y	0.1
55212#1	YR8	DTI	BOX CORE	23/07	07:50:00	Gear	59 54.53N	7 39.06W	602	N	N	N	N	
55212#2	YR8	DTI	BOX CORE	23/07	08:44:00	Gear	59 54.51N	7 39.65W	598	Y	Y	Y	Y	0.1
55213#1	YR9	DTI	BOX CORE	23/07	10:16:00	Gear	59 52.33N	7 37.62W	697	Y	Y	Y	Y	0.1
55214#1	YR10	DTI	BOX CORE	23/07	14:34:00	Gear	59 56.66N	7 40.98W	550	Y	Y	Y	Y	0.1
55215#1	YR11	DTI	BOX CORE	23/07	16:26:00	Gear	60 0.29N	7 54.57W	693	Y	Y	Y	Y	0.1
55216#1	YR12	DTI	BOX CORE	23/07	18:01:00	Gear	59 57.52N	8 1.74W	610	Y	Y	Y	Y	0.1
55217#1	YR13	DTI	BOX CORE	23/07	19:23:00	Gear	59 55.12N	8 7.12W	531	N	N	N	N	
55217#2	YR13	DTI	BOX CORE	23/07	20:06:00	Gear	59 55.37N	8 6.54W	536	Y	Y	Y	Y	0.1
55218#1	YRW3	DTI	WASP	23/07	23:23:00	Gear	59 56.66N	8 25.74W	975					
		DTI		24/07	00:31:00	Gear	59 56.95N	8 24.08W	851					
55219#1	YRW4	DTI	WASP	24/07	02:22:00	Gear	59 56.09N	8 31.61W	1352					
		DTI		24/07	03:30:00	Gear	59 56.31N	8 30.77W	1295					

Station number	Site name	Ops	Gear type	Date 2000	Time (UTC)	Navig ation	Position Lat	Long	Depth (m)	HC	HM	PSA	MAC	(m²)
55220#1	YR14	DTI	MEGA04	24/07	11:17:00	Gear	59 54.75N	8 30.48W	1200	Y	Y	Y	N	
55220#2	YR14	DTI	BGS CORE	24/07	12:57:00	Gear	59 53.94N	8 31.54W	1142					
55221#1	YRW5	DTI	WASP	24/07	16:03:00	Gear	59 52.44N	8 51.12W	1245					
		DTI		24/07	17:10:00	Gear	59 52.71N	8 50.36W	1278					
55222#1	YRW6	DTI	WASP	24/07	19:06:00	Gear	59 54.67N	8 57.60W	1304					
		DTI		24/07	20:16:00	Gear	59 55.19N	8 56.88W	1240					
55223#1	YR15	DTI	BOX CORE	24/07	22:11:00	Gear	59 52.53N	8 50.70W	1298	N	N	N	N	
55223#2	YR15	DTI	BOX CORE	24/07	23:54:00	Gear	59 53.32N	8 50.27W	1279	Y	Y	Y	Y	0.1
55224#1	YR16	DTI	MEGA08	25/07	03:09:00	Gear	59 45.23N	8 45.33W	1308	N	N	N	Y	0.063
55224#2	YR16	DTI	MEGA08	25/07	04:52:00	Gear	59 45.05N	8 45.12W	1307	Y	Y	Y	Y	0.031
55225#1	YRW7	DTI	WASP	25/07	06:34:00	Gear	59 45.02N	8 44.82W	1271					
		DTI		25/07	07:06:00	Gear	59 45.33N	8 44.76W	1274					
55226#1	YRW8	DTI	WASP	25/07	09:15:00	Gear	59 40.27N	8 41.52W	1248					
		DTI		25/07	09:47:00	Gear	59 40.47N	8 41.94W	1205					
55227#1	WTS1	DTI	BOX CORE	26/07	01:43:00	Gear	59 50.07N	5 54.30W	674	N	N	N	N	
55228#1	WTS1	DTI	WASP	26/07	03:17:00	Gear	59 49.99N	5 54.93W	547					
		DTI		26/07	03:48:00	Gear	59 50.24N	5 54.12W	634					
55229#1	WTS2	DTI	WASP	26/07	05:17:00	Gear	59 51.36N	5 54.42W	818					
		DTI		26/07	05:47:00	Gear	59 51.34N	5 53.52W	811					
55230#1	WTS2	DTI	MEGA06	26/07	06:57:00	Gear	59 51.11N	5 54.33W	811	N	N	N	N	
55230#2	WTS2	DTI	MEGA04	26/07	07:58:00	Gear	59 50.99N	5 54.00W	811	N	N	N	Y	0.024
55230#3	WTS2	DTI	MEGA04	26/07	09:00:00	Gear	59 50.94N	5 54.56W	781	N	N	N	N	
55231#1	WTS3	DTI	MEGA04	26/07	11:03:00	Gear	59 58.42N	5 55.08W	1000	Y	Y	Y	N	
55231#2	WTS3	DTI	MEGA04	26/07	12:03:00	Gear	59 58.34N	5 55.32W	999	N	N	N	Y	0.031
55231#3	WTS3	DTI	MEGA06	26/07	13:07:00	Gear	59 58.39N	5 55.02W	1000	N	N	N	Y	0.039
55232#1	WTS3	DTI	WASP	26/07	14:35:00	Gear	59 58.58N	5 54.18W	1919					
		DTI		26/07	15:40:00	Gear	59 58.66N	5 53.40W	1332					
55233#1	FSC1200	DTI	MEGA04	26/07	18:32:00	Gear	60 9.46N	5 55.98W	1151	N	N	N	N	
55233#2	FSC1200	DTI	MEGA04	26/07	19:52:00	Gear	60 9.07N	5 57.72W	1156	Y	Y	Y	N	
55233#3	FSC1200	DTI	MEGA06	26/07	21:11:00	Gear	60 9.26N	5 57.42W	1158	N	N	N	Y	0.016
55233#4	FSC1200	DTI	MEGA06	26/07	22:29:00	Gear	60 9.32N	5 57.18W	1159	N	N	N	Y	0.024
55233#5	FSC1200	DTI	MEGA06	26/07	23:41:00	Gear	60 9.29N	5 57.72W	1160	N	N	N	N	
52234#1	SITE P	DTI	MEGA06	27/07	01:31:00	Gear	60 12.11N	6 4.56W	1191	N	N	N	Y	0.047
55234#2	SITE P	DTI	MEGA06	27/07	02:43:00	Gear	60 12.04N	6 4.68W	1193	Y	Y	Y	Y	0.016
55235#1	SITE N2	DTI	MEGA06	27/07	04:38:00	Gear	60 11.80N	6 10.44W	1196	N	N	N	Y	0.024
55235#2	SITE N2	DTI	MEGA06	27/07	05:52:00	Gear	60 11.83N	6 10.50W	1196	N	N	N	Y	0.008
55235#3	SITE N2	DTI	MEGA04	27/07	07:00:00	Gear	60 11.72N	6 10.44W	1197	N	N	N	Y	0.031
55235#4	SITE N2	DTI	MEGA04	27/07	08:14:00	Gear	60 11.82N	6 10.68W	1196	Y	Y	Y	N	
55236#1	WTS4	DTI	WASP	27/07	10:10:00	Gear	60 7.67N	6 12.96W	1981					
		DTI		27/07	11:17:00	Gear	60 7.94N	6 13.56W	2349					
55237#1	FBC1200	DTI	MEGA06	27/07	13:43:00	Gear	60 10.22N	6 32.88W	1183	N	N	N	Y	0.047

Station number	Site name	Ops	Gear type	Date 2000	Time (UTC)	Navig ation	Position Lat	Long	Depth (m)	HC	HM	PSA	MAC	(m²)
55237#2	FBC1200	DTI	MEGA06	27/07	14:55:00	Gear	60 10.61N	6 32.58W	1188	Y	Y	Y	Y	0.016
55238#1	FBC1000	DTI	MEGA06	27/07	17:22:00	Gear	60 6.79N	6 50.52W	991	Y	Y	Y	Y	0.016
55238#2	FBC1000	DTI	MEGA08	27/07	18:29:00	Gear	60 6.77N	6 50.52W	993	N	N	N	Y	0.047
55239#1	WTW1	DTI	WASP	27/07	21:09:00	Gear	60 6.12N	7 17.22W	487					
		DTI		27/07	22:17:00	Gear	60 6.51N	7 16.92W	487					
55240#1	WTW2	DTI	WASP	28/07	00:23:00	Ship	60 1.33N	7 0.42W	1724					
		DTI		28/07	01:30:00	Ship	60 1.37N	6 59.28W	2380					
55241#1	WTS5	DTI	BOX CORE	28/07	02:52:00	Gear	59 57.32N	6 59.46W	699	Y	Y	Y	Y	0.1
55242#1	WTS6	DTI	BOX CORE	28/07	03:52:00	Gear	59 56.83N	6 59.94W	808	Y	Y	Y	Y	0.1
55243#1	WTS7	DTI	MEGA06	28/07	05:28:00	Gear	59 54.97N	7 2.40W	889	N	N	N	Y	0.039
55243#2	WTS7	DTI	MEGA06	28/07	06:32:00	Gear	59 54.97N	7 2.79W	876	Y	Y	Y	Y	0.024
55244#1	WTS8	DTI	MEGA06	28/07	08:04:00	Gear	59 53.00N	7 4.26W	957	N	N	N	N	
55244#2	WTS8	DTI	MEGA04	28/07	08:58:00	Gear	59 53.18N	7 4.08W	967	Y	Y	Y	N	
55244#3	WTS8	DTI	BOX CORE	28/07	09:58:00	Gear	59 52.97N	7 4.92W	957	N	N	N	N	
55244#4	WTS8	DTI	BOX CORE	28/07	10:46:00	Gear	59 52.70N	7 4.69W	967	N	N	N	N	0.1
55244#5	WTS8	DTI	BGS CORE	28/07	11:40:00	Gear	59 53.01N	7 4.33W	955					
55245#1	FSC300	DTI	DAY GRAB	30/07	03:24:00	Ship	59 53.24N	5 9.38W	249	N	N	N	Y	0.1
55245#2	FSC300	DTI	DAY GRAB	30/07	03:47:00	Ship	59 53.24N	5 9.38W	247	N	N	N	N	
55245#3	FSC300	DTI	DAY GRAB	30/07	04:27:00	Ship	59 53.24N	5 9.38W	254	Y	Y	Y	N	
55246#1	FSC500	DTI	BOX CORE	30/07	06:18:00	Ship	59 56.88N	5 18.46W	508	Y	Y	Y	Y	0.1
55247#1	FSC800	DTI	MEGA06	30/07	08:11:00	Ship	59 59.79N	5 30.89W	793	Y	N	Y	N	
55247#2	FSC800	DTI	MEGA06	30/07	09:01:00	Ship	60 0.05N	5 31.33W	790	N	Y	N	Y	0.031
55247#3	FSC800	DTI	MEGA06	30/07	10:02:00	Gear	59 59.89N	5 30.60W	792	N	N	N	Y	0.031
55248#1	FSC1000	DTI	MEGA08	30/07	11:49:00	Gear	60 3.76N	5 41.82W	966	Y	Y	Y	Y	0.008
55248#2	FSC1000	DTI	MEGA06	30/07	12:57:00	Gear	60 3.56N	5 42.68W	972	N	N	N	Y	0.039
55248#3	FSC1000	DTI	MEGA06	30/07	13:56:00	Gear	60 3.90N	5 42.60W	975	N	N	N	Y	0.024
55249#1	WTS9	DTI	MEGA06	30/07	15:46:00	Gear	60 4.43N	5 56.22W	1067	N	N	N	Y	0.039
55249#2	WTS9	DTI	MEGA08	30/07	16:53:00	Gear	60 4.31N	5 56.04W	1064	Y	Y	Y	Y	0.024
55250#1	WTS9	DTI	WASP	30/07	18:12:00	Gear	60 4.83N	5 55.20W	996					
		DTI		30/07	19:22:00	Gear	60 4.88N	5 54.02W	1044					
55251#1	WTW6	DTI	WASP	30/07	22:30:00	Gear	59 49.72N	6 9.78W	468					
		DTI		30/07	23:37:00	Gear	59 49.49N	6 11.22W	468					
55252#1	WTS10	DTI	MEGA06	31/07	02:19:00	Gear	59 50.88N	6 34.36W	902	N	N	N	N	
55252#2	WTS10	DTI	MEGA04	31/07	03:25:00	Gear	59 51.14N	6 33.12W	801	N	Y	N	N	
55252#3	WTS10	DTI	MEGA02	31/07	04:17:00	Gear	59 51.35N	6 32.94W	817	Y	N	Y	N	
55252#4	WTS10	DTI	WASP	31/07	05:26:00	Gear	59 50.94N	6 32.70W	2151					
		DTI		31/07	05:56:00	Gear	59 51.13N	6 32.34W	1880					
55253#1	WTS11	DTI	WASP	31/07	07:41:00	Gear	59 50.44N	6 36.54W	911					
		DTI		31/07	08:13:00	Gear	59 50.60N	6 36.18W	917					
55253#2	WTS11	DTI	MEGA04	31/07	09:12:00	Gear	59 50.32N	6 36.32W	916	Y	Y	Y	N	
55253#3	WTS11	DTI	BOX CORE	31/07	10:09:00	Gear	59 50.14N	6 36.47W	915	N	N	N	N	

Station number	Site name	Ops	Gear type	Date 2000	Time (UTC)	Navig ation	Position Lat	Long	Depth (m)	HC	HM	PSA	MAC	(m²)
55253#4	WTS11	DTI	BOX CORE	31/07	11:09:00	Gear	59 50.16N	6 37.08W	907	N	N	N	N	
55253#5	WTS11	DTI	BOX CORE	31/07	12:08:00	Gear	59 50.07N	6 36.30W	914	N	N	N	Y	0.1
55254#1	WTS8	DTI	WASP	31/07	15:43:00	Gear	59 52.98N	7 5.14W	2287					
		DTI		31/07	16:50:00	Gear	59 52.88N	7 4.06W	962					
55255#1	WTS8	DTI	BGS CORE	31/07	18:05:00	Ship	59 52.97N	7 04.76W	960					
55256#1	WTS5/6	DTI	WASP	31/07	19:56:00	Gear	59 57.75N	7 0.48W	672					
		DTI		31/07	20:28:00	Gear	59 58.09N	7 0.42W	672					
55257#1	WTW3	DTI	WASP	31/07	22:07:00	Gear	60 2.27N	6 46.68W	526					
		DTI		31/07	22:39:00	Gear	60 2.25N	6 45.24W	526					
55258#1	WTW4	DTI	WASP	31/07	23:51:00	Gear	59 58.52N	6 43.81W	361					
		DTI		01/08	00:22:00	Gear	59 58.51N	6 42.40W	361					
55259#1	WTW5	DTI	WASP	01/08	01:49:00	Gear	60 0.40N	6 31.32W	1656					
		DTI		01/08	02:26:00	Gear	60 0.32N	6 30.34W	2088					
55260#1	CT1	DTI	MEGA04	01/08	03:54:00	Gear	60 2.31N	6 27.96W	903	N	N	N	N	
55260#2	CT1	DTI	MEGA04	01/08	04:46:00	Gear	60 2.41N	6 26.88W	948	N	N	N	N	
55261#1	CT2	DTI	MEGA02	01/08	05:59:00	Gear	60 3.38N	6 28.38W	1027	N	N	N	N	
55261#2	CT2	DTI	MEGA02	01/08	06:58:00	Gear	60 3.71N	6 27.36W	1053	Y	N	N	N	
55262#1	CT3	DTI	MEGA04	01/08	08:20:00	Gear	60 4.79N	6 27.54W	1101	Y	Y	N	N	
55263#1	SITE J	DTI	MEGA04	01/08	10:24:00	Gear	60 1.74N	6 18.30W	998	N	N	N	Y	0.031
55264#1	SITE L	DTI	MEGA06	01/08	11:52:00	Gear	60 4.24N	6 16.97W	1048	N	N	N	Y	0.031
55264#2	SITE L	DTI	MEGA06	01/08	13:15:00	Gear	60 3.85N	6 17.52W	1042	N	N	N	Y	0.031
55264#3	SITE L	DTI	MEGA06	01/08	14:34:00	Gear	60 4.00N	6 18.18W	1046	Y	Y	Y	Y	0.016
55265#1	WTS4	DTI	MEGA06	01/08	16:50:00	Gear	60 7.30N	6 13.68W	1157	Y	Y	Y	Y	0.024
55265#2	WTS4	DTI	MEGA08	01/08	18:12:00	Gear	60 7.52N	6 12.84W	1164	N	N	N	Y	0.039
55266#1	FSC1200	DTI	MEGA06	01/08	20:57:00	Gear	60 9.60N	5 55.94W	1157	N	N	N	N	
55266#2	FSC1200	DTI	MEGA04	01/08	22:10:00	Gear	60 9.48N	5 56.34W	1160	N	N	N	N	
55267#1	SITE R2	DTI	MEGA04	02/08	00:12:00	Gear	60 10.68N	5 43.62W	1125	N	N	N	Y	0.031
55267#2	SITE R2	DTI	MEGA04	02/08	01:37:00	Gear	60 10.82N	5 43.74W	1129	Y	Y	Y	N	
55267#3	SITE R2	DTI	MEGA04	02/08	02:59:00	Gear	60 10.69N	5 44.40W	1132	N	N	N	Y	0.016
55267#4	SITE R2	DTI	MEGA04	02/08	04:22:00	Gear	60 10.66N	5 44.22W	1129	N	N	N	Y	0.016
55267#5	SITE R2	DTI	BGS CORE	02/08	05:52:00	Gear	60 11.14N	5 43.74W	1134					
55268#1	WTS12	DTI	MEGA06	02/08	08:05:00	Gear	60 8.69N	5 27.42W	937	N	N	N	Y	0.047
55268#2	WTS12	DTI	MEGA06	02/08	09:20:00	Gear	60 8.48N	5 27.96W	939	Y	Y	Y	Y	0.008
55268#3	WTS12	DTI	MEGA06	02/08	10:29:00	Gear	60 8.40N	5 27.79W	936	N	N	N	Y	0.024
55268#4	WTS12	DTI	WASP	02/08	11:45:00	Gear	60 8.38N	5 27.77W	2073					
		DTI		02/08	12:52:00	Gear	60 8.72N	5 25.92W	1365					
55269#1	SITE S	DTI	MEGA06	02/08	14:40:00	Gear	60 13.49N	5 16.68W	950	N	N	N	N	
55269#2	SITE S	DTI	MEGA04	02/08	15:39:00	Gear	60 13.22N	5 16.92W	945	Y	Y	Y	N	
55269#3	SITE S	DTI	MEGA04	02/08	16:47:00	Gear	60 13.34N	5 16.38W	943	N	N	N	Y	0.031
55269#4	SITE S	DTI	MEGA04	02/08	17:58:00	Gear	60 13.49N	5 16.80W	952	N	N	N	Y	0.024

Station number	Site name	Ops	Gear type	Date 2000	Time (UTC)	Navig ation	Position Lat	Long	Depth (m)	HC	HM	PSA	MAC	(m²)
55270#1	WTS13	DTI	WASP	02/08	20:17:00	Gear	60 15.95N	5 29.82W	1098					
		DTI		02/08	21:24:00	Gear	60 16.47N	5 28.50W	1091					
55270#2	WTS13	DTI	MEGA04	02/08	22:36:00	Gear	60 16.07N	5 30.06W	1102	Y	Y	Y	N	
55270#3	WTS13	DTI	MEGA06	02/08	23:44:00	Gear	60 16.22N	5 30.24W	1103	N	N	N	Y	0.039
55270#4	WTS13	DTI	MEGA06	03/08	01:05:00	Gear	60 15.99N	5 29.34W	1093	N	N	N	Y	0.024
55271#1	FBW1	DTI	WASP	03/08	03:20:00	Gear	60 13.34N	5 37.68W	2251					
		DTI		03/08	04:27:00	Gear	60 12.51N	5 37.58W	2353					
55272#1	SITE S	DTI	MEGA04	03/08	07:00:00	Gear	60 13.41N	5 17.04W	952	N	N	N	Y	0.016
55273#1	WTS14	DTI	MEGA06	03/08	08:51:00	Gear	60 11.52N	5 2.74W	779	N	N	N	Y	0.047
55273#2	WTS14	DTI	MEGA06	03/08	09:55:00	Gear	60 11.51N	5 3.12W	783	Y	Y	Y	Y	0.016
55273#3	WTS14	DTI	MEGA06	03/08	10:59:00	Gear	60 11.24N	5 2.57W	767	N	N	N	Y	0.008
55274#1	WTS15	DTI	BOX CORE	03/08	13:08:00	Gear	60 7.87N	4 45.54W	492	Y	Y	Y	Y	0.1
55275#1	WTS16	DTI	WASP	03/08	16:08:00	Gear	60 19.57N	5 0.91W	956					
		DTI		03/08	17:14:00	Gear	60 0.00N	5 0.00W	956					
55275#2	WTS16	DTI	MEGA06	03/08	18:30:00	Gear	60 19.58N	5 0.64W	954	N	N	N	Y	0.031
55275#3	WTS16	DTI	MEGA06	03/08	19:37:00	Gear	60 19.73N	5 0.18W	955	Y	Y	Y	Y	0.024
55275#4	WTS16	DTI	MEGA06	03/08	20:40:00	Gear	60 19.91N	4 59.33W	952	N	N	N	Y	0.016
55276#1	FSC1	DTI	WASP	03/08	23:40:00	Gear	60 28.98N	4 37.02W	1018					
		DTI		04/08	00:47:00	Gear	60 28.45N	4 36.60W	1018					
55276#2	FSC1	DTI	MEGA06	04/08	02:08:00	Gear	60 29.03N	4 37.66W	1018	N	N	N	Y	0.031
55276#3	FSC1	DTI	MEGA06	04/08	03:12:00	Gear	60 29.11N	4 37.98W	1020	Y	N	Y	Y	0.031
55276#4	FSC1	DTI	MEGA06	04/08	04:13:00	Gear	60 29.03N	4 38.04W	1019	N	Y	N	Y	0.024
55277#1	BP1	COMM	MOORING	04/08	07:12:00	Gear	60 29.35N	3 59.02W	514					
		COMM		11/08	09:11:00	Gear	60 0.00N	3 0.00W	506					
52278#1	ET1	COMM	MEGA10	04/08	16:08:00	Gear	61 33.63N	2 4.74W	1111	N	N	N	Y	0.071
55278#2	ET1	COMM	MEGA10	04/08	17:32:00	Gear	61 33.62N	2 4.80W	1208	Y	Y	Y	Y	0.039
55279#1	ET2	COMM	MEGA12	04/08	19:01:00	Gear	61 35.34N	2 3.18W	1288	N	N	N	Y	0.071
55279#2	ET2	COMM	MEGA10	04/08	20:21:00	Gear	61 35.30N	2 3.18W	1287	Y	Y	Y	Y	0.031
55280#1	ET3	COMM	MEGA12	04/08	21:49:00	Gear	61 34.42N	2 0.42W	1231	Y	Y	Y	Y	0.063
55281#1	ET4	COMM	MEGA12	04/08	23:25:00	Gear	61 33.44N	1 59.76W	1198	Y	Y	Y	Y	0.063
55282#1	ET5	COMM	MEGA12	05/08	01:27:00	Gear	61 36.82N	1 58.80W	1279	Y	Y	Y	Y	0.063
55283#1	ET6	COMM	MEGA12	05/08	03:21:00	Gear	61 35.42N	1 58.44W	1238	N	N	N	Y	0.079
55283#2	ET6	COMM	MEGA12	05/08	04:46:00	Gear	61 35.42N	1 58.49W	1237	Y	Y	Y	Y	0.031
55284#1	ET7	COMM	MEGA12	05/08	06:47:00	Gear	61 34.70N	1 56.63W	1182	Y	Y	Y	Y	0.063
55285#1	ET8	COMM	MEGA12	05/08	08:39:00	Gear	61 36.15N	1 55.40W	1207	N	N	N	Y	0.079
55285#2	ET8	COMM	MEGA12	05/08	10:01:00	Gear	61 36.24N	1 55.38W	1209	Y	Y	Y	Y	0.024
55286#1	ET9	COMM	MEGA12	05/08	12:31:00	Gear	61 37.51N	1 53.04W	1205	Y	Y	Y	Y	0.063
55287#1	ET10	COMM	MEGA12	05/08	14:23:00	Gear	61 39.21N	1 52.74W	1265	N	N	N	Y	0.063
55287#2	ET10	COMM	MEGA08	05/08	15:46:00	Gear	61 39.20N	1 52.80W	1265	Y	Y	Y	N	
55288#1	ETW1	COMM	WASP	05/08	21:13:00	Gear	61 39.12N	1 51.44W	1244					
		COMM		05/08	22:20:00	Gear	61 39.22N	1 53.42W	1287					

Station number	Site name	Ops	Gear type	Date 2000	Time (UTC)	Navigation	Position Lat	Long	Depth (m)	HC	HM	PSA	MAC	(m²)
55289#1	ET11	COMM	MEGA12	06/08	00:22:00	Gear	61 38.68N	1 48.41W	1146	Y	Y	Y	N	
55289#2	ET11	COMM	MEGA12	06/08	01:50:00	Gear	61 38.70N	1 48.30W	1145	N	N	N	N	
55290#1	ET11	COMM	MEGA12	08/08	01:42:00	Gear	61 38.80N	1 48.24W	1148	N	N	N	Y	0.071
55290#2	ET11	COMM	MEGA10	08/08	03:07:00	Gear	61 38.67N	1 48.21W	1143	N	N	N	Y	0.063
55291#1	ET12	COMM	MEGA12	08/08	05:16:00	Gear	61 36.57N	1 46.26W	1001	Y	Y	Y	Y	0.063
55292#1	ET13	COMM	MEGA12	08/08	06:59:00	Gear	61 37.80N	1 45.66W	1048	Y	Y	Y	N	
55292#2	ET13	COMM	MEGA12	08/08	08:07:00	Gear	61 37.81N	1 45.90W	1054	N	N	N	Y	0.079
55293#1	ET14	COMM	MEGA12	08/08	09:34:00	Gear	61 38.82N	1 44.03W	1029	Y	Y	Y	Y	0.063
55294#1	ET15	COMM	MEGA12	08/08	11:13:00	Gear	61 37.43N	1 42.90W	927	Y	Y	Y	Y	0.063
55295#1	ETW2	COMM	WASP	08/08	12:45:00	Gear	61 37.87N	1 45.42W	2109					
		COMM		08/08	13:52:00	Gear	61 37.73N	1 46.04W	2355					
55296#1	ET3	COMM	MEGA12	08/08	16:44:00	Gear	61 34.41N	2 0.84W	1239	N	N	N	Y	0.063
55296#2	ET3	COMM	MEGA10	08/08	18:13:00	Gear	61 34.40N	2 0.90W	1241	Y	Y	Y	Y	0.039
55297#1	ET4	COMM	MEGA12	08/08	19:55:00	Gear	61 33.36N	2 0.13W	1202	Y	Y	Y	Y	0.063
55298#1	ETW3	COMM	WASP	08/08	21:58:00	Gear	61 36.36N	1 55.20W	1210					
		COMM		08/08	23:03:00	Gear	61 37.12N	1 53.76W	1209					
55299#1	ET8	COMM	MEGA12	09/08	00:39:00	Gear	61 36.19N	1 55.38W	1211	N	N	N	Y	0.071
55300#1	ET5	COMM	MEGA12	09/08	02:39:00	Gear	61 36.82N	1 58.91W	1281	N	N	N	Y	0.079
55300#2	ET5	COMM	MEGA12	09/08	04:01:00	Gear	61 36.80N	1 58.86W	1280	Y	Y	Y	Y	0.047
55301#1	ET11	COMM	MEGA12	09/08	06:37:00	Gear	61 38.71N	1 48.24W	1145	N	N	N	Y	0.079
55301#2	ET11	COMM	MEGA12	09/08	08:06:00	Gear	61 38.71N	1 48.30W	1146	Y	Y	Y	Y	0.063
55302#1	ET13	COMM	MEGA12	09/08	09:42:00	Gear	61 37.80N	1 45.72W	1053	N	N	N	Y	0.079
55303#1	ET15	COMM	MEGA12	09/08	11:00:00	Gear	61 37.87N	1 42.38W	927	N	N	N	N	
55303#2	ET15	COMM	MEGA12	09/08	12:10:00	Gear	61 37.40N	1 42.78W	920	Y	Y	Y	Y	0.063
55304#1	ET12	COMM	MEGA12	09/08	13:40:00	Gear	61 36.71N	1 46.01W	1007	N	N	N	Y	0.071
55304#2	ET12	COMM	MEGA12	09/08	15:04:00	Gear	61 36.49N	1 46.38W	1007	Y	Y	Y	Y	0.055
55305#1	ETW4	COMM	WASP	09/08	16:54:00	Gear	61 36.69N	1 49.38W	1138					
		COMM		09/08	19:24:00	Gear	61 36.44N	1 45.24W	988					
55306#1	ETW5	COMM	WASP	09/08	22:03:00	Gear	61 34.46N	2 1.56W	1240					
		COMM		09/08	23:08:00	Gear	61 34.42N	2 0.28W	1136					
55307#1	ET16	COMM	MEGA12	10/08	01:12:00	Gear	61 32.51N	2 7.38W	1252	N	N	N	Y	0.063
55307#2	ET16	COMM	MEGA12	10/08	02:43:00	Gear	61 32.51N	2 7.38W	1252	Y	Y	Y	Y	0.063
55308#1	ET17	COMM	MEGA12	10/08	05:41:00	Gear	61 38.98N	1 50.36W	1211	Y	Y	Y	Y	0.063
55309#1	ETW6	COMM	WASP	10/08	08:19:00	Gear	61 36.21N	1 55.95W	1558					
		COMM		10/08	09:40:00	Gear	61 36.21N	1 53.16W	1881					
55310#1	FSC2	DTI	WASP	10/08	22:23:00	Gear	60 40.15N	4 23.88W	1050					
		DTI		10/08	23:28:00	Gear	60 40.34N	4 24.06W	1071					
55310#2	FSC2	DTI	MEGA12	11/08	00:42:00	Gear	60 39.64N	4 24.12W	1073	Y	Y	Y	N	
55310#3	FSC2	DTI	MEGA08	11/08	02:05:00	Gear	60 39.80N	4 24.12W	1074	N	N	N	Y	0.063
55311#1	FSC3	DTI	MEGA08	11/08	04:55:00	Gear	60 49.89N	4 11.18W	1085	N	N	N	Y	0.063
55311#2	FSC3	DTI	MEGA08	11/08	06:15:00	Gear	60 49.83N	4 10.87W	1085	Y	Y	Y	N	

Station number	Site name	Ops	Gear type	Date 2000	Time (UTC)	Navig ation	Position Lat	Long	Depth (m)	HC	HM	PSA	MAC	(m²)
55312#1	FSC4	DTI	MEGA08	11/08	13:54:00	Gear	60 59.79N	4 1.26W	1119	Y	Y	Y	Y	0.031
55312#2	FSC4	DTI	MEGA08	11/08	15:05:00	Gear	60 59.74N	4 1.26W	1119	N	N	N	Y	0.047
55313#1	FSC5	DTI	MEGA08	11/08	17:55:00	Gear	61 11.92N	3 53.10W	1094	Y	Y	Y	Y	0.008
55313#2	FSC5	DTI	MEGA08	11/08	19:08:00	Gear	61 12.10N	3 53.34W	1088	N	N	N	Y	0.031
55313#3	FSC5	DTI	MEGA06	11/08	20:14:00	Gear	61 11.96N	3 53.61W	1089	N	N	N	Y	0.031
55313#4	FSC5	DTI	WASP	11/08	21:32:00	Gear	61 11.66N	3 52.92W	1421					
		DTI		11/08	22:39:00	Gear	61 10.77N	3 52.28W	2094					
55314#1	FSC6	DTI	WASP	12/08	01:39:00	Gear	61 23.07N	3 39.96W	2441					
		DTI		12/08	02:46:00	Gear	61 22.59N	3 38.46W	1615					
55314#2	FSC6	DTI	MEGA08	12/08	04:10:00	Gear	61 22.95N	3 39.99W	1138	N	N	N	Y	0.063
55314#3	FSC6	DTI	MEGA08	12/08	05:26:00	Gear	61 22.87N	3 39.84W	1138	Y	Y	Y	N	
55315#1	FSC7	DTI	MEGA08	12/08	08:04:00	Gear	61 33.65N	3 23.16W	1388	Y	Y	Y	N	
55315#2	FSC7	DTI	MEGA06	12/08	09:16:00	Gear	61 33.45N	3 23.34W	1385	N	N	N	Y	0.047
55315#3	FSC7	DTI	MEGA06	12/08	10:37:00	Gear	61 33.51N	3 23.46W	1386	N	N	N	Y	0.024
55315#4	FSC7	DTI	WASP	12/08	12:08:00	Gear	61 32.97N	3 23.34W	2261					
		DTI		12/08	13:14:00	Gear	61 32.59N	3 22.49W	2293					
55316#1	FSC8	DTI	MEGA08	12/08	16:16:00	Gear	61 42.77N	3 4.02W	1501	Y	Y	Y	N	
55316#2	FSC8	DTI	MEGA08	12/08	17:56:00	Gear	61 42.86N	3 4.14W	1500	N	N	N	Y	0.016
55316#3	FSC8	DTI	MEGA08	12/08	19:27:00	Gear	61 42.83N	3 4.14W	1500	N	N	N	Y	0.047
55316#4	FSC8	DTI	WASP	12/08	21:01:00	Gear	61 42.74N	3 3.47W	1755					
		DTI		12/08	22:06:00	Gear	61 42.16N	3 2.52W	1589					
55317#1	FSC9	DTI	MEGA08	13/08	01:16:00	Gear	61 54.59N	2 48.25W	1620	N	N	N	Y	0.047
55317#2	FSC9	DTI	MEGA08	13/08	02:41:00	Gear	61 53.80N	2 49.68W	1614	Y	Y	Y	Y	0.016
55317#3	FSC9	DTI	WASP	13/08	04:31:00	Gear	61 54.76N	2 47.82W	1509					
		DTI		13/08	05:38:00	Gear	61 54.19N	2 47.82W	1547					
55318#1	Tr1300	DTI	MEGA06	13/08	10:02:00	Ship	61 25.31N	3 7.03W	1379	N	N	Y	N	
55319#1	Tr1200	DTI	MEGA06	13/08	11:48:00	Ship	61 19.63N	2 58.85W	1191	N	N	Y	N	
55320#1	Tr1100	DTI	MEGA06	13/08	13:38:00	Ship	61 13.05N	2 49.62W	1072	N	N	Y	N	
55321#1	Tr1000	DTI	MEGA06	13/08	14:55:00	Ship	61 10.61N	2 45.25W	984	N	N	Y	N	
55322#1	NW5	DTI	MEGA12	16/08	03:33:04	Gear	62 34.51N	0 8.81E	1050	Y	Y	Y	Y	0.063
55323#1	NW4	DTI	MEGA12	16/08	05:20:27	Gear	62 33.82N	0 1.38E	1092	Y	Y	Y	Y	0.055
55323#2	NW4	DTI	MEGA12	16/08	06:41:42	Gear	62 34.01N	0 1.75E	1090	N	N	N	Y	0.071
55324#1	NW2	DTI	MEGA12	16/08	09:02:28	Gear	62 26.29N	0 7.43E	1025	Y	Y	Y	Y	0.055
55324#2	NW2	DTI	MEGA10	16/08	10:20:30	Gear	62 26.10N	0 7.41E	1025	N	N	N	Y	0.063
55325#1	NW1	DTI	MEGA12	16/08	12:05:45	Gear	62 24.47N	0 0.14W	1067	N	N	N	Y	0.071
55325#2	NW1	DTI	MEGA10	16/08	13:31:30	Gear	62 24.55N	0 0.12E	1065	Y	Y	Y	Y	0.031
55326#1	NW3	DTI	MEGA12	16/08	15:12:27	Gear	62 26.50N	0 5.61W	1125	Y	Y	Y	Y	0.063
55327#1	NWW	DTI	WASP	16/08	17:16:00	Gear	62 29.86N	0 0.28E	1086					
		DTI		16/08	18:27:40	Gear	62 29.38N	0 0.59E	1043					
55328#1	NR2	DTI	MEGA10	16/08	21:51:22	Gear	62 14.48N	0 11.07E	725	N	N	N	Y	0.071
55328#2	NR2	DTI	MEGA10	16/08	22:59:16	Gear	62 14.41N	0 11.06E	723	Y	Y	Y	Y	0.031

Station number	Site name	Ops	Gear type	Date 2000	Time (UTC)	Navigation	Position Lat	Long	Depth (m)	HC	HM	PSA	MAC	(m²)
55329#1	NRW	DTI	WASP	17/08	00:17:53	Gear	62 13.21N	0 15.79E	664					
		DTI		17/08	01:24:17	Gear	62 13.88N	0 16.26E	662					
55330#1	NR3	DTI	MEGA08	17/08	02:29:21	Gear	62 14.72N	0 17.05E	712	Y	Y	Y	Y	0.024
55330#2	NR3	DTI	MEGA08	17/08	03:37:00	Gear	62 14.63N	0 16.50E	709	N	N	N	Y	0.039
55331#1	NR4	DTI	MEGA08	17/08	04:42:14	Gear	62 14.31N	0 20.84E	686	Y	Y	Y	Y	0.008
55331#2	NR4	DTI	MEGA08	17/08	05:46:08	Gear	62 13.76N	0 19.59E	676	N	N	N	Y	0.031
55331#3	NR4	DTI	MEGA06	17/08	06:49:02	Gear	62 13.76N	0 20.36E	672	N	N	N	Y	0.031
55332#1	NR1	DTI	MEGA08	17/08	07:51:35	Gear	62 12.42N	0 22.87E	630	Y	Y	Y	Y	0.016
55332#2	NR1	DTI	MEGA08	17/08	08:56:47	Gear	62 12.54N	0 23.00E	632	N	N	N	Y	0.047
55333#1	WFA1	COMM	BGS CORE	17/08	13:13:20	Ship	62 18.93N	0 9.74E	915					
55334#1	WFA3	COMM	BGS CORE	17/08	14:26:30	Ship	62 18.67N	0 6.17E	926					
55335#1	SBA1	COMM	MEGA10	17/08	15:58:54	Gear	62 17.09N	0 11.79E	814	N	N	N	Y	0.071
55335#2	SBA1	COMM	MEGA08	17/08	17:03:37	Gear	62 17.11N	0 11.80E	815	Y	Y	Y	Y	0.024
55336#1	SBA2	COMM	MEGA10	17/08	18:18:57	Gear	62 18.10N	0 10.80E	870	N	N	N	Y	0.071
55336#2	SBA2	COMM	MEGA08	17/08	19:36:53	Gear	62 18.10N	0 10.84E	869	Y	Y	Y	Y	0.024
55337#1	SBA3	COMM	MEGA10	17/08	20:52:44	Gear	62 19.01N	0 10.02E	917	N	N	N	Y	0.063
55337#2	SBA3	COMM	MEGA08	17/08	22:05:00	Gear	62 19.03N	0 10.03E	918	Y	Y	Y	Y	0.024
55337#3	SBA3	COMM	WASP	17/08	23:38:46	Gear	62 19.24N	0 10.37E	913					
		COMM		18/08	00:44:03	Gear	62 18.76N	0 9.62E	910					
55338#1	SBA4	COMM	MEGA12	18/08	02:28:52	Gear	62 20.99N	0 8.09E	967	Y	Y	Y	Y	0.063
55339#1	SBA5	COMM	MEGA12	18/08	04:07:04	Gear	62 22.21N	0 6.85E	991	Y	Y	Y	Y	0.063
55340#1	SBA6	COMM	MEGA12	18/08	05:58:29	Gear	62 24.97N	0 4.28E	1042	Y	Y	Y	Y	0.063
55341#1	SBB5	COMM	MEGA12	18/08	08:29:26	Gear	62 23.99N	0 10.01E	988	Y	Y	Y	Y	0.063
55342#1	SBB4	COMM	MEGA12	18/08	10:07:07	Gear	62 22.90N	0 10.98E	965	N	N	N	Y	0.071
55342#2	SBB4	COMM	MEGA12	18/08	11:27:20	Gear	62 22.90N	0 10.98E	966	Y	Y	Y	Y	0.047
55343#1	SBB6	COMM	MEGA12	18/08	13:20:20	Gear	62 28.00N	0 6.09E	1041	Y	Y	Y	Y	0.063
55344#1	SBA6	COMM	MEGA12	18/08	14:57:46	Gear	62 24.98N	0 4.33E	1042	N	N	N	Y	0.079
55344#2	SBA6	COMM	MEGA12	18/08	16:08:24	Gear	62 24.99N	0 4.30E	1042	Y	Y	Y	Y	0.047
55345#1	SBA5	COMM	WASP	18/08	18:09:02	Gear	62 22.38N	0 7.38E	980					
		COMM		18/08	19:14:53	Gear	62 21.99N	0 6.37E	988					
55346#1	SBB1	COMM	MEGA12	18/08	23:48:58	Gear	62 17.60N	0 15.98E	814	N	N	N	Y	0.071
55346#2	SBB1	COMM	MEGA10	19/08	01:30:14	Gear	62 17.59N	0 16.00E	814	Y	Y	Y	N	
55347#1	SBB2	COMM	MEGA12	19/08	03:02:04	Gear	62 18.56N	0 15.00E	864	Y	Y	Y	Y	0.063
55348#1	SBB3	COMM	MEGA12	19/08	04:52:50	Gear	62 20.60N	0 13.19E	915	Y	Y	Y	Y	0.063
55349#1	SBC5	COMM	MEGA12	19/08	07:41:07	Gear	62 19.90N	0 4.47E	989	N	N	N	Y	0.071
55349#2	SBC5	COMM	MEGA10	19/08	09:13:23	Gear	62 19.88N	0 4.51E	988	Y	Y	Y	Y	0.039
55350#1	SBC4	COMM	MEGA12	19/08	10:25:25	Gear	62 19.37N	0 5.02E	966	N	N	N	Y	0.079
55350#2	SBC4	COMM	MEGA12	19/08	11:47:12	Gear	62 19.37N	0 5.00E	965	Y	Y	Y	Y	0.039
55351#1	SBC3	COMM	MEGA12	19/08	13:30:52	Gear	62 18.48N	0 5.81E	916	Y	Y	Y	Y	0.063
55352#1	SBC6	COMM	MEGA12	19/08	16:07:24	Gear	62 23.10N	0 1.46E	1041	N	N	N	Y	0.063
55352#2	SBC6	COMM	MEGA10	19/08	17:25:17	Gear	62 23.08N	0 1.47E	1040	Y	Y	Y	Y	0.024

Station number	Site name	Ops	Gear type	Date 2000	Time (UTC)	Navig ation	Position Lat	Long	Depth (m)	HC	HM	PSA	MAC	(m²)
55353#1	SBA3	COMM	WASP	19/08	19:25:13	Gear	62 18.73N	0 10.28E	898					
		COMM		19/08	20:28:30	Gear	62 19.30N	0 9.86E	928					
55354#1	SBC2	COMM	MEGA12	19/08	22:08:54	Gear	62 17.49N	0 6.71E	863	N	N	N	Y	0.063
55354#2	SBC2	COMM	MEGA08	19/08	23:39:41	Gear	62 17.47N	0 6.71E	862	Y	Y	Y	N	
55355#1	SBC1	COMM	MEGA12	20/08	01:10:29	Gear	62 16.60N	0 7.60E	813	Y	Y	Y	Y	0.063
55356#1	BGS1	DTI	BGS CORE	20/08	02:50:20	Ship	62 13.41N	0 13.16E	691					
55357#1	BGS4	DTI	BGS CORE	20/08	04:47:30	Ship	62 10.05N	0 19.98E	590					
55358#1	NN4	DTI	BOX CORE	20/08	06:09:09	Gear	62 10.10N	0 24.13E	573	N	N	N	N	
55358#2	NN4	DTI	BOX CORE	20/08	07:04:25	Gear	62 9.91N	0 24.34E	569	Y	Y	Y	Y	0.1
55359#1	NN1	DTI	BOX CORE	20/08	08:36:09	Gear	62 9.31N	0 30.85E	543	Y	Y	Y	Y	0.1
55360#1	NN2	DTI	BOX CORE	20/08	14:47:39	Gear	62 8.03N	0 25.15E	520	N	N	N	N	
55360#2	NN2	DTI	BOX CORE	20/08	15:55:24	Gear	62 8.25N	0 25.63E	526	N	N	N	N	
55360#3	NN2	DTI	BOX CORE	20/08	16:43:49	Gear	62 7.97N	0 25.31E	519	N	N	N	N	
55360#4	NN2	DTI	DAY GRAB	20/08	17:58:00	Ship	62 8.22N	0 25.31E	525	N	N	N	N	
55360#5	NN2	DTI	DAY GRAB	20/08	19:21:00	Ship	62 8.10N	0 25.51E	525	N	N	N	N	
55360#6	NN2	DTI	DAY GRAB	20/08	20:10:00	Ship	62 8.24N	0 25.51E	525	N	N	N	Y	0.1
55360#7	NN2	DTI	DAY GRAB	20/08	20:57:00	Ship	62 8.21N	0 25.58E	525	N	N	N	N	
55360#8	NN2	DTI	DAY GRAB	20/08	21:48:00	Ship	62 8.17N	0 25.16E	525	N	N	N	N	
55360#9	NN2	DTI	DAY GRAB	20/08	22:27:00	Ship	62 8.14N	0 25.22E	525	Y	Y	Y	N	
55361#1	NNW	DTI	WASP	20/08	23:32:49	Gear	62 7.63N	0 21.32E	527					
		DTI		21/08	00:39:01	Gear	62 7.84N	0 20.62E	537					
55362#1	NN3	DTI	DAY GRAB	21/08	02:22:00	Ship	62 7.68N	0 14.15E	542	N	N	N	N	
55362#2	NN3	DTI	DAY GRAB	21/08	03:06:10	Ship	62 7.67N	0 14.16E	542	N	N	N	N	
55362#3	NN3	DTI	DAY GRAB	21/08	03:48:00	Ship	62 7.61N	0 14.05E	541	N	N	N	N	
55362#4	NN3	DTI	DAY GRAB	21/08	04:33:00	Ship	62 7.61N	0 13.97E	541	Y	Y	Y	N	
55362#5	NN3	DTI	DAY GRAB	21/08	05:21:10	Ship	62 7.63N	0 13.88E	541	N	N	N	N	
55362#6	NN3	DTI	DAY GRAB	21/08	06:17:10	Ship	62 7.63N	0 13.68E	542	N	N	N	N	
55362#7	NN3	DTI	DAY GRAB	21/08	07:08:00	Ship	62 7.67N	0 13.89E	541	N	N	N	N	
55362#8	NN3	DTI	DAY GRAB	21/08	08:01:00	Ship	62 7.64N	0 13.84E	541	N	N	N	N	
55362#9	NN3	DTI	DAY GRAB	21/08	08:49:00	Ship	62 7.53N	0 13.90E	539	N	N	N	N	
55363#1	NK4	DTI	DAY GRAB	21/08	09:59:00	Ship	62 5.51N	0 17.07E	478	N	N	N	N	
55363#2	NK4	DTI	DAY GRAB	21/08	10:47:10	Ship	62 5.37N	0 17.21E	473	N	N	N	Y	0.1
55363#3	NK4	DTI	DAY GRAB	21/08	11:33:00	Ship	62 5.46N	0 17.81E	471	N	N	N	N	
55363#4	NK4	DTI	DAY GRAB	21/08	12:19:00	Ship	62 5.22N	0 16.54E	475	N	N	N	N	
55363#5	NK4	DTI	DAY GRAB	21/08	12:56:00	Ship	62 5.36N	0 16.76E	479	N	N	N	N	
55363#6	NK4	DTI	DAY GRAB	21/08	13:39:00	Ship	62 5.55N	0 16.94E	480	N	N	N	N	
55363#7	NK4	DTI	DAY GRAB	21/08	14:22:00	Ship	62 5.14N	0 16.86E	470	N	N	N	N	
55364#1	NKW	DTI	WASP	21/08	15:30:32	Gear	62 4.85N	0 22.08E	446					
		DTI		21/08	16:34:50	Gear	62 4.61N	0 21.46E	444					
55365#1	NK2	DTI	DAY GRAB	21/08	17:43:00	Ship	62 3.86N	0 25.27E	416	N	N	N	N	
55365#2	NK2	DTI	DAY GRAB	21/08	18:24:10	Ship	62 3.87N	0 25.24E	417	N	N	N	Y	0.1

Station number	Site name	Ops	Gear type	Date 2000	Time (UTC)	Navig ation	Position Lat	Long	Depth (m)	HC	HM	PSA	MAC	(m²)
55365#3	NK2	DTI	DAY GRAB	21/08	19:09:00	Ship	62 3.87N	0 25.30E	416	N	N	N	N	
55365#4	NK2	DTI	DAY GRAB	21/08	19:40:00	Ship	62 3.92N	0 25.30E	417	Y	Y	Y	N	
55366#1	NK1	DTI	DAY GRAB	21/08	20:57:00	Ship	62 5.33N	0 34.34E	433	N	N	N	N	
55366#2	NK1	DTI	DAY GRAB	21/08	21:43:00	Ship	62 5.19N	0 34.45E	430	N	N	N	N	
55366#3	NK1	DTI	DAY GRAB	21/08	22:14:00	Ship	62 5.31N	0 34.38E	433	N	N	N	Y	0.1
55366#4	NK1	DTI	DAY GRAB	21/08	23:00:10	Ship	62 5.13N	0 34.89E	426	N	N	N	N	
55366#5	NK1	DTI	DAY GRAB	21/08	23:36:10	Ship	62 5.22N	0 34.97E	430	Y	Y	Y	N	
55367#1	NG3	DTI	DAY GRAB	22/08	00:39:00	Ship	62 3.49N	0 30.24E	393	N	N	N	Y	0.1
55367#2	NG3	DTI	DAY GRAB	22/08	01:12:10	Ship	62 3.42N	0 30.20E	393	Y	Y	Y	N	
55368#1	NGW	DTI	WASP	22/08	02:35:57	Gear	62 0.97N	0 24.13E	337					
		DTI		22/08	03:41:13	Gear	62 0.47N	0 23.57E	330					
55369#1	NG1	DTI	DAY GRAB	22/08	04:28:00	Ship	61 59.34N	0 23.25E	309	N	N	N	N	
55369#2	NG1	DTI	DAY GRAB	22/08	04:49:20	Ship	61 59.28N	0 23.05E	307	N	N	N	N	
55369#3	NG1	DTI	DAY GRAB	22/08	05:12:10	Ship	61 59.30N	0 22.97E	308	N	N	N	N	
55369#4	NG1	DTI	DAY GRAB	22/08	05:32:00	Ship	61 59.23N	0 22.93E	306	Y	Y	Y	N	
55369#5	NG1	DTI	DAY GRAB	22/08	06:01:30	Ship	61 59.37N	0 22.98E	308	N	N	N	N	
55369#6	NG1	DTI	DAY GRAB	22/08	06:26:00	Ship	61 59.30N	0 22.91E	307	N	N	N	N	
55369#7	NG1	DTI	DAY GRAB	22/08	06:47:20	Ship	61 59.33N	0 23.07E	306	N	N	N	N	
55369#8	NG1	DTI	DAY GRAB	22/08	07:08:30	Ship	61 59.27N	0 23.16E	306	N	N	N	N	
55370#1	NG2	DTI	DAY GRAB	22/08	07:57:30	Ship	61 59.43N	0 18.39E	322	N	N	N	N	
55370#2	NG2	DTI	DAY GRAB	22/08	08:20:30	Ship	61 59.44N	0 18.21E	323	N	N	N	N	
55370#3	NG2	DTI	DAY GRAB	22/08	08:51:40	Ship	61 59.52N	0 18.52E	322	N	N	N	N	
55370#4	NG2	DTI	DAY GRAB	22/08	09:22:40	Ship	61 59.34N	0 18.50E	320	N	N	N	Y	0.1
55370#5	NG2	DTI	DAY GRAB	22/08	09:45:40	Ship	61 59.29N	0 18.53E	319	Y	Y	Y	N	
55371#1	NG4	DTI	DAY GRAB	22/08	10:34:30	Ship	62 1.36N	0 18.46E	370	N	N	N	N	
55371#2	NG4	DTI	DAY GRAB	22/08	11:14:00	Ship	62 1.19N	0 18.42E	362	N	N	N	Y	0.1
55371#3	NG4	DTI	DAY GRAB	22/08	11:40:00	Ship	62 1.19N	0 18.40E	368	N	N	N	N	
55371#4	NG4	DTI	DAY GRAB	22/08	12:04:20	Ship	62 1.27N	0 18.45E	365	Y	Y	Y	N	
55372#1	NK3	DTI	DAY GRAB	22/08	13:15:00	Ship	62 2.73N	0 12.09E	428	N	N	N	N	
55372#2	NK3	DTI	DAY GRAB	22/08	13:47:10	Ship	62 2.76N	0 12.08E	428	N	N	N	Y	0.1
55372#3	NK3	DTI	DAY GRAB	22/08	14:29:00	Ship	62 2.82N	0 12.03E	431	Y	Y	Y	N	
55373#1	WFA2	COMM	BGS CORE	22/08	17:44:20	Ship	62 18.34N	0 11.88E	876					
55374#1	SBA2.5	COMM	MEGA12	22/08	18:56:32	Gear	62 18.49N	0 10.51E	890	Y	Y	Y	Y	0.063
55375#1	SBA3.5	COMM	MEGA12	22/08	20:09:34	Gear	62 19.51N	0 9.50E	940	N	N	N	N	
55375#2	SBA3.5	COMM	MEGA12	22/08	21:18:03	Gear	62 19.50N	0 9.51E	940	N	N	N	Y	0.071
55375#3	SBA3.5	COMM	MEGA12	22/08	22:28:21	Gear	62 19.49N	0 9.51E	941	Y	Y	Y	Y	0.039
55376#1	SBA5.5	COMM	MEGA12	22/08	23:59:01	Gear	62 23.27N	0 5.91E	1014	Y	Y	Y	Y	0.063
55377#1	SBD5	COMM	MEGA12	23/08	01:44:04	Gear	62 23.20N	0 8.40E	993	Y	Y	Y	Y	0.063
55378#1	SBE5	COMM	MEGA12	23/08	03:28:44	Gear	62 21.28N	0 5.62E	991	N	N	N	Y	0.079
55378#2	SBE5	COMM	MEGA12	23/08	04:32:29	Gear	62 21.32N	0 5.61E	992	Y	Y	Y	Y	0.024
55379#1	SBE3	COMM	MEGA12	23/08	06:28:13	Gear	62 18.70N	0 7.99E	917	Y	Y	Y	Y	0.063

Station number	Site name	Ops	Gear type	Date 2000	Time (UTC)	Navig ation	Position Lat	Long	Depth (m)	HC	HM	PSA	MAC	(m²)
55380#1	SBD3	COMM	MEGA12	23/08	08:03:43	Gear	62 19.39N	0 12.02E	919	N	N	N	Y	0.071
55380#2	SBD3	COMM	MEGA12	23/08	09:10:00	Ship	62 19.44N	0 11.81E	924	N	N	N	N	
55381#1	NU1	DTI	MEGA12	24/08	00:07:32	Gear	62 28.36N	0 26.11E	877	Y	Y	Y	Y	0.063
55382#1	NU2	DTI	MEGA12	24/08	02:15:52	Gear	62 30.48N	0 19.71E	942	Y	Y	Y	Y	0.047
55382#2	NU2	DTI	MEGA12	24/08	03:36:29	Gear	62 30.41N	0 19.55E	945	N	N	N	Y	0.047
55383#1	NU3	DTI	MEGA12	24/08	06:21:00	Gear	62 26.63N	0 22.69E	898	Y	Y	Y	Y	0.063
55384#1	NU4	DTI	MEGA12	24/08	08:39:05	Gear	62 29.11N	0 32.80E	836	Y	Y	Y	Y	0.063
55385#1	NU5	DTI	MEGA12	24/08	11:01:32	Gear	62 24.22N	0 27.36E	844	N	N	N	Y	0.071
55385#2	NU5	DTI	MEGA12	24/08	12:06:36	Gear	62 24.20N	0 27.45E	844	Y	Y	Y	Y	0.055
55386#1	NR5	DTI	MEGA12	24/08	13:22:38	Gear	62 24.06N	0 35.18E	776	Y	Y	Y	Y	0.063
55387#1	NR6	DTI	MEGA12	24/08	14:44:20	Gear	62 21.30N	0 32.18E	766	N	N	N	Y	0.071
55387#2	NR6	DTI	MEGA10	24/08	15:34:54	Gear	62 21.28N	0 32.13E	767	Y	Y	Y	Y	0.039
55388#1	SBD3	COMM	MEGA08	24/08	18:05:11	Gear	62 19.42N	0 12.03E	920	Y	Y	Y	Y	0.031
55389#1	SBD3	COMM	WASP	24/08	19:37:07	Gear	62 19.54N	0 12.48E	914					
		COMM		24/08	21:40:17	Gear	62 19.29N	0 10.63E	921					
55390#1	SBB3	COMM	BGS CORE	24/08	23:04:20	Ship	62 20.64N	0 13.24E	915					
55391#1	TX1	COMM	BGS CORE	25/08	10:29:00	Ship	61 54.98N	3 0.20W	1552					
55391#2	TX1	COMM	MEGA08	25/08	12:38:10	Gear	61 54.97N	3 0.24W	1551	N	N	N	Y	0.063
55391#3	TX1	COMM	MEGA08	25/08	14:07:55	Gear	61 54.94N	3 0.24W	1553	Y	Y	Y	Y	0.031
55391#4	TX1	COMM	WASP	25/08	15:54:01	Gear	61 55.15N	3 0.00W	1542					
		COMM		25/08	17:00:02	Gear	61 54.91N	3 0.30W	1539					
55392#1	FSC10	DTI	MEGA08	25/08	20:57:11	Gear	62 5.06N	2 35.28W	1665	2Y	Y	Y	N	
55392#2	FSC10	DTI	MEGA08	25/08	22:23:59	Gear	62 4.75N	2 34.86W	1663	N	N	N	N	
55392#3	FSC10	DTI	MEGA08	25/08	23:53:14	Gear	62 4.91N	2 35.22W	1662	2Y	N	N	Y	0.031
55392#4	FSC10	DTI	MEGA08	26/08	01:09:00	Ship	62 5.07N	2 34.89W	1664	N	N	N	N	
55393#1	TX2	COMM	BGS CORE	26/08	03:03:00	Ship	62 2.01N	2 45.70W	1634					
55394#1	FSC10	DTI	MEGA08	26/08	05:39:12	Gear	62 4.99N	2 35.16W	1664	2Y	N	N	Y	0.031
55394#2	FSC10	DTI	MEGA08	26/08	07:10:01	Gear	62 4.99N	2 34.92W	1664	2Y	N	N	Y	0.031
55394#3	FSC10	DTI	MEGA08	26/08	08:41:15	Gear	62 5.15N	2 34.80W	1664	2Y	N	N	N	
55394#4	FSC10	DTI	WASP	26/08	10:33:20	Gear	62 4.91N	2 36.18W	1659					
		DTI		26/08	11:38:11	Gear	62 4.99N	2 34.86W	1669					
55395#1	TR1300	DTI	MEGA08	26/08	19:58:09	Ship	61 25.19N	3 6.96W	1380	N	N	N	Y	0.047
55395#2	TR1300	DTI	MEGA06	26/08	21:42:10	Gear	61 25.67N	3 6.90W	1381	Y	Y	N	Y	0.024
55396#1	TR1250	DTI	MEGA08	26/08	23:35:29	Gear	61 22.52N	3 2.70W	1291	Y	Y	Y	Y	0.031
55396#2	TR1250	DTI	MEGA08	27/08	00:53:27	Gear	61 22.49N	3 2.88W	1292	N	N	N	Y	0.031
55397#1	TR1200	DTI	MEGA08	27/08	03:15:52	Gear	61 20.05N	2 58.98W	1205	N	N	N	Y	0.031
55397#2	TR1200	DTI	MEGA08	27/08	04:31:52	Gear	61 20.10N	2 59.16W	1208	Y	Y	N	Y	0.031
55398#1	TR1100	DTI	MEGA08	27/08	07:17:07	Gear	61 12.86N	2 49.98W	1074	Y	Y	N	Y	0.039
55398#2	TR1100	DTI	MEGA08	27/08	08:36:16	Gear	61 13.03N	2 50.34W	1077	N	N	N	Y	0.039
55399#1	BGSAS2	DTI	BGS CORE	27/08	09:53:00	Ship	61 12.86N	2 54.34W	1080					
55400#1	TR1000	DTI	MEGA08	27/08	11:51:37	Gear	61 10.48N	2 45.60W	987	Y	Y	N	Y	0.024

Station number	Site name	Ops	Gear type	Date 2000	Time (UTC)	Navig ation	Position Lat	Long	Depth (m)	HC	HM	PSA	MAC	(m²)
55400#2	TR1000	DTI	MEGA08	27/08	12:52:07	Gear	61 10.45N	2 45.24W	979	N	N	N	Y	0.039
55401#1	TR900	DTI	MEGA08	27/08	14:04:57	Gear	61 9.54N	2 43.92W	899	N	N	N	Y	0.047
55401#2	TR900	DTI	MEGA08	27/08	15:01:40	Gear	61 9.59N	2 43.92W	903	Y	Y	Y	Y	0.016
55401#3	TR900	DTI	WASP	27/08	16:15:27	Gear	61 9.25N	2 43.62W	866					
		DTI		27/08	17:20:23	Gear	61 9.68N	2 44.28W	919					
55402#1	TR800	DTI	MEGA08	27/08	18:49:20	Gear	61 8.07N	2 41.70W	792	N	N	N	Y	0.047
55402#2	TR800	DTI	MEGA08	27/08	19:47:13	Gear	61 8.06N	2 41.58W	789	Y	Y	Y	Y	0.016
55403#1	S2	DTI	MEGA08	27/08	21:04:33	Gear	61 5.65N	2 40.86W	700	Y	Y	Y	Y	0.031
55403#2	S2	DTI	MEGA08	27/08	21:50:58	Gear	61 5.59N	2 40.92W	699	N	N	N	Y	0.031
55404#1	TR650	DTI	MEGA08	27/08	23:00:50	Gear	61 4.61N	2 36.60W	640	Y	N	N	Y	0.024
55404#2	TR650	DTI	MEGA08	27/08	23:53:49	Gear	61 4.49N	2 36.66W	637	N	Y	Y	Y	0.039
55405#1	TR600	DTI	MEGA08	28/08	01:18:13	Gear	61 2.65N	2 33.90W	590	Y	Y	Y	Y	0.024
55405#2	TR600	DTI	MEGA08	28/08	02:16:58	Gear	61 2.62N	2 33.84W	590	N	N	N	N	
55405#3	TR600	DTI	MEGA08	28/08	03:05:51	Gear	61 2.65N	2 33.90W	592	N	N	N	Y	0.039
55406#1	TR550	DTI	MEGA08	28/08	04:26:38	Gear	61 0.98N	2 31.80W	543	Y	Y	Y	Y	0.031
55406#2	TR550	DTI	MEGA08	28/08	05:14:15	Gear	61 1.00N	2 31.74W	544	N	N	N	Y	0.031
55407#1	L4	DTI	BOX CORE	28/08	06:43:16	Gear	60 59.44N	2 29.52W	495	Y	Y	Y	Y	0.1
55408#1	TR450	DTI	BOX CORE	28/08	07:56:03	Gear	60 58.45N	2 28.20W	450	Y	Y	Y	Y	0.1
55409#1	L5	DTI	BOX CORE	28/08	09:13:36	Gear	60 57.70N	2 24.96W	409	N	N	N	N	
55409#2	L5	DTI	BOX CORE	28/08	09:53:11	Gear	60 57.74N	2 25.14W	410	N	N	N	N	
55409#3	L5	DTI	BOX CORE	28/08	10:32:11	Gear	60 57.79N	2 24.66W	409	N	N	N	N	
55409#4	L5	DTI	BOX CORE	28/08	11:09:12	Gear	60 57.62N	2 25.14W	407	Y	Y	Y	Y	0.1
55410#1	TR350	DTI	BOX CORE	28/08	12:21:45	Gear	60 55.62N	2 24.06W	342	Y	Y	Y	Y	0.1
55411#1	TR300	DTI	DAY GRAB	28/08	13:31:10	Ship	60 53.89N	2 21.76W	284	N	N	N	N	
55411#2	TR300	DTI	DAY GRAB	28/08	13:56:10	Ship	60 53.88N	2 21.81W	284	Y	Y	Y	N	
55411#3	TR300	DTI	DAY GRAB	28/08	14:28:00	Ship	60 53.91N	2 21.89W	285	N	N	N	N	
55411#4	TR300	DTI	DAY GRAB	28/08	14:54:00	Ship	60 53.96N	2 21.84W	286	N	N	N	Y	0.1
55412#1	TR250	DTI	DAY GRAB	28/08	15:30:10	Ship	60 53.23N	2 20.70W	246	N	N	N	N	
55412#2	TR250	DTI	DAY GRAB	28/08	15:49:00	Ship	60 53.23N	2 20.69W	246	N	N	N	Y	0.1
55412#3	TR250	DTI	DAY GRAB	28/08	16:15:00	Ship	60 53.22N	2 20.78W	246	N	N	N	N	
55412#4	TR250	DTI	DAY GRAB	28/08	16:35:00	Ship	60 53.18N	2 20.75W	243	Y	Y	Y	N	
55413#1	TR200	DTI	DAY GRAB	28/08	17:16:10	Ship	60 52.41N	2 19.55W	201	N	N	N	N	
55413#2	TR200	DTI	DAY GRAB	28/08	17:33:00	Ship	60 52.38N	2 19.65W	201	Y	Y	Y	N	
55413#3	TR200	DTI	DAY GRAB	28/08	18:02:00	Ship	60 52.36N	2 19.55W	200	N	N	N	N	
55413#4	TR200	DTI	DAY GRAB	28/08	18:21:10	Ship	60 52.41N	2 19.56W	201	N	N	N	N	
55413#5	TR200	DTI	DAY GRAB	28/08	18:39:00	Ship	60 52.41N	2 19.52W	201	N	N	N	N	
55413#6	TR200	DTI	DAY GRAB	28/08	18:57:00	Ship	60 52.40N	2 19.55W	201	N	N	N	N	
55413#7	TR200	DTI	DAY GRAB	28/08	19:14:00	Ship	60 52.38N	2 19.56W	201	N	N	N	N	
55413#8	TR200	DTI	DAY GRAB	28/08	19:31:00	Ship	60 52.39N	2 19.58W	201	N	N	N	Y	0.1
55414#1	B5	DTI	DAY GRAB	28/08	20:24:00	Ship	60 49.44N	2 19.89W	134	N	N	N	N	
55414#2	B5	DTI	DAY GRAB	28/08	20:35:00	Ship	60 49.41N	2 20.05W	134	N	N	N	N	

Station number	Site name	Ops	Gear type	Date 2000	Time (UTC)	Navig ation	Position Lat	Long	Depth (m)	HC	HM	PSA	MAC	(m²)
55414#3	B5	DTI	DAY GRAB	28/08	20:47:20	Ship	60 49.52N	2 20.11W	137	N	N	N	N	
55414#4	B5	DTI	DAY GRAB	28/08	20:59:00	Ship	60 49.46N	2 20.09W	136	N	N	N	N	
55414#5	B5	DTI	DAY GRAB	28/08	21:25:00	Ship	60 49.35N	2 19.93W	133	N	N	N	N	
55414#6	B5	DTI	DAY GRAB	28/08	21:38:00	Ship	60 49.34N	2 20.19W	133	N	N	N	N	
55414#7	B5	DTI	DAY GRAB	28/08	21:51:10	Ship	60 49.38N	2 20.38W	136	N	N	N	N	
55414#8	B5	DTI	DAY GRAB	28/08	22:03:00	Ship	60 49.39N	2 20.45W	137	Y	Y	Y	N	
55414#9	B5	DTI	DAY GRAB	28/08	22:25:00	Ship	60 49.49N	2 20.73W	142	N	N	N	Y	0.1
55415#1	TR200	DTI	MEGA02	28/08	23:12:07	Gear	60 52.41N	2 19.68W	202	N	N	N	N	
55416#1	TR250	DTI	MEGA02	28/08	23:44:29	Gear	60 53.21N	2 20.88W	246	N	N	N	N	
55416#2	TR250	DTI	MEGA02	29/08	00:06:22	Gear	60 53.19N	2 21.18W	252	N	N	N	N	
55416#3	TR250	DTI	MEGA02	29/08	00:31:39	Gear	60 53.16N	2 21.18W	248	N	N	N	N	
55417#1	TR300	DTI	MEGA02	29/08	01:07:01	Gear	60 53.92N	2 21.72W	285	N	N	N	N	
55417#2	TR300	DTI	MEGA02	29/08	01:28:49	Gear	60 53.86N	2 21.84W	284	N	N	N	N	
55417#3	TR300	DTI	MEGA02	29/08	01:50:47	Gear	60 53.88N	2 22.08W	285	N	N	N	N	
55417#4	TR300	DTI	MEGA02	29/08	02:20:38	Gear	60 53.90N	2 22.02W	285	N	N	N	N	
55418#1	TR350	DTI	MEGA04	29/08	03:09:23	Gear	60 55.59N	2 24.12W	341	N	N	N	N	
55418#2	TR350	DTI	MEGA04	29/08	03:39:19	Gear	60 55.60N	2 24.24W	343	N	N	N	N	
55419#1	L5	DTI	MEGA04	29/08	04:36:53	Gear	60 57.67N	2 25.08W	406	N	N	N	N	
55419#2	L5	DTI	MEGA04	29/08	05:10:33	Gear	60 57.73N	2 24.96W	407	N	N	N	N	
55420#1	TR450	DTI	MEGA04	29/08	06:08:27	Gear	60 58.39N	2 28.20W	446	N	N	N	N	
55420#2	TR450	DTI	MEGA04	29/08	06:48:11	Gear	60 58.42N	2 28.20W	449	N	N	N	N	
55421#1	L4	DTI	MEGA04	29/08	07:43:00	Gear	60 59.43N	2 29.46W	494	N	N	N	N	
55421#2	L4	DTI	MEGA04	29/08	08:22:28	Gear	60 59.39N	2 29.40W	494	N	N	N	N	
55422#1	TR550	DTI	MEGA04	29/08	09:48:26	Gear	61 1.02N	2 31.68W	544	N	N	N	N	
55423#1	TR600	DTI	MEGA04	29/08	10:53:35	Gear	61 2.62N	2 33.84W	591	N	N	N	N	
55423#2	TR600	DTI	MEGA04	29/08	11:35:44	Gear	61 2.59N	2 33.90W	591	N	N	N	N	
55424#1	TR650	DTI	MEGA04	29/08	12:47:38	Gear	61 4.49N	2 36.60W	637	Y	N	N	N	
55424#2	TR650	DTI	MEGA04	29/08	13:29:02	Gear	61 4.49N	2 36.66W	636	Y	N	N	N	
55425#1	S2	DTI	MEGA04	29/08	14:35:47	Gear	61 5.55N	2 40.86W	696	N	N	N	N	
55425#2	S2	DTI	MEGA04	29/08	15:10:28	Gear	61 5.60N	2 40.80W	696	N	N	N	N	
55426#1	BGSAS1	DTI	BGS CORE	29/08	17:23:00	Ship	61 7.51N	2 51.38W	910					
55427#1	CS1	DTI	WASP	29/08	18:31:41	Gear	61 7.42N	2 51.16W	897					
		DTI		29/08	19:35:12	Gear	61 7.40N	2 52.08W	915					
55427#2	CS1	DTI	MEGA08	29/08	20:37:25	Gear	61 7.39N	2 51.66W	908	Y	Y	Y	Y	0.024
55427#3	CS1	DTI	MEGA08	29/08	21:54:41	Gear	61 7.37N	2 51.90W	910	N	N	N	Y	0.055
55428#1	Tr1000	DTI	MEGA08	29/08	23:27:44	Gear	61 10.50N	2 45.30W	982	N	N	N	Y	0.039
55429#1	Tr900	DTI	MEGA08	30/08	00:41:44	Gear	61 9.61N	2 43.86W	898	N	N	N	Y	0.031
55430#1	Tr800	DTI	MEGA08	30/08	01:57:18	Gear	61 8.01N	2 41.64W	785	N	N	N	Y	0.039
55431#1	CS2	DTI	WASP	30/08	04:17:03	Gear	61 11.78N	2 35.58W	867					
		DTI		30/08	05:22:38	Gear	61 11.69N	2 36.72W	887					
55431#2	CS2	DTI	MEGA08	30/08	06:38:34	Gear	61 11.75N	2 36.24W	884	Y	Y	Y	Y	0.016

Station number	Site name	Ops	Gear type	Date 2000	Time (UTC)	Navig ation	Position Lat	Long	Depth (m)	HC	HM	PSA	MAC	(m²)
55431#3	CS2	DTI	MEGA10	30/08	07:39:22	Gear	61 11.75N	2 36.24W	884	N	N	N	Y	0.047
55432#1	BGSS1	DTI	BGS CORE	30/08	11:04:00	Ship	61 16.47N	2 29.09W	1017					
55433#1	CS3	DTI	MEGA08	30/08	12:28:15	Gear	61 14.25N	2 28.80W	886	N	N	N	Y	0.063
55433#2	CS3	DTI	MEGA08	30/08	13:25:28	Gear	61 14.27N	2 28.86W	886	Y	Y	Y	Y	0.024
55433#3	CS3	DTI	WASP	30/08	14:34:40	Gear	61 14.46N	2 28.08W	879					
		DTI		30/08	15:39:38	Gear	61 14.08N	2 29.34W	883					
55434#1	CS4	DTI	MEGA08	30/08	18:48:14	Gear	61 16.00N	2 20.16W	826	N	N	N	Y	0.063
55434#2	CS4	DTI	MEGA08	30/08	19:55:06	Gear	61 15.99N	2 20.22W	828	Y	Y	Y	Y	0.016
55434#3	CS4	DTI	WASP	30/08	21:01:29	Gear	61 16.47N	2 19.56W	834					
		DTI		30/08	22:06:10	Gear	61 16.14N	2 20.04W	831					
55434#4	CS4	DTI	BGS CORE	30/08	23:03:00	Ship	61 16.17N	2 20.06W	833					
55435#1	CS5	DTI	MEGA08	31/08	00:55:15	Gear	61 20.08N	2 7.92W	800	Y	Y	Y	Y	0.024
55435#2	CS5	DTI	MEGA08	31/08	01:55:52	Gear	61 20.07N	2 7.92W	799	N	N	N	Y	0.055
55436#1	WAVE	DTI	WASP	31/08	04:20:10	Gear	61 18.56N	2 19.02W	927					
		DTI		31/08	05:25:33	Gear	61 17.97N	2 19.38W	904					
55437#1	BGSS4	DTI	BGS CORE	31/08	07:10:00	Ship	61 15.72N	2 22.47W	851					
55437#2	BGSS4	DTI	BGS CORE	31/08	08:22:00	Ship	61 15.58N	2 23.38W	868					
55438#1	CS6	DTI	MEGA08	31/08	10:13:17	Gear	61 12.83N	2 25.92W	777	Y	Y	Y	Y	0.024
55438#2	CS6	DTI	MEGA08	31/08	11:33:15	Gear	61 12.50N	2 26.64W	773	N	N	N	N	
55438#3	CS6	DTI	MEGA08	31/08	12:36:18	Gear	61 12.80N	2 27.36W	795	N	N	N	Y	0.055
55439#1	CS7	DTI	MEGA08	31/08	13:49:02	Gear	61 13.48N	2 28.20W	837	N	N	N	Y	0.063
55439#2	CS7	DTI	MEGA08	31/08	14:47:55	Gear	61 13.42N	2 28.14W	831	Y	Y	Y	Y	0.008
55440#1	CS8	DTI	MEGA08	31/08	16:03:18	Gear	61 14.68N	2 30.12W	932	N	N	N	Y	0.024
55440#2	CS8	DTI	MEGA08	31/08	16:54:12	Gear	61 14.82N	2 29.70W	934	Y	Y	N	Y	0.039
55441#1	CS9	DTI	MEGA08	31/08	18:24:48	Gear	61 16.01N	2 31.32W	1029	N	N	N	Y	0.031
55441#2	CS9	DTI	MEGA08	31/08	19:47:42	Gear	61 15.95N	2 31.50W	1029	Y	Y	Y	Y	0.039
55442#1	WAVE2	DTI	WASP	31/08	21:55:11	Gear	61 14.29N	2 33.60W	973					
		DTI		31/08	23:00:10	Gear	61 14.55N	2 32.52W	974					
55443#1	CS10	DTI	MEGA08	01/09	01:09:47	Gear	61 11.81N	2 25.38W	740	Y	Y	Y	Y	0.024
55443#2	CS10	DTI	MEGA08	01/09	02:11:00	Ship	61 11.79N	2 25.29W	739	N	N	N	Y	0.039
55444#1	CS11	DTI	MEGA08	01/09	03:26:58	Gear	61 10.72N	2 24.36W	699	N	N	N	N	
55444#2	CS11	DTI	MEGA08	01/09	04:07:49	Gear	61 10.70N	2 24.24W	699	N	N	N	N	
55444#3	CS11	DTI	MEGA08	01/09	04:57:29	Gear	61 10.87N	2 23.94W	699	Y	Y	Y	Y	0.016
55444#4	CS11	DTI	MEGA08	01/09	05:58:37	Gear	61 10.72N	2 23.82W	697	N	N	N	Y	0.047
55445#1	CS12	DTI	MEGA08	01/09	08:45:14	Gear	61 11.77N	2 46.80W	1042	Y	Y	Y	Y	0.039
55445#2	CS12	DTI	MEGA08	01/09	10:04:28	Gear	61 11.56N	2 47.22W	1038	N	N	N	Y	0.047
55446#1	CS13	DTI	MEGA08	01/09	13:34:20	Gear	61 2.46N	3 6.06W	867	N	N	N	Y	0.055
55446#2	CS13	DTI	MEGA08	01/09	14:39:35	Gear	61 2.39N	3 6.12W	865	Y	Y	Y	Y	0.008
55447#1	FSC9	COMM	WASP	01/09	22:16:50	Gear	61 54.83N	3 0.37W	1544					
		COMM		01/09	23:21:12	Gear	61 55.29N	2 59.95W	1542					
55447#2	FSC9	DTI	MEGA10	02/09	01:51:04	Gear	61 54.87N	2 48.18W	1623	N	N	N	Y	0.039

Station number	Site name	Ops	Gear type	Date 2000	Time (UTC)	Navig ation	Position Lat	Long	Depth (m)	HC	HM	PSA	MAC	(m²)
55447#3	FSC9	DTI	MEGA10	02/09	03:29:11	Gear	61 54.89N	2 48.24W	1623	N	N	N	Y	0.039
55447#4	FSC9	DTI	MEGA10	02/09	05:06:03	Gear	61 54.82N	2 48.24W	1622	N	N	N	Y	0.047
55447#5	FSC9	DTI	MEGA10	02/09	06:47:23	Gear	61 54.98N	2 48.06W	1623	N	N	N	Y	0.055
55447#6	FSC9	DTI	MEGA10	02/09	08:40:22	Gear	61 55.03N	2 48.30W	1622	N	N	N	Y	0.039
55447#7	FSC9	COMM	WASP	02/09	11:20:00	Ship	61 54.87N	3 0.38W	1544					
		COMM		02/09	12:25:00	Ship	61 55.64N	2 59.94W	1542					
55447#8	FSC9	DTI	MEGA10	02/09	14:57:00	Gear	61 54.87N	2 48.18W	1623	N	N	N	Y	0.055
55447#9	FSC9	DTI	MEGA10	02/09	16:42:18	Gear	61 55.05N	2 48.12W	1624	N	N	N	Y	0.055
55447#10	FSC9	DTI	MEGA10	02/09	18:17:45	Gear	61 54.89N	2 47.94W	1623	N	N	N	Y	0.047
55447#11	FSC9	DTI	MEGA10	02/09	19:48:45	Gear	61 54.95N	2 48.06W	1624	N	N	N	Y	0.063
55447#12	FSC9	DTI	MEGA10	02/09	21:21:25	Gear	61 54.99N	2 48.06W	1624	N	N	N	N	
55447#13	FSC9	DTI	MEGA10	02/09	22:50:54	Gear	61 54.95N	2 47.82W	1624	N	N	N	Y	0.039
55447#14	FSC9	DTI	MEGA10	03/09	00:18:04	Gear	61 55.00N	2 48.00W	1625	N	N	N	Y	0.047
55447#15	FSC9	DTI	MEGA10	03/09	01:48:21	Gear	61 54.96N	2 48.06W	1624	N	N	N	Y	0.063
55447#16	FSC9	COMM	WASP	03/09	04:18:16	Gear	61 54.82N	3 0.51W	1545					
		COMM		03/09	05:23:38	Gear	61 55.19N	2 59.94W	1546					
55448#1	CS13	DTI	WASP	03/09	12:14:51	Gear	61 2.04N	3 5.83W	841					
		DTI		03/09	13:19:37	Gear	61 2.73N	3 6.13W	878					
55449#1	CS14	DTI	MEGA08	03/09	16:08:26	Gear	61 6.43N	2 39.36W	712	N	N	N	N	
55449#2	CS14	DTI	MEGA08	03/09	16:53:43	Gear	61 6.52N	2 39.41W	715	N	N	N	N	
55450#1	CS7	DTI	BOX CORE	03/09	19:21:23	Gear	61 13.47N	2 27.87W	834	N	N	N	N	
55451#1	CS5	DTI	WASP	03/09	22:08:30	Gear	61 19.63N	2 8.11W	784					
		DTI		03/09	23:13:45	Gear	61 20.33N	2 7.76W	806					
55452#1	CS4	DTI	BOX CORE	04/09	01:20:26	Gear	61 16.11N	2 19.99W	829	N	N	N	N	
55452#2	CS4	DTI	BOX CORE	04/09	02:20:27	Gear	61 16.06N	2 19.97W	826	N	N	N	N	
55453#1	CS3	DTI	BOX CORE	04/09	04:03:16	Gear	61 14.24N	2 28.88W	885	N	N	N	N	
55453#2	CS3	DTI	BOX CORE	04/09	05:01:35	Gear	61 14.16N	2 28.96W	884	N	N	N	N	
55454#1	CS2	DTI	BOX CORE	04/09	06:35:01	Gear	61 11.76N	2 36.76W	898	N	N	N	N	
55455#1	TR300	DTI	MEGA02	04/09	09:29:12	Gear	60 53.98N	2 21.56W	285	N	N	N	N	
55456#1	TR200	DTI	WASP	04/09	10:20:00	Ship	60 52.82N	2 19.13W	209					
		DTI		04/09	11:25:00	Ship	60 52.32N	2 19.67W	204					
55457#1	B8	COMM	MEGA08	05/09	08:29:14	Gear	58 46.46N	1 20.84E	102	N	N	N	N	
55457#2	B8	COMM	MEGA04	05/09	09:41:47	Gear	58 46.45N	1 20.86E	102	N	N	N	N	
55457#3	B8	COMM	MEGA04	05/09	10:53:02	Gear	58 46.56N	1 20.87E	101	N	N	N	N	
55457#4	B8	COMM	DAY GRAB	05/09	11:32:17	Gear	58 46.49N	1 20.93E	102	N	N	N	N	
55457#5	B8	COMM	DAY GRAB	05/09	11:41:52	Gear	58 46.47N	1 20.99E	102	N	N	N	N	
55457#6	B8	COMM	DAY GRAB	05/09	12:13:58	Gear	58 46.48N	1 20.84E	102	N	N	N	N	
55457#7	B8	COMM	DAY GRAB	05/09	12:36:03	Gear	58 46.49N	1 20.83E	102	N	N	N	N	
55457#8	B8	COMM	DAY GRAB	05/09	12:52:48	Gear	58 46.45N	1 20.82E	102	N	N	N	N	
55457#9	B8	COMM	DAY GRAB	05/09	13:23:46	Gear	58 46.45N	1 20.83E	102	N	N	N	N	
55457#10	B8	COMM	DAY GRAB	05/09	13:50:23	Gear	58 46.47N	1 20.84E	102	N	N	N	N	

Station number	Site name	Ops	Gear type	Date 2000	Time (UTC)	Navigation	Position Lat	Long	Depth (m)	HC	HM	PSA	MAC	(m²)
55457#11	B8	COMM	BOX CORE	05/09	14:16:17	Gear	58 46.45N	1 20.77E	102	N	N	N	N	
55457#12	B8	COMM	BOX CORE	05/09	15:20:51	Gear	58 46.46N	1 20.80E	102	N	N	N	N	
55457#13	B8	COMM	BOX CORE	05/09	16:03:39	Gear	58 46.47N	1 20.82E	102	N	N	N	N	
55457#14	B8	COMM	DAY GRAB	05/09	16:45:09	Gear	58 46.48N	1 20.96E	102	N	N	N	N	
55457#15	B8	COMM	DAY GRAB	05/09	17:01:10	Gear	58 46.48N	1 20.87E	102	N	N	N	N	
55457#16	B8	COMM	DAY GRAB	05/09	17:21:04	Gear	58 46.47N	1 20.86E	102	Y	Y	Y	N	
55457#17	B8	COMM	DAY GRAB	05/09	17:44:56	Gear	58 46.47N	1 20.84E	102	N	N	N	N	
55457#18	B8	COMM	DAY GRAB	05/09	18:07:23	Gear	58 46.48N	1 20.86E	102	N	N	N	N	
55457#19	B8	COMM	DAY GRAB	05/09	18:27:31	Gear	58 46.47N	1 20.86E	102	N	N	N	N	
55457#20	B8	COMM	DAY GRAB	05/09	18:56:19	Gear	58 46.47N	1 20.85E	102	N	N	N	N	
55457#21	B8	COMM	DAY GRAB	05/09	19:19:45	Gear	58 46.46N	1 20.84E	102	N	N	N	N	
55457#22	B8	COMM	DAY GRAB	05/09	19:46:07	Gear	58 46.47N	1 20.84E	102	N	N	N	N	
55458#1	XB2	COMM	DAY GRAB	05/09	20:44:25	Gear	58 48.65N	1 18.59E	112	N	N	N	Y	0.1
55458#2	XB2	COMM	DAY GRAB	05/09	21:10:22	Gear	58 48.67N	1 18.59E	112	Y	Y	Y	N	
55459#1	B6R	COMM	DAY GRAB	05/09	22:01:47	Gear	58 49.17N	1 20.75E	112	N	N	N	Y	0.1
55459#2	B6R	COMM	DAY GRAB	05/09	22:29:57	Gear	58 49.18N	1 20.75E	112	N	N	N	N	
55459#3	B6R	COMM	DAY GRAB	05/09	22:45:30	Gear	58 49.18N	1 20.76E	112	N	N	N	N	
55459#4	B6R	COMM	DAY GRAB	05/09	23:01:07	Gear	58 49.17N	1 20.76E	112	Y	Y	Y	N	
55460#1	B7R	COMM	DAY GRAB	05/09	23:39:02	Gear	58 50.18N	1 20.74E	112	N	N	N	N	
55460#2	B7R	COMM	DAY GRAB	05/09	23:56:37	Gear	58 50.26N	1 20.75E	111	N	N	N	Y	0.1
55460#3	B7R	COMM	DAY GRAB	06/09	00:22:21	Gear	58 50.24N	1 20.71E	111	Y	Y	Y	N	
55461#1	A2	COMM	DAY GRAB	06/09	01:52:58	Gear	58 43.20N	1 16.82E	109	N	N	N	Y	0.1
55461#2	A2	COMM	DAY GRAB	06/09	02:22:47	Gear	58 43.21N	1 16.82E	109	Y	Y	Y	N	
55462#1	XA2	COMM	DAY GRAB	06/09	03:14:46	Gear	58 40.44N	1 19.14E	113	N	N	N	N	
55462#2	XA2	COMM	DAY GRAB	06/09	03:28:42	Gear	58 40.45N	1 19.16E	112	Y	Y	Y	N	
55462#3	XA2	COMM	DAY GRAB	06/09	03:54:32	Gear	58 40.44N	1 19.16E	113	N	N	N	Y	0.1
55463#1	E1	COMM	DAY GRAB	06/09	06:47:00	Gear	58 55.27N	1 31.50E	132	N	N	N	Y	0.1
55463#2	E1	COMM	DAY GRAB	06/09	07:11:20	Gear	58 55.24N	1 31.50E	133	Y	Y	Y	N	
55464#1	XE2	COMM	DAY GRAB	06/09	07:49:02	Gear	58 53.63N	1 31.58E	120	N	N	N	Y	0.1
55464#2	XE2	COMM	DAY GRAB	06/09	08:08:45	Gear	58 53.64N	1 31.55E	121	Y	Y	Y	N	
55465#1	XE1	COMM	DAY GRAB	06/09	08:45:52	Gear	58 53.15N	1 31.57E	118	N	N	N	N	
55465#2	XE1	COMM	DAY GRAB	06/09	09:09:00	Ship	58 53.12N	1 31.57E	118	N	N	N	Y	0.1
55465#3	XE1	COMM	DAY GRAB	06/09	09:27:52	Gear	58 53.10N	1 31.58E	118	Y	Y	Y	N	
55466#1	E4	COMM	DAY GRAB	06/09	10:22:02	Gear	58 52.18N	1 31.69E	117	N	N	N	Y	0.1
55466#2	E4	COMM	DAY GRAB	06/09	10:49:52	Gear	58 52.18N	1 31.67E	117	Y	Y	Y	N	
55467#1	E6	COMM	DAY GRAB	06/09	11:15:00	Ship	58 52.06N	1 31.65E	117	N	N	N	Y	0.1
55467#2	E6	COMM	DAY GRAB	06/09	11:55:09	Gear	58 52.02N	1 31.68E	117	Y	Y	Y	N	
55467#3	E6	COMM	DAY GRAB	06/09	12:24:23	Gear	58 52.03N	1 31.68E	117	N	N	N	Y	0.1
55468#1	E8	COMM	DAY GRAB	06/09	12:55:00	Gear	58 51.49N	1 31.70E	115	N	N	N	Y	0.1
55468#2	E8	COMM	DAY GRAB	06/09	13:22:29	Gear	58 51.48N	1 31.72E	115	Y	Y	Y	N	
55469#1	A5	COMM	DAY GRAB	06/09	15:40:05	Gear	58 41.17N	1 16.96E	113	N	N	N	Y	0.1

Station number	Site name	Ops	Gear type	Date 2000	Time (UTC)	Navig ation	Position Lat	Long	Depth (m)	HC	HM	PSA	MAC	(m²)
55469#2	A5	COMM	DAY GRAB	06/09	15:57:18	Gear	58 41.17N	1 16.97E	113	Y	Y	Y	N	
55470#1	A7	COMM	DAY GRAB	06/09	16:23:58	Gear	58 41.03N	1 16.99E	113	N	N	N	Y	0.1
55470#2	A7	COMM	DAY GRAB	06/09	16:46:12	Gear	58 41.03N	1 17.01E	113	Y	Y	Y	N	
55471#1	A9	COMM	DAY GRAB	06/09	17:19:38	Gear	58 40.49N	1 17.03E	114	N	N	N	Y	0.1
55471#2	A9	COMM	DAY GRAB	06/09	17:39:47	Gear	58 40.49N	1 17.04E	114	N	N	N	N	
55471#3	A9	COMM	DAY GRAB	06/09	17:59:16	Gear	58 40.49N	1 17.02E	114	Y	Y	Y	N	
55472#1	XA1	COMM	DAY GRAB	06/09	19:04:14	Gear	58 42.10N	1 16.91E	112	N	N	N	Y	0.1
55472#2	XA1	COMM	DAY GRAB	06/09	19:27:19	Gear	58 42.11N	1 16.90E	112	Y	Y	Y	N	
55473#1	XB2	COMM	MEGA04	06/09	21:48:37	Gear	58 48.65N	1 18.58E	112	Y	Y	Y	N	
55474#1	B6R	COMM	MEGA04	06/09	22:37:57	Gear	58 49.17N	1 20.80E	113	Y	Y	Y	N	
55475#1	B7R	COMM	MEGA04	06/09	23:21:17	Gear	58 50.24N	1 20.71E	112	Y	N	Y	N	
55475#2	B7R	COMM	MEGA04	06/09	23:50:53	Gear	58 50.24N	1 20.71E	111	N	N	N	N	
55475#3	B7R	COMM	MEGA04	07/09	00:20:44	Gear	58 50.24N	1 20.75E	111	N	Y	N	N	
55476#1	E1	COMM	MEGA04	07/09	02:06:35	Gear	58 55.28N	1 31.48E	132	Y	Y	Y	N	
55476#2	E1	COMM	MEGA08	07/09	02:44:58	Gear	58 55.26N	1 31.47E	132	N	N	N	Y	0.063
55477#1	B6R	COMM	MEGA08	07/09	04:49:33	Gear	58 49.20N	1 20.76E	112	N	N	N	N	
55478#1	XB1	COMM	DAY GRAB	07/09	05:51:15	Gear	58 48.12N	1 20.85E	106	Y	Y	Y	N	
55479#1	B3	COMM	DAY GRAB	07/09	06:28:47	Gear	58 47.14N	1 20.94E	103	Y	Y	Y	N	
55480#1	B5	COMM	DAY GRAB	07/09	06:49:20	Gear	58 47.04N	1 20.93E	103	Y	Y	Y	N	
55481#1	T61	DTI	DAY GRAB	07/09	10:01:23	Gear	58 38.05N	0 44.93E	140	Y	Y	Y	N	
55481#2	T61	DTI	MEGA06	07/09	10:39:33	Gear	58 38.04N	0 45.26E	141	N	N	N	N	
55482#1	T62	DTI	DAY GRAB	07/09	19:19:55	Gear	58 36.01N	0 45.01E	150	N	N	N	N	
55482#2	T62	DTI	DAY GRAB	07/09	19:35:55	Gear	58 35.92N	0 44.82E	149	N	N	N	N	
55482#3	T62	DTI	DAY GRAB	07/09	20:04:51	Gear	58 36.02N	0 44.98E	150	N	N	N	N	
55482#4	T62	DTI	DAY GRAB	07/09	20:16:00	Ship	58 35.96N	0 44.83E	150	N	N	N	N	
55482#5	T62	DTI	DAY GRAB	07/09	20:49:07	Gear	58 36.02N	0 45.18E	150	N	N	N	N	
55482#6	T62	DTI	DAY GRAB	07/09	21:18:31	Gear	58 36.00N	0 44.98E	149	N	N	N	N	
55482#7	T62	DTI	DAY GRAB	07/09	21:53:37	Gear	58 36.21N	0 45.02E	150	N	N	N	N	
55482#8	T62	DTI	DAY GRAB	07/09	22:07:55	Gear	58 36.05N	0 45.22E	149	N	N	N	N	
55482#9	T62	DTI	DAY GRAB	07/09	22:38:21	Gear	58 36.15N	0 45.09E	150	N	N	N	N	
55482#10	T62	DTI	DAY GRAB	07/09	22:59:12	Gear	58 36.11N	0 44.93E	149	N	N	N	N	
55482#11	T62	DTI	DAY GRAB	07/09	23:39:30	Gear	58 36.23N	0 44.78E	150	N	N	N	N	
55482#12	T62	DTI	DAY GRAB	08/09	00:27:59	Gear	58 35.92N	0 44.94E	149	Y	Y	Y	N	
55483#1	T63	DTI	DAY GRAB	08/09	01:40:50	Gear	58 34.08N	0 45.09E	152	Y	Y	Y	N	
55484#1	T64	DTI	DAY GRAB	08/09	02:57:20	Gear	58 32.09N	0 44.08E	151	N	N	N	N	
55484#2	T64	DTI	DAY GRAB	08/09	03:11:04	Gear	58 32.04N	0 44.00E	150	N	N	N	N	
55484#3	T64	DTI	DAY GRAB	08/09	03:24:16	Gear	58 32.03N	0 44.19E	150	N	N	N	N	
55484#4	T64	DTI	DAY GRAB	08/09	03:38:16	Gear	58 32.01N	0 44.13E	149	N	N	N	N	
55484#5	T64	DTI	DAY GRAB	08/09	03:51:52	Gear	58 31.97N	0 44.21E	148	N	N	N	N	
55484#6	T64	DTI	DAY GRAB	08/09	04:08:42	Gear	58 32.05N	0 44.26E	150	Y	Y	Y	N	
55485#1	T65	DTI	DAY GRAB	08/09	05:08:06	Gear	58 30.05N	0 46.12E	147	N	N	N	N	

Station number	Site name	Ops	Gear type	Date 2000	Time (UTC)	Navig ation	Position Lat	Long	Depth (m)	HC	HM	PSA	MAC	(m²)
55485#2	T65	DTI	DAY GRAB	08/09	05:24:02	Gear	58 29.98N	0 46.19E	147	Y	Y	Y	N	
55486#1	T66	DTI	DAY GRAB	08/09	06:20:01	Gear	58 28.01N	0 45.07E	147	N	N	N	N	
55486#2	T66	DTI	DAY GRAB	08/09	06:45:32	Gear	58 28.05N	0 45.17E	148	N	N	N	N	
55486#3	T66	DTI	DAY GRAB	08/09	07:00:13	Gear	58 27.98N	0 45.26E	148	Y	Y	Y	N	
55487#1	T67	DTI	DAY GRAB	08/09	07:46:03	Gear	58 25.99N	0 45.23E	147	N	N	N	N	
55487#2	T67	DTI	DAY GRAB	08/09	07:59:16	Gear	58 25.86N	0 45.34E	147	N	N	N	N	
55487#3	T67	DTI	DAY GRAB	08/09	08:21:13	Gear	58 26.18N	0 45.13E	148	Y	Y	Y	N	
55488#1	T68	DTI	DAY GRAB	08/09	09:14:51	Gear	58 24.02N	0 45.08E	148	Y	Y	Y	N	
55489#1	T3-73	DTI	DAY GRAB	08/09	11:39:28	Gear	58 15.33N	0 44.90E	154	N	N	N	N	
55489#2	T3-73	DTI	DAY GRAB	08/09	12:06:41	Gear	58 15.35N	0 44.99E	154	Y	Y	Y	N	
55489#3	T3-73	DTI	DAY GRAB	08/09	12:33:20	Gear	58 15.39N	0 45.00E	154	N	N	N	N	
55489#4	T3-73	DTI	DAY GRAB	08/09	12:46:14	Gear	58 15.40N	0 44.87E	154	N	N	N	N	
55489#5	T3-73	DTI	DAY GRAB	08/09	13:04:04	Gear	58 15.45N	0 44.90E	154	N	N	N	N	
55489#6	T3-73	DTI	DAY GRAB	08/09	14:03:35	Gear	58 15.40N	0 44.87E	154	N	N	N	N	
55489#7	T3-73	DTI	DAY GRAB	08/09	14:40:20	Gear	58 15.49N	0 45.03E	154	N	N	N	N	
55489#8	T3-73	DTI	DAY GRAB	08/09	14:54:19	Gear	58 15.55N	0 44.85E	153	Y	N	N	N	
55489#9	T3-73	DTI	DAY GRAB	08/09	15:32:45	Gear	58 15.44N	0 44.97E	154	Y	N	N	N	
55489#10	T3-73	DTI	DAY GRAB	08/09	15:52:16	Gear	58 15.40N	0 44.85E	154	N	N	N	N	
55489#11	T3-73	DTI	DAY GRAB	08/09	16:06:28	Gear	58 15.41N	0 44.91E	155	N	N	N	N	
55489#12	T3-73	DTI	DAY GRAB	08/09	16:47:18	Gear	58 15.50N	0 44.82E	155	N	N	N	N	
55489#13	T3-73	DTI	DAY GRAB	08/09	17:02:53	Gear	58 15.55N	0 44.68E	154	Y	N	N	N	
55489#14	T3-73	DTI	DAY GRAB	08/09	17:31:47	Gear	58 15.24N	0 44.79E	154	N	N	N	N	
55489#15	T3-73	DTI	DAY GRAB	08/09	17:48:59	Gear	58 15.24N	0 45.02E	154	Y	N	N	N	
55490#1	T3-75	DTI	DAY GRAB	08/09	18:55:08	Gear	58 13.62N	0 52.52E	155	N	N	N	N	
55490#2	T3-75	DTI	DAY GRAB	08/09	19:10:22	Gear	58 13.54N	0 52.54E	155	Y	Y	Y	N	
55491#1	T3-77	DTI	DAY GRAB	08/09	20:08:34	Gear	58 11.55N	0 56.63E	154	Y	Y	Y	N	
55492#1	T4-51	DTI	DAY GRAB	08/09	21:35:23	Gear	58 8.02N	1 4.04E	146	N	N	N	N	
55492#2	T4-51	DTI	DAY GRAB	08/09	21:56:58	Gear	58 8.20N	1 3.71E	145	Y	Y	Y	N	
55493#1	T4-49	DTI	DAY GRAB	08/09	23:14:45	Gear	58 9.84N	0 56.19E	153	Y	Y	Y	N	
55494#1	ALBA4	DTI	DAY GRAB	09/09	00:32:29	Gear	58 11.02N	0 49.97E	156	N	N	N	N	
55494#2	ALBA4	DTI	DAY GRAB	09/09	00:52:50	Gear	58 11.02N	0 49.98E	157	N	N	N	N	
55494#3	ALBA4	DTI	DAY GRAB	09/09	01:07:30	Gear	58 11.04N	0 49.92E	156	Y	Y	Y	N	
55495#1	T4-47	DTI	DAY GRAB	09/09	01:45:40	Gear	58 11.45N	0 48.74E	156	N	N	N	N	
55495#2	T4-47	DTI	DAY GRAB	09/09	02:01:26	Gear	58 11.47N	0 48.62E	155	Y	Y	Y	N	
55496#1	T4-45	DTI	DAY GRAB	09/09	03:26:13	Gear	58 13.17N	0 41.06E	152	Y	Y	Y	N	
55497#1	T4-71	DTI	DAY GRAB	09/09	04:28:41	Gear	58 16.38N	0 39.81E	153	Y	Y	Y	N	
55498#1	T3-69	DTI	DAY GRAB	09/09	05:54:58	Gear	58 19.28N	0 29.96E	150	N	N	N	N	
55498#2	T3-69	DTI	DAY GRAB	09/09	06:09:50	Gear	58 19.35N	0 29.90E	151	Y	Y	Y	N	
55499#1	T3-67	DTI	DAY GRAB	09/09	07:18:14	Gear	58 20.14N	0 22.31E	147	Y	Y	Y	N	
55500#1	T3-65	DTI	DAY GRAB	09/09	08:38:14	Gear	58 21.80N	0 14.61E	145	Y	Y	Y	N	
55501#1	T3-63	DTI	DAY GRAB	09/09	09:55:00	Ship	58 23.97N	0 8.27E	144	N	N	N	N	

Station number	Site name	Ops	Gear type	Date 2000	Time (UTC)	Navig ation	Position Lat	Long	Depth (m)	HC	HM	PSA	MAC	(m²)
55501#2	T3-63	DTI	DAY GRAB	09/09	10:38:44	Gear	58 24.03N	0 8.32E	144	Y	Y	Y	N	
55502#1	T3-61	DTI	DAY GRAB	09/09	12:01:59	Gear	58 25.53N	0 1.06E	141	N	N	N	N	
55502#2	T3-61	DTI	DAY GRAB	09/09	12:17:20	Gear	58 25.48N	0 1.00E	141	N	N	N	N	
55502#3	T3-61	DTI	DAY GRAB	09/09	12:29:17	Gear	58 25.53N	0 0.92E	139	Y	Y	Y	N	
55503#1	T3-59	DTI	DAY GRAB	09/09	13:40:36	Gear	58 26.73N	0 7.96W	133	Y	Y	Y	N	
55504#1	T3-55	DTI	DAY GRAB	09/09	15:27:15	Gear	58 30.04N	0 23.29W	129	Y	Y	Y	N	
55504#2	T3-55	DTI	MEGA06	09/09	16:06:30	Gear	58 30.03N	0 23.31W	128	Y	Y	Y	N	
55504#3	T3-55	DTI	MEGA06	09/09	16:34:22	Gear	58 30.13N	0 23.42W	128	N	N	N	N	
55505#1	T3-59	DTI	MEGA06	09/09	18:23:03	Gear	58 26.67N	0 7.93W	134	N	N	N	N	
55505#2	T3-59	DTI	MEGA06	09/09	18:39:28	Gear	58 26.65N	0 7.99W	134	Y	N	N	N	
55505#3	T3-59	DTI	MEGA06	09/09	19:02:45	Gear	58 26.68N	0 8.12W	134	N	Y	Y	N	
55506#1	T3-61	DTI	MEGA06	09/09	20:12:12	Gear	58 25.51N	0 1.12E	141	Y	Y	Y	N	
55507#1	T3-63	DTI	MEGA06	09/09	21:28:27	Gear	58 24.00N	0 8.08E	144	N	N	N	N	
55507#2	T3-63	DTI	MEGA06	09/09	21:44:02	Gear	58 23.97N	0 7.95E	144	Y	Y	Y	N	
55508#1	T3-65	DTI	MEGA06	09/09	22:50:33	Gear	58 21.84N	0 14.66E	145	Y	Y	Y	N	
55509#1	T3-67	DTI	MEGA06	09/09	23:59:55	Gear	58 20.18N	0 22.27E	147	N	N	N	N	
55509#2	T3-67	DTI	MEGA06	10/09	00:18:30	Gear	58 20.18N	0 22.28E	147	Y	Y	Y	N	
55510#1	T3-69	DTI	MEGA06	10/09	01:42:35	Gear	58 19.21N	0 30.09E	150	Y	Y	Y	N	
55510#2	T3-69	DTI	MEGA06	10/09	02:07:36	Gear	58 19.21N	0 30.05E	150	N	N	N	N	
55511#1	T3-71	DTI	MEGA06	10/09	03:48:32	Gear	58 16.31N	0 40.02E	153	N	N	N	N	
55511#2	T3-71	DTI	MEGA06	10/09	04:14:09	Gear	58 16.32N	0 39.90E	153	Y	Y	Y	N	
55512#1	T3-73	DTI	MEGA06	10/09	05:41:17	Gear	58 15.31N	0 44.74E	154	Y	N	N	N	
55512#2	T3-73	DTI	MEGA06	10/09	06:14:28	Gear	58 15.29N	0 44.84E	154	Y	Y	Y	N	
55512#3	T3-73	DTI	MEGA04	10/09	07:04:00	Gear	58 15.32N	0 44.88E	154	Y	N	N	N	
55512#4	T3-73	DTI	MEGA04	10/09	07:34:12	Gear	58 15.33N	0 44.94E	154	Y	N	N	N	
55512#5	T3-73	DTI	MEGA04	10/09	08:03:32	Gear	58 15.23N	0 44.97E	154	Y	N	N	N	
55512#6	T3-73	DTI	MEGA04	10/09	08:34:43	Gear	58 15.38N	0 44.74E	154	Y	N	N	N	
55512#7	T3-73	DTI	BGS CORE	10/09	09:35:00	Ship	58 15.16N	0 45.00E	154					
55512#8	T3-73	DTI	BGS CORE	10/09	10:03:00	Ship	58 15.24N	0 45.12E	154					
55512#9	T3-73	DTI	BGS CORE	10/09	10:25:00	Ship	58 15.26N	0 44.69E	154					
55513#1	T3-75	DTI	MEGA06	10/09	11:30:06	Gear	58 13.67N	0 52.55E	154	Y	Y	Y	N	
55514#1	ALBA4	DTI	MEGA06	10/09	12:44:27	Gear	58 11.00N	0 50.10E	155	Y	Y	Y	N	
55515#1	T3-77	DTI	MEGA06	10/09	13:39:46	Gear	58 11.48N	0 56.57E	154	Y	Y	Y	N	
55516#1	T3-80	DTI	MEGA06	10/09	15:42:41	Gear	58 8.98N	1 13.59E	135	Y	Y	Y	N	
55516#2	T3-80	DTI	DAY GRAB	10/09	16:19:58	Gear	58 9.04N	1 13.54E	136	Y	Y	Y	N	
55517#1	T6-1	DTI	MEGA06	10/09	20:30:50	Gear	58 37.96N	0 44.95E	142	N	Y	Y	N	
55517#2	T6-1	DTI	MEGA06	10/09	20:53:15	Gear	58 38.07N	0 45.06E	141	Y	N	N	N	
55518#1	T6-2	DTI	MEGA06	10/09	21:47:38	Gear	58 36.09N	0 44.93E	149	Y	Y	Y	N	
55519#1	T6-3	DTI	MEGA06	10/09	22:42:35	Gear	58 34.06N	0 44.94E	151	Y	N	Y	N	
55519#2	T6-3	DTI	MEGA06	10/09	23:14:11	Gear	58 33.95N	0 45.02E	159	N	Y	N	N	
55520#1	T6-4	DTI	MEGA06	11/09	00:08:11	Gear	58 32.02N	0 43.98E	150	Y	Y	Y	N	

Station number	Site name	Ops	Gear type	Date 2000	Time (UTC)	Navig ation	Position Lat	Long	Depth (m)	HC	HM	PSA	MAC	(m²)
55521#1	T6-5	DTI	MEGA06	11/09	01:17:00	Gear	58 30.05N	0 45.94E	148	Y	Y	Y	N	
55522#1	T6-6	DTI	MEGA06	11/09	02:36:29	Gear	58 28.05N	0 45.05E	148	N	N	N	N	
55522#2	T6-6	DTI	MEGA06	11/09	03:00:12	Gear	58 28.00N	0 45.06E	147	N	N	N	N	
55522#3	T6-6	DTI	MEGA06	11/09	03:19:15	Gear	58 28.00N	0 45.03E	147	Y	Y	Y	N	
55523#1	T6-7	DTI	MEGA06	11/09	04:28:16	Gear	58 26.01N	0 45.04E	147	N	Y	Y	N	
55523#2	T6-7	DTI	MEGA06	11/09	04:50:12	Gear	58 25.93N	0 45.11E	146	Y	N	N	N	
55524#1	T6-8	DTI	MEGA06	11/09	05:57:14	Gear	58 24.00N	0 44.90E	148	Y	Y	Y	N	
55524#2	T6-8	DTI	MEGA08	11/09	06:41:07	Gear	58 24.01N	0 45.05E	148	N	N	N	Y	0.047
55524#3	T6-8	DTI	MEGA08	11/09	07:17:39	Gear	58 24.00N	0 44.97E	148	N	N	N	N	
55524#4	T6-8	DTI	MEGA06	11/09	07:37:06	Gear	58 23.92N	0 44.86E	148	N	N	N	Y	0.063
55525#1	T3-69	DTI	MEGA04	11/09	09:27:17	Gear	58 19.17N	0 29.87E	150	N	N	N	N	
55525#2	T3-69	DTI	MEGA06	11/09	09:48:31	Gear	58 19.20N	0 30.08E	151	2Y	N	N	N	
55525#3	T3-69	DTI	MEGA06	11/09	10:15:49	Gear	58 19.04N	0 30.15E	150	N	N	N	N	
55525#4	T3-69	DTI	MEGA06	11/09	10:40:35	Gear	58 19.34N	0 30.46E	150	2Y	N	N	N	
55525#5	T3-69	DTI	MEGA06	11/09	11:08:32	Gear	58 19.19N	0 29.94E	150	2Y	N	N	N	0.024
55525#6	T3-69	DTI	MEGA06	11/09	11:38:53	Gear	58 19.15N	0 29.96E	150	2Y	N	N	N	
55525#7	T3-69	DTI	MEGA06	11/09	12:15:43	Gear	58 19.19N	0 29.91E	150	2Y	N	N	N	
55525#8	T3-69	DTI	MEGA06	11/09	12:36:49	Gear	58 19.19N	0 29.94E	150	N	N	N	Y	0.047
55526#1	T3-73	DTI	MEGA06	11/09	14:23:50	Gear	58 15.33N	0 44.87E	154	N	N	N	Y	0.024
55526#2	T3-73	DTI	MEGA08	11/09	14:50:57	Gear	58 15.35N	0 44.94E	153	N	N	N	Y	0.031
55527#1	T3-77	DTI	MEGA08	11/09	16:22:31	Gear	58 11.55N	0 56.72E	153	N	N	N	Y	0.039
55527#2	T3-77	DTI	MEGA08	11/09	16:49:14	Gear	58 11.65N	0 56.59E	154	N	N	N	Y	0.016
55528#1	T1-117	DTI	MEGA08	11/09	18:18:32	Gear	58 18.77N	0 58.35E	150	N	N	N	Y	0.039
55528#2	T1-117	DTI	MEGA08	11/09	18:45:34	Gear	58 18.84N	0 58.43E	150	N	N	N	Y	0.024
55528#3	T1-117	DTI	DAY GRAB	11/09	19:17:01	Gear	58 18.76N	0 58.39E	150	N	N	N	N	
55528#4	T1-117	DTI	DAY GRAB	11/09	19:33:10	Gear	58 18.73N	0 58.46E	150	Y	Y	Y	N	
55529#1	ALBA3	DTI	DAY GRAB	11/09	22:16:14	Gear	58 8.97N	0 34.99E	154	N	N	N	N	
55529#2	ALBA3	DTI	DAY GRAB	11/09	22:30:14	Gear	58 8.89N	0 34.96E	153	Y	Y	Y	N	
55529#3	ALBA3	DTI	MEGA08	11/09	22:54:51	Gear	58 8.85N	0 34.72E	152	N	N	N	N	
55529#4	ALBA3	DTI	MEGA08	11/09	23:18:13	Gear	58 9.00N	0 35.07E	153	Y	Y	Y	N	
55530#1	ALBA2	DTI	DAY GRAB	12/09	00:57:50	Gear	58 2.95N	0 37.83E	154	Y	Y	Y	N	
55531#1	ALBA1	DTI	DAY GRAB	12/09	02:38:30	Gear	57 57.92N	0 40.88E	151	Y	Y	Y	N	
55532#1	T5-21	DTI	DAY GRAB	12/09	04:52:16	Gear	58 7.87N	0 52.59E	152	Y	Y	Y	N	
55533#1	T5-19	DTI	DAY GRAB	12/09	06:06:11	Gear	58 9.28N	0 45.07E	155	N	N	N	N	
55533#2	T5-19	DTI	DAY GRAB	12/09	06:33:33	Gear	58 9.36N	0 45.12E	155	Y	Y	Y	N	
55534#1	T5-17	DTI	DAY GRAB	12/09	07:48:58	Gear	58 10.84N	0 37.51E	152	Y	Y	Y	N	
55535#1	T5-15	DTI	DAY GRAB	12/09	09:06:50	Gear	58 12.47N	0 29.40E	149	Y	Y	Y	N	
55536#1	T4-43	DTI	DAY GRAB	12/09	10:10:15	Gear	58 13.99N	0 33.64E	150	N	N	N	N	
55536#2	T4-43	DTI	DAY GRAB	12/09	10:35:11	Gear	58 14.13N	0 33.58E	151	Y	Y	Y	N	
55537#1	T2-93	DTI	DAY GRAB	12/09	11:55:38	Gear	58 18.79N	0 37.34E	152	Y	Y	Y	N	
55538#1	T1-113	DTI	DAY GRAB	12/09	12:57:46	Gear	58 21.94N	0 41.12E	147	Y	Y	Y	N	

Station number	Site name	Ops	Gear type	Date 2000	Time (UTC)	Navigation	Position Lat	Long	Depth (m)	HC	HM	PSA	MAC	(m²)
55539#1	T1-115	DTI	DAY GRAB	12/09	14:18:33	Gear	58 20.22N	0 50.11E	150	N	N	N	N	
55539#2	T1-115	DTI	DAY GRAB	12/09	14:34:58	Gear	58 20.25N	0 50.06E	150	N	N	N	N	
55539#3	T1-115	DTI	DAY GRAB	12/09	14:50:34	Gear	58 20.24N	0 50.07E	149	Y	Y	Y	N	
55540#1	T2-97	DTI	DAY GRAB	12/09	15:56:49	Gear	58 16.64N	0 52.48E	147	Y	Y	Y	N	
55541#1	T1-111	DTI	DAY GRAB	12/09	18:11:31	Gear	58 23.78N	0 33.53E	149	N	N	N	N	
55541#2	T1-111	DTI	DAY GRAB	12/09	18:28:11	Gear	58 23.99N	0 33.68E	150	Y	Y	Y	N	
55542#1	T2-91	DTI	DAY GRAB	12/09	19:22:23	Gear	58 22.35N	0 29.62E	148	Y	Y	Y	N	

9.2. Comments and other samples

The following listing provides a simple comment on each deployment made during the cruise and lists samples collected other than primary survey samples. For station data and information on primary survey samples see the preceding listing in Section 9.1.

Station & Site See Section 9.1 for definitions.

Comment & Other samples Refer to glossary below.

250 MAC	Macrobenthos sample <500µm >250µm
2nd 0.1 MAC	Second 0.1m^2 macrobenthos sample retained
FORAM	Foraminiferan sample
FROZEN	Whole frozen core retained
GASH MEIOB	Qualitative meiobenthos sample
GEOL	Geology sample examined / retained by BGS
gravel dislodged	Some sediment resuspension resulting from gravel movement during core penetration
LIVE MEIOB	Core top retained to study live meiobenthos
MAC250	Macrobenthos sample <500µm >250µm
MEIOB	Meiobenthos sample
MESOB	Mesobenthos sample
MICRO	Microbiology sample
Mk7	WASP still camera
mwo	Metres of wire out (deployed)
Q MAC	Qualitative macrobenthos sample
Radioisotope	Radioisotope sample
RIJ	'Rock in jaw', a common failure mode of the Day grab
SOC GEOL	Geology sample retained by SOC
Spec.	'Speciality' chemical sample
Special	'Speciality' chemical sample
USBL	Ultra-short Baseline (acoustic navigation system)
vs	Vertically sectioned core sample
wire test	*In situ* test of acoustic release system
x m Vis.	x Metres of colour film exposed (WASP)
x mins DV	x Minutes of digital video footage (WASP)
x/x	x Good quality cores recovered from /x core units deployed on the megacorer.

Station number	Site name	Other samples	Comments
55201#1	BGS1	10m Vis.	No Video, damage to Mk7 belt drive
55202#1	TRNSP		USBL system calibration
55203#1	YR1	GEOL	7/8 good cores, combined with 55203#3
55203#2	YR1		1/7 short core, discarded, no samples
55203#3	YR1		7/8 good cores, combined with 55203#1
55204#1	YR2		3/8 good cores
55204#2	YR2		8/8 good cores
55205#1	YR3		2/8 (short) good cores
55205#2	YR3		1/8 (short) good core
55205#3	YR3		0/8 cores. No samples
55205#4	YR3		Gushed on recovery. No samples
55205#5	YR3		Warp fouled on corer, not triggered
55205#6	YR3		4/4 good cores, combined with 55205#7
55205#7	YR3		4/4 good cores, combined with 55205#6
55206#1	YR4		3/4 (short) good cores
55206#2	YR4		4/4 good cores, combined with 55206#3,4
55206#3	YR4	GEOL	3/4 good cores, combined with 55206#2,4
55206#4	YR4		4/4 good cores, combined with 55206#2,3
55207#1	YR5	GEOL	4/4 good cores
55207#2	YR5		3/4 good cores, combined with 55207#3
55207#3	YR5		9/9 good cores, combined with 55207#2
55208#1	YRW1	65mins DV, 15m Vis.	
55209#1	YRW2	65mins DV, 15m Vis.	
55210#1	YR6	GEOL	Good core
55211#1	YR7	GEOL	Good core
55212#1	YR8		Sample washed out, box damaged
55212#2	YR8	GEOL	Good core
55213#1	YR9	GEOL	Good core
55214#1	YR10	GEOL	Good core
55215#1	YR11	GEOL	Good core
55216#1	YR12	GEOL	Good core
55217#1	YR13		Disturbed core, discarded
55217#2	YR13	GEOL	Good core
55218#1	YRW3	65mins DV, 15m Vis.	
55219#1	YRW4	65mins DV, 15m Vis.	
55220#1	YR14		4/4 short but good cores
55220#2	YR14	2 m geology core	Good core
55221#1	YRW5	65mins DV, 15m Vis.	
55222#1	YRW6	60 mins DV, 15m Vis.	
55223#1	YR15		Warp fouled on gear, no sample
55223#2	YR15	GEOL	Good core

Station number	Site name	Other samples	Comments
55224#1	YR16		8/8 good cores, combined with 55224#2
55224#2	YR16	GEOL	8/8 good cores
55225#1	YRW7	30mins DV, 7m Vis.	
55226#1	YRW8	30mins DV, 7m Vis.	
55227#1	WTS1		Washed out, box bent, no samples
55228#1	WTS1	30mins DV, 7m Vis.	
55229#1	WTS2	30mins DV, 7m Vis.	
55230#1	WTS2		1/6 short core, no samples
55230#2	WTS2		3/4 good cores
55230#3	WTS2		0/4 cores, no samples
55231#1	WTS3	GEOL	4/4 good cores
55231#2	WTS3		4/4 good cores
55231#3	WTS3	MEIOB	6/6 good cores
55232#1	WTS3	65mins DV, 15m Vis.	and wire test
55233#1	FSC1200		0/4 cores, fell over?
55233#2	FSC1200		4/4 good cores, 1 lost on deck
55233#3	FSC1200		4/6 good cores, 2 lost on deck
55233#4	FSC1200	GEOL	4/6 good cores
55233#5	FSC1200		0/6 cores, no samples
52234#1	SITE P		6/6 good cores
55234#2	SITE P	GEOL	6/6 good cores
55235#1	SITE N2		3/6 (short) good cores
55235#2	SITE N2		1/6 (short) good core
55235#3	SITE N2		4/4 good cores
55235#4	SITE N2	GEOL	4/4 good cores
55236#1	WTS4	65mins DV, 15m vision	
55237#1	FBC1200		6/6 good cores
55237#2	FBC1200	GEOL	6/6 good cores
55238#1	FBC1000		5/6 good cores
55238#2	FBC1000	GEOL	7/8 good cores
55239#1	WTW1	65mins DV, 15m Vis.	
55240#1	WTW2	65mins DV, 15m Vis.	No USBL data
55241#1	WTS5	GEOL	Good core
55242#1	WTS6	GEOL	Good core
55243#1	WTS7		5/6 good cores
55243#2	WTS7		6/6 good cores
55244#1	WTS8		0/6 cores, no samples
55244#2	WTS8	GEOL	4/4 good cores
55244#3	WTS8		Gushed, no samples
55244#4	WTS8	2nd 0.1 MAC	Good core, 2nd 0.1 MAC taken
55244#5	WTS8		Abort, longline round prop, no samples

Station number	Site name	Other samples	Comments
55245#1	FSC300		God sample
55245#2	FSC300		Sample lost no deck, no samples
55245#3	FSC300		Good sample
55246#1	FSC500	GEOL	Good core
55247#1	FSC800	GEOL	3/6 good cores
55247#2	FSC800		5/6 good cores
55247#3	FSC800		4/6 good cores
55248#1	FSC1000		4/8 good cores
55248#2	FSC1000	GEOL	6/6 good cores
55248#3	FSC1000	GEOL, MEIOB	5/6 good cores
55249#1	WTS9	GEOL	6/6 good cores
55249#2	WTS9		6/8 good cores
55250#1	WTS9	65mins DV, 15m Vis.	
55251#1	WTW6	65mins DV, 15m Vis.	
55252#1	WTS10		0/6 cores, no samples
55252#2	WTS10		1/4 good core
55252#3	WTS10		2/2 cores
55252#4	WTS10	30mins DV, 7m Vis.	
55253#1	WTS11	30mins DV, 15m Vis.	
55253#2	WTS11	GEOL	4/4 good cores
55253#3	WTS11		Gushed, hung on gimbals, no samples
55253#4	WTS11		No samples
55253#5	WTS11		Good core
55254#1	WTS8	65mins DV, 15m Vis.	
55255#1	WTS8	Gravity core sample	Short core (0.7 m)
55256#1	WTS5/6	30mins DV, 7m Vis.	
55257#1	WTW3	30mins DV, 15m Vis.	
55258#1	WTW4	30mins DV, 7m Vis.	
55259#1	WTW5	30mins DV, 7m Vis.	
55260#1	CT1		0/4 cores, no samples
55260#2	CT1		0/4 cores, no samples
55261#1	CT2	GEOL	1/2 good core
55261#2	CT2	SOC GEOL	2/2 good cores
55262#1	CT3	SOC GEOL, GEOL	4/4 good cores
55263#1	SITE J		4/4 good cores, warned off by guard boat
55264#1	SITE L	GEOL	5/6 good cores
55264#2	SITE L		5/6 good cores
55264#3	SITE L	MEIOB	6/6 good cores
55265#1	WTS4		6/6 good cores
55265#2	WTS4	MEIOB, GEOL	7/8 good cores
55266#1	FSC1200		0/6 cores, no samples

Station number	Site name	Other samples	Comments
55266#2	FSC1200		0/4 cores, no samples
55267#1	SITE R2		4/4 good cores
55267#2	SITE R2	GEOL	4/4 good cores
55267#3	SITE R2		2/4 good cores
55267#4	SITE R2	MEIOB	3/4 good cores
55267#5	SITE R2	2.5 m core	2.5 m core
55268#1	WTS12		6/6 good cores
55268#2	WTS12		4/6 good cores
55268#3	WTS12	MEIOB, GEOL	5/6 good cores
55268#4	WTS12	65mins DV, 15m Vis.	
55269#1	SITE S		0/6 cores, no samples
55269#2	SITE S		3/4 good cores
55269#3	SITE S		4/4 good cores
55269#4	SITE S		3/4 good cores
55270#1	WTS13	65mins DV, 15m Vis.	
55270#2	WTS13		3/4 good cores
55270#3	WTS13		5/6 good cores
55270#4	WTS13	MEIOB, GEOL	5/6 good cores
55271#1	FBW1	65mins DV, 15m Vis.	
55272#1	SITE S	MEIOB, GEOL	4/4 good cores
55273#1	WTS14		5/6 fair cores (gravel dislodged)
55273#2	WTS14		5/6 fair cores (gravel dislodged)
55273#3	WTS14		1/6 good core
55274#1	WTS15		Good core, box dented
55275#1	WTS16	65mins DV, 15m Vis.	No USBL (batts dead)
55275#2	WTS16		4/6 fair cores (gravel dislodged)
55275#3	WTS16		6/6 good cores
55275#4	WTS16	MEIOB, GEOL	4/6 good cores
55276#1	FSC1	65mins DV, 15m Vis.	
55276#2	FSC1		4/6 good cores
55276#3	FSC1		6/6 good cores
55276#4	FSC1	MEIOB, GEOL	6/6 good cores
55277#1	BP1	Limited run, film jammed	Short-term deployment
52278#1	ET1		9/10 good cores
55278#2	ET1	MEIOB, GEOL	10/10 good cores
55279#1	ET2		9/12 good cores
55279#2	ET2	MEIOB, GEOL	9/10 good cores
55280#1	ET3		11/12 good cores
55281#1	ET4		11/12 good cores
55282#1	ET5		11/12 good cores
55283#1	ET6		10/12 good cores

Station number	Site name	Other samples	Comments
55283#2	ET6	MEIOB, GEOL	9/12 good cores
55284#1	ET7		11/12 good cores
55285#1	ET8		10/12 good cores
55285#2	ET8	MEIOB, GEOL	8/12 good cores
55286#1	ET9		11/12 good cores
55287#1	ET10		8/12 good cores
55287#2	ET10	2xMEIOB, GEOL	6/8 good cores
55288#1	ETW1	65mins DV, 15m Vis.	
55289#1	ET11	2xMEIOB, GEOL	6/12 good cores
55289#2	ET11		0/12 cores (all too short), no samples
55290#1	ET11	GEOL	10/12 good cores
55290#2	ET11	GEOL	9/10 good cores
55291#1	ET12		11/12 good cores
55292#1	ET13	MEIOB, GEOL	5/12 good cores
55292#2	ET13	MEIOB	11/12 good cores
55293#1	ET14		11/12 good cores
55294#1	ET15		11/12 good cores
55295#1	ETW2	65mins DV, 15m Vis.	
55296#1	ET3		8/12 good cores
55296#2	ET3	MEIOB, GEOL	10/10 good cores
55297#1	ET4		11/12 good cores
55298#1	ETW3	65mins DV, 15m Vis.	
55299#1	ET8		9/12 good cores
55300#1	ET5		10/12 good cores
55300#2	ET5	GEOL	10/12 good cores
55301#1	ET11		10/12 good cores
55301#2	ET11	SOC GEOL	12/12 good cores
55302#1	ET13		10/12 good cores
55303#1	ET15		Aborted, mwo failed, no samples
55303#2	ET15		11/12 good cores
55304#1	ET12		9/12 good cores
55304#2	ET12		10/12 good cores
55305#1	ETW4	48mins DV, 15m Vis.	
55306#1	ETW5	65mins DV, 15m Vis.	
55307#1	ET16	MEIOB, GEOL	10/12 good cores
55307#2	ET16		11/12 good cores
55308#1	ET17	SOC GEOL	12/12 good cores
55309#1	ETW6	65mins DV, 15m Vis.	
55310#1	FSC2	65mins DV, 15m Vis.	
55310#2	FSC2	MEIOB, GEOL	5/12 good cores
55310#3	FSC2		8/8 good cores

Station number	Site name	Other samples	Comments
55311#1	FSC3		8/8 good cores
55311#2	FSC3	2xMEIOB, GEOL	6/8 good cores
55312#1	FSC4	MEIOB	8/8 good cores
55312#2	FSC4	MEIOB, GEOL	8/8 good cores
55313#1	FSC5	MEIOB	5/8 good cores
55313#2	FSC5		4/8 (short) good cores
55313#3	FSC5	MEIOB	5/6 good cores
55313#4	FSC5	65mins DV, 15m Vis.	
55314#1	FSC6	65mins DV, 15m Vis.	
55314#2	FSC6		8/8 good cores
55314#3	FSC6	2xMEIOB, GEOL	6/8 good cores
55315#1	FSC7		3/8 good cores
55315#2	FSC7		6/6 (short) good cores
55315#3	FSC7	2xMEIOB, GEOL	6/6 good cores
55315#4	FSC7	15m Vis.	No video - monitor problem
55316#1	FSC8	MEIOB	4/8 good cores
55316#2	FSC8	GEOL	2/8 good cores
55316#3	FSC8	MEIOB	7/8 good cores
55316#4	FSC8	65mins DV, 15m Vis.	
55317#1	FSC9		6/8 good cores
55317#2	FSC9	2xMEIOB, GEOL	8/8 good cores
55317#3	FSC9	65mins DV, 15m Vis.	
55318#1	Tr1300	MEIOB, FORAM, MICRO, GEOL, FROZEN	6/6 good cores
55319#1	Tr1200	MEIOB, FORAM, MICRO, GEOL	5/6 good cores
55320#1	Tr1100	MEIOB, FORAM, MICRO, GEOL	5/6 good cores
55321#1	Tr1000	MEIOB, FORAM, MICRO, GEOL, FROZEN	6/6 good cores
55322#1	NW5		11/12 good cores
55323#1	NW4	GEOL	11/12 good cores
55323#2	NW4	2xMEIOB	11/12 good cores
55324#1	NW2		10/12 good cores
55324#2	NW2	MEIOB, GEOL	10/10 good cores
55325#1	NW1		9/12 good cores
55325#2	NW1	MEIOB, GEOL	9/10 good cores
55326#1	NW3	(GEOL)	11/12 good cores
55327#1	NWW	65mins DV, 15m Vis.	
55328#1	NR2		9/10 good cores
55328#2	NR2	GEOL	8/10 good cores
55329#1	NRW	65mins DV, 15m Vis.	
55330#1	NR3		6/8 good cores
55330#2	NR3	GEOL	6/8 good cores
55331#1	NR4		4/8 good cores

Station number	Site name	Other samples	Comments
55331#2	NR4	GEOL	5/8 good cores
55331#3	NR4	MEIOB	5/6 good cores
55332#1	NR1	GEOL	5/8 good cores
55332#2	NR1		6/8 good cores
55333#1	WFA1	2.4 m core	Good core
55334#1	WFA3	2.4 m core	Good core
55335#1	SBA1	GEOL	10/100good cores
55335#2	SBA1		6/8 good cores
55336#1	SBA2		9/10 good cores
55336#2	SBA2	GEOL	7/8 good cores
55337#1	SBA3		8/10 good cores
55337#2	SBA3	GEOL	7/8 good cores
55337#3	SBA3	65mins DV, 15m Vis.	
55338#1	SBA4	GEOL	11/12 good cores
55339#1	SBA5	GEOL	12/12 good cores
55340#1	SBA6	GEOL	11/12 good cores
55341#1	SBB5		11/12 good cores
55342#1	SBB4		9/12 good cores
55342#2	SBB4	GEOL	10/12 good cores
55343#1	SBB6	GEOL	12/12 good cores
55344#1	SBA6		10/12 god cores
55344#2	SBA6	GEOL	10/12 good cores
55345#1	SBA5	65mins DV, 15m Vis.	
55346#1	SBB1		9/12 good cores
55346#2	SBB1	MEIOB, GEOL	5/10 good cores
55347#1	SBB2	GEOL	12/12 good cores
55348#1	SBB3	GEOL	11/12 good cores
55349#1	SBC5		9/12 good cores
55349#2	SBC5	MEIOB, GEOL	10/10 good cores
55350#1	SBC4		10/12 good cores
55350#2	SBC4	GEOL	9/12 good cores
55351#1	SBC3		11/12 good cores
55352#1	SBC6		8/12 good cores
55352#2	SBC6	GEOL	7/10 good cores
55353#1	SBA3	65mins DV, 15m Vis.	
55354#1	SBC2		8/12 good cores
55354#2	SBC2	MEIOB, GEOL	5/8 good cores
55355#1	SBC1		11/12 good cores
55356#1	BGS1	2.3 m core	Good core
55357#1	BGS4	2.2 m core	Good core
55358#1	NN4		Failed to trigger, no samples

Station number	Site name	Other samples	Comments
55358#2	NN4	GEOL	Good core
55359#1	NN1	GEOL	Good core
55360#1	NN2		Box bent, disturbed, discarded
55360#2	NN2		Gushed, discarded
55360#3	NN2		Box bent, no samples
55360#4	NN2		Rock in jaw
55360#5	NN2		Rock in jaw
55360#6	NN2		Good sample
55360#7	NN2		Rock in jaw
55360#8	NN2		Rock in jaw
55360#9	NN2		Grab rather full
55361#1	NNW	65mins DV, 15m Vis.	
55362#1	NN3		Rock in jaw
55362#2	NN3		Rock in jaw
55362#3	NN3		Rock in jaw
55362#4	NN3		Fair sample
55362#5	NN3		Rock in jaw
55362#6	NN3		Rock in jaw
55362#7	NN3		Rock in jaw
55362#8	NN3		Rock in jaw
55362#9	NN3		Rock in jaw
55363#1	NK4		Top flap open, discarded
55363#2	NK4		Good sample
55363#3	NK4		Rock in jaw
55363#4	NK4		Rock in jaw
55363#5	NK4		Rock in jaw
55363#6	NK4		Rock in jaw
55363#7	NK4		Rock in jaw
55364#1	NKW	65mins DV, 15m Vis.	
55365#1	NK2		Rock in jaw
55365#2	NK2		Good sample
55365#3	NK2		Washed out
55365#4	NK2		Good sample
55366#1	NK1		Rock in jaw
55366#2	NK1		Rock in jaw
55366#3	NK1		Good sample
55366#4	NK1		Rock in jaw
55366#5	NK1		Good sample
55367#1	NG3		Good sample
55367#2	NG3	(GEOL)	Good sample
55368#1	NGW	65mins DV, 15m Vis.	

Station number	Site name	Other samples	Comments
55369#1	NG1		Rock in jaw
55369#2	NG1		Washed out
55369#3	NG1		Rock in jaw
55369#4	NG1		Good sample
55369#5	NG1		Rock in jaw
55369#6	NG1		Rock in jaw
55369#7	NG1		Rock in jaw
55369#8	NG1		Rock in jaw
55370#1	NG2		Washed out
55370#2	NG2		Rock in jaw
55370#3	NG2		Washed out
55370#4	NG2		Good sample
55370#5	NG2		Good sample
55371#1	NG4	(GEOL)	Washed out
55371#2	NG4		Good sample
55371#3	NG4		Empty
55371#4	NG4		Good sample
55372#1	NK3		Poor, discarded
55372#2	NK3		Good sample
55372#3	NK3	(GEOL)	Good sample
55373#1	WFA2	2.1m core	Good core
55374#1	SBA2.5	GEOL	12/12 good cores
55375#1	SBA3.5	GEOL	Cloudy, discarded
55375#2	SBA3.5		9/12 good cores
55375#3	SBA3.5		8/12 good cores
55376#1	SBA5.5	GEOL	12/12 good cores
55377#1	SBD5		11/12 good cores
55378#1	SBE5		10/12 good cores
55378#2	SBE5	MEIOB, GEOL	8/12 good cores
55379#1	SBE3		11/12 good cores
55380#1	SBD3		9/12 good cores
55380#2	SBD3		Aborted before bottoming
55381#1	NU1	MEIOB, (GEOL)	12/12 good cores
55382#1	NU2	MEIOB	10/12 good cores
55382#2	NU2	MEIOB, GEOL (LIVE MEIOB)	12/12 good cores
55383#1	NU3	GEOL	11/12 good cores
55384#1	NU4	GEOL	12/12 good cores
55385#1	NU5		9/12 good cores
55385#2	NU5	GEOL	11/12 good cores
55386#1	NR5	GEOL	12/12 good cores

Station number	Site name	Other samples	Comments
55387#1	NR6		9/12 good cores
55387#2	NR6	GEOL	9/10 good cores
55388#1	SBD3	GEOL	8/8 good cores
55389#1	SBD3	65mins DV, 30 m Vis.	
55390#1	SBB3	2.4 m core	Good core
55391#1	TX1	2.5 m core	Good core
55391#2	TX1		8/8 good cores
55391#3	TX1		7/8 good cores
55391#4	TX1	65mins DV, 15m Vis.	
55392#1	FSC10	MEIOB, GASH MEIOB	8/8 good cores
55392#2	FSC10		Cloudy, all discarded, no samples
55392#3	FSC10	MEIOB	7/8 good cores
55392#4	FSC10		Aborted for seismic vessel
55393#1	TX2	2.5 m core	Good core
55394#1	FSC10	GEOL, GASH MEIOB	7/8 good cores
55394#2	FSC10	FORAM, GASH MEIOB	8/8 good cores
55394#3	FSC10	GASH MEIOB, LIVE MEIOB	8/8 good cores
55394#4	FSC10	65mins DV, 15m Vis.	
55395#1	TR1300		6/8 good cores, no good USBL data
55395#2	TR1300		6/6 good cores
55396#1	TR1250	MEIOB	8/8 good cores
55396#2	TR1250	MEIOB, FORAM, FROZEN, MICRO	8/8 good cores
55397#1	TR1200		4/8 good cores
55397#2	TR1200	MEIOB	7/8 good cores
55398#1	TR1100	MEIOB	8/8 good cores
55398#2	TR1100	MEIOB, FROZEN	7/8 good cores
55399#1	BGSAS2	2.0 m core	Good core
55400#1	TR1000		5/8 good cores
55400#2	TR1000		5/8 good cores
55401#1	TR900		6/8 good cores
55401#2	TR900	MEIOB, MICRO	7/8 good cores
55401#3	TR900	65mins DV, 15m Vis.	
55402#1	TR800		6/8 good cores
55402#2	TR800	MEIOB, MICRO, FORAM	8/8 good cores
55403#1	S2		7/8 good cores
55403#2	S2	MEIOB, MICRO, FORAM	7/8 good cores
55404#1	TR650		4/8 good cores
55404#2	TR650		7/8 good cores
55405#1	TR600		6/8 good cores
55405#2	TR600		0/8 cores, dragged over ?
55405#3	TR600		5/8 good cores

Station number	Site name	Other samples	Comments
55406#1	TR550		7/8 good cores
55406#2	TR550	MEIOB	5/8 good cores
55407#1	L4		Good core
55408#1	TR450		Good core
55409#1	L5		Gushed, no samples
55409#2	L5		Cloudy, discarded, no samples
55409#3	L5		Not fired, warp hung up, no samples
55409#4	L5		Good core
55410#1	TR350		Good core
55411#1	TR300		RIJ
55411#2	TR300	GEOL	Good sample
55411#3	TR300		RIJ
55411#4	TR300		Good sample
55412#1	TR250		RIJ
55412#2	TR250		Good sample
55412#3	TR250		RIJ
55412#4	TR250		Good sample
55413#1	TR200		RIJ
55413#2	TR200		Good sample
55413#3	TR200		Empty
55413#4	TR200		RIJ
55413#5	TR200		Washed out
55413#6	TR200		RIJ
55413#7	TR200		RIJ
55413#8	TR200		Good sample
55414#1	B5		RIJ
55414#2	B5		RIJ
55414#3	B5		RIJ
55414#4	B5		RIJ
55414#5	B5		RIJ
55414#6	B5		RIJ
55414#7	B5		RIJ
55414#8	B5		Good sample
55414#9	B5		Good sample
55415#1	TR200		0/2 cores
55416#1	TR250	MEIOB, MICRO	2/2 good cores
55416#2	TR250	MEIOB	1/2 good cores
55416#3	TR250		Not triggered, no samples
55417#1	TR300		Disturbed, no samples
55417#2	TR300		Disturbed, no samples
55417#3	TR300	MEIOB, MICRO	2/2 good cores

Station number	Site name	Other samples	Comments
55417#4	TR300		Empty
55418#1	TR350	MEIOB, MICRO, FORAM	3/4 good cores
55418#2	TR350	MEIOB, FROZEN	2/4 good cores
55419#1	L5	MEIOB, MICRO, FORAM	3/4 good cores
55419#2	L5	MEIOB (x2), FROZEN	4/4 good cores
55420#1	TR450	MEIOB, FORAM, FROZEN, GASH MEIOB	4/4 good cores
55420#2	TR450	MEIOB, GASH MEIOB	1/4 good cores
55421#1	L4	MEIOB, FORAM, FROZEN	3/4 good cores
55421#2	L4	MEIOB, GASH MEIOB (x2)	3/4 good cores
55422#1	TR550	MEIOB, FORAM, FROZEN	3/4 good cores
55423#1	TR600	MEIOB, FORAM, FROZEN, GASH MEIOB	4/4 good cores
55423#2	TR600	MEIOB, GASH MEIOB (x2)	4/4 good cores
55424#1	TR650	MEIOB, FORAM, GASH MEIOB	3/4 good cores
55424#2	TR650	MEIOB	2/4 good cores
55425#1	S2		0/4 cores, no samples
55425#2	S2	MEIOB, FROZEN, LIVE MEIOB (x2)	2/4 good cores
55426#1	BGSAS1	2.0 m core	Good core
55427#1	CS1	65mins DV, 15m Vis.	
55427#2	CS1	SOC GEOL	7/8 good cores
55427#3	CS1	GEOL	8/8 good cores
55428#1	Tr1000	MEIOB, SOC GEOL	7/8 good cores
55429#1	Tr900	MEIOB, FORAM, FROZEN, SOC GEOL	8/8 good cores
55430#1	Tr800	MEIOB, FROZEN, SOC GEOL	8/8 good cores
55431#1	CS2	65mins DV, 15m Vis.	
55431#2	CS2		5/8 good cores
55431#3	CS2	SOC GEOL, GEOL	8/10 good cores
55432#1	BGSS1	3.0 m core	Good core
55433#1	CS3		8/8 good cores
55433#2	CS3	SOC GEOL, GEOL	8/8 good cores
55433#3	CS3	65mins DV, 15m Vis.	
55434#1	CS4		8/8 good cores
55434#2	CS4	SOC GEOL, GEOL	7/8 good cores
55434#3	CS4	65mins DV, 15m Vis.	
55434#4	CS4	2.0 m core	Good core (Site aka BGSS3)
55435#1	CS5	SOC GEOL, GEOL	8/8 good cores
55435#2	CS5		7/8 good cores
55436#1	WAVE	65mins DV, 15m Vis.	
55437#1	BGSS4	0.4 m core	Poor core
55437#2	BGSS4	1.4 m core	Good core
55438#1	CS6	SOC GEOL	7/8 good cores
55438#2	CS6		0/8 cores, dragged over, no samples

Station number	Site name	Other samples	Comments
55438#3	CS6	GEOL	8/8 good cores
55439#1	CS7		8/8 good cores
55439#2	CS7	SOC GEOL, GEOL	6/8 good cores
55440#1	CS8		3/8 good cores
55440#2	CS8	SOC GEOL	8/8 good cores
55441#1	CS9	SOC GEOL, GEOL	6/8 good cores
55441#2	CS9		8/8 good cores
55442#1	WAVE2	65mins DV, 15m Vis.	
55443#1	CS10	SOC GEOL, GEOL	8/8 good cores
55443#2	CS10		5/7 good cores
55444#1	CS11		0/8 cores, fell over ?, no samples
55444#2	CS11		0/8 cores, fell over ?, no samples
55444#3	CS11		6/8 good cores
55444#4	CS11		7/8 good cores
55445#1	CS12		8/8 good cores
55445#2	CS12	SOC GEOL, GEOL	8/8 good cores
55446#1	CS13		7/8 good cores
55446#2	CS13	SOC GEOL, GEOL	6/8 good cores
55447#1	FSC9	65mins DV, 15m Vis.	
55447#2	FSC9	MEIOB, MESOB, 0.024 MAC250	7/10 good cores
55447#3	FSC9	MEIOB, MESOB, 0.024 MAC250	7/10 good cores
55447#4	FSC9	MEIOB, MESOB, 0.024 MAC250	8/10 good cores
55447#5	FSC9	MEIOB, MESOB, 0.031 MAC250	9/10 good cores
55447#6	FSC9	MEIOB, MESOB, 0.024 MAC250	7/10 good cores
55447#7	FSC9	65mins DV, 15m Vis.	NO USBL data
55447#8	FSC9	MEIOB, MESOB, 0.031 MAC250	9/10 good cores
55447#9	FSC9	MEIOB, MESOB, 0.031 MAC250	9/10 good cores
55447#10	FSC9	MEIOB, MESOB, 0.024 MAC250	8/10 good cores
55447#11	FSC9	MEIOB, MESOB, 0.031 MAC250	10/10 good cores
55447#12	FSC9	MEIOB, MESOB	5/10 good cores (3 discarded)
55447#13	FSC9	MEIOB, MESOB, 0.024 MAC250	7/10 good cores
55447#14	FSC9	MEIOB, MESOB, 0.024 MAC250	8/10 good cores
55447#15	FSC9	0.031 MAC250	8/10 good cores
55447#16	FSC9	65mins DV, 15m Vis.	
55448#1	CS13	65mins DV, 15m Vis.	
55449#1	CS14		Corer damaged, no samples
55449#2	CS14	SOC GEOL	8/8 good cores, disturbed on recovery
55450#1	CS7	0.25 Q MAC	Top water not held, gash sample
55451#1	CS5	65mins DV, 15m Vis.	
55452#1	CS4	0.25 Q MAC	Top water not held, gash sample
55452#2	CS4	0.25 Q MAC	Top water not held, gash sample

Station number	Site name	Other samples	Comments
55453#1	CS3	0.25 Q MAC	Good core
55453#2	CS3	0.25 Q MAC	Top water not held, gash sample
55454#1	CS2	0.25 Q MAC	Top water not held, gash sample
55455#1	TR300	MEIOB, FORAM	2/2 good cores
55456#1	TR200	65mins DV, 15m Vis.	No USBL data
55457#1	B8		Empty
55457#2	B8		Empty
55457#3	B8		Empty
55457#4	B8		Washed out
55457#5	B8		Washed out
55457#6	B8		Washed out
55457#7	B8		Washed out
55457#8	B8		Washed out
55457#9	B8		Washed out
55457#10	B8		Washed out
55457#11	B8		Washed out
55457#12	B8		Washed out
55457#13	B8		Washed out
55457#14	B8		Washed out
55457#15	B8		Washed out
55457#16	B8		Good sample
55457#17	B8		Washed out
55457#18	B8		Washed out
55457#19	B8		Washed out
55457#20	B8		Washed out
55457#21	B8		Washed out
55457#22	B8		Washed out
55458#1	XB2		Good sample
55458#2	XB2		Good sample
55459#1	B6R		Good sample
55459#2	B6R		Disturbed
55459#3	B6R		Disturbed
55459#4	B6R		Good sample
55460#1	B7R		Out of position, discarded
55460#2	B7R		Good sample
55460#3	B7R		Good sample
55461#1	A2		Good sample
55461#2	A2		Good sample
55462#1	XA2		Misfired
55462#2	XA2		Good sample
55462#3	XA2		Good sample

Station number	Site name	Other samples	Comments
55463#1	E1		Good sample
55463#2	E1		Good sample
55464#1	XE2		Good sample
55464#2	XE2		Good sample
55465#1	XE1		Abandon attempt, out of position
55465#2	XE1		Good sample
55465#3	XE1		Good sample
55466#1	E4		Good sample
55466#2	E4		Good sample
55467#1	E6		No USBL data
55467#2	E6		Good sample
55467#3	E6		Good sample
55468#1	E8		Good sample
55468#2	E8		Good sample
55469#1	A5		Good sample
55469#2	A5		Good sample
55470#1	A7		Good sample
55470#2	A7		Good sample
55471#1	A9		Good sample
55471#2	A9		Disturbed, discarded
55471#3	A9		Good sample
55472#1	XA1		Good sample
55472#2	XA1		Good sample
55473#1	XB2		3/4 good cores
55474#1	B6R		3/4 good cores
55475#1	B7R		2/4 good cores
55475#2	B7R		Empty
55475#3	B7R		2/4 good cores
55476#1	E1		3/4 good cores
55476#2	E1		8/8 good cores
55477#1	B6R		Empty
55478#1	XB1		Good sample
55479#1	B3		Good sample
55480#1	B5		Good sample
55481#1	T61		Good sample
55481#2	T61		Disturbed, dragged over, discarded
55482#1	T62		Over full, disturbed, discarded
55482#2	T62		Over full, disturbed, discarded
55482#3	T62		Over full, disturbed, discarded
55482#4	T62		Not fired, no samples
55482#5	T62		Over full, disturbed, discarded

Station number	Site name	Other samples	Comments
55482#6	T62		Over full, disturbed, discarded
55482#7	T62		Not fired, no samples
55482#8	T62		Over full, disturbed, discarded
55482#9	T62		Not fired, no samples
55482#10	T62		Not fired, no samples
55482#11	T62		Not fired, no samples
55482#12	T62		Good sample
55483#1	T63		Good sample
55484#1	T64		Not fired, no samples
55484#2	T64		Washed out, no samples
55484#3	T64		Over full, disturbed, discarded
55484#4	T64		Over full, disturbed, discarded
55484#5	T64		Over full, disturbed, discarded
55484#6	T64		Good sample
55485#1	T65		Over full, disturbed, discarded
55485#2	T65		Good sample
55486#1	T66		Over full, disturbed, discarded
55486#2	T66		Over full, disturbed, discarded
55486#3	T66		Good sample
55487#1	T67		Not fired, no samples
55487#2	T67		Washed out, no samples
55487#3	T67		Good sample
55488#1	T68		Good sample
55489#1	T3-73		Flap open, washed, discarded
55489#2	T3-73		Good sample
55489#3	T3-73		Not fired, no samples
55489#4	T3-73		Over full, disturbed, discarded
55489#5	T3-73		Over full, disturbed, discarded
55489#6	T3-73		Over full, disturbed, discarded
55489#7	T3-73		Not fired, no samples
55489#8	T3-73		Good sample
55489#9	T3-73		Good sample
55489#10	T3-73		Fell over, no samples
55489#11	T3-73		Hung up, no samples
55489#12	T3-73		Over full, disturbed, discarded
55489#13	T3-73		Good sample
55489#14	T3-73		Disturbed, discarded
55489#15	T3-73		Good sample
55490#1	T3-75		Not fired, no samples
55490#2	T3-75		Good sample
55491#1	T3-77		Good sample

Station number	Site name	Other samples	Comments
55492#1	T4-51		Not fired, no samples
55492#2	T4-51		Good sample
55493#1	T4-49		Good sample
55494#1	ALBA4		Disturbed, discarded
55494#2	ALBA4		Not fired, no samples
55494#3	ALBA4		Good sample
55495#1	T4-47		Over full, disturbed, discarded
55495#2	T4-47		Good sample
55496#1	T4-45		Good sample
55497#1	T4-71		Good sample
55498#1	T3-69		Not fired, no samples
55498#2	T3-69		Good sample
55499#1	T3-67		Good sample
55500#1	T3-65		Good sample
55501#1	T3-63		Aborted, no samples
55501#2	T3-63		Good sample
55502#1	T3-61		Disturbed, discarded
55502#2	T3-61		Not fired, no samples
55502#3	T3-61		Good sample
55503#1	T3-59		Good sample
55504#1	T3-55		Good sample
55504#2	T3-55	HC, HM, PSA vs	3/6 good cores
55504#3	T3-55	Special, MEIOB	5/6 good cores (3 discarded)
55505#1	T3-59		Short, disturbed, discarded
55505#2	T3-59	HC vs, Spec.	2/6 good cores
55505#3	T3-59	HM, PSA vs, MEIOB	3/6 good cores
55506#1	T3-61	HC, HM, PSA vs, Spec., MEIOB	6/6 good cores
55507#1	T3-63		Short, disturbed, discarded
55507#2	T3-63	HC, HM, PSA vs, Spec., MEIOB	6/6 good cores
55508#1	T3-65	HC, HM, PSA vs, Spec., MEIOB	6/6 good cores
55509#1	T3-67		Disturbed, discarded
55509#2	T3-67	HC, HM, PSA vs, Spec.	4/6 good cores
55510#1	T3-69	HC, HM, PSA vs	3/6 good cores
55510#2	T3-69	Special, MEIOB	2/6 good cores
55511#1	T3-71	MEIOB	2/6 good cores
55511#2	T3-71	HC, HM, PSA vs, Spec.	5/6 good cores
55512#1	T3-73	Quintuplicate 0-2 cm HC	5/6 good cores
55512#2	T3-73	HC, HM, PSA vs, radioisotope	4/6 good cores
55512#3	T3-73	Radioisotope	2/4 good cores
55512#4	T3-73	Radioisotope	2/4 good cores
55512#5	T3-73	Radioisotope, Spec.	3/4 good cores

Station number	Site name	Other samples	Comments
55512#6	T3-73	Radioisotope	2/4 good cores
55512#7	T3-73	1.7m core	Good core
55512#8	T3-73	2.3 m core	Good core
55512#9	T3-73	2.3 m core	Good core
55513#1	T3-75	HC, HM, PSA vs, Spec.	4/6 good cores
55514#1	ALBA4	HC, HM, PSA vs, Spec., MEIOB	6/6 good cores
55515#1	T3-77	HC, HM, PSA vs, Spec.	4/6 good cores
55516#1	T3-80	HC, HM, PSA vs, Spec., MEIOB	6/6 good cores
55516#2	T3-80		Good sample
55517#1	T6-1	HM, PSA vs	2/6 good cores
55517#2	T6-1	HC vs, Spec., MEIOB	5/6 good cores
55518#1	T6-2	HC, HM, PSA vs, Spec.	4/6 good cores
55519#1	T6-3	HC, PSA vs, Spec.	3/6 good cores
55519#2	T6-3	HM vs, MEIOB	4/6 good cores
55520#1	T6-4	HC, HM, PSA vs, Spec.	6/6 good cores
55521#1	T6-5	HC, HM, PSA vs, Spec., MEIOB	5/6 good cores
55522#1	T6-6		Disturbed, discarded
55522#2	T6-6		Short, disturbed, discarded
55522#3	T6-6	HC, HM, PSA vs, Spec., MEIOB	6/6 good cores
55523#1	T6-7	HM, PSA vs, MEIOB	3/6 good cores
55523#2	T6-7	HC vs, Spec.	2/6 good cores
55524#1	T6-8	HC, HM, PSA vs, Spec., MEIOB, MESOB	6/6 good cores
55524#2	T6-8	MEIOB, 0.047 250 MAC	8/8 good cores
55524#3	T6-8		Disturbed, discarded
55524#4	T6-8	0.063 250 MAC	8/8 good cores
55525#1	T3-69		Disturbed, discarded
55525#2	T3-69	MEIOB, MESOB	4/6 good cores
55525#3	T3-69		Disturbed, discarded
55525#4	T3-69	MEIOB, MESOB	4/6 good cores
55525#5	T3-69	MEIOB, 0.024 250 MAC	6/6 good cores
55525#6	T3-69	MEIOB	3/6 good cores
55525#7	T3-69	MEIOB	5/6 good cores
55525#8	T3-69	0.047 250 MAC	6/6 good cores
55526#1	T3-73	MEIOB, MESOB, 0.024 250 MAC	5/6 good cores
55526#2	T3-73	MEIOB, MESOB, 0.031 250 MAC	6/8 good cores
55527#1	T3-77	MEIOB, MESOB, 0.039 250 MAC	7/8 good cores
55527#2	T3-77	MEIOB, MESOB, 0.016 250 MAC	4/8 good cores
55528#1	T1-117	MEIOB, MESOB, 0.039 250 MAC	7/8 good cores
55528#2	T1-117	MEIOB, MESOB, 0.024 250 MAC	5/8 good cores
55528#3	T1-117		Disturbed, discarded
55528#4	T1-117		Good sample

Station number	Site name	Other samples	Comments
55529#1	ALBA3		Disturbed, discarded
55529#2	ALBA3		Good sample
55529#3	ALBA3		Disturbed, discarded
55529#4	ALBA3	HC, HM, PSA vs	3/8 good cores
55530#1	ALBA2		Good sample
55531#1	ALBA1		Good sample
55532#1	T5-21		Good sample
55533#1	T5-19		Disturbed, discarded
55533#2	T5-19		Good sample
55534#1	T5-17		Good sample
55535#1	T5-15		Good sample
55536#1	T4-43		Disturbed, discarded
55536#2	T4-43		Good sample
55537#1	T2-93		Good sample
55538#1	T1-113		Good sample
55539#1	T1-115		Disturbed, discarded
55539#2	T1-115		Disturbed, discarded
55539#3	T1-115		Good sample
55540#1	T2-97		Good sample
55541#1	T1-111		Disturbed, discarded
55541#2	T1-111		Good sample
55542#1	T2-91		Good sample

11. CHARTS

Chart 1.	Complete cruise track
Chart 2.	Cruise track through survey areas
Charts 3-12.	Cruise track through individual survey areas
Charts 13-24.	Deployments in individual survey areas
Charts 25-89.	Individual WASP vehicle tracks *(these are based on USBL data where available [see Station List; Section 9], if not they show the corresponding ship track)*.

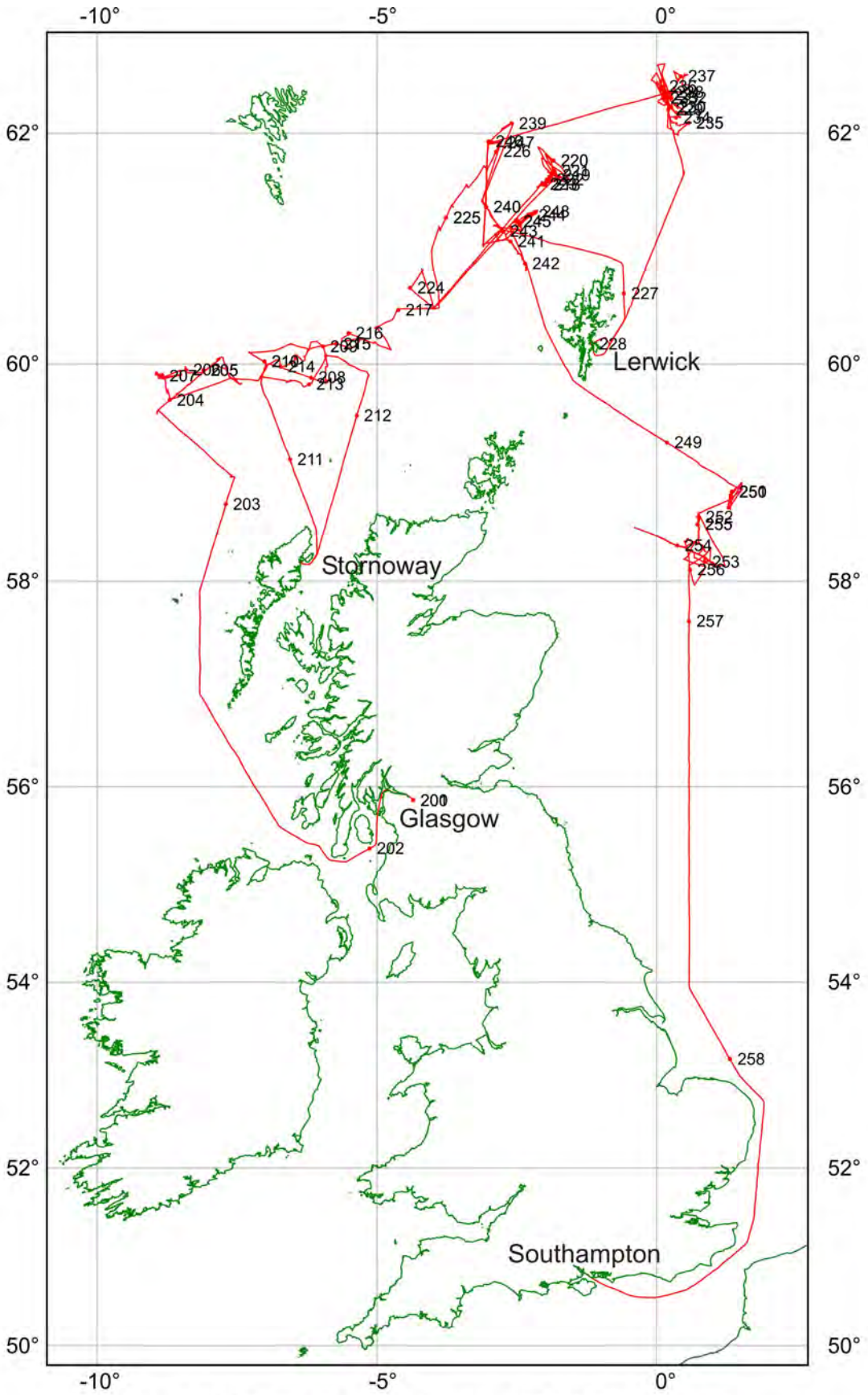


Chart 1. RRS *Charles Darwin* cruise 123 C3-4, cruise track.

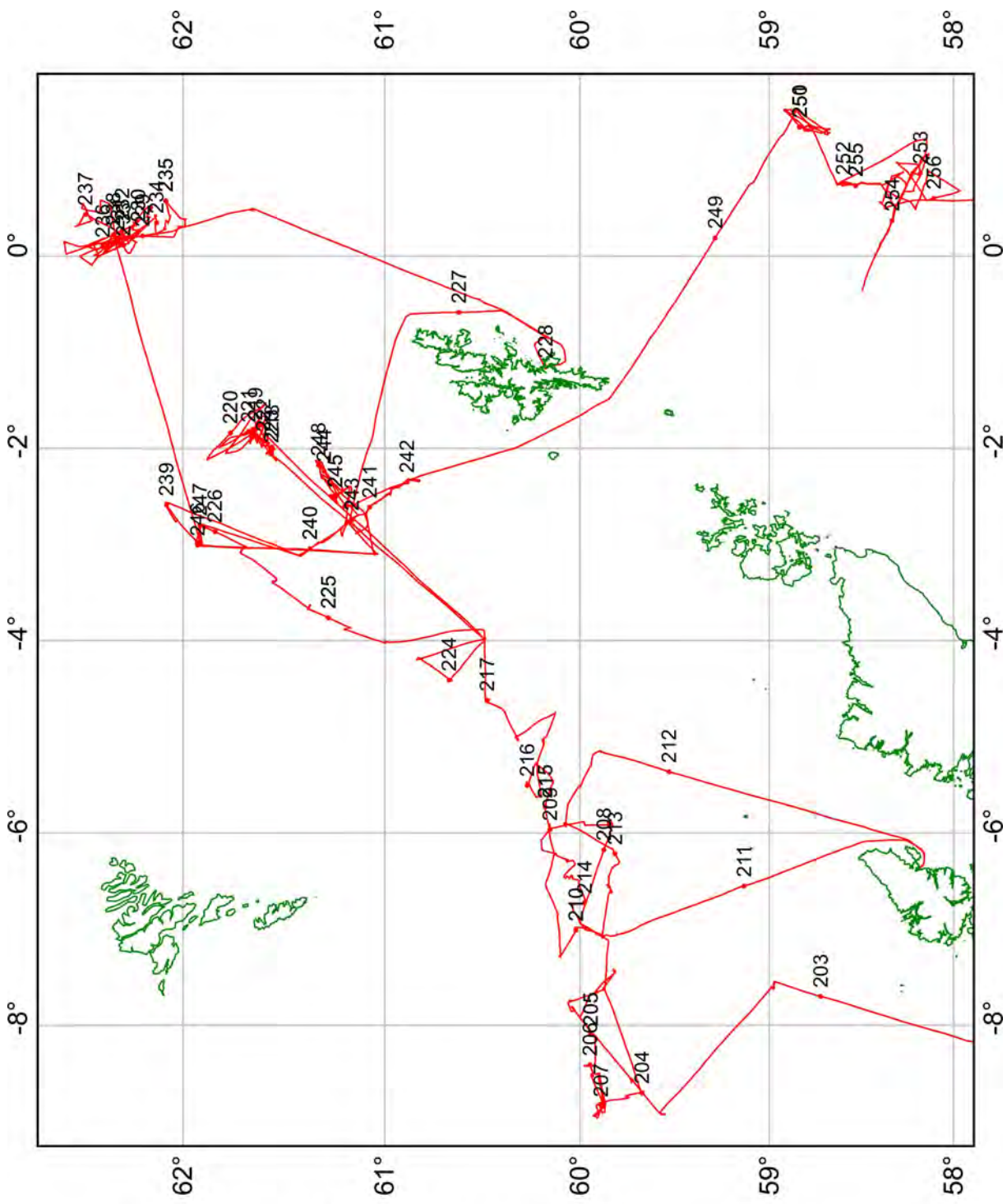


Chart 2. RRS *Charles Darwin* cruise 123 C3-4, survey track.

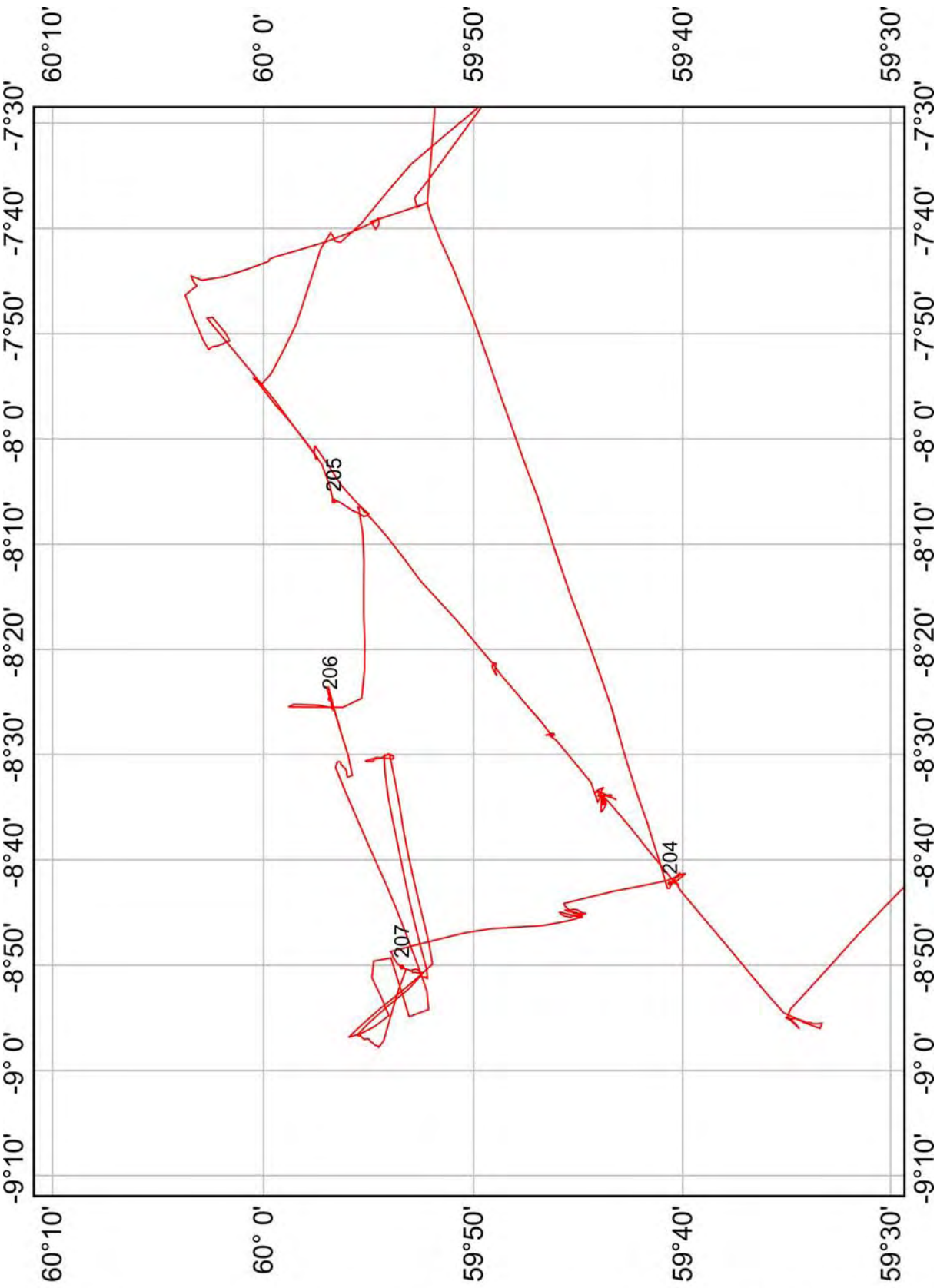


Chart 3. RRS *Charles Darwin* cruise 123 C3-4, Ymir Ridge survey track.

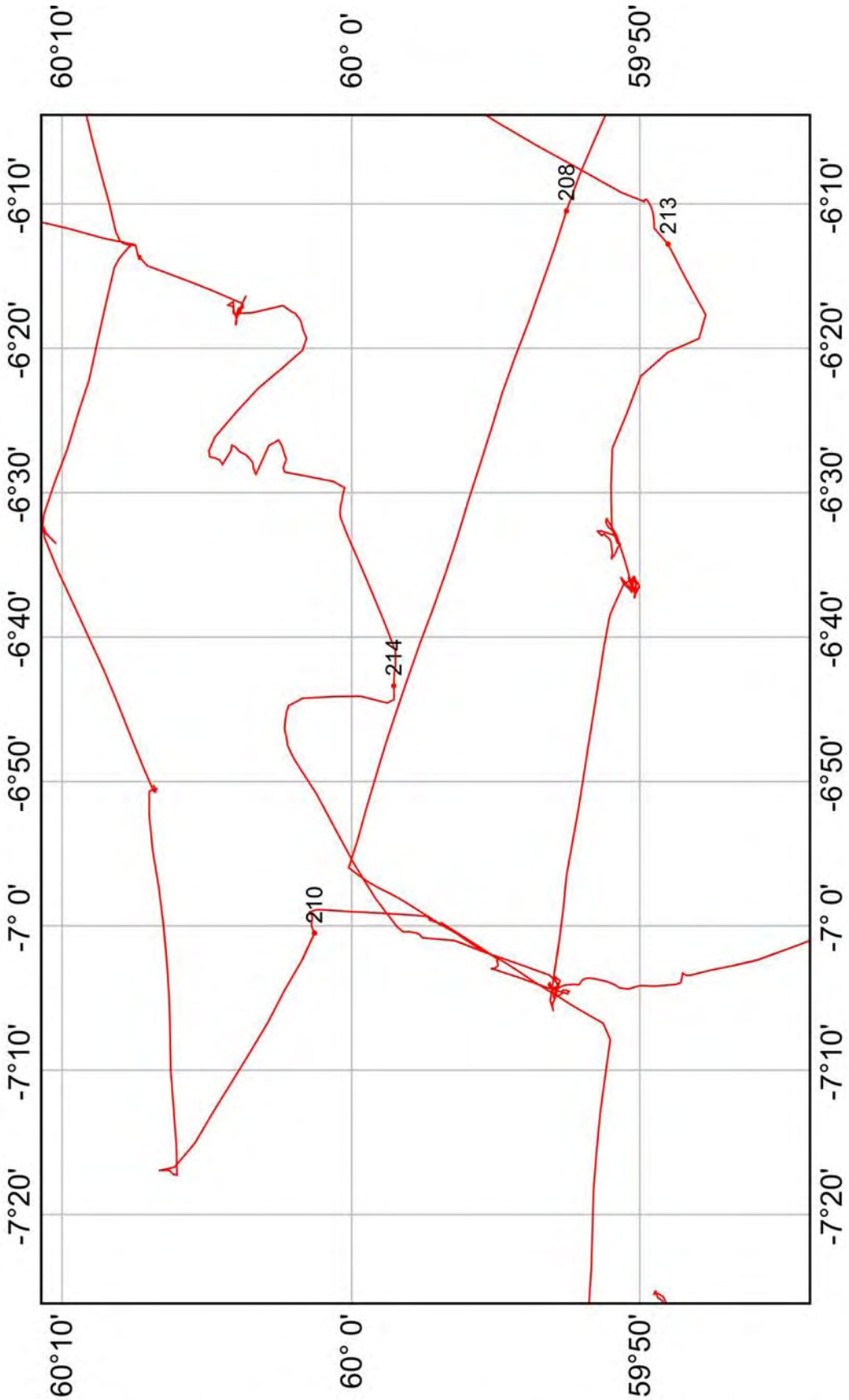


Chart 4. RRS *Charles Darwin* cruise 123 C3-4, Wyville Thomson Ridge survey track.

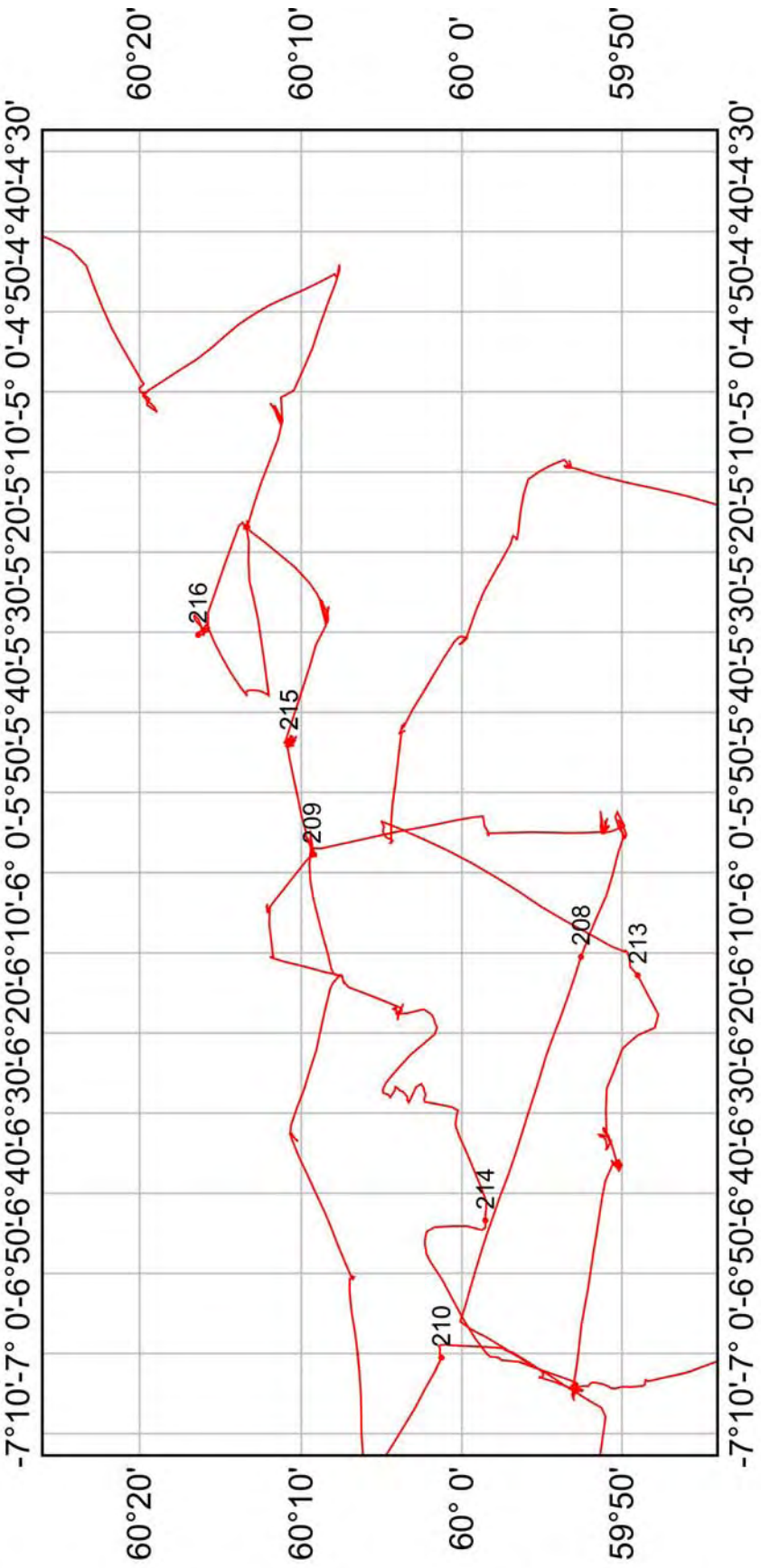


Chart 5. RRS *Charles Darwin* cruise 123 C3-4, Faroe Bank Channel survey track.

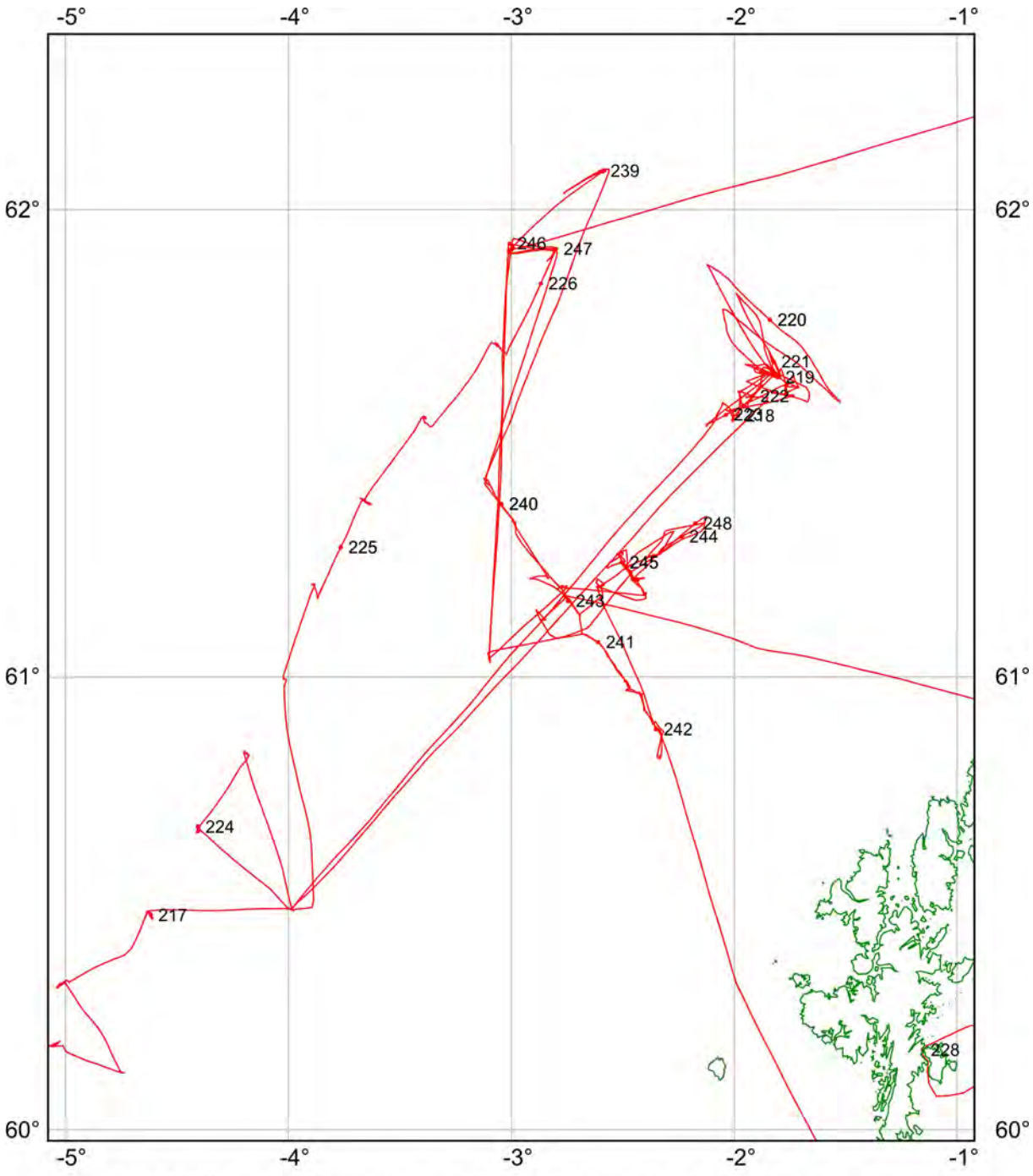


Chart 6. RRS *Charles Darwin* cruise 123 C3-4, Faroe-Shetland Channel survey track.

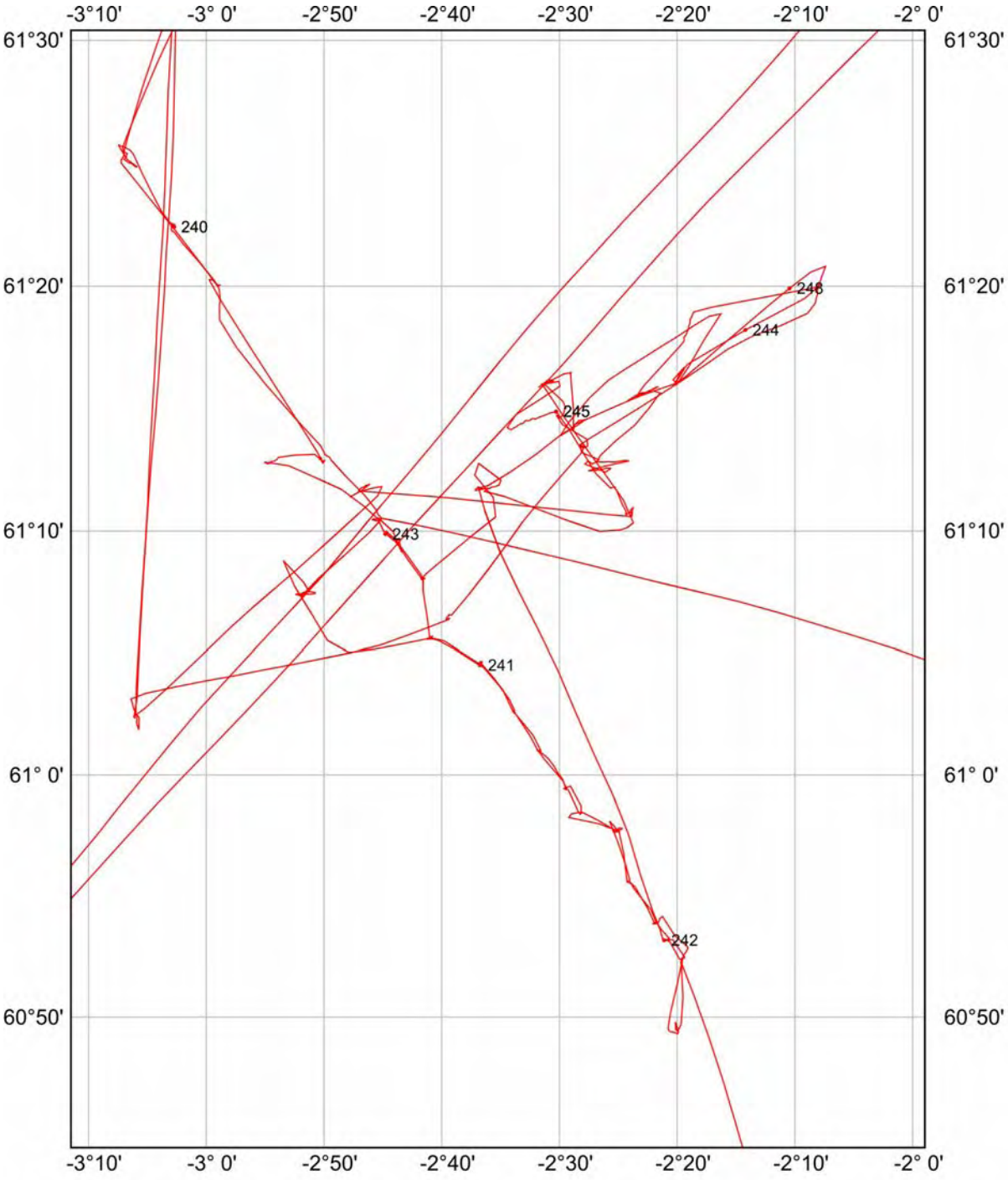


Chart 7. RRS *Charles Darwin* cruise 123 C3-4, West of Shetland transect and contourite study survey track.

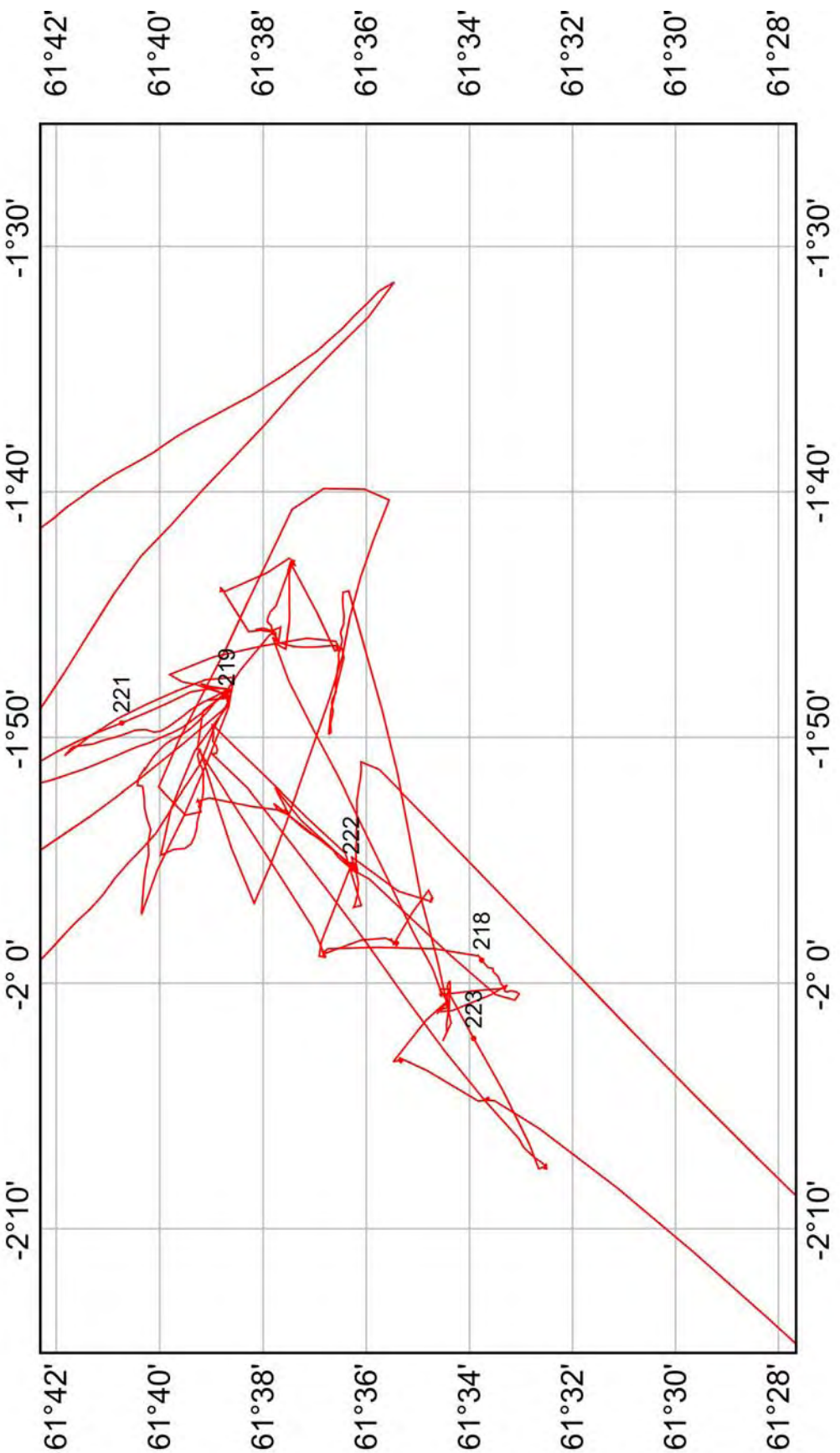


Chart 8. RRS *Charles Darwin* cruise 123 C3-4, Tranche 4 survey track.

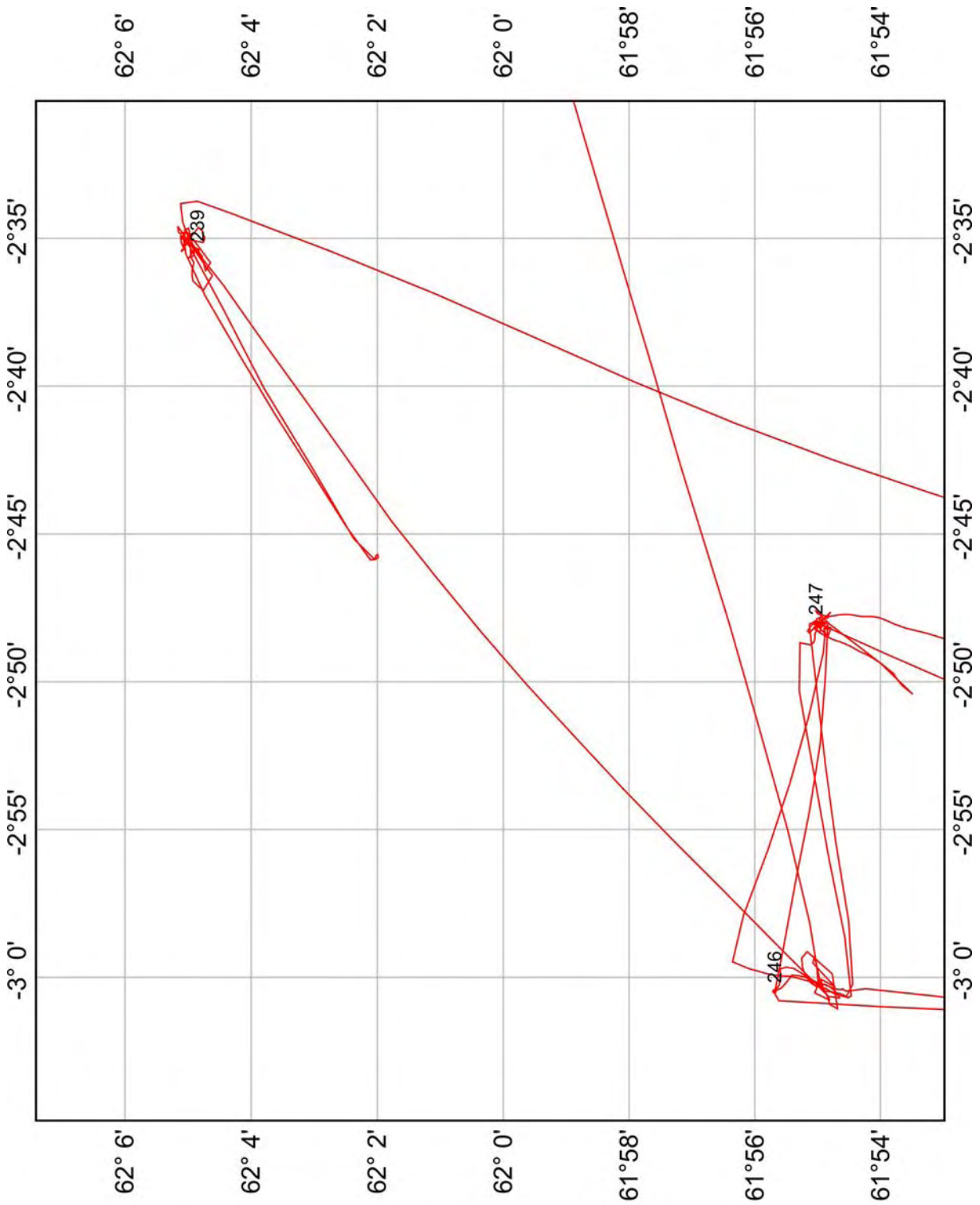


Chart 9. RRS *Charles Darwin* cruise 123 C3-4, Texaco survey track.

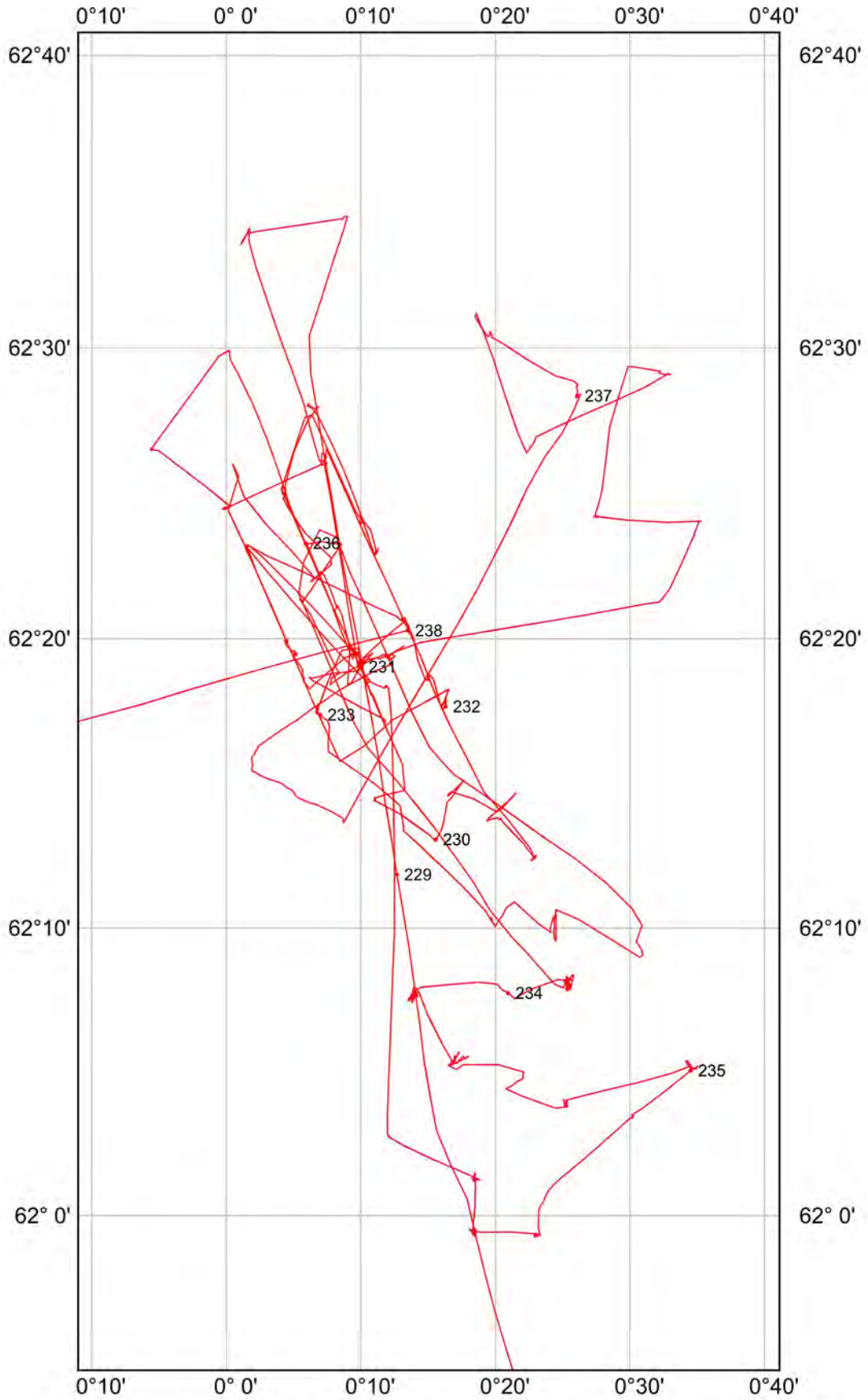


Chart 10. RRS *Charles Darwin* cruise 123 C3-4, Tranches 65-67 survey track.

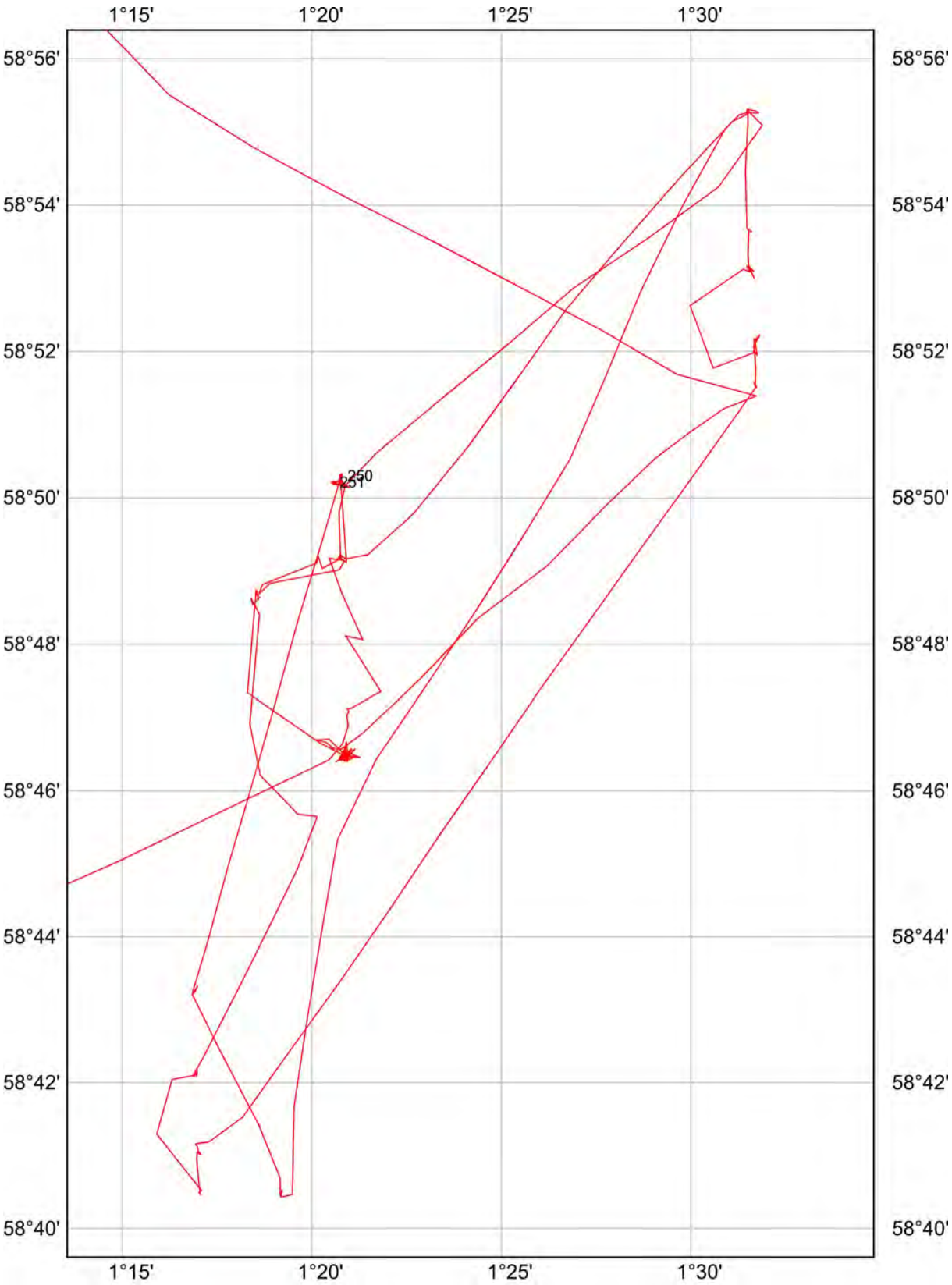


Chart 11. RRS *Charles Darwin* cruise 123 C3-4, Brae oil field survey track.

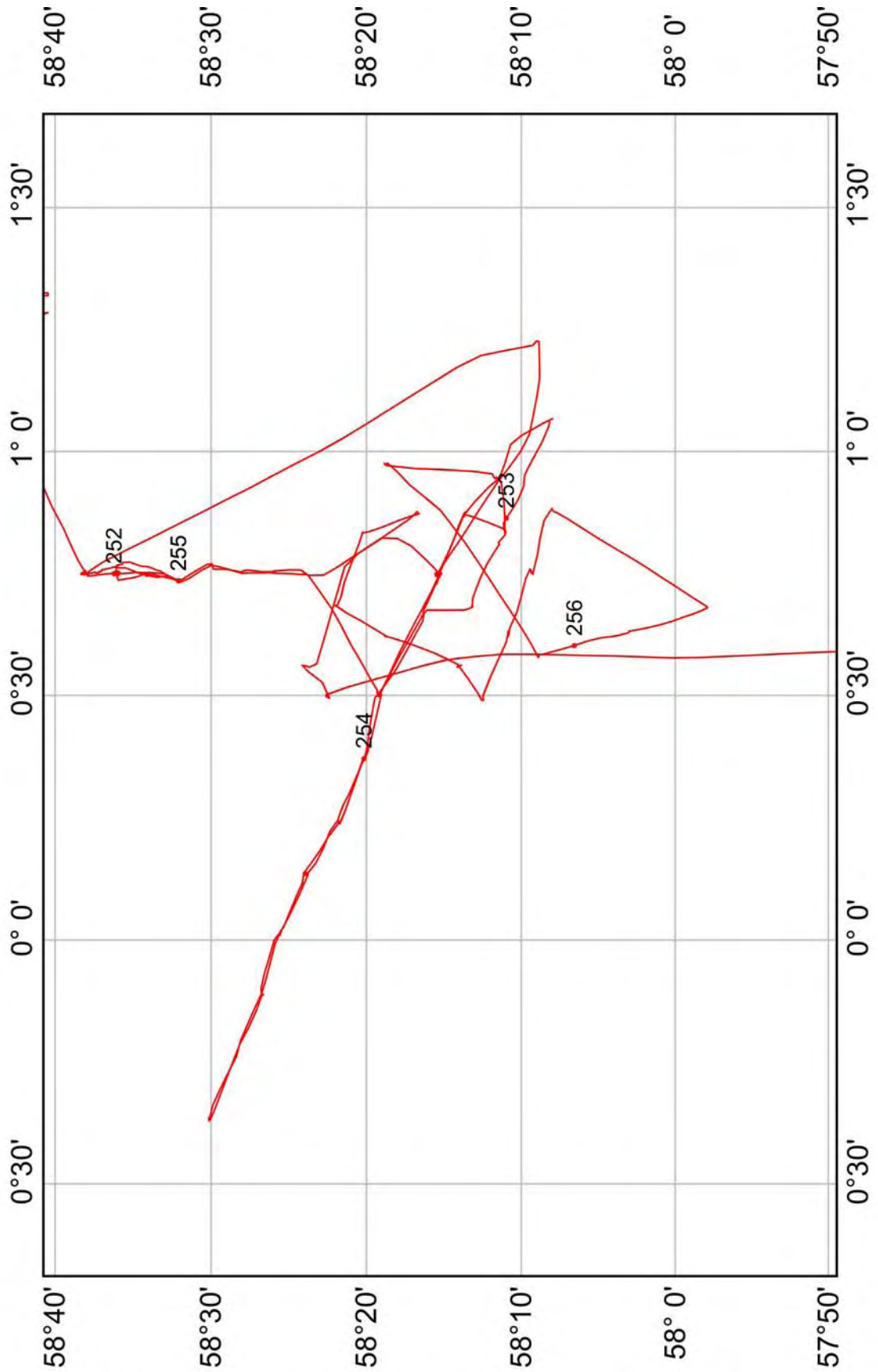


Chart 12. RRS *Charles Darwin* cruise 123 C3-4, Fladen Ground survey track.

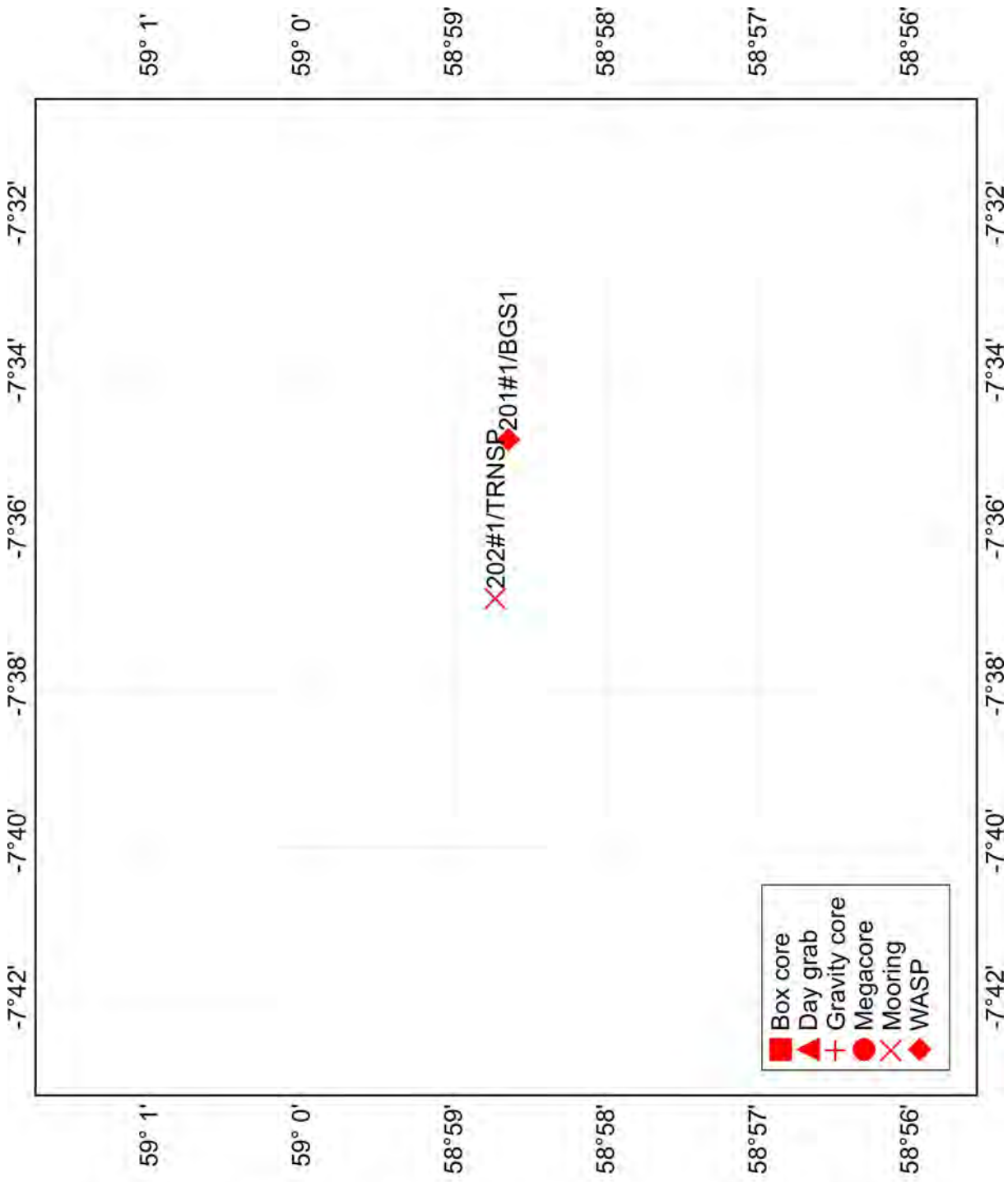


Chart 13. RRS *Charles Darwin* cruise 123 C3-4, West Hebrides Slope deployments.

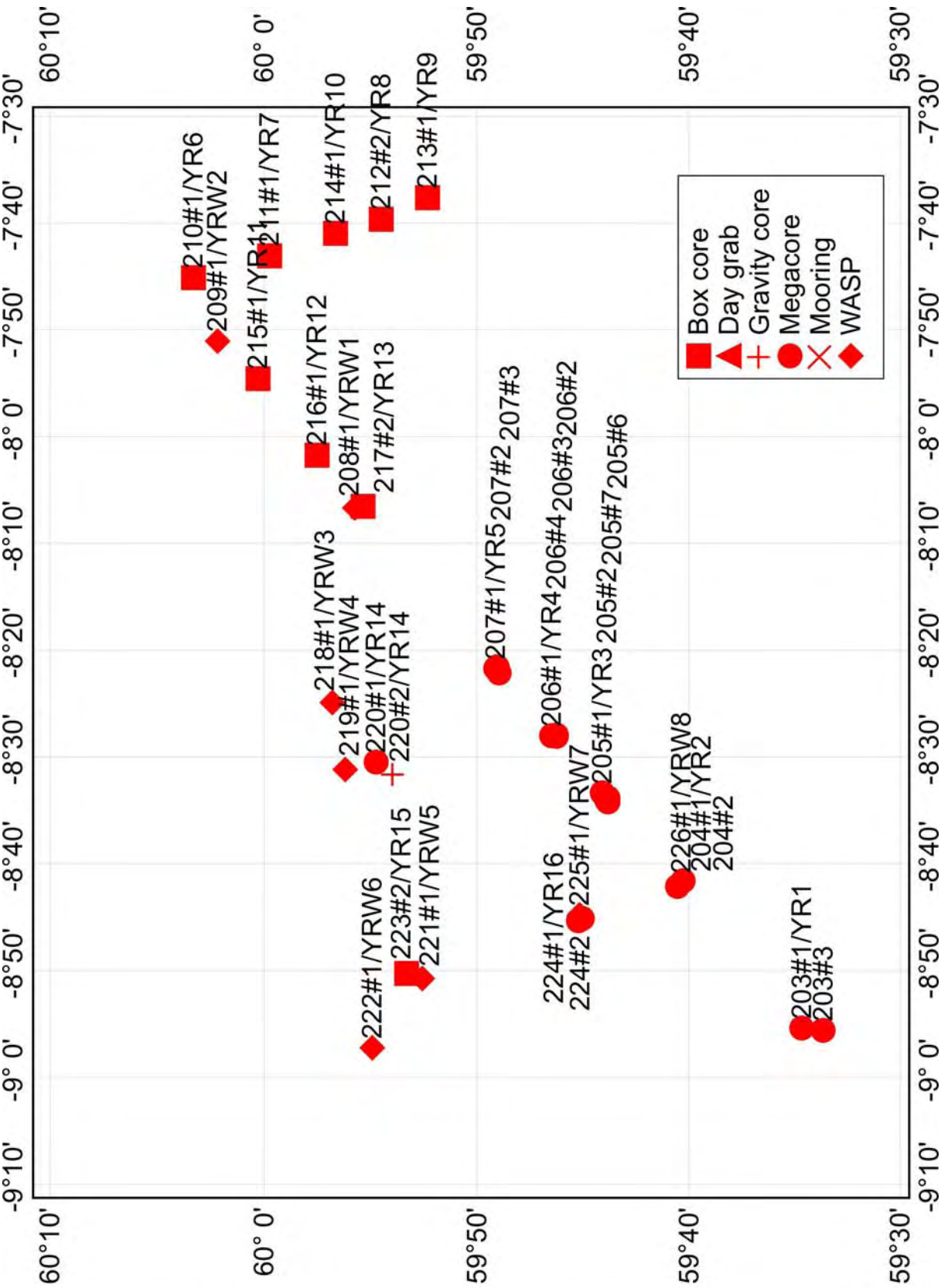


Chart 14. RRS *Charles Darwin* cruise 123 C3-4, Ymir Ridge deployments.

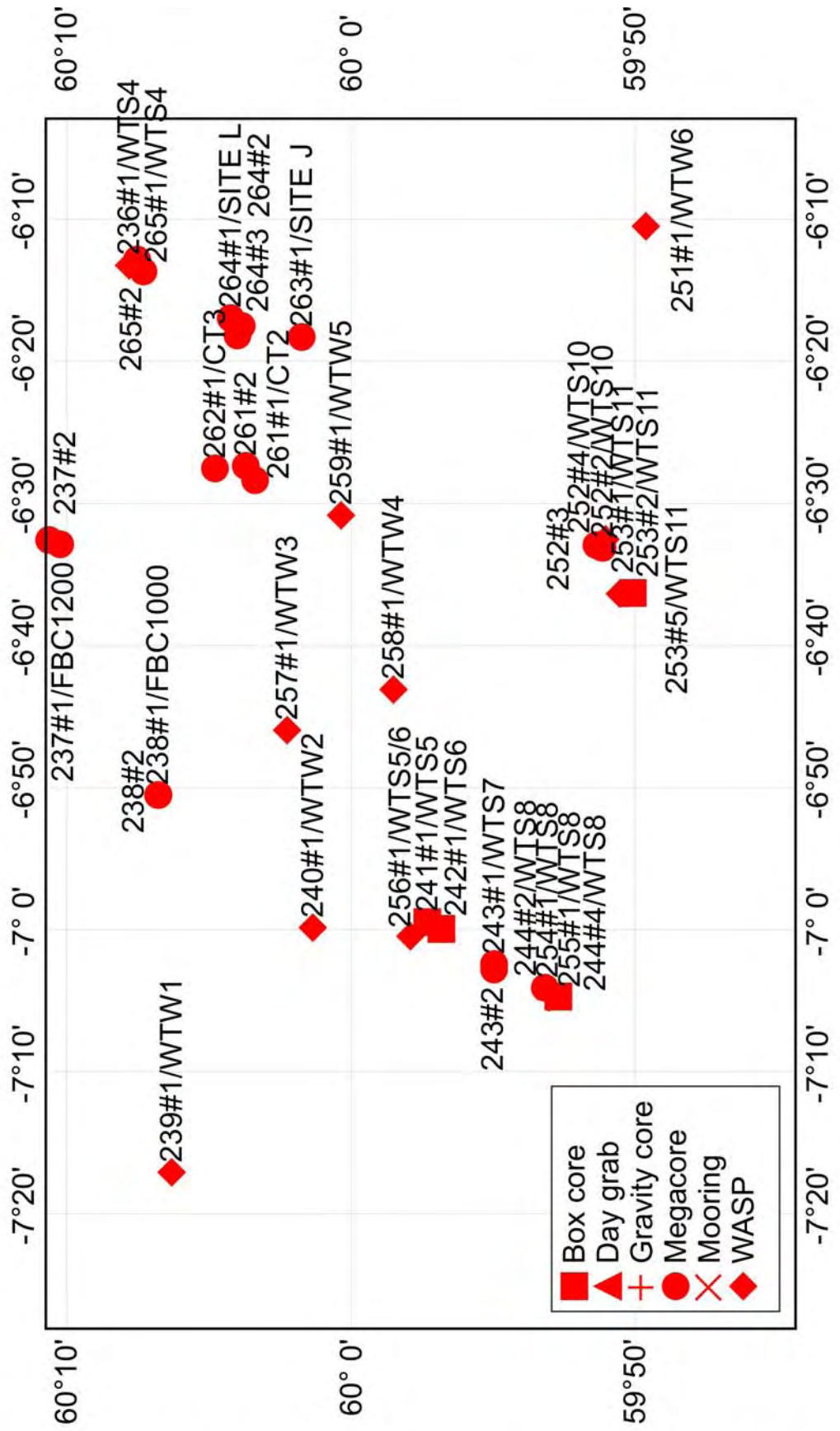


Chart 15. RRS *Charles Darwin* cruise 123 C3-4,Wyville Thomson Ridge deployments.

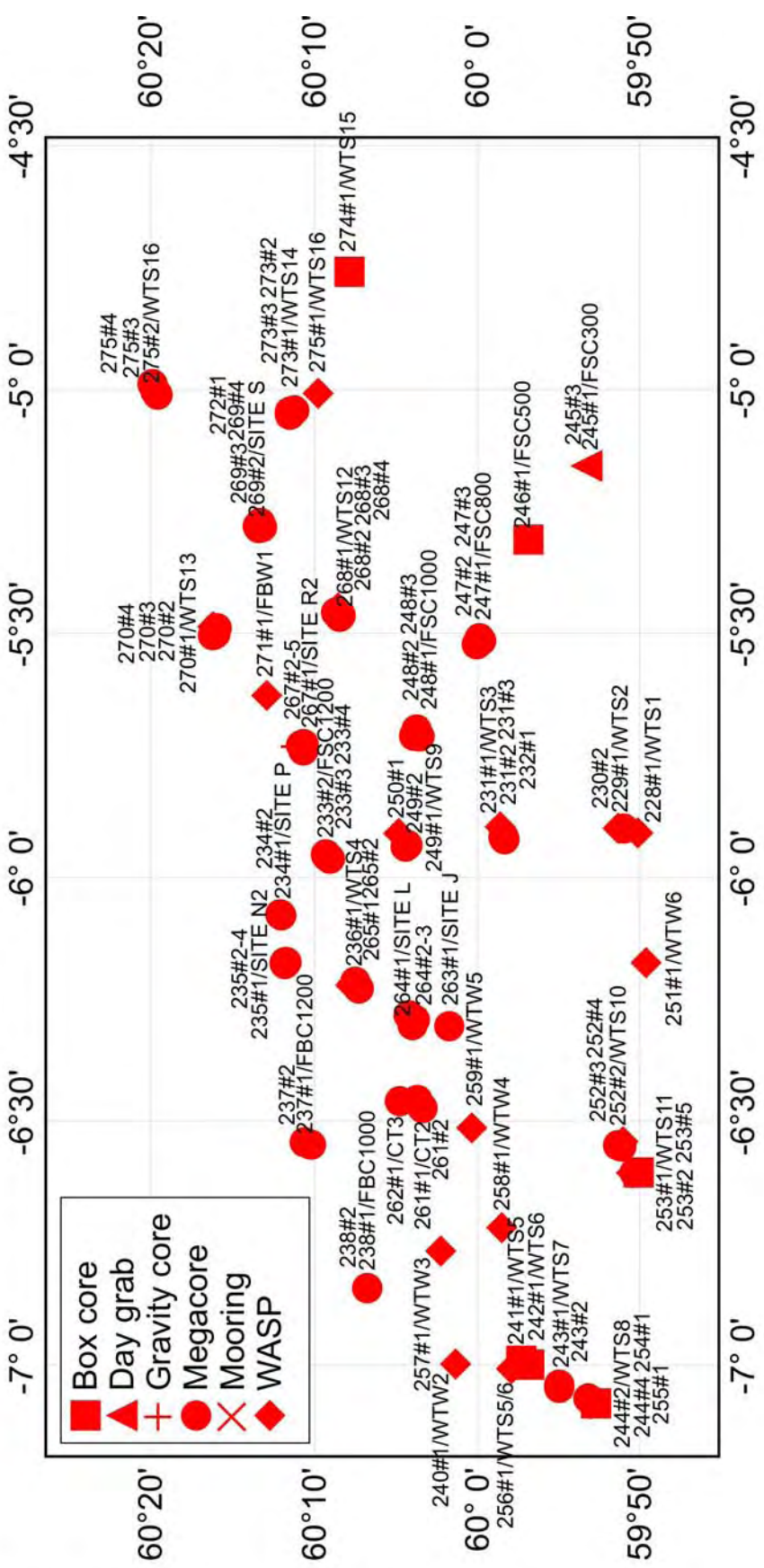


Chart 16. RRS *Charles Darwin* cruise 123 C3-4,Faroe Bank Channel deployments.

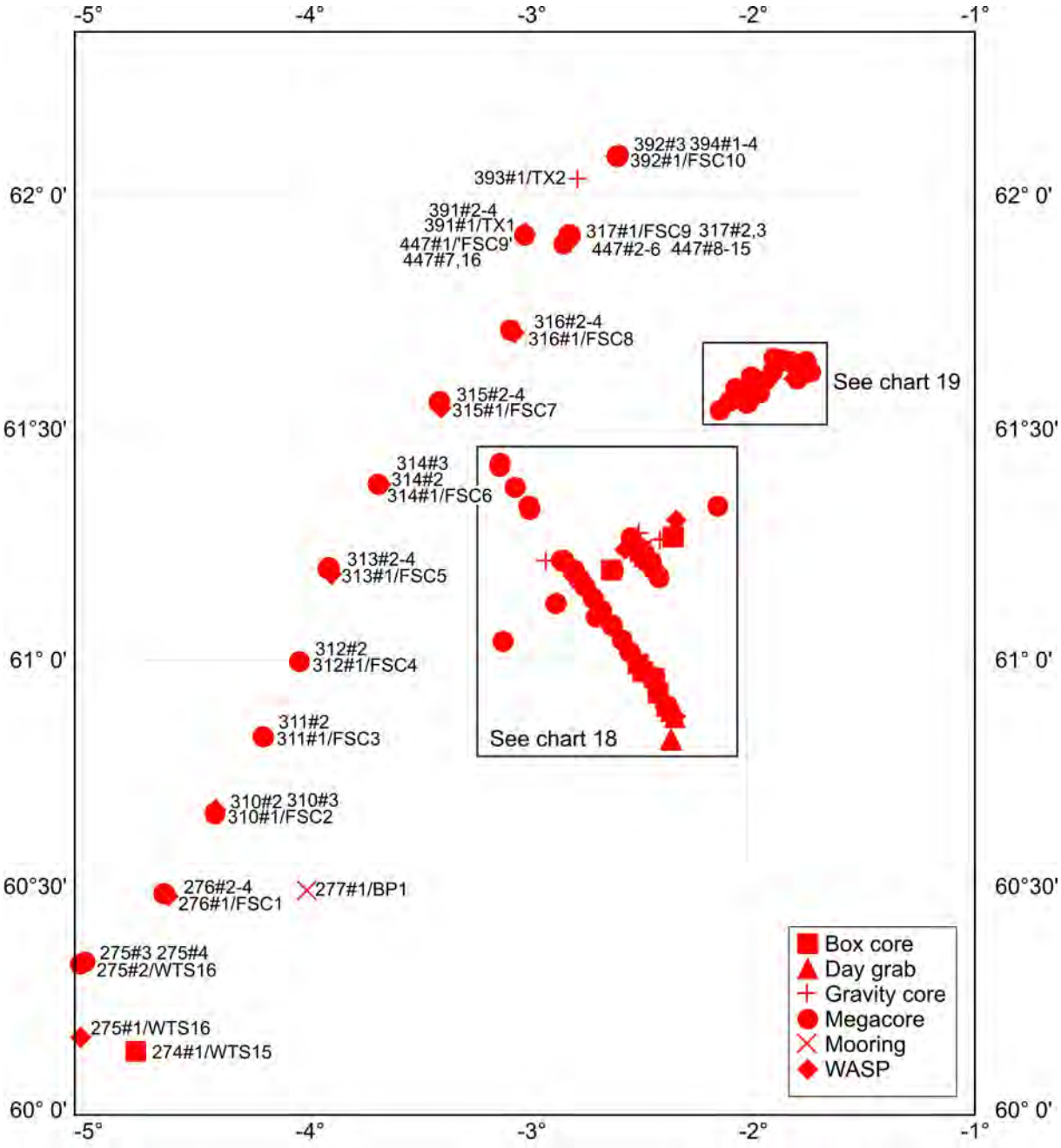


Chart 17. RRS *Charles Darwin* cruise 123 C3-4,Faroe-Shetland Channel deployments.

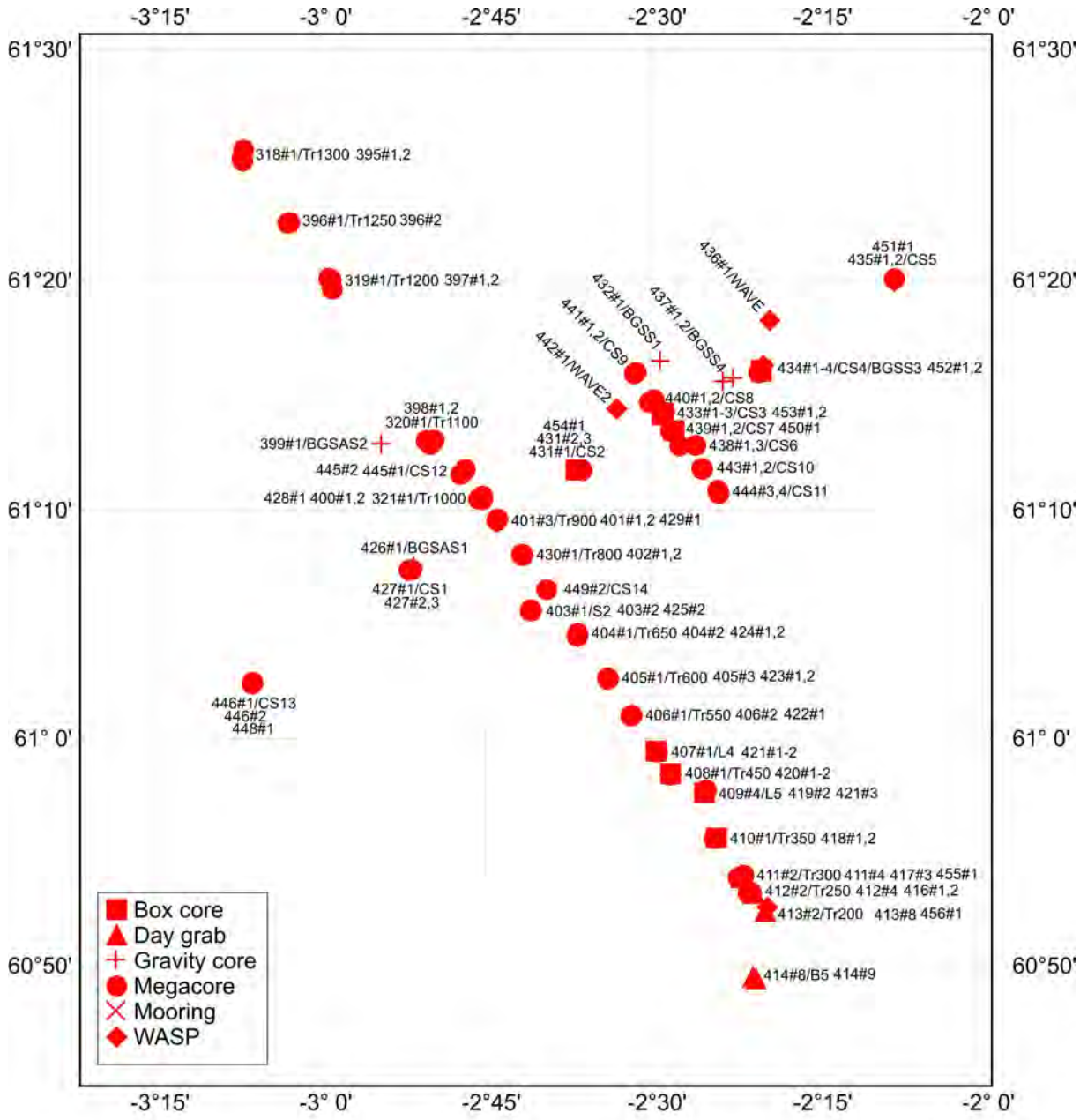


Chart 18. RRS *Charles Darwin* cruise 123 C3-4,West of Shetland transect and contourite study deployments.

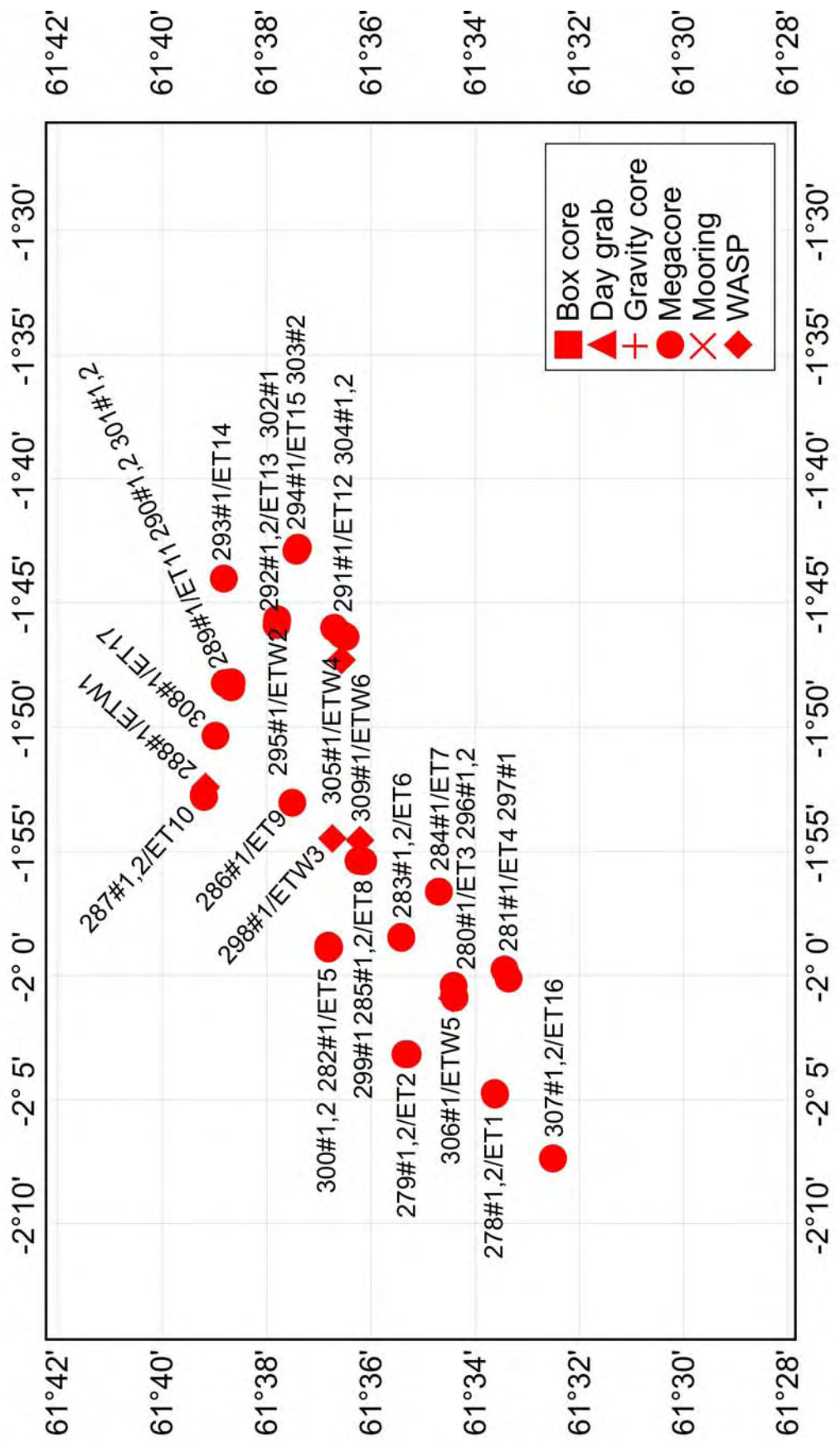


Chart 19. RRS *Charles Darwin* cruise 123 C3-4, Tranche 4 deployments.

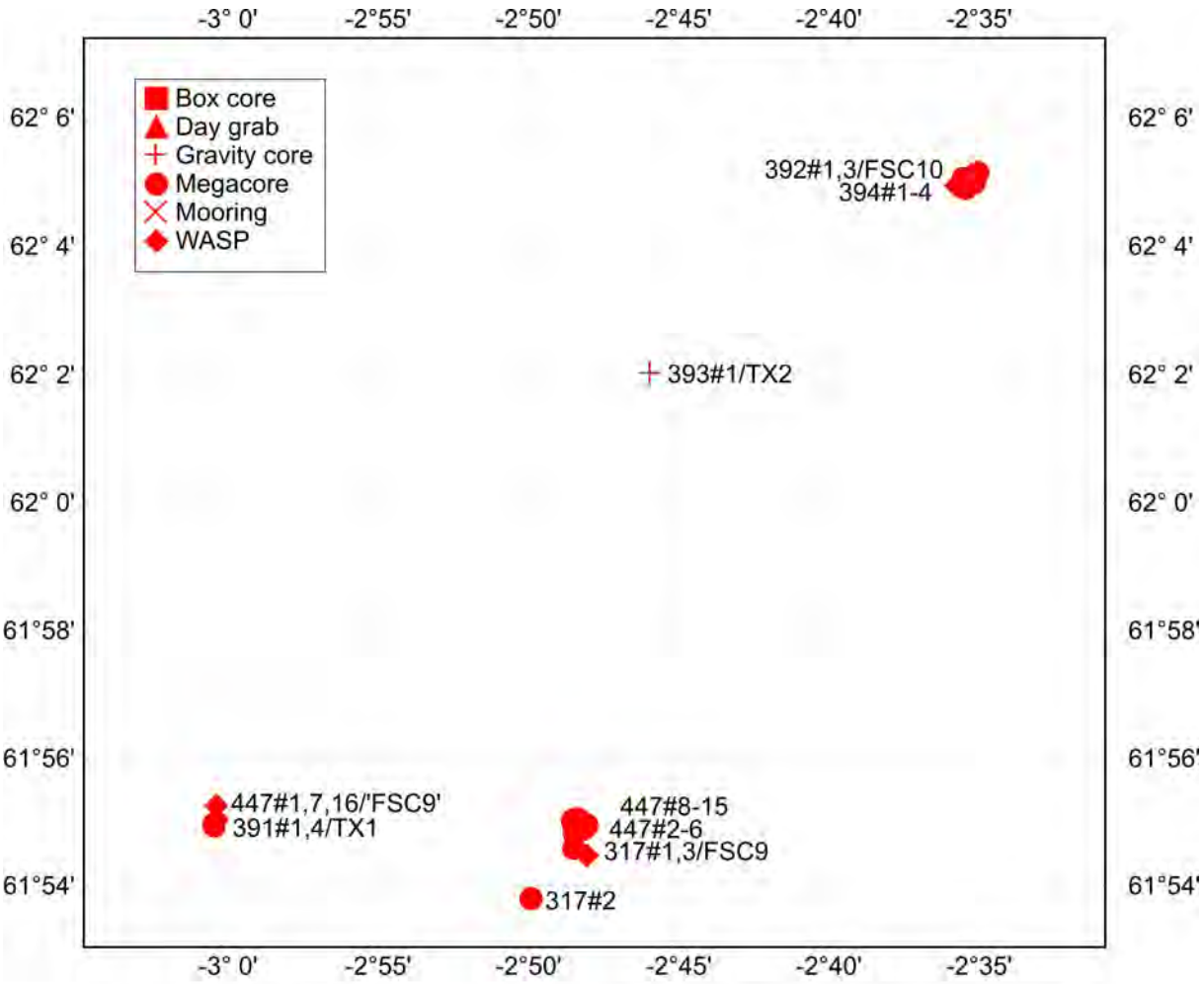


Chart 20. RRS *Charles Darwin* cruise 123 C3-4, Texaco survey deployments.

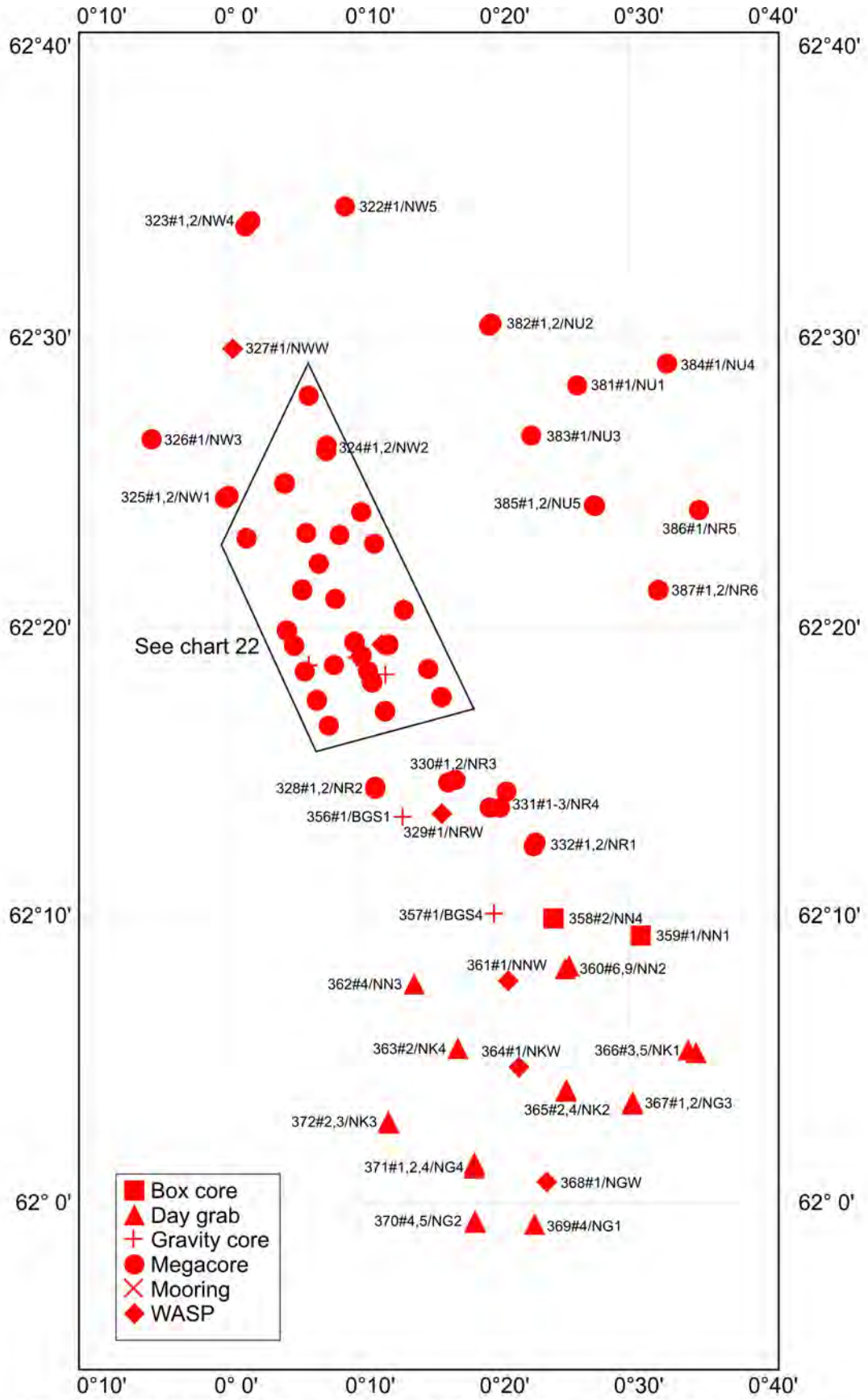


Chart 21. RRS *Charles Darwin* cruise 123 C3-4, Tranches 65-67 deployments.

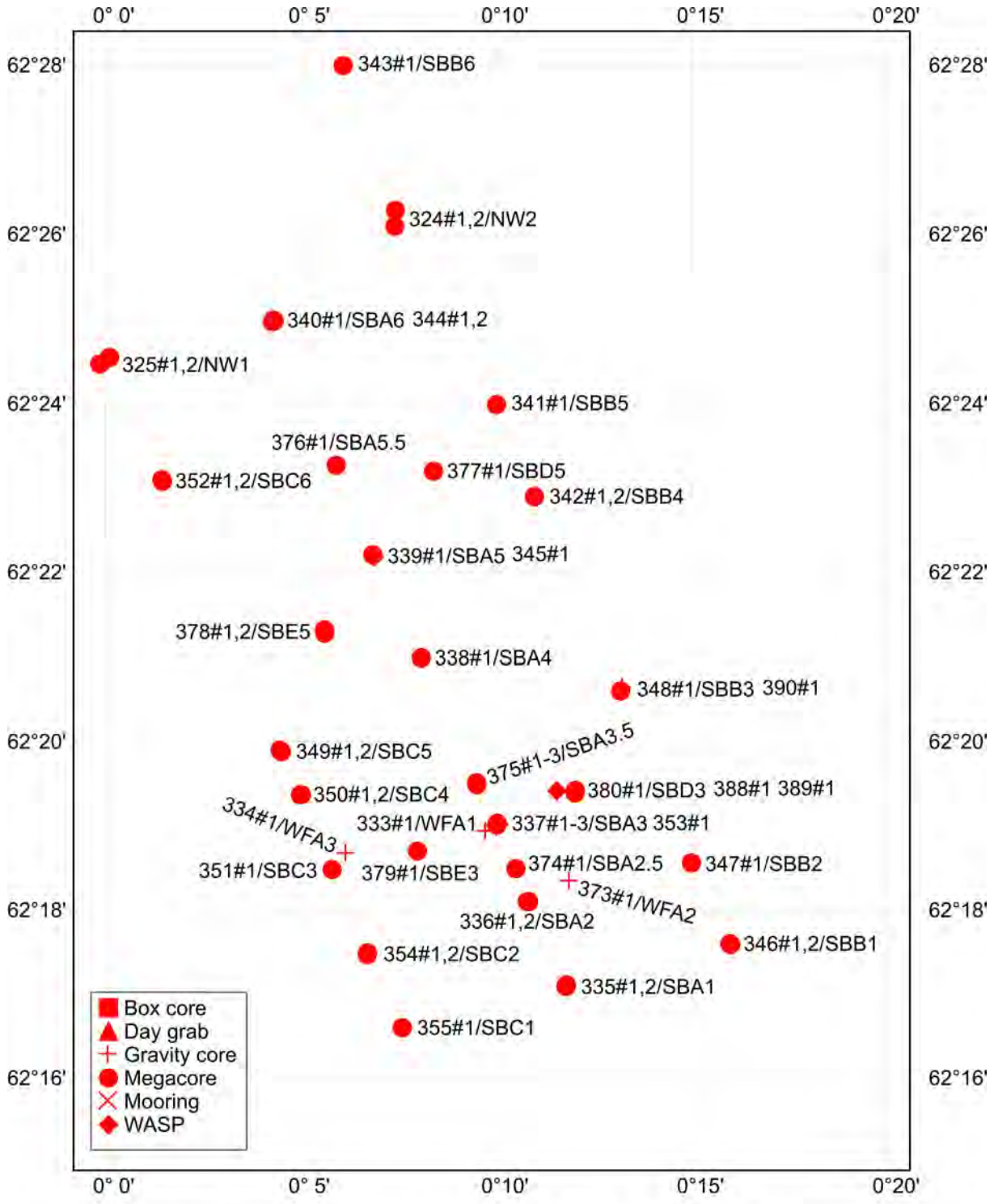


Chart 22. RRS *Charles Darwin* cruise 123 C3-4, Statoil / BP deployments.

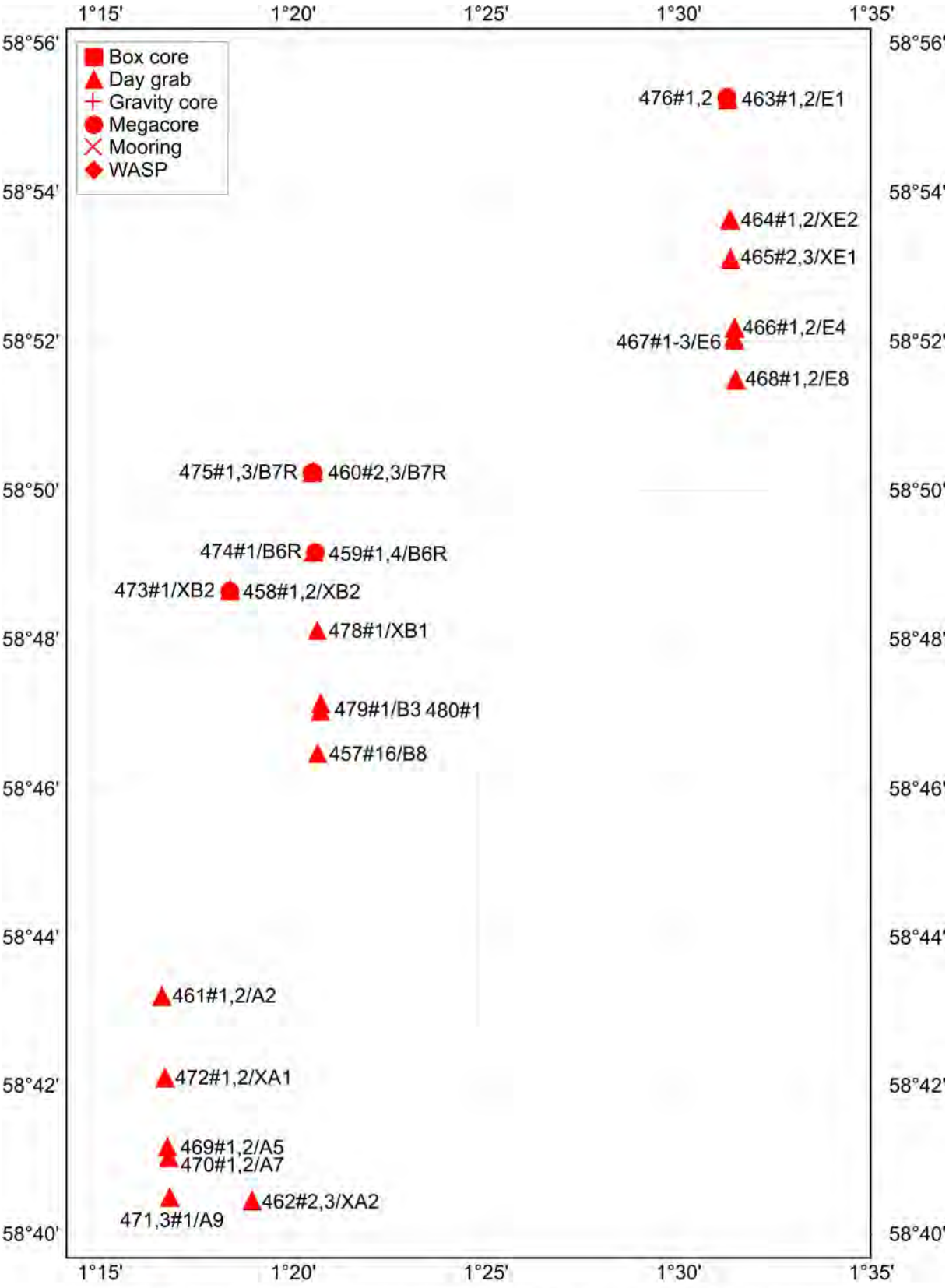


Chart 23. RRS *Charles Darwin* cruise 123 C3-4, Brae oil field deployments.

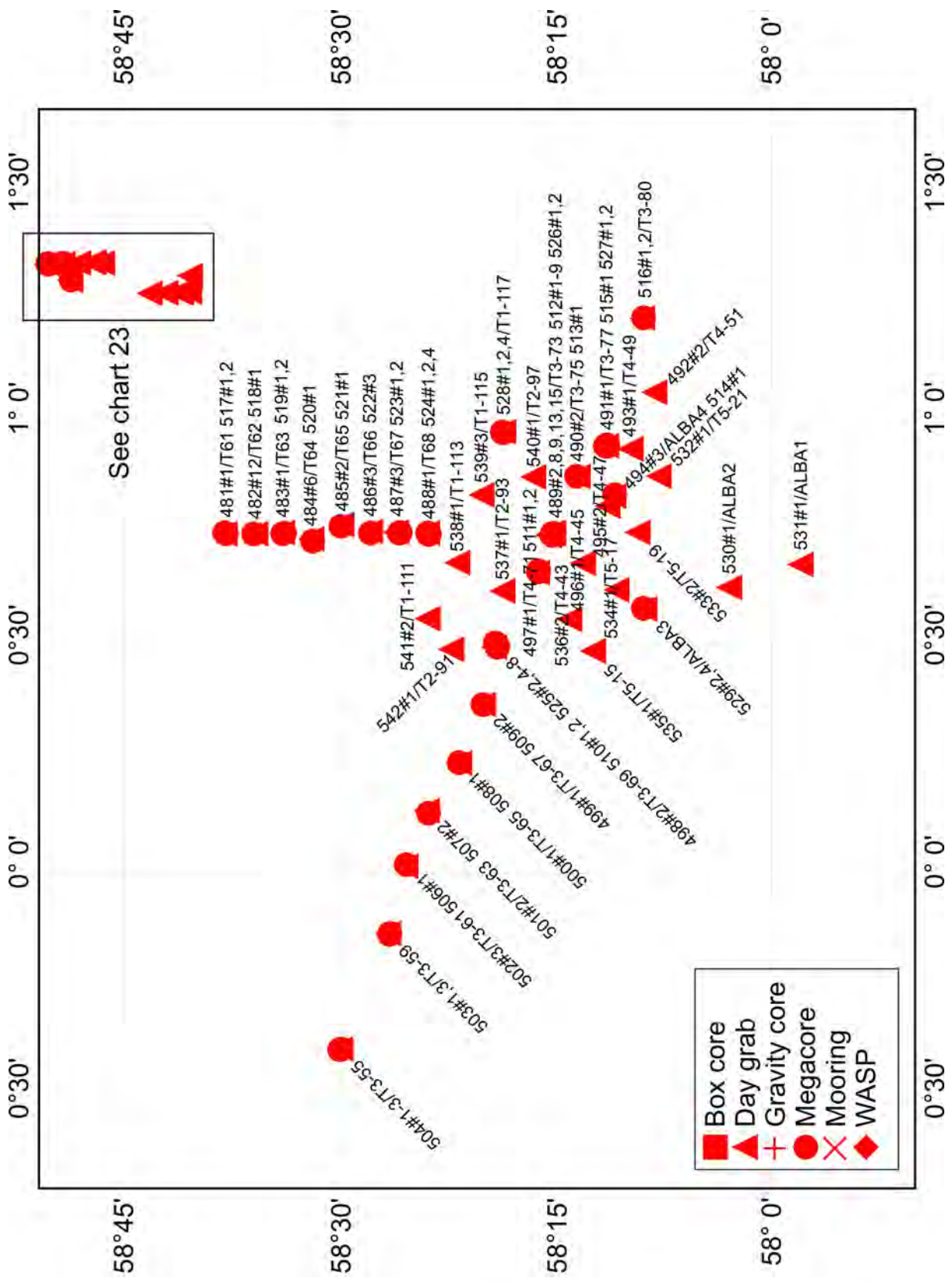


Chart 24. RRS *Charles Darwin* cruise 123 C3-4, Fladen Ground deployments.

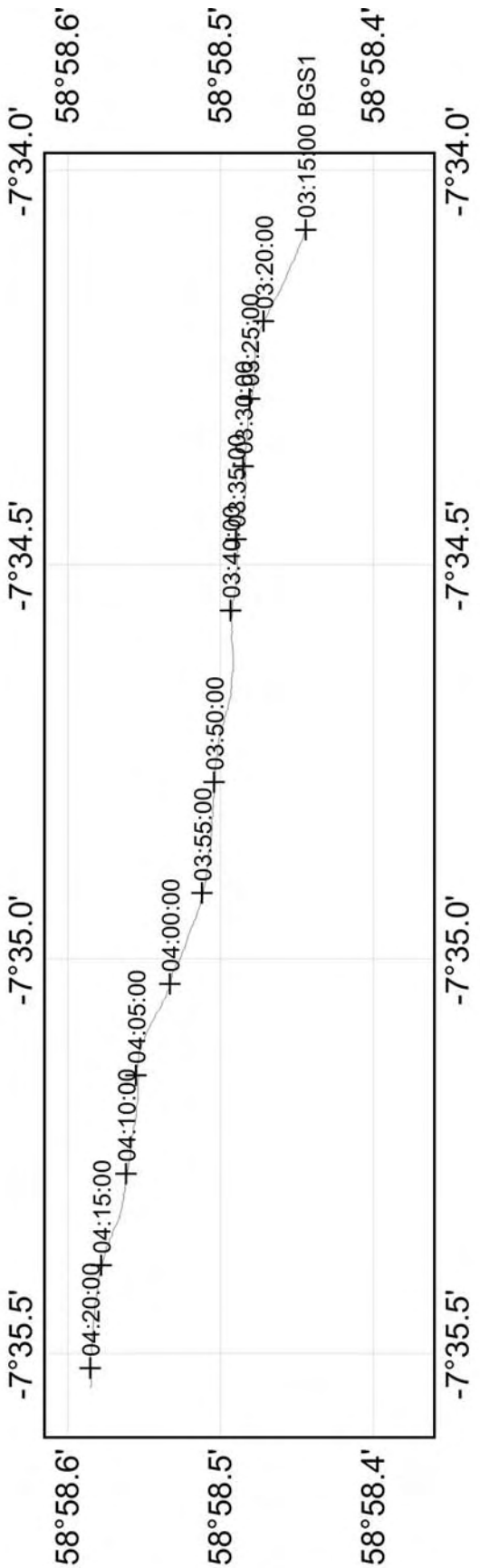


Chart 25. WASP station 55201#1, site BGS1

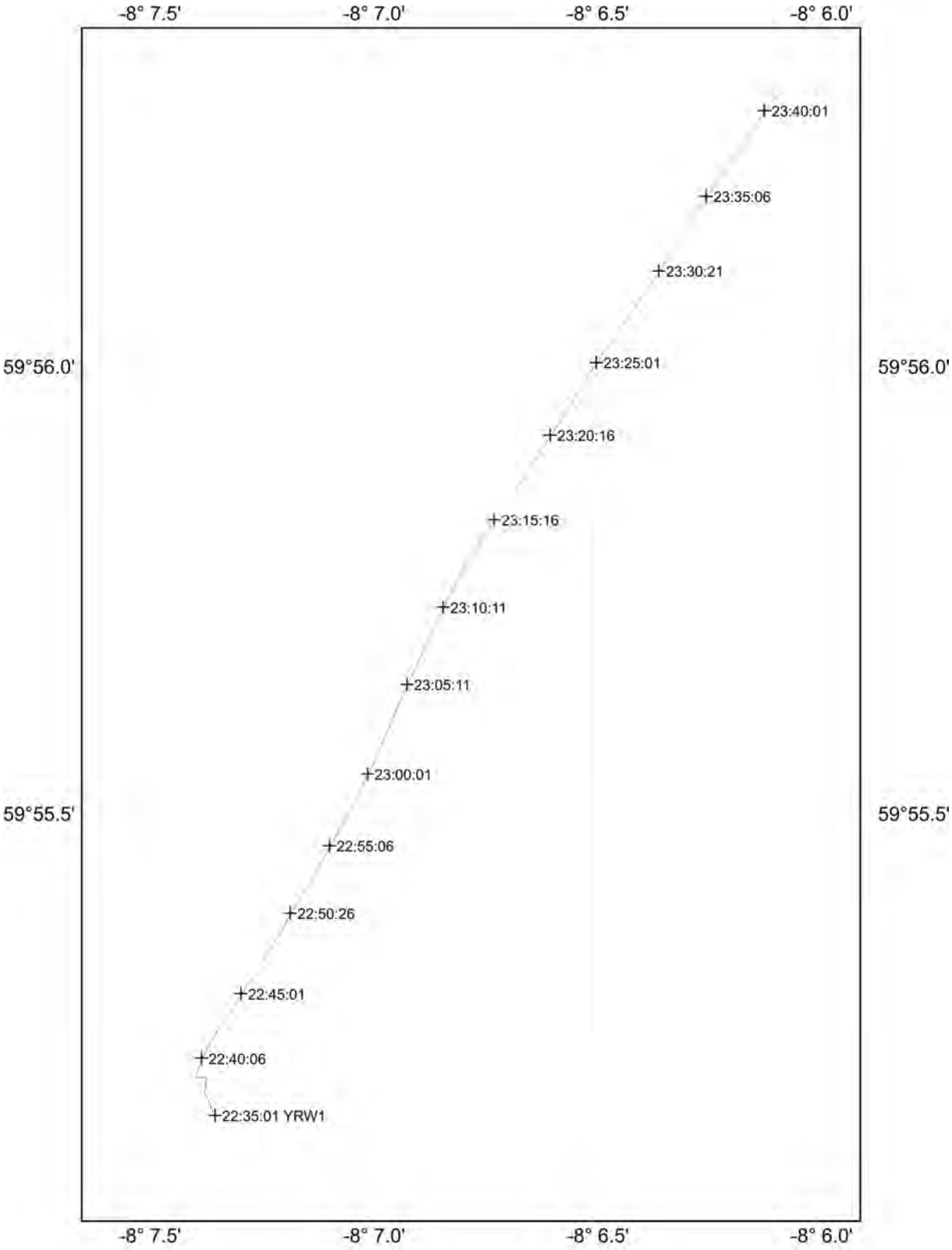


Chart 26. WASP station 55208#1, site YRW1

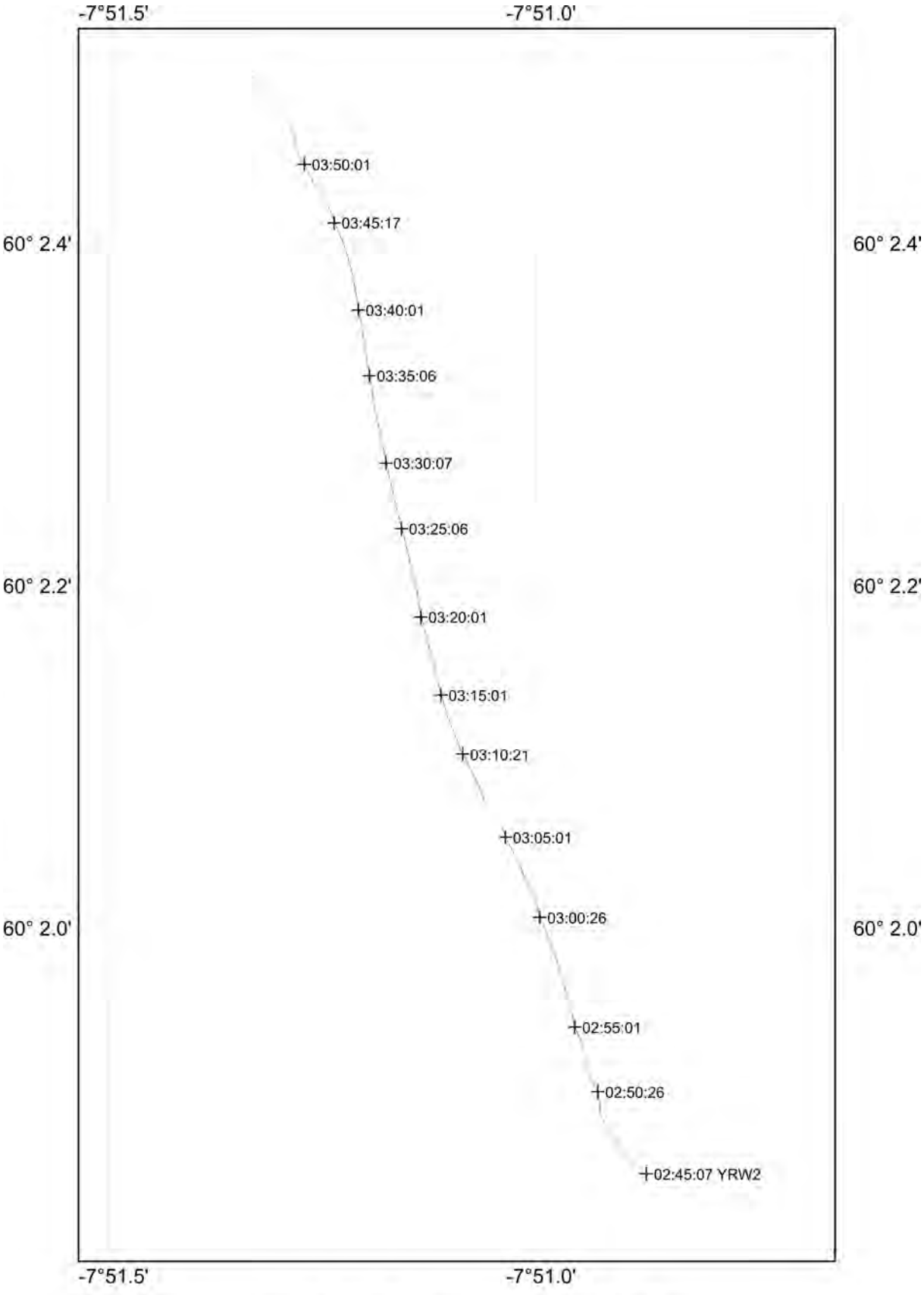


Chart 27. WASP station 55209#1, site YRW2

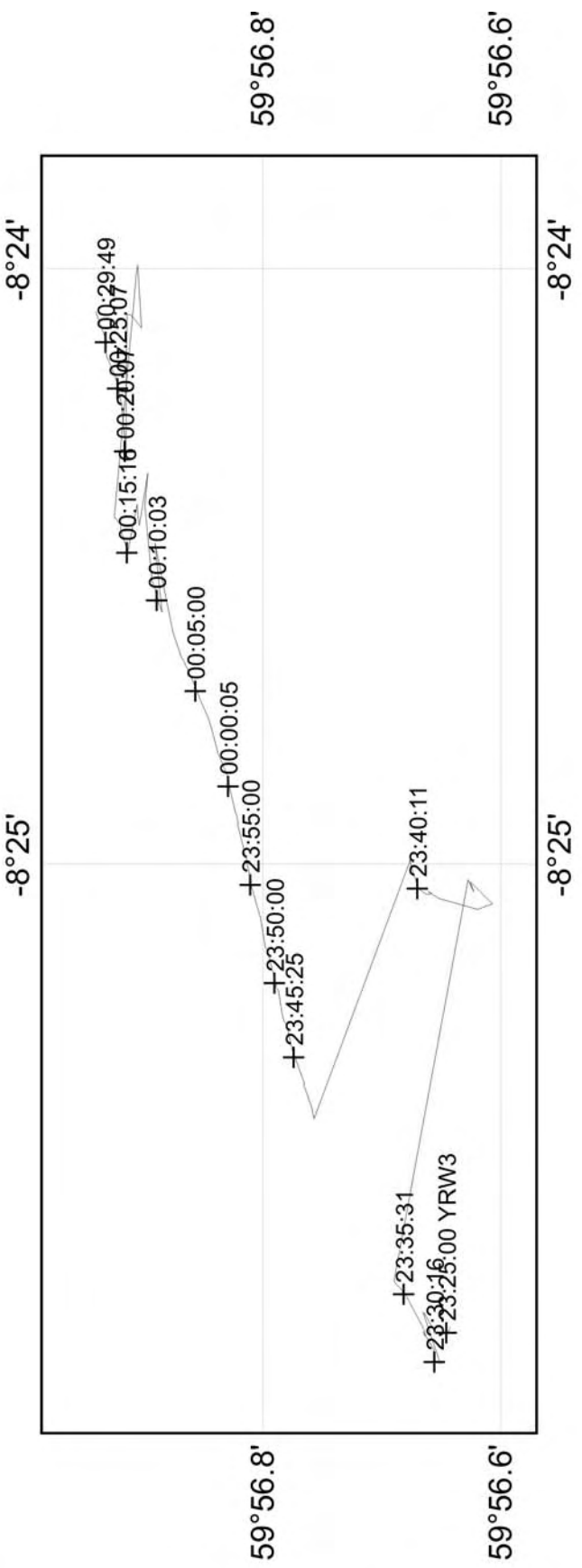


Chart 28. WASP station 55218#1, site YRW3

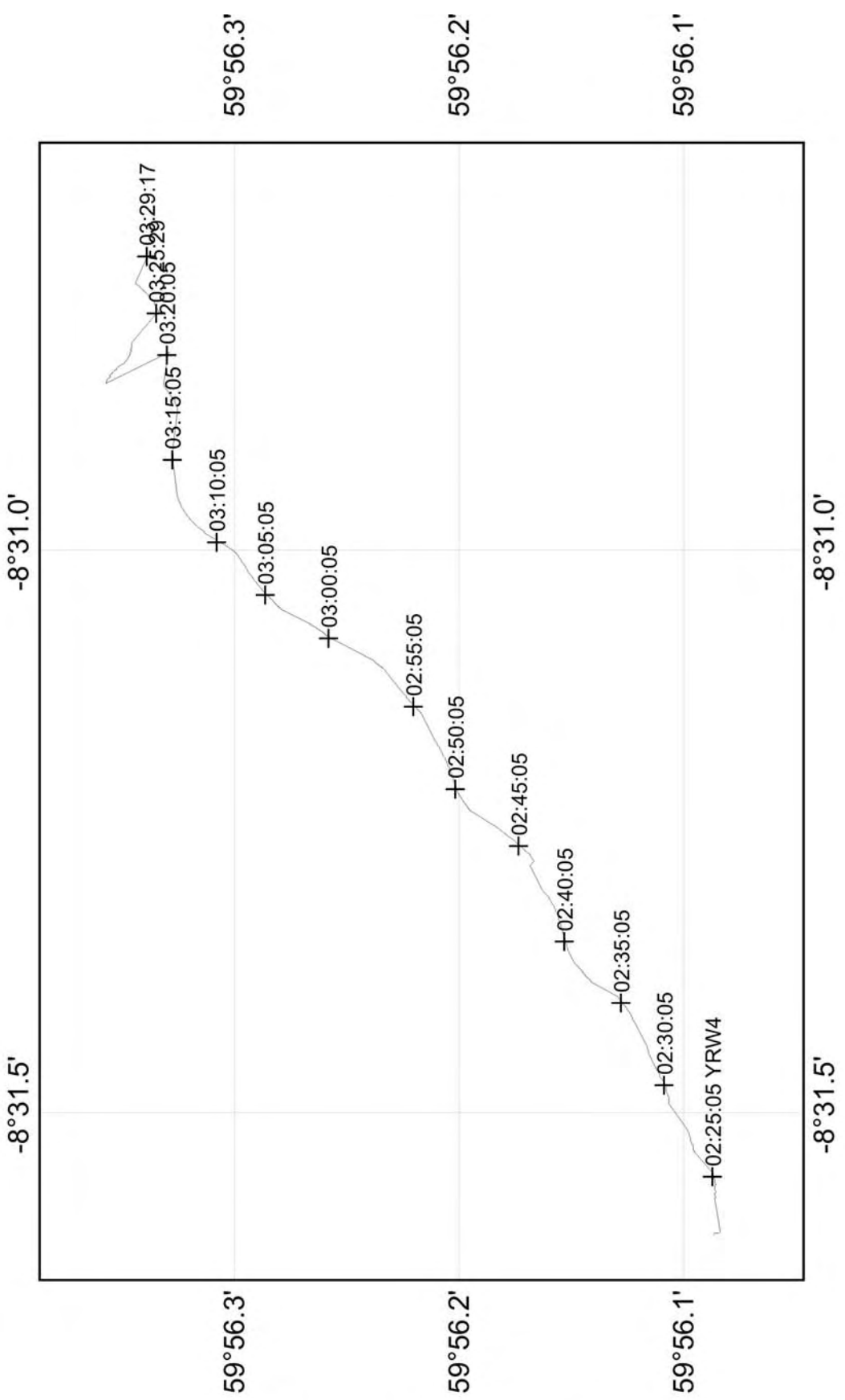


Chart 29. WASP station 55219#1, site YRW4

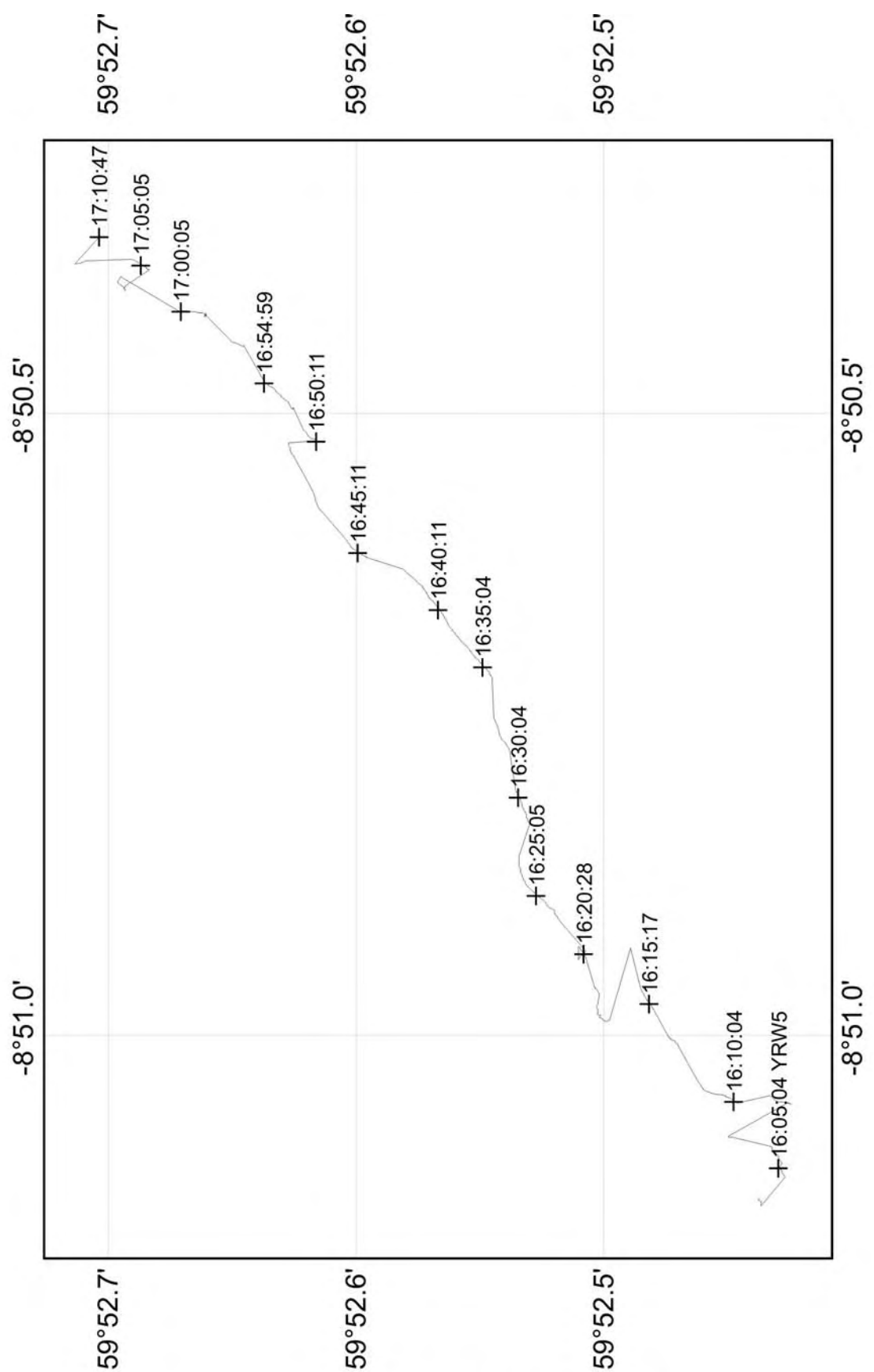


Chart 30. WASP station 55221#1, site YRW5

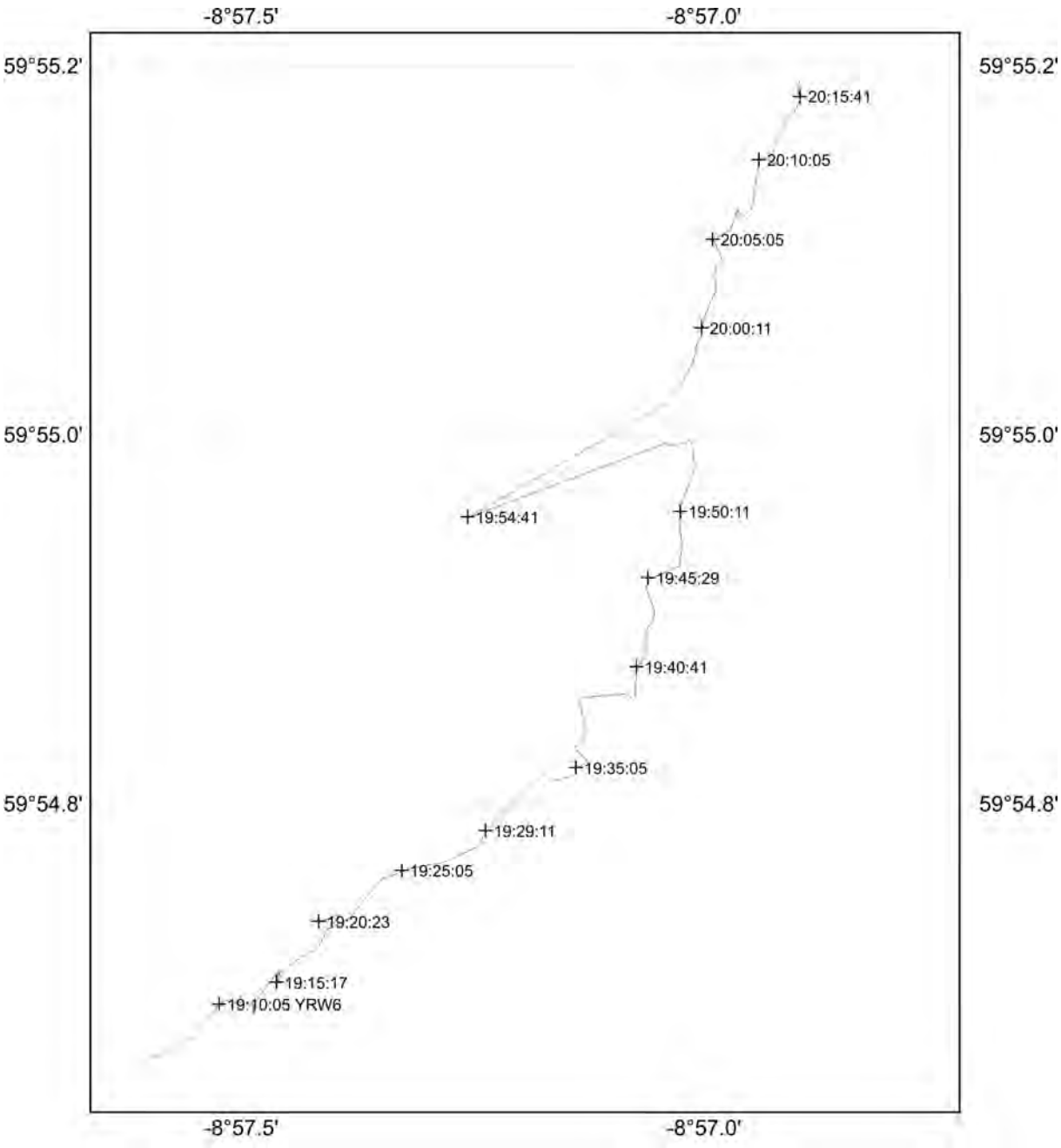


Chart 31. WASP station 55222#1, site YRW6

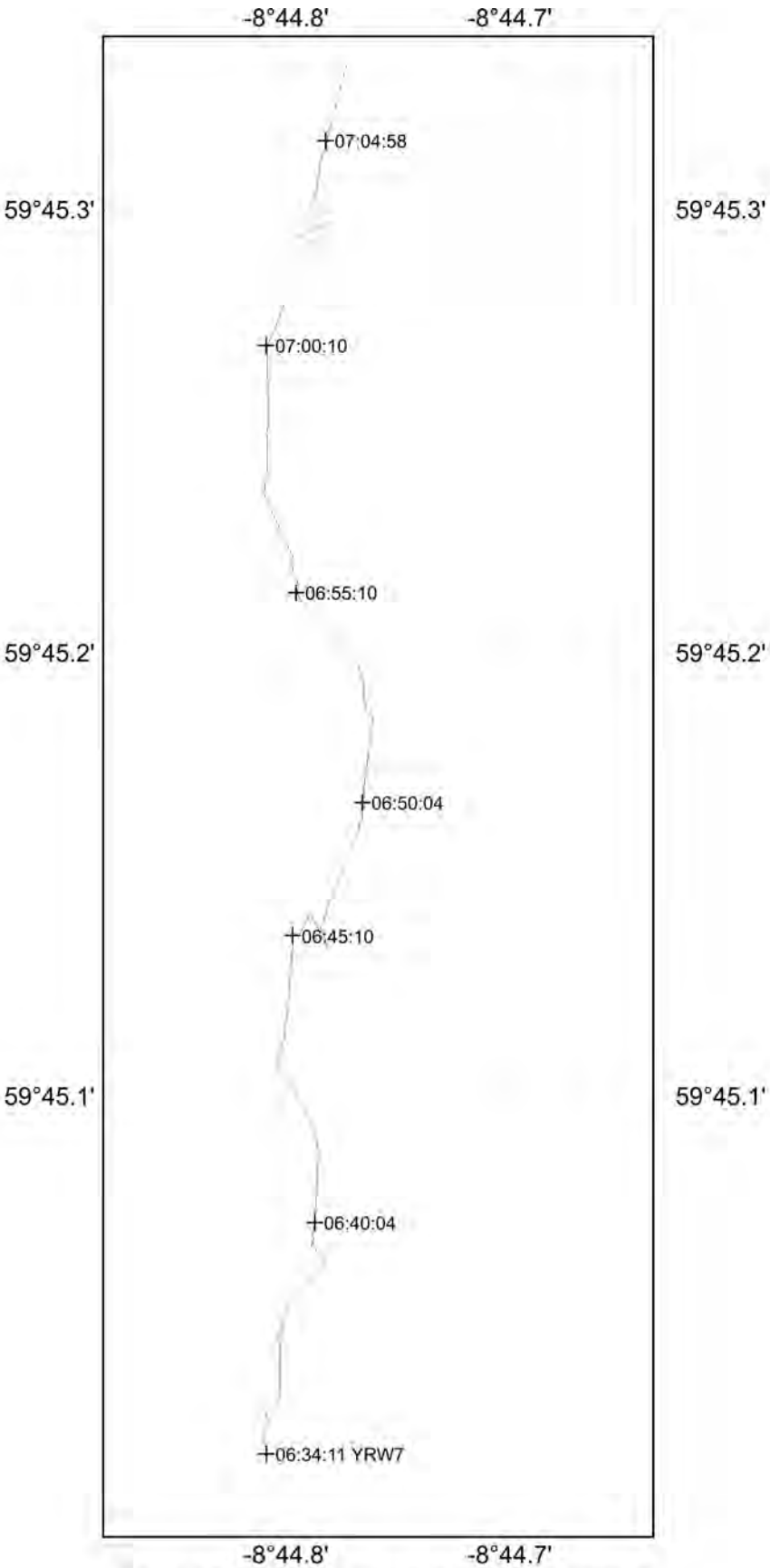


Chart 32. WASP station 55225#1, site YRW7

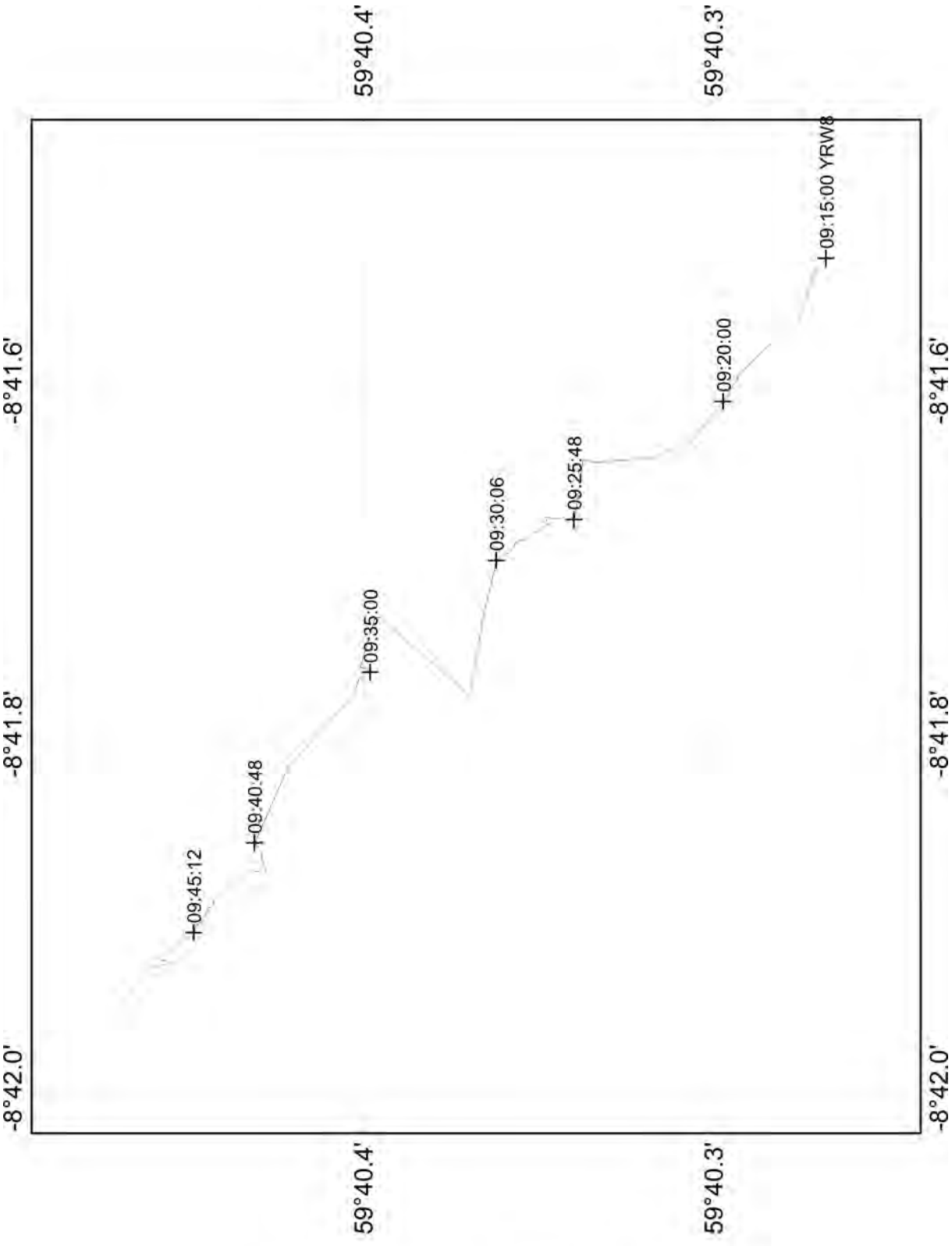


Chart 33. WASP station 55226#1, site YRW8

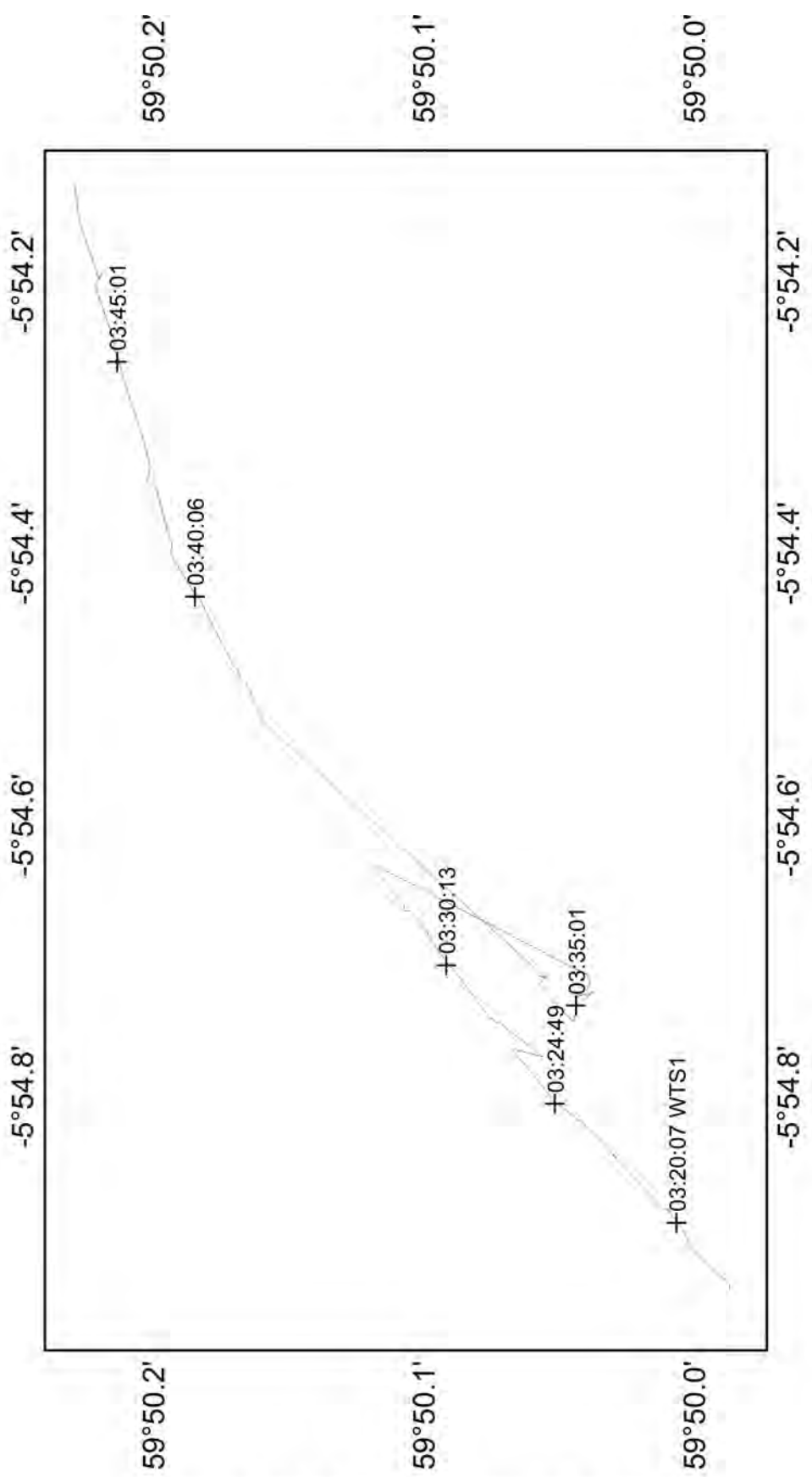


Chart 34. WASP station 55228#1, site WTS1

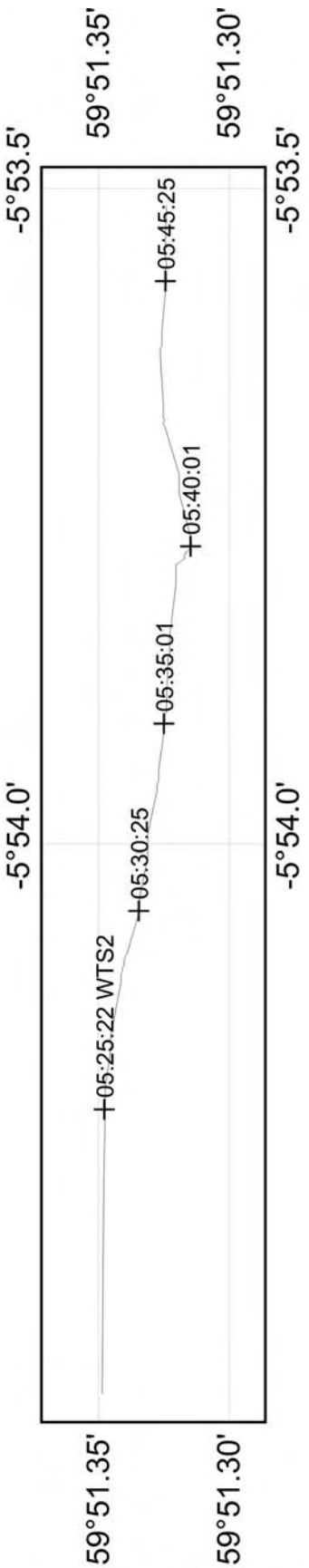


Chart 35. WASP station 55229#1, site WTS2

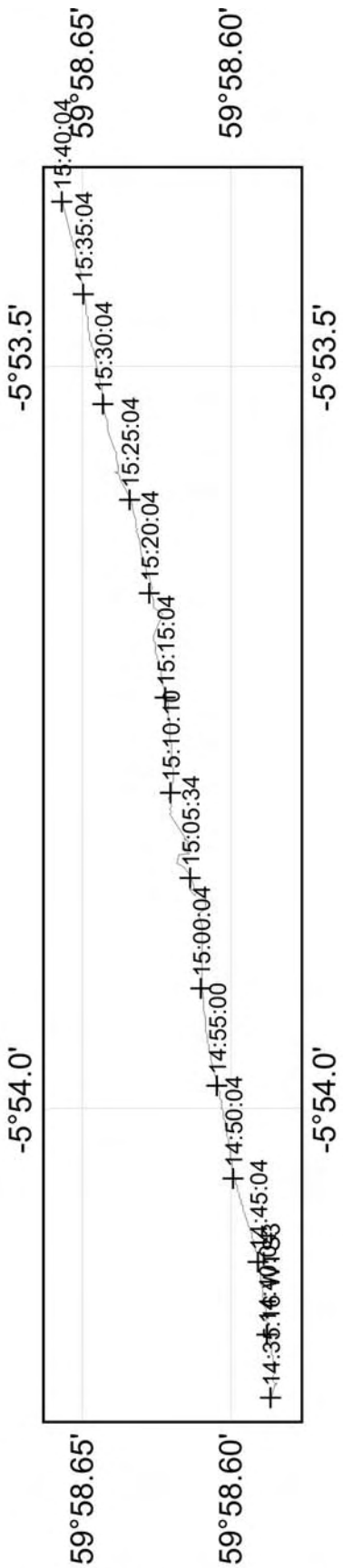


Chart 36. WASP station 55232#1, site WTS3

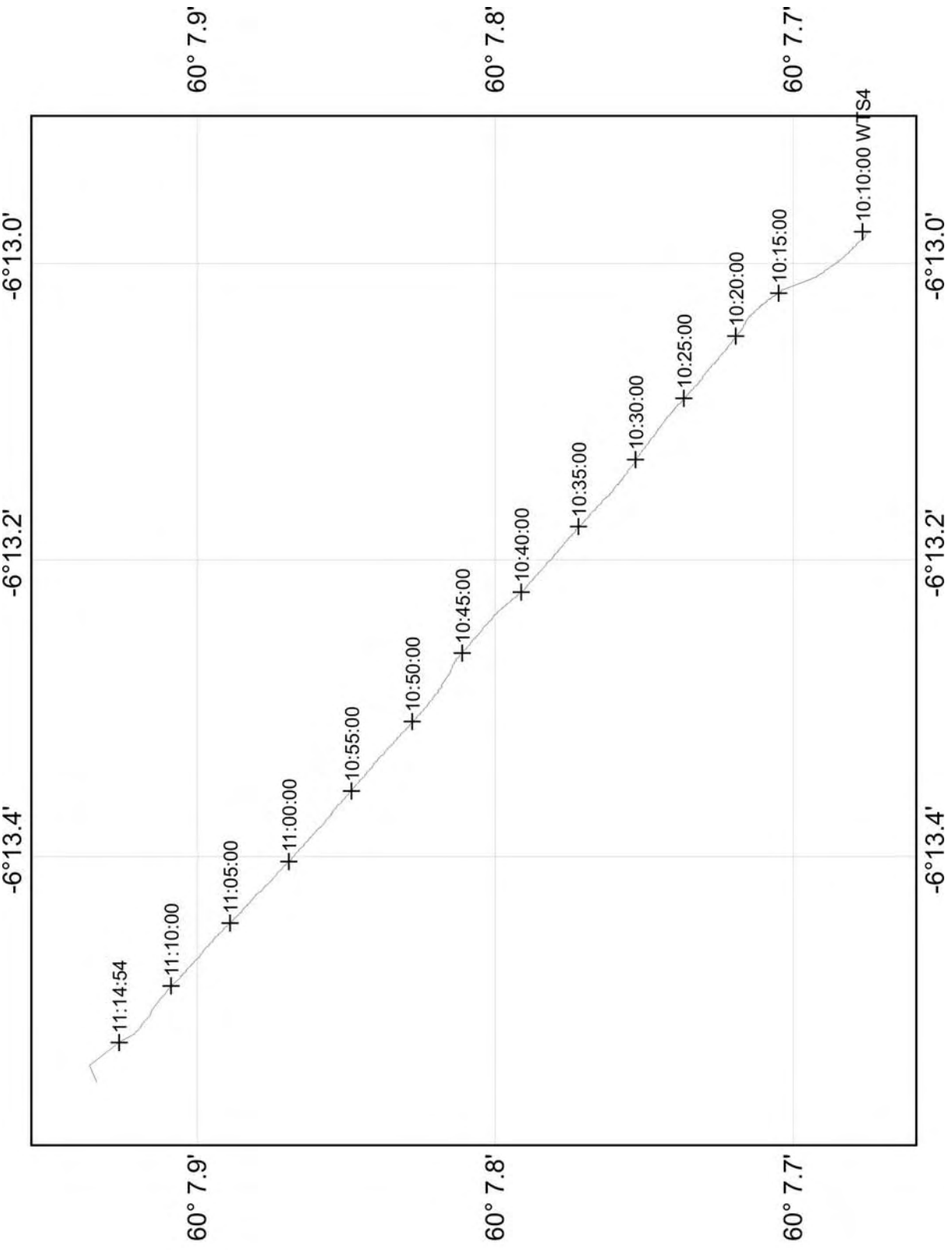


Chart 37. WASP station 55236#1, site WTS4

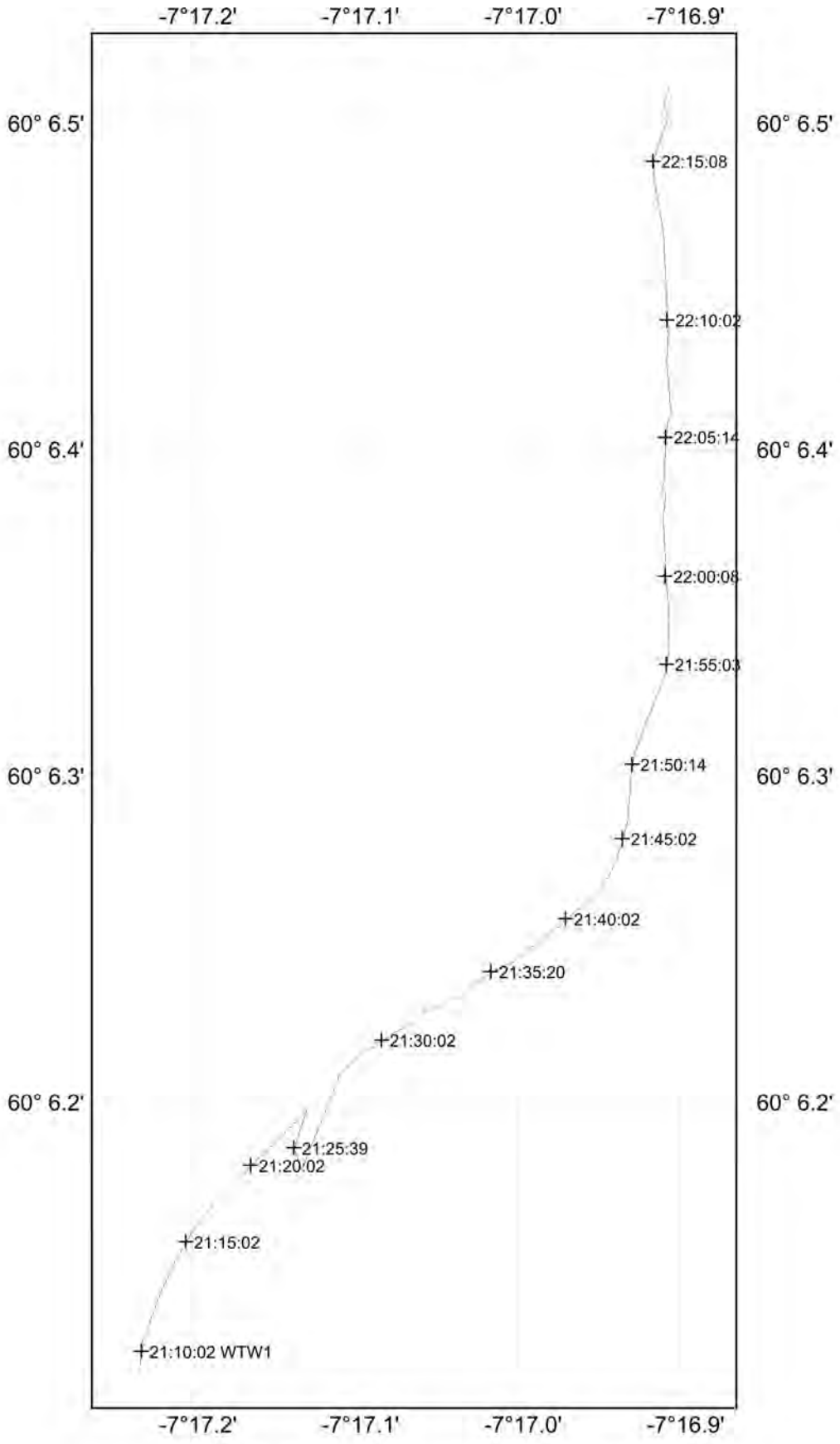


Chart 38. WASP station 55239#1, site WTW1

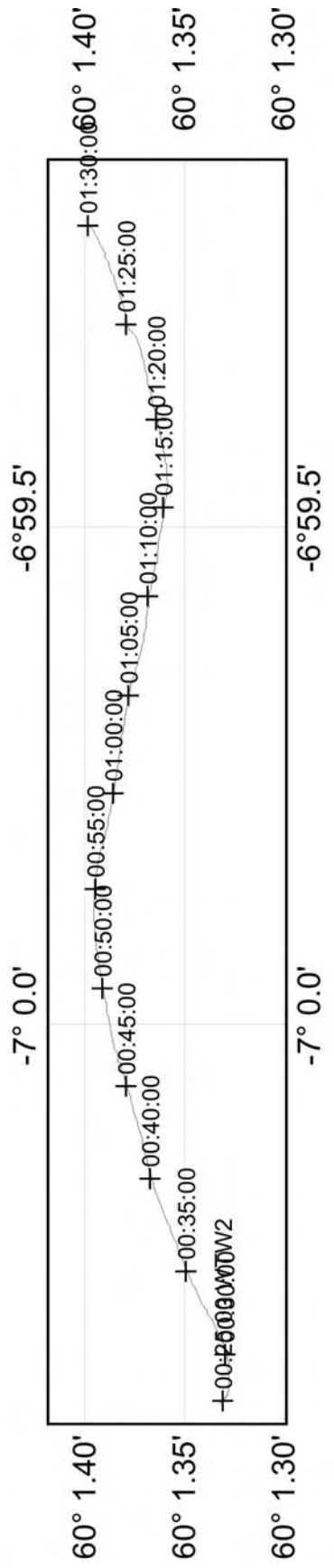


Chart 39. WASP station 55240#1, site WTW2

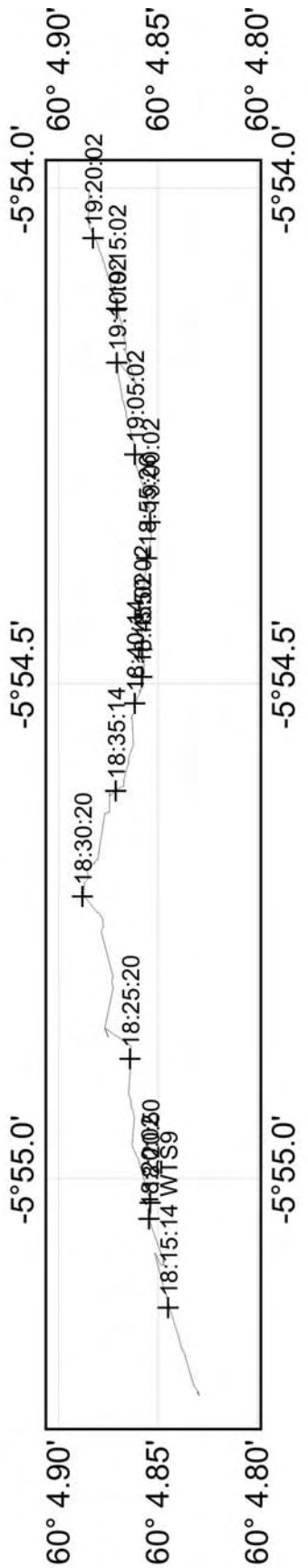


Chart 40. WASP station 55250#1, site WTS9

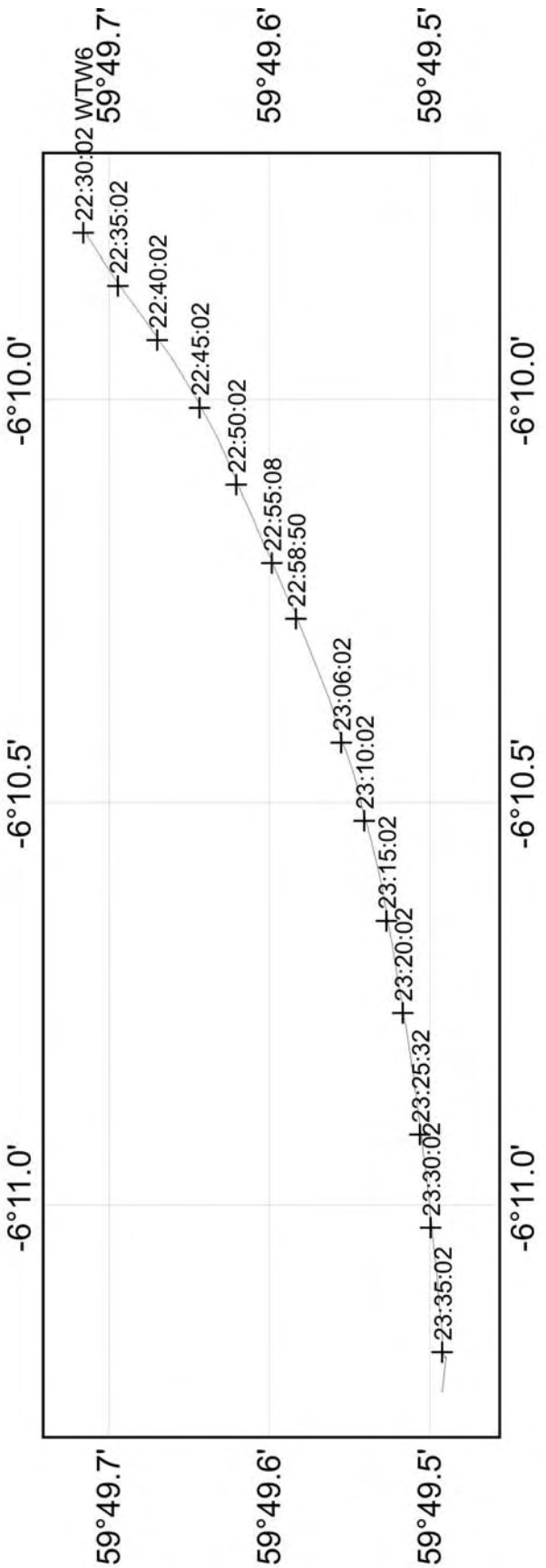


Chart 41. WASP station 55251#1, site WTW6

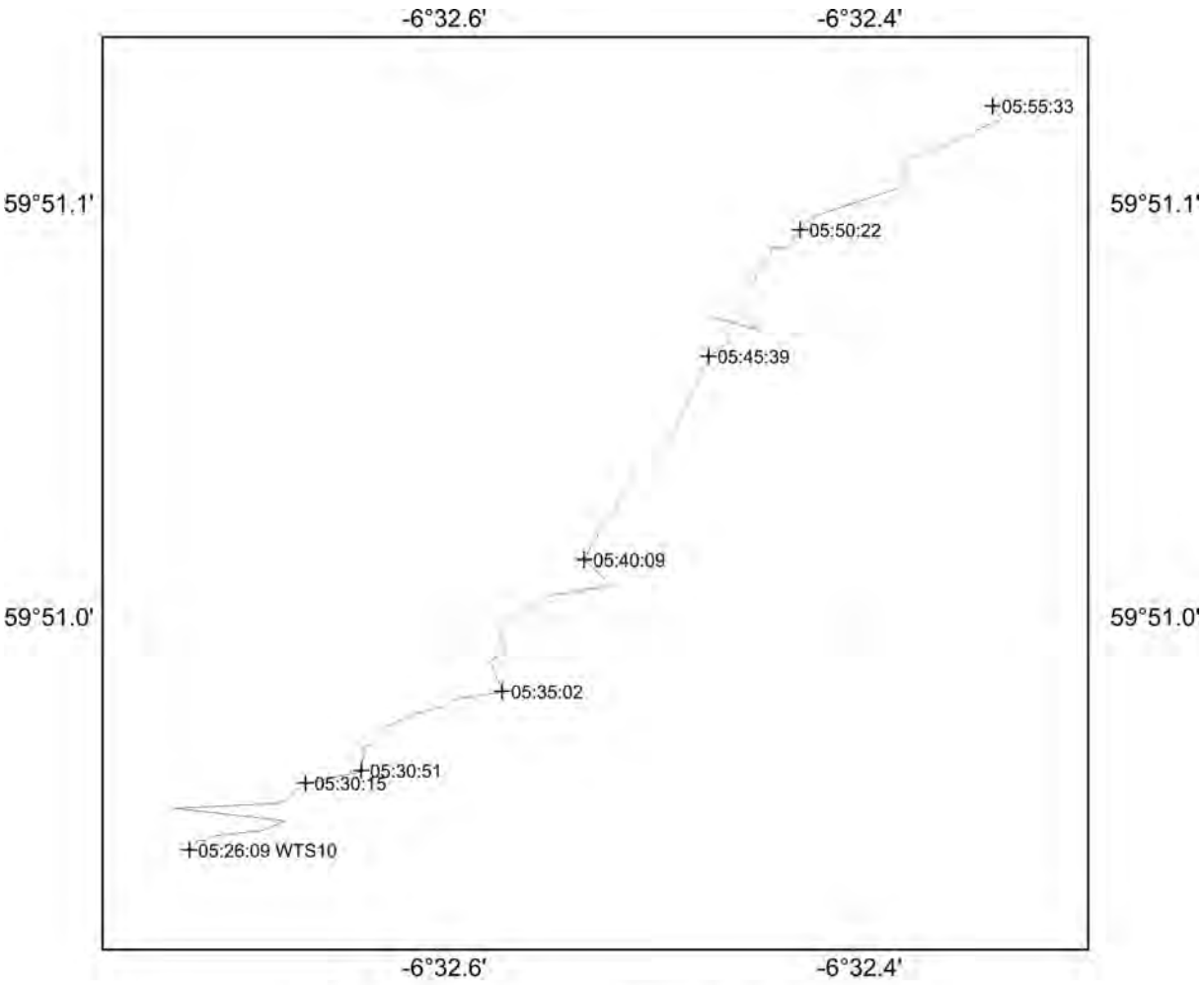


Chart 42. WASP station 55252#1, site WTS10

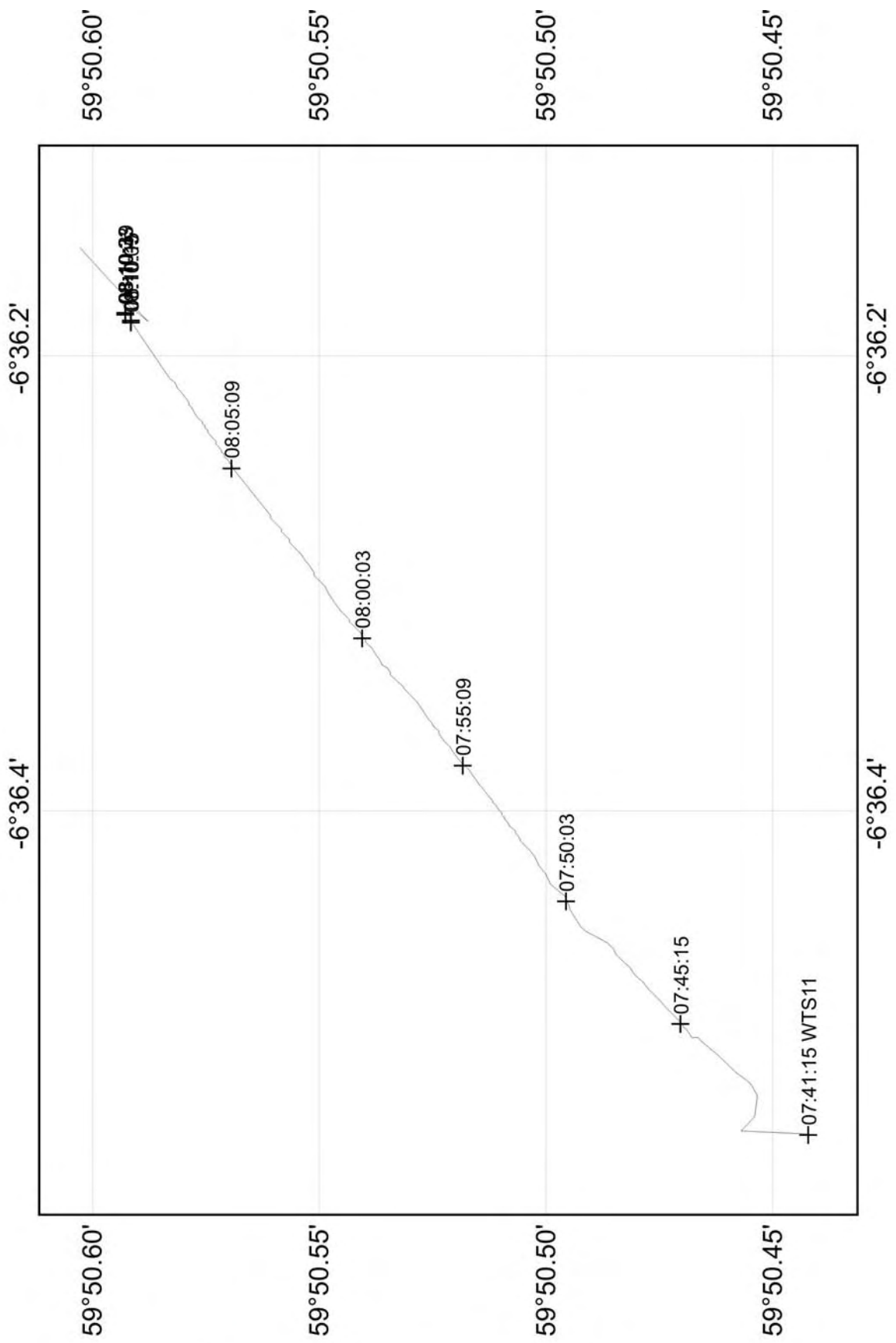


Chart 43. WASP station 55253#1, site WTS11

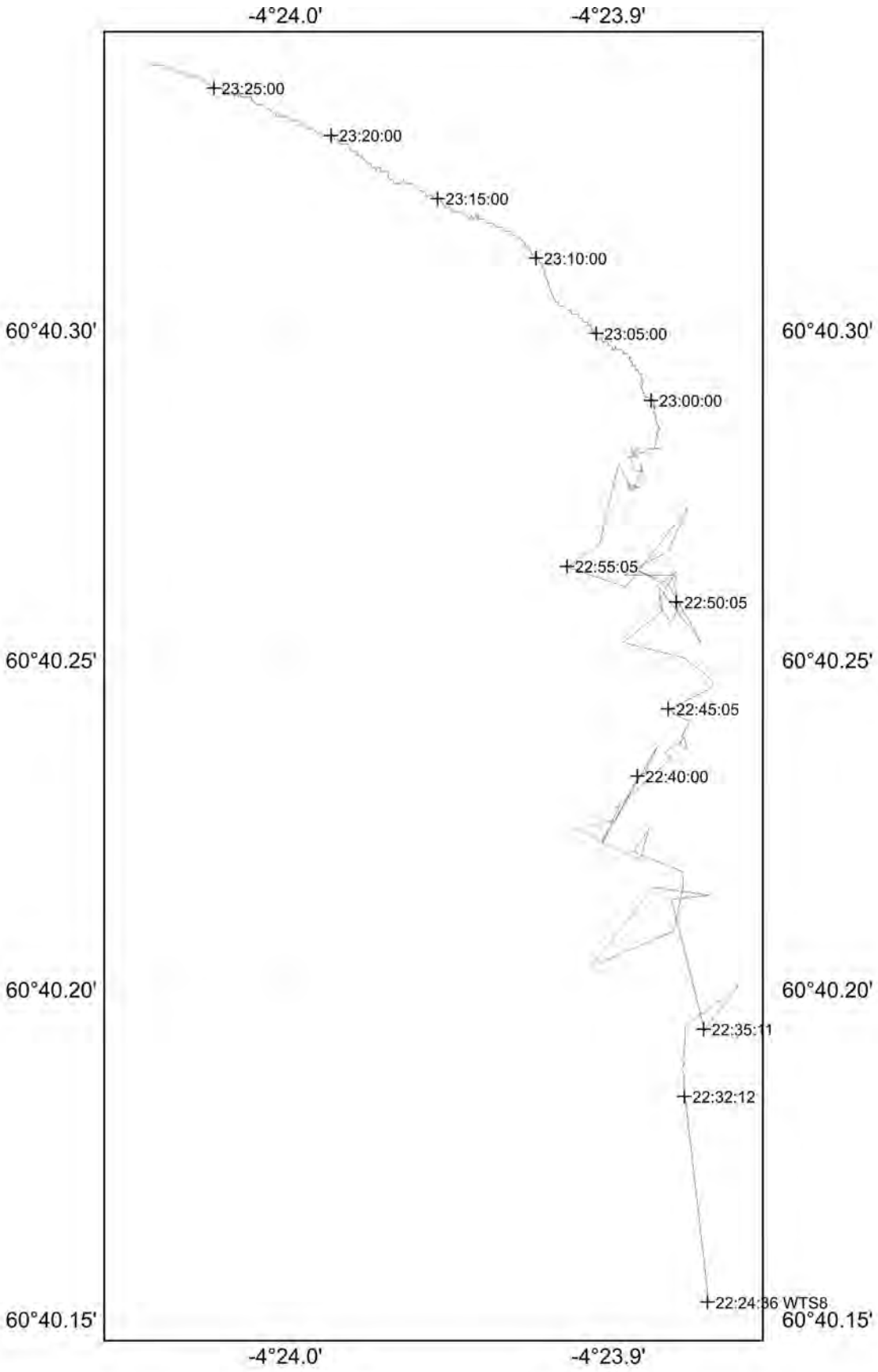


Chart 44. WASP station 55254#1, site WTS8

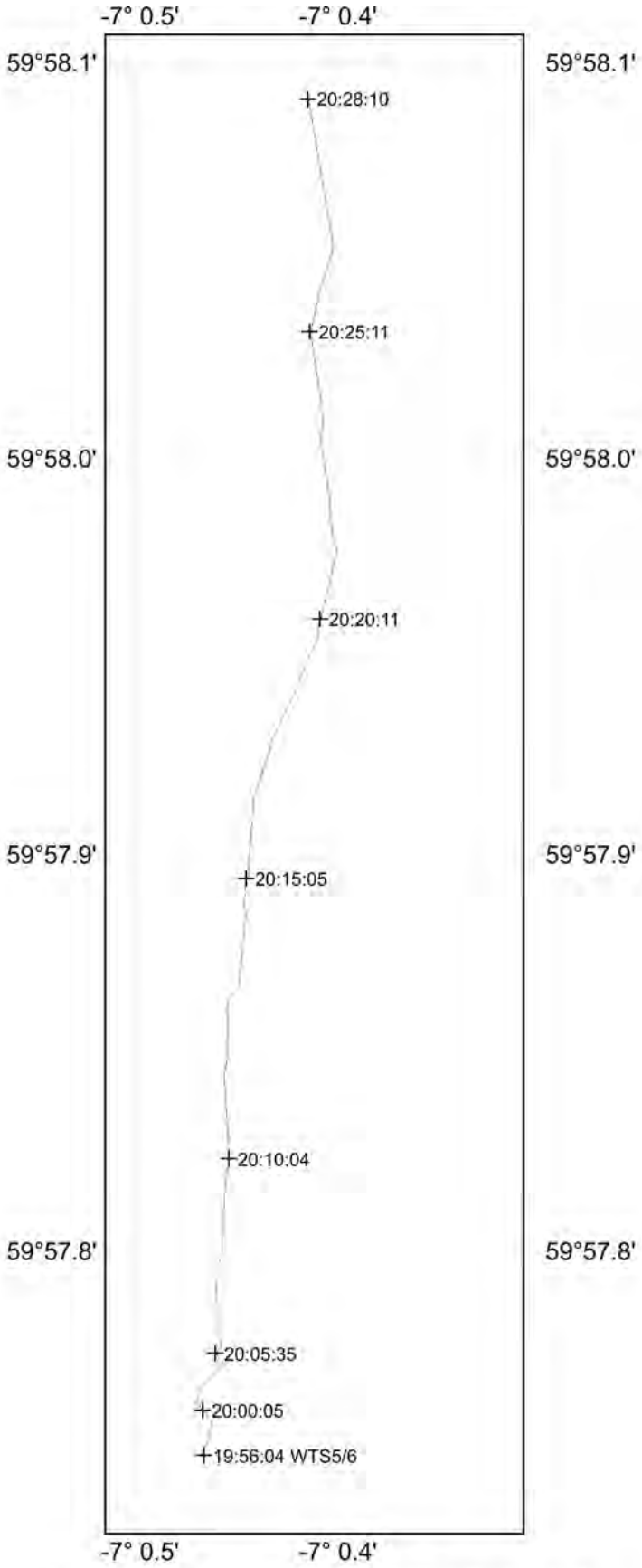


Chart 45. WASP station 55256#1, site WTS5/6

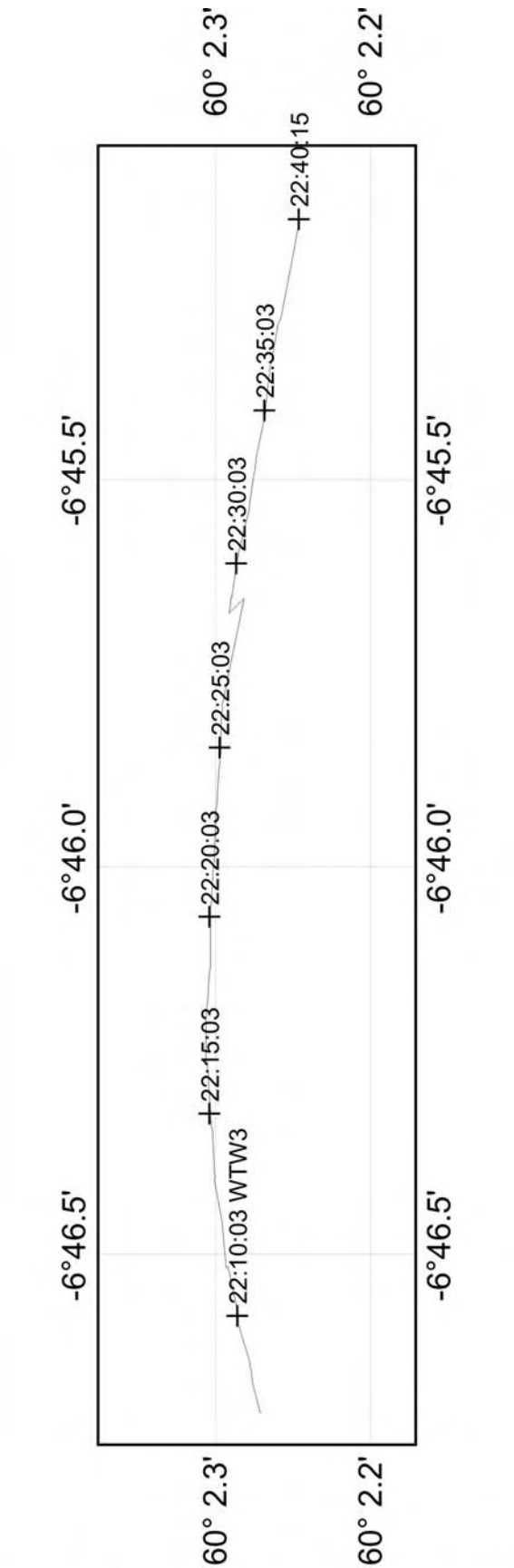


Chart 46. WASP station 55257#1, site WTW3

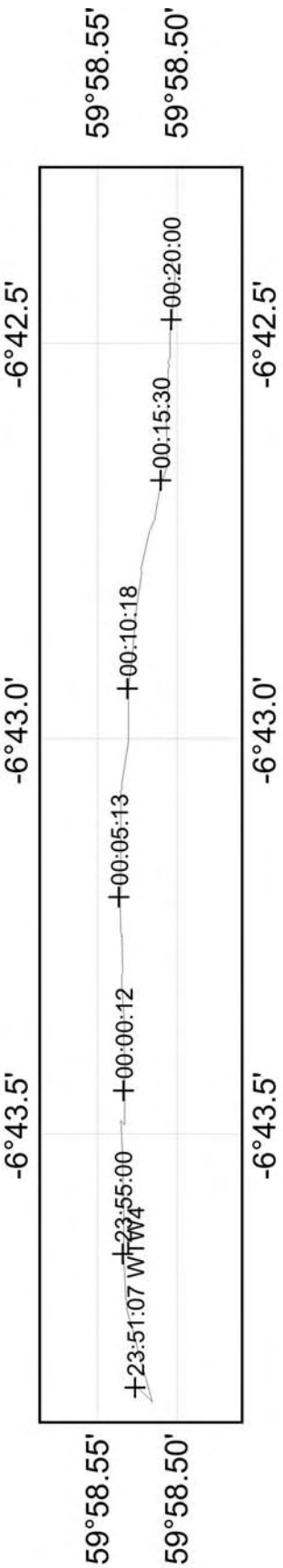


Chart 47. WASP station 55258#1, site WTW4

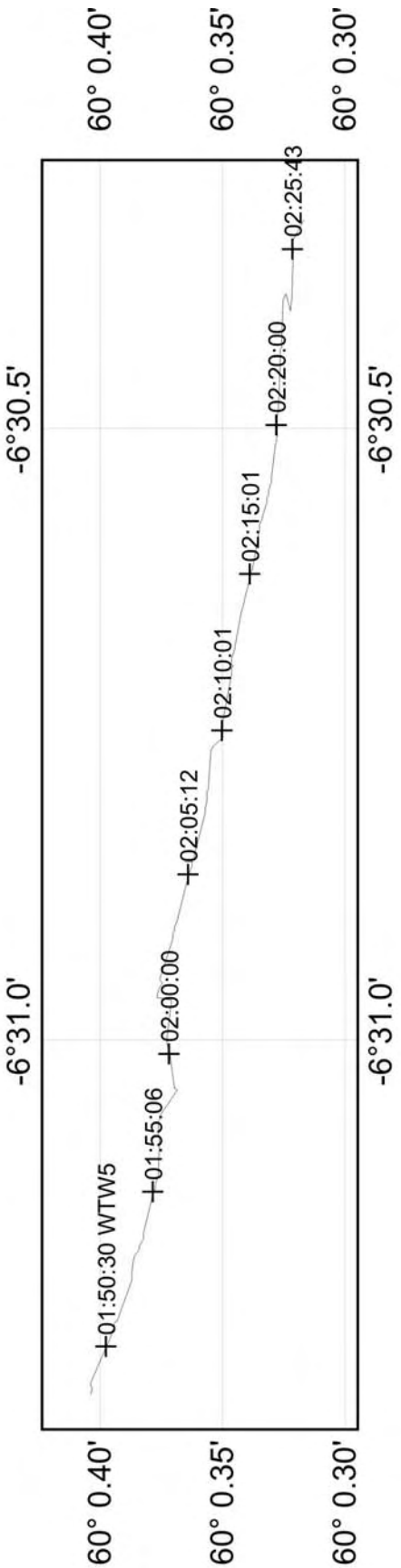


Chart 48. WASP station 55259#1, site WTW5

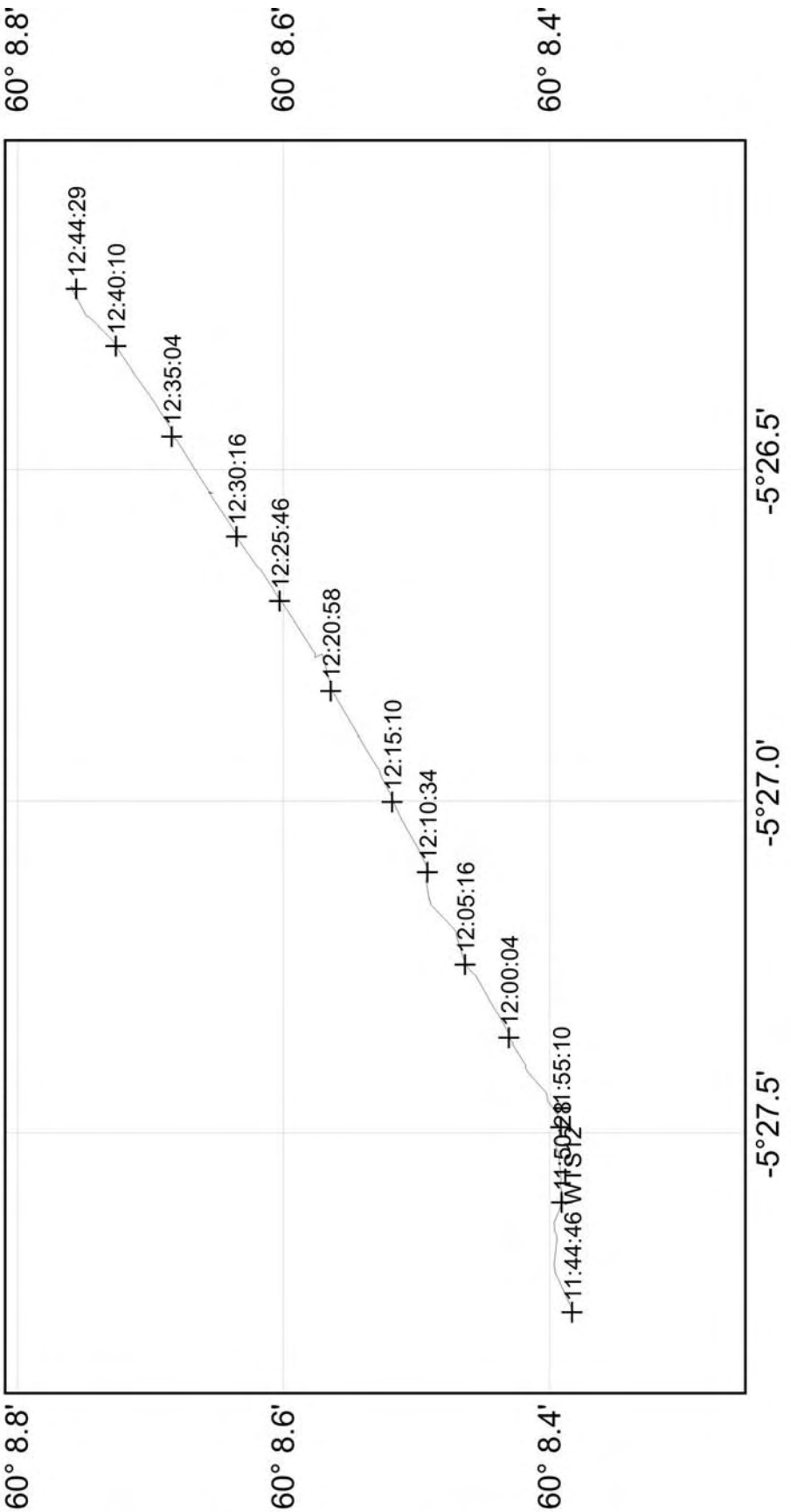


Chart 49. WASP station 55268#1, site WTS12

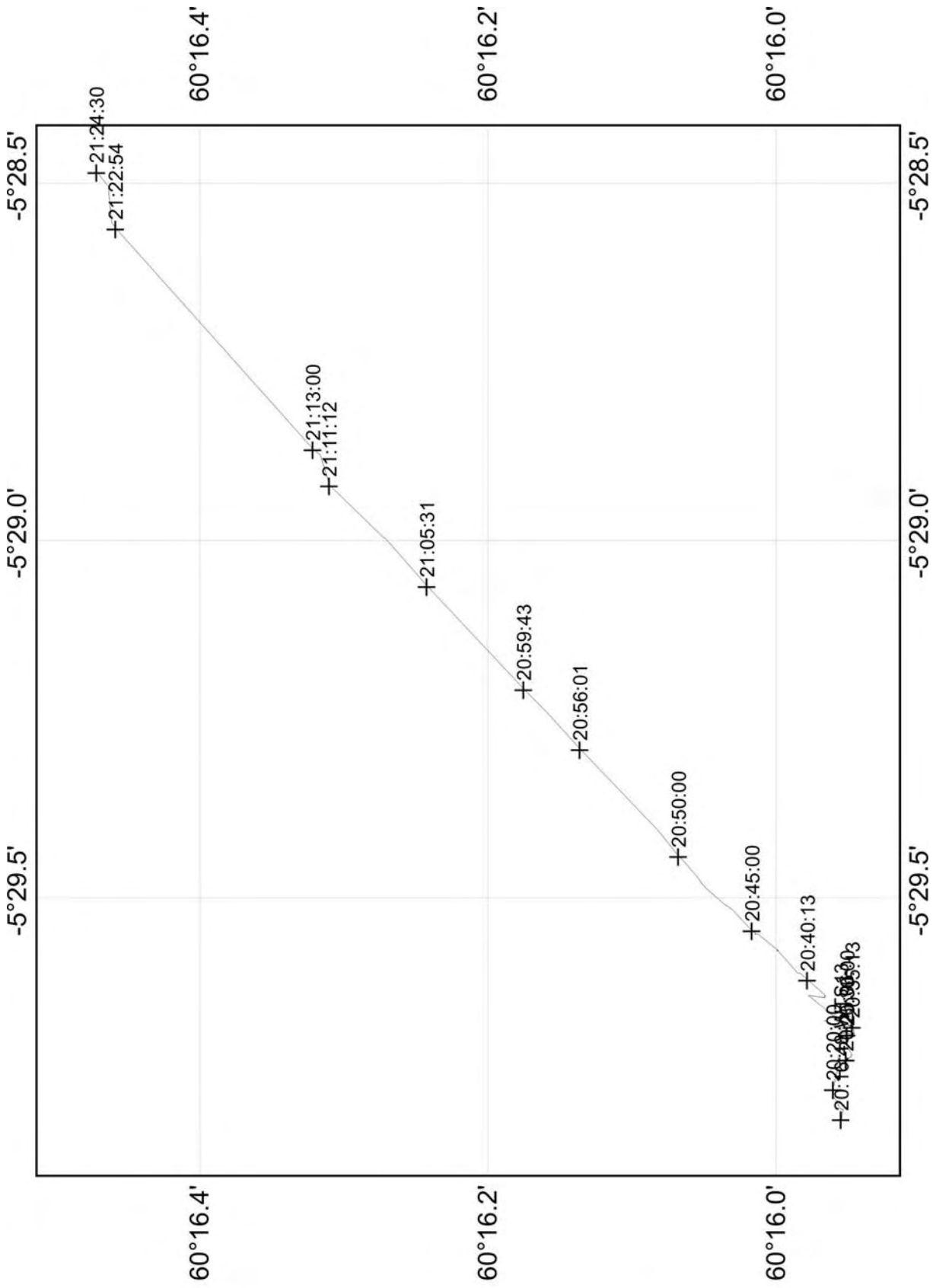


Chart 50. WASP station 55270#1, site WTS13

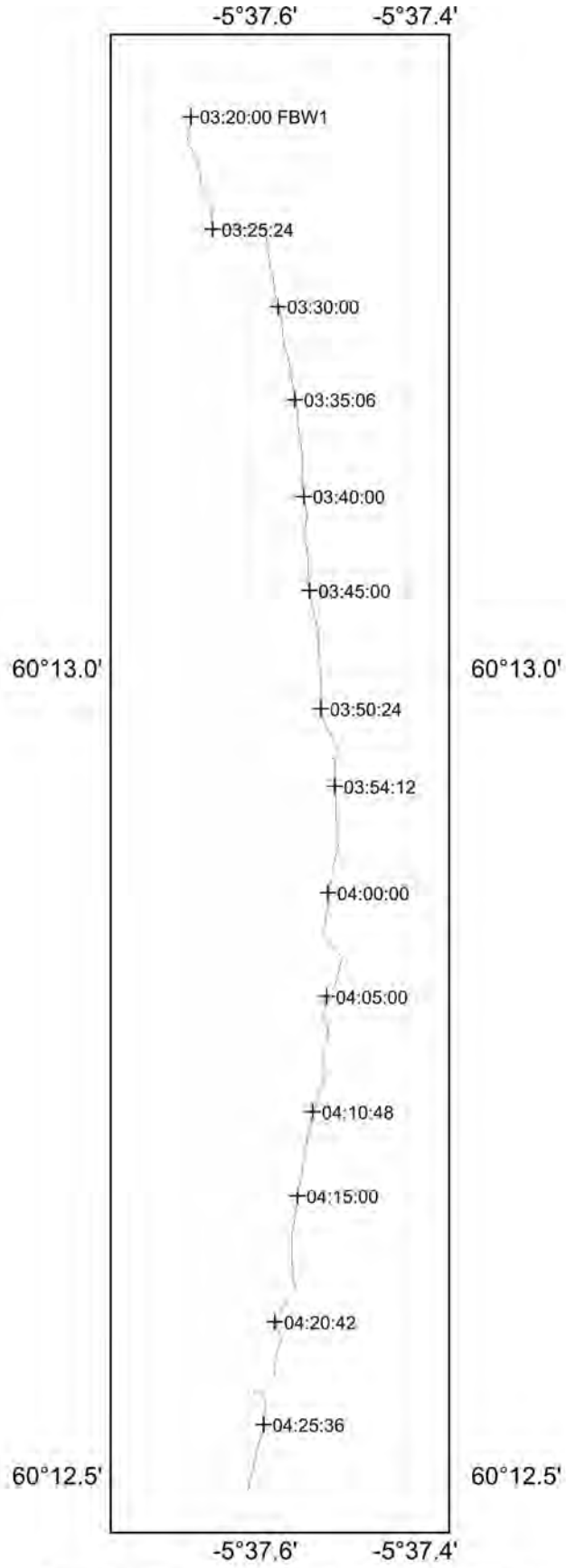


Chart 51. WASP station 55271#1, site FBW1

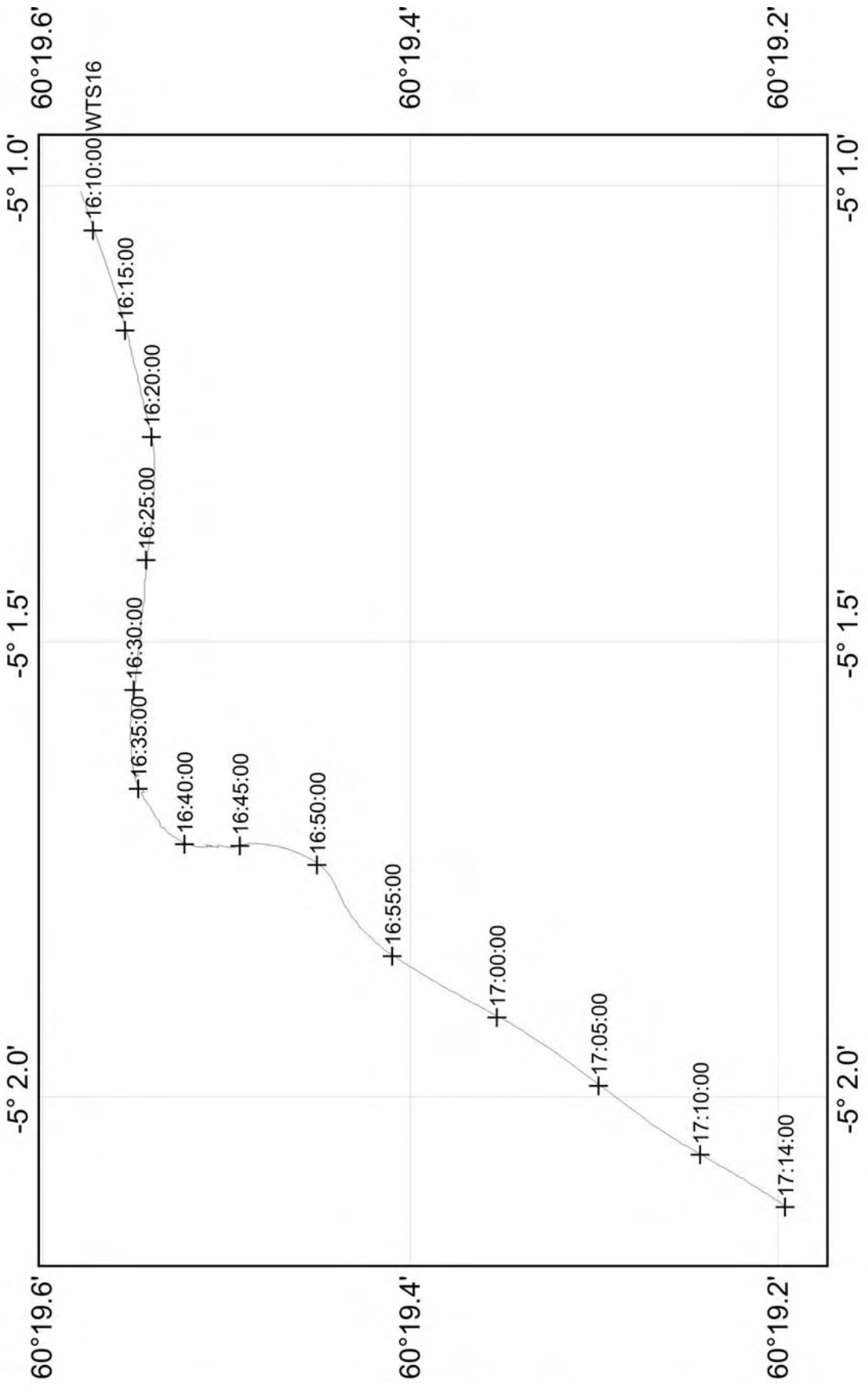


Chart 52. WASP station 55275#1, site WTS16

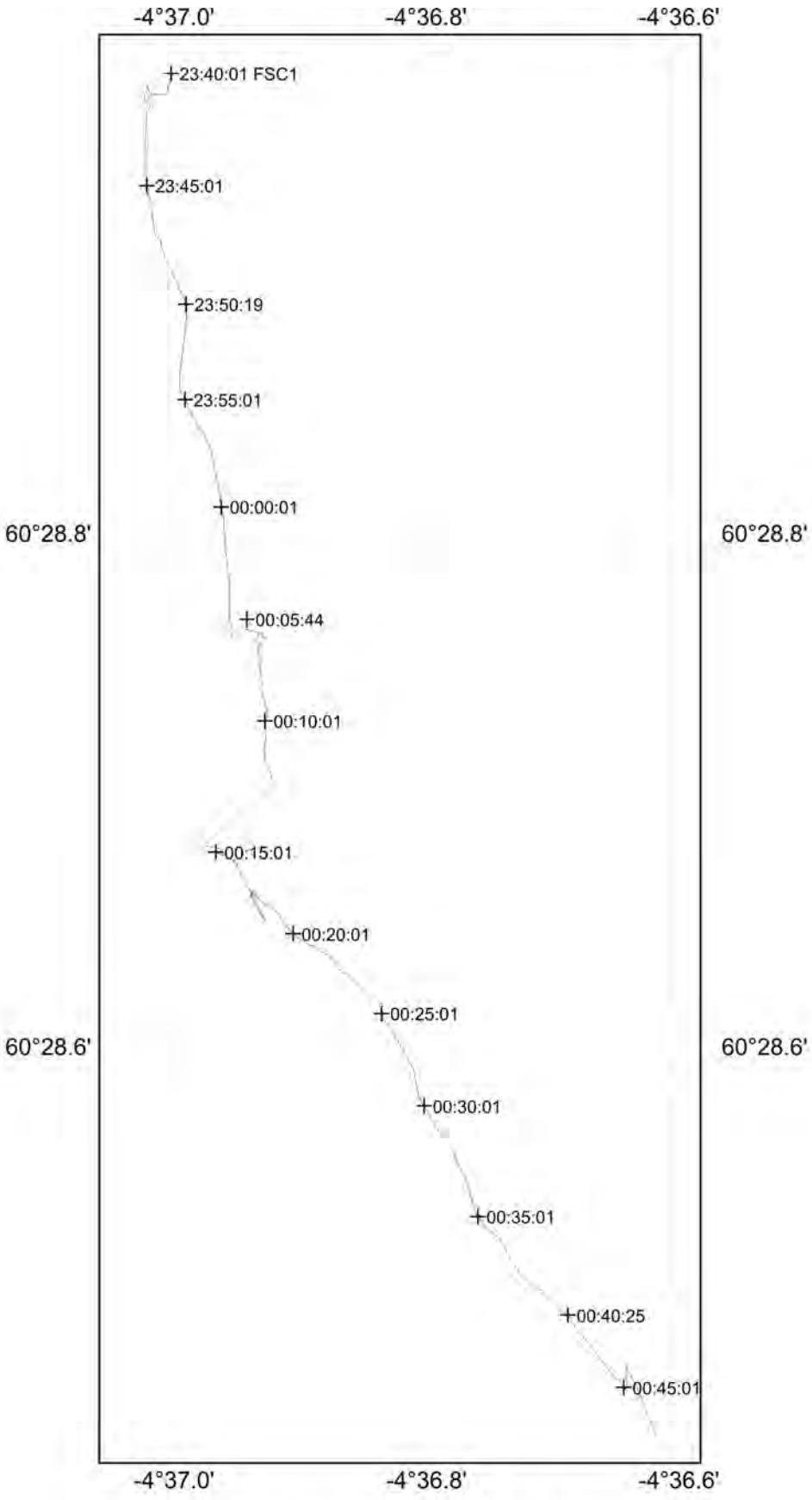


Chart 53. WASP station 55276#1, site FSC1

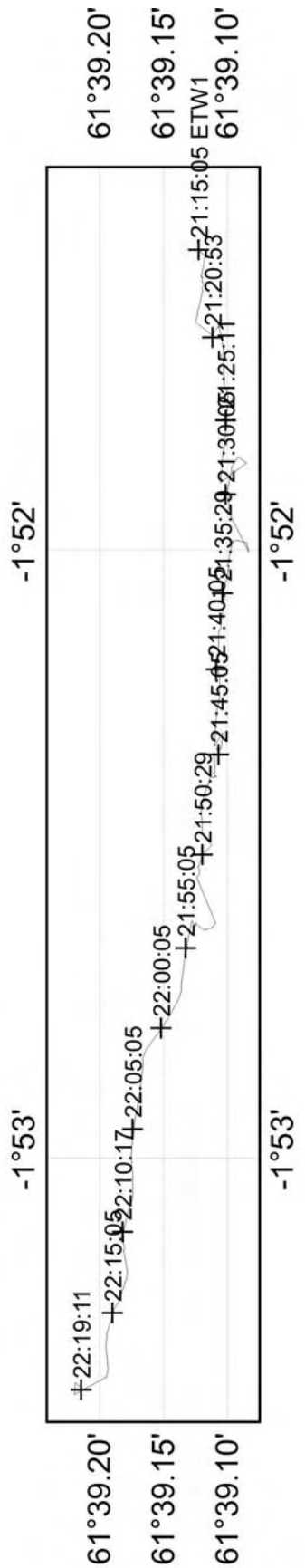


Chart 54. WASP station 55288#1, site ETW1

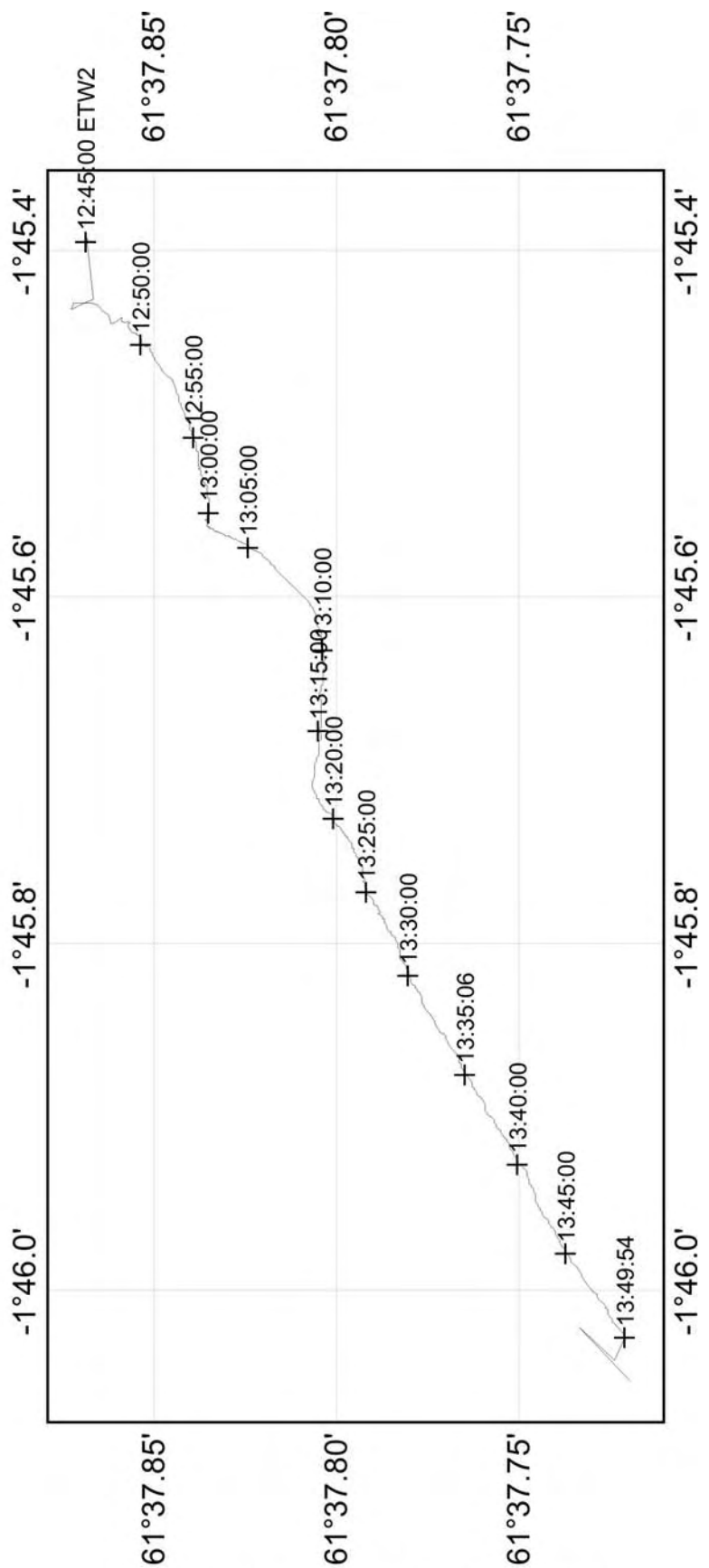


Chart 55. WASP station 55295#1, site ETW2

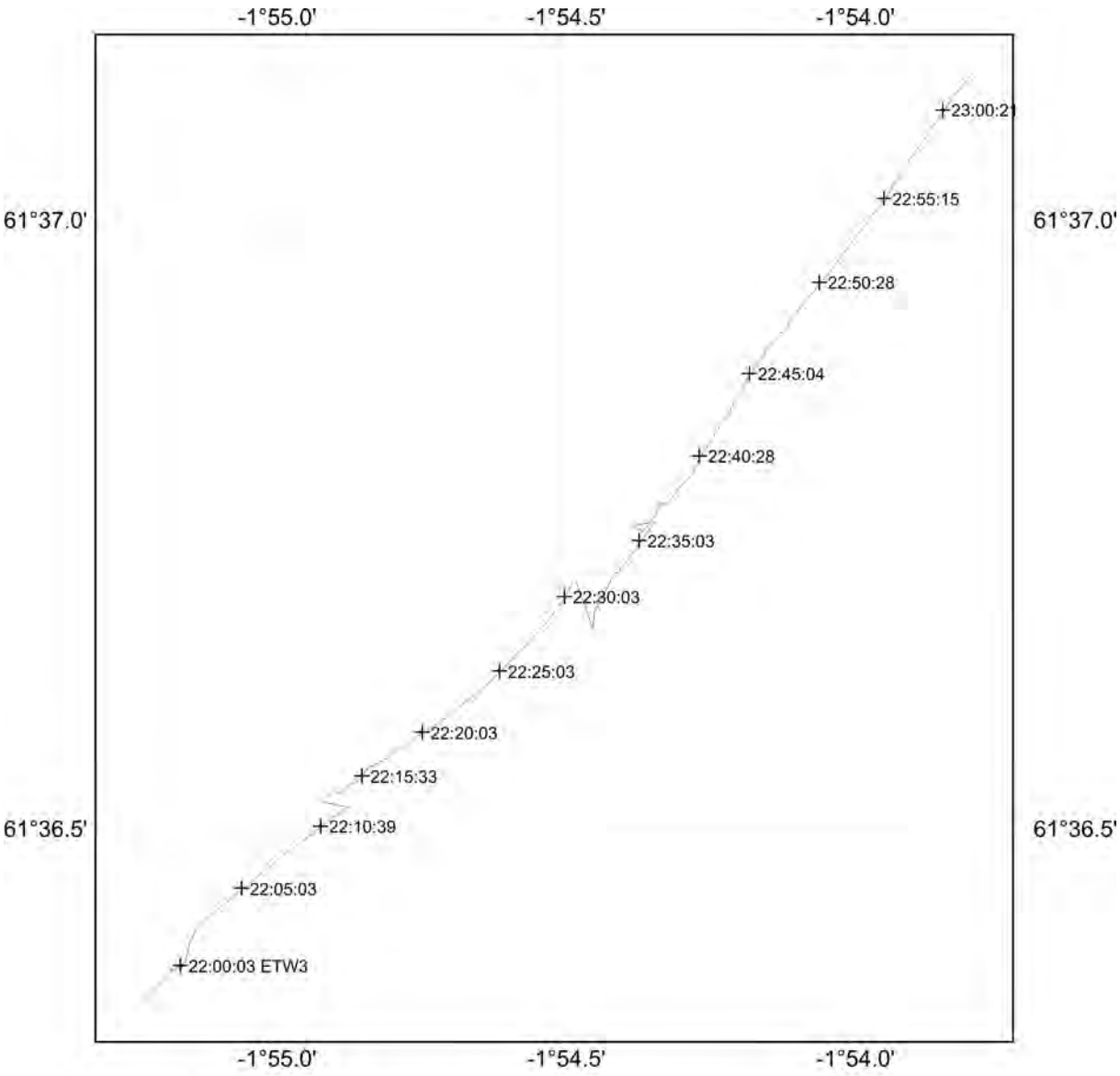


Chart 56. WASP station 55298#1, site ETW3

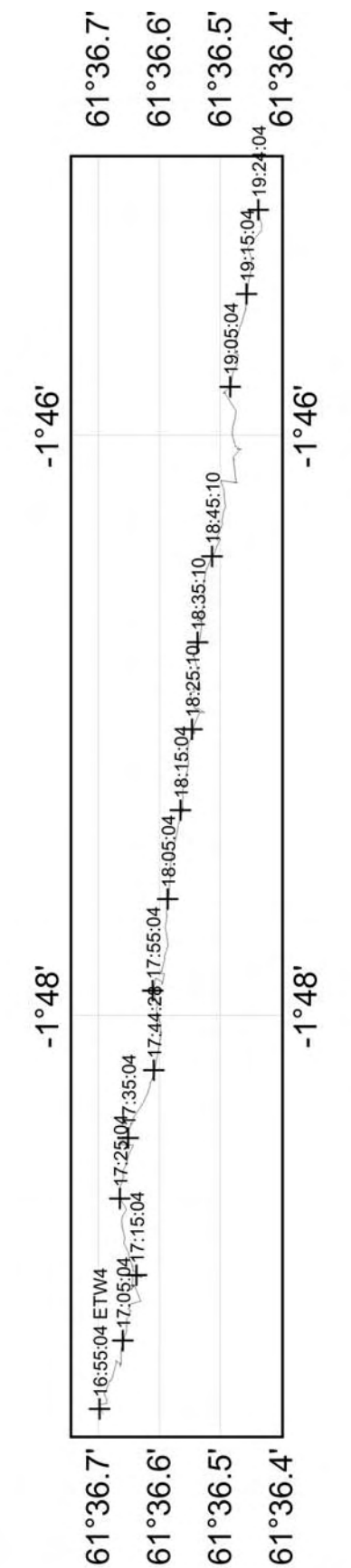


Chart 57. WASP station 55305#1, site ETW4

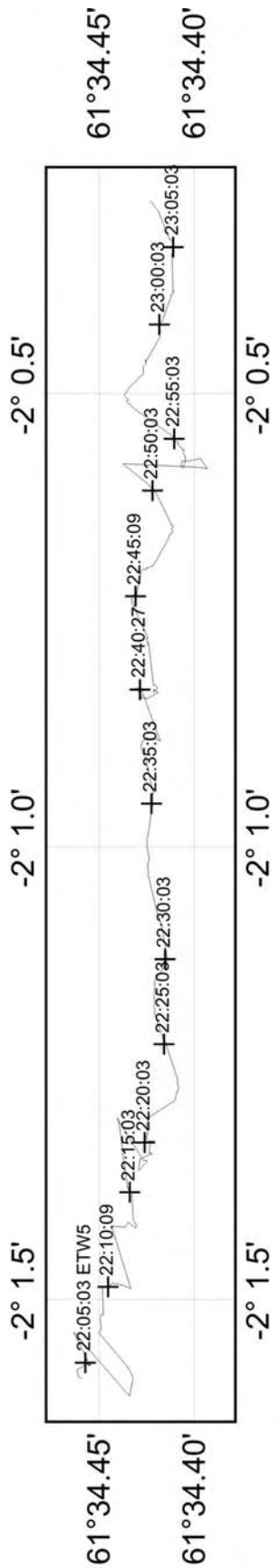


Chart 58. WASP station 55306#1, site ETW5

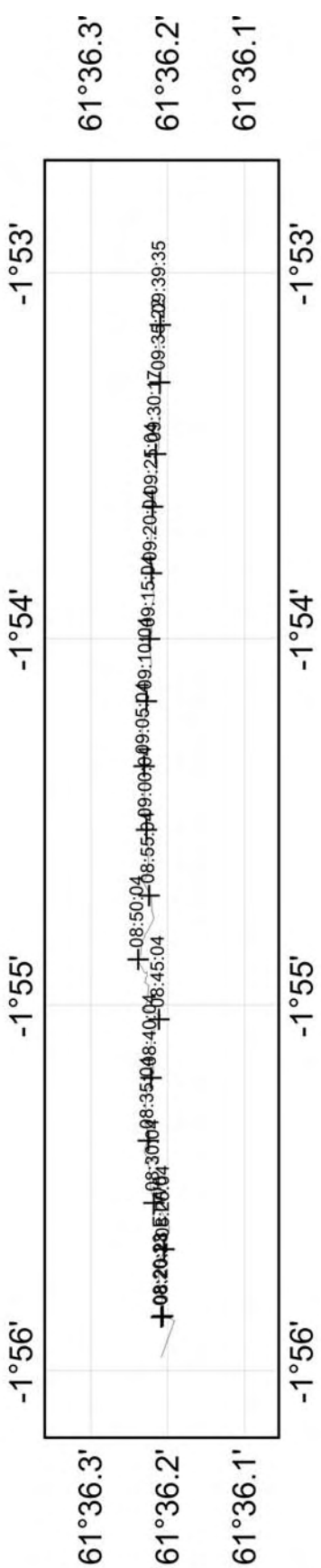


Chart 59. WASP station 55309#1, site ETW6

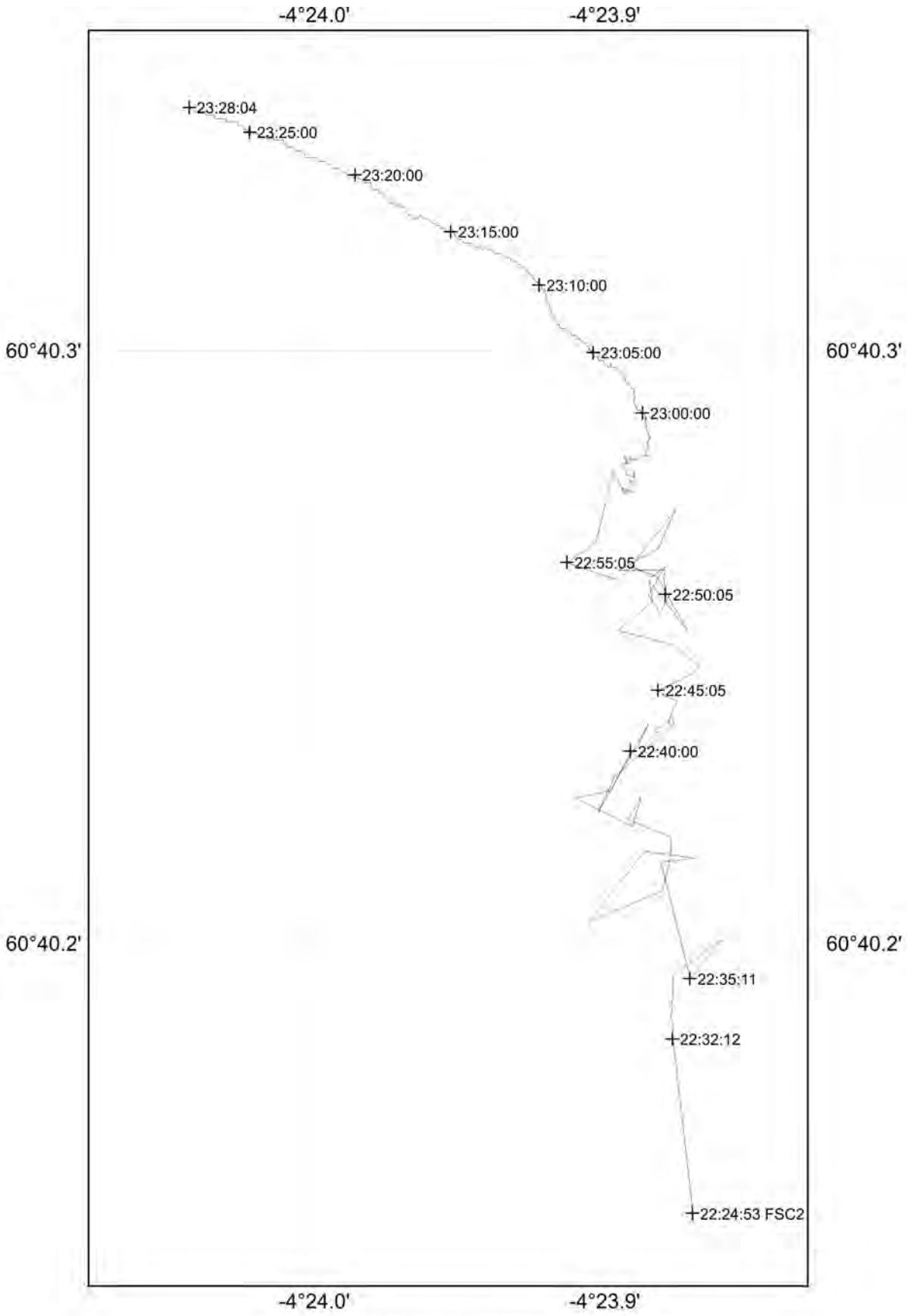


Chart 60. WASP station 55310#1, site FSC2

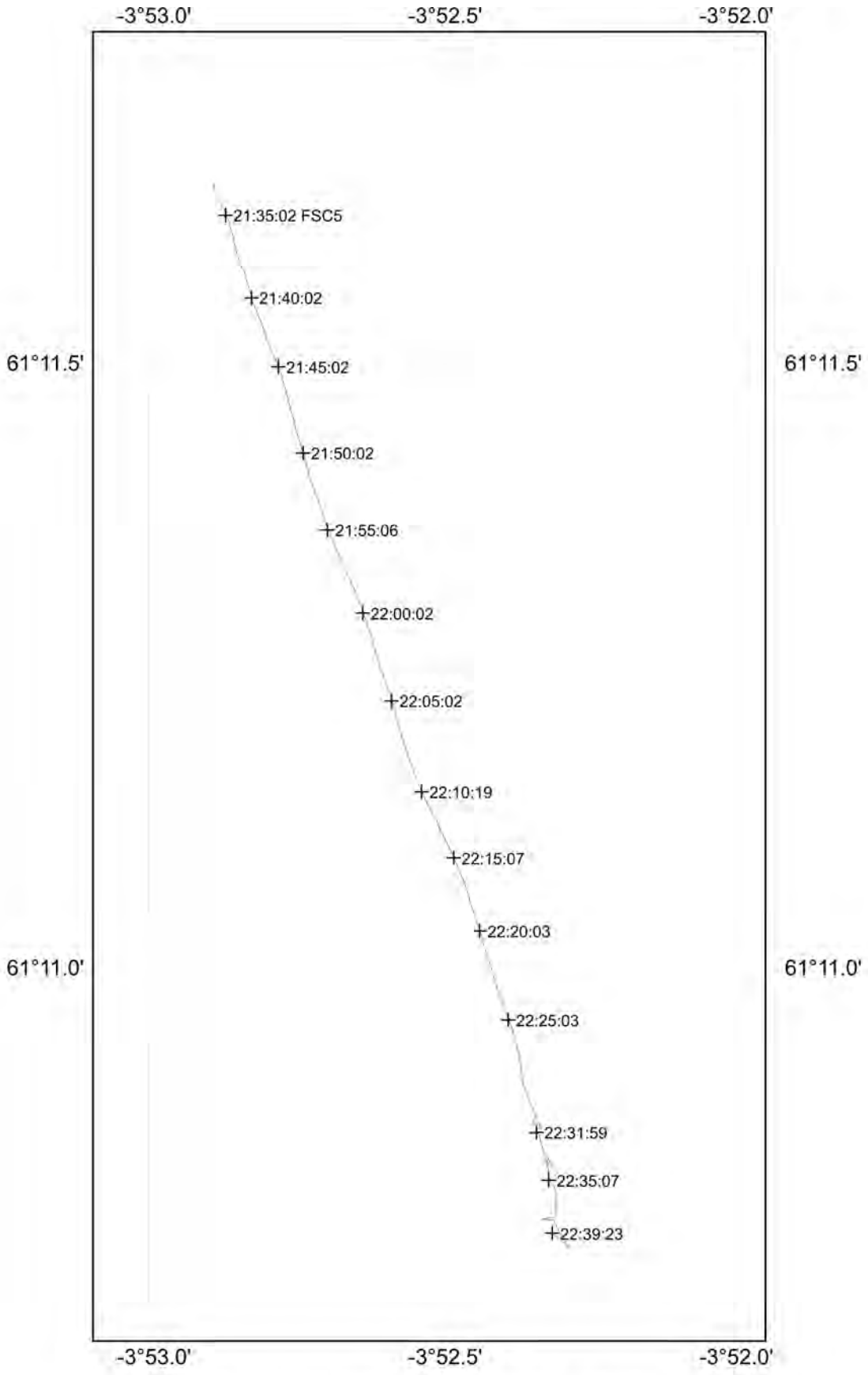


Chart 61. WASP station 55313#4, site FSC5

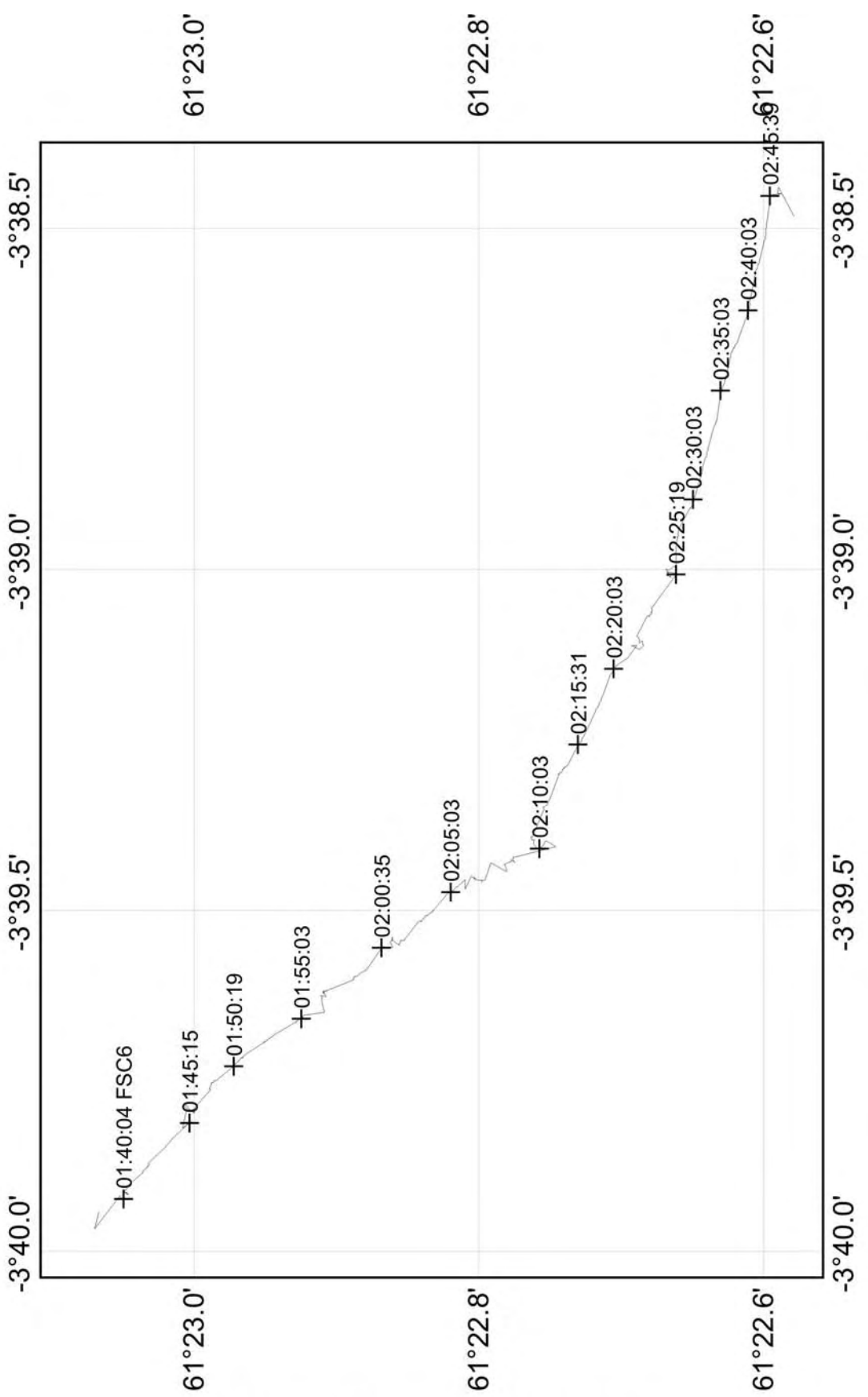


Chart 62. WASP station 55314#1, site FSC6

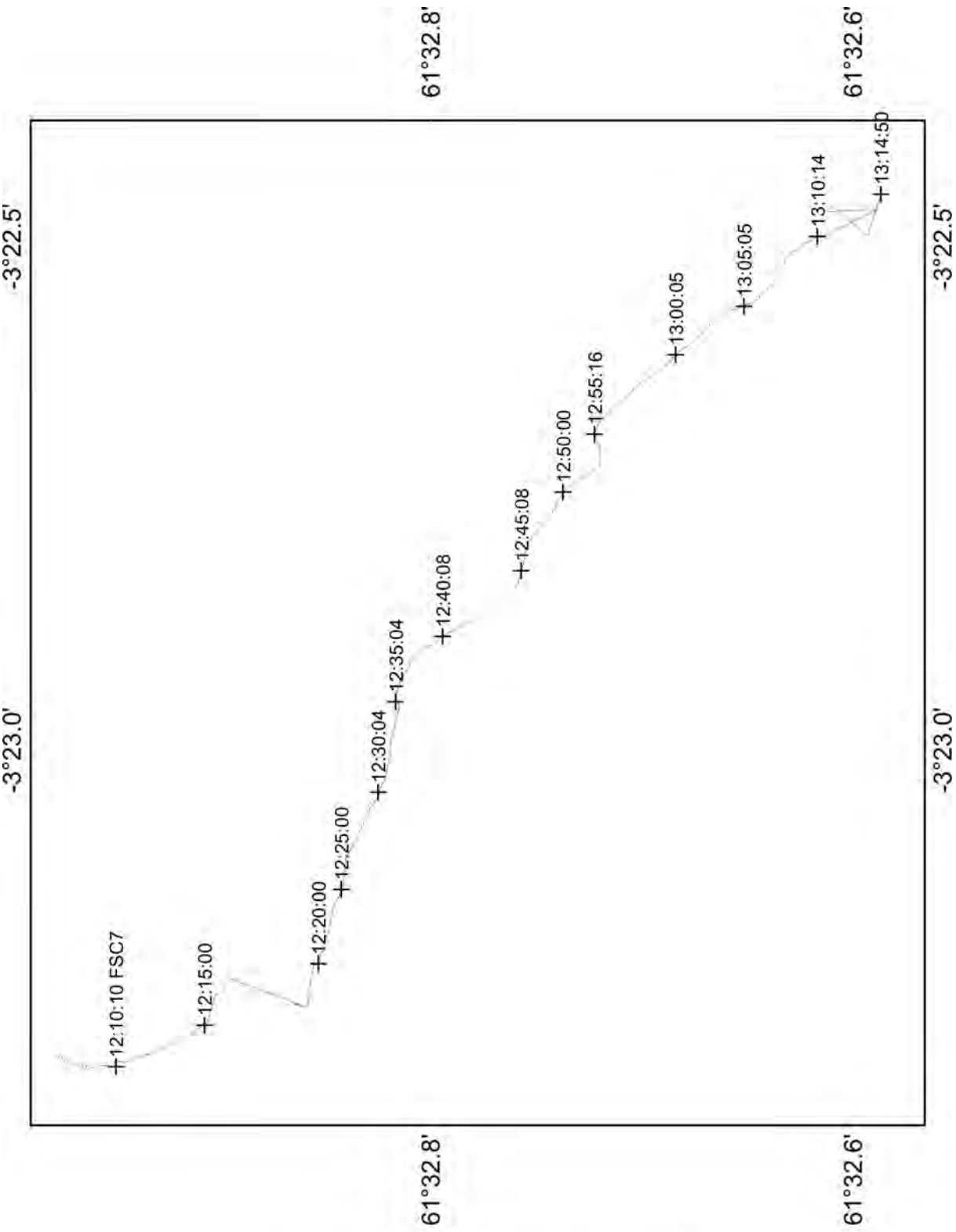


Chart 63. WASP station 55315#4, site FSC7

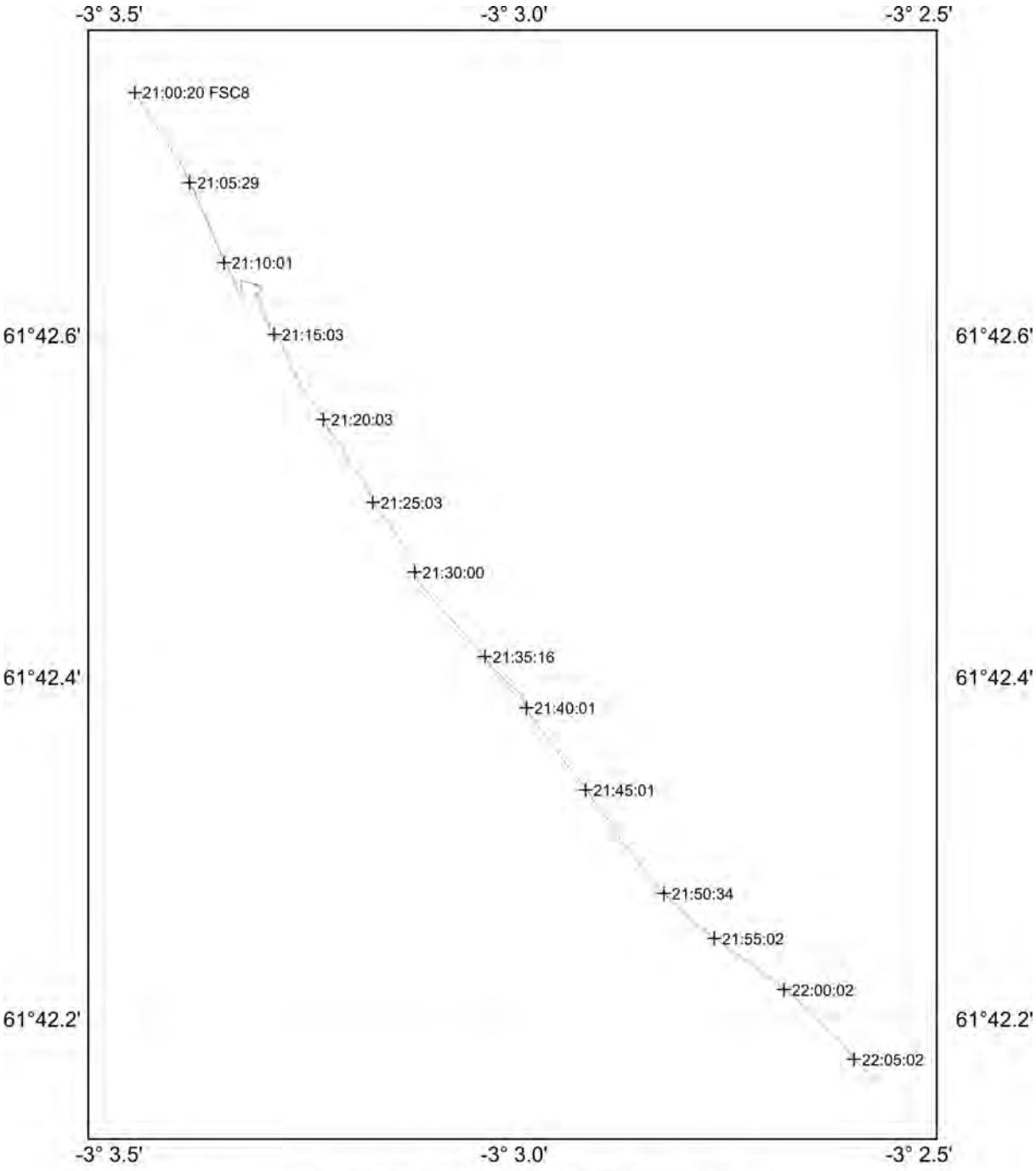


Chart 64. WASP station 55316#4, site FSC8

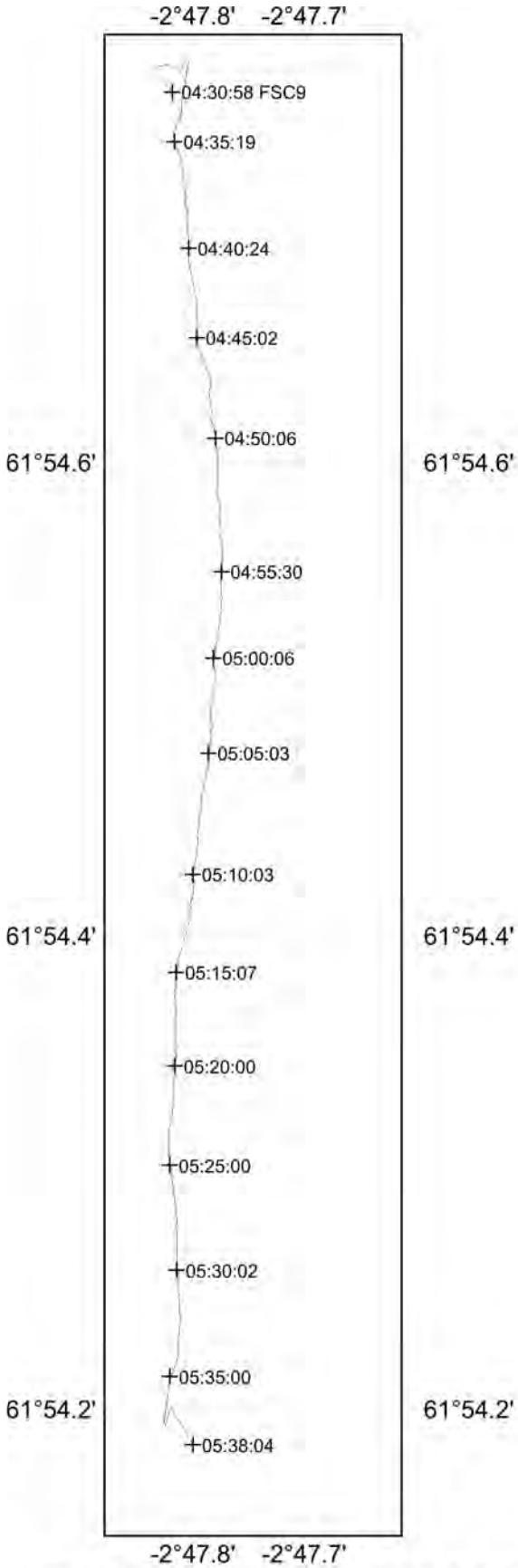


Chart 65. WASP station 55317#3, site FSC9

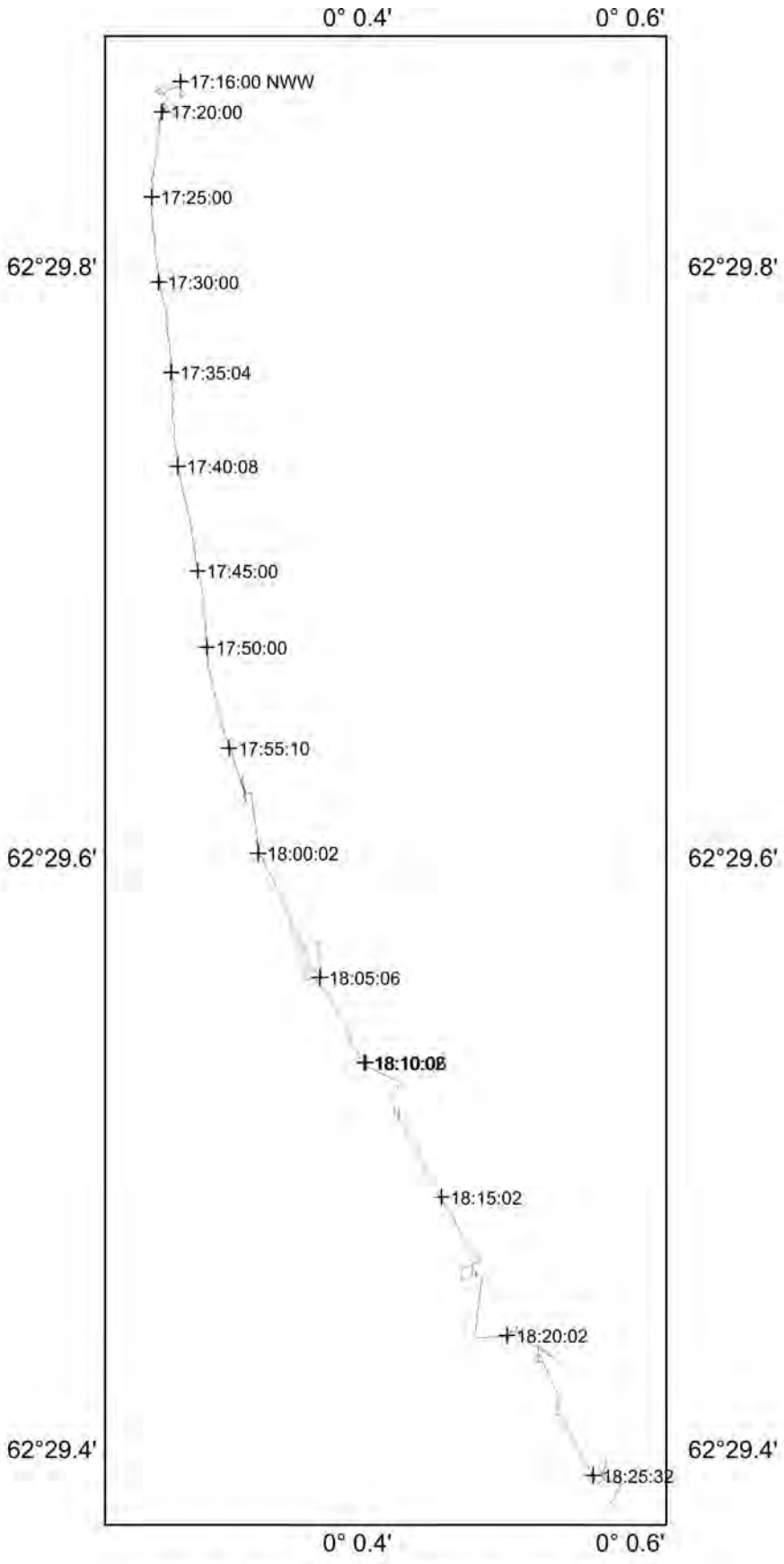


Chart 66. WASP station 55327#1, site NWW

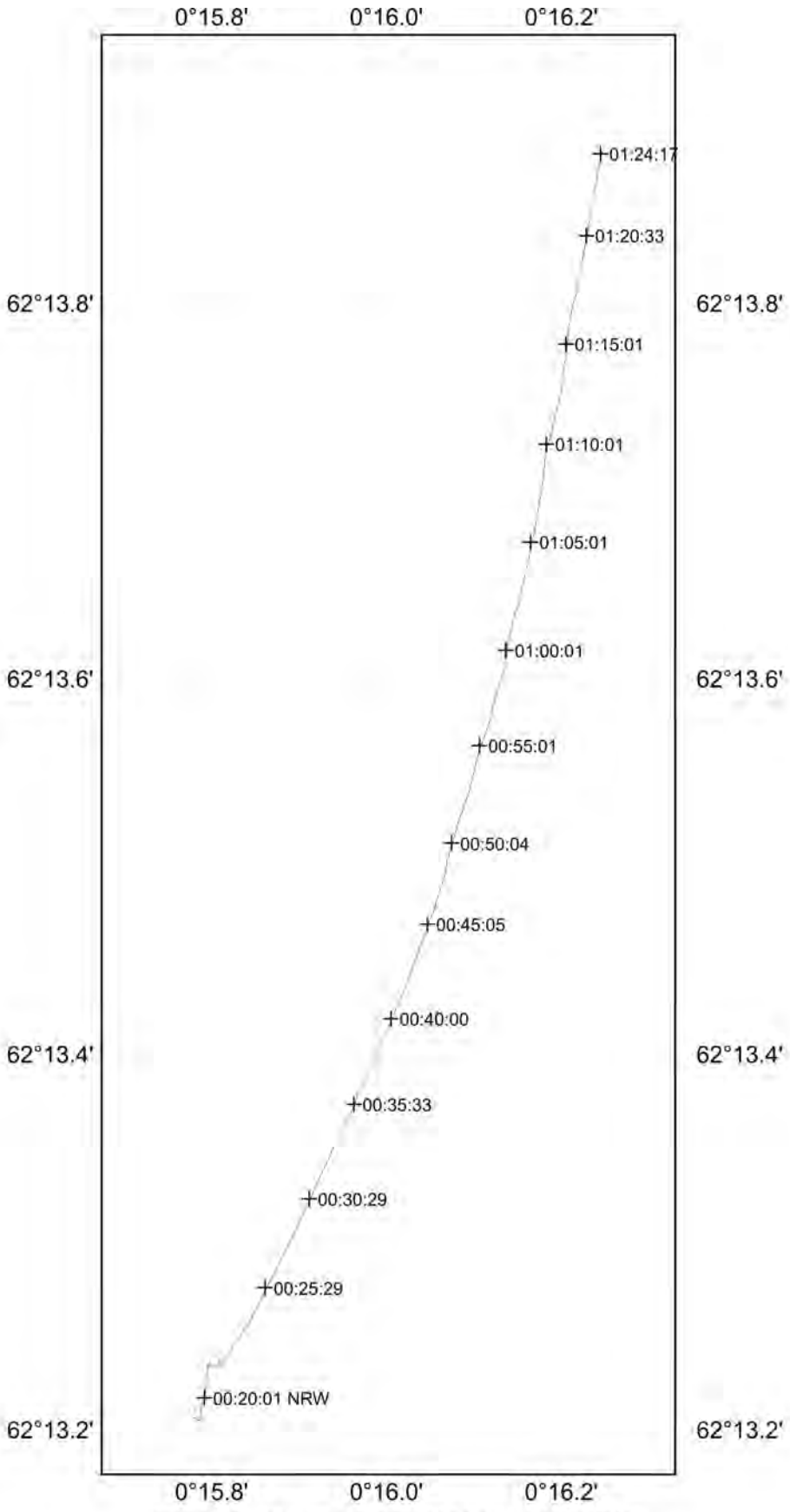


Chart 67. WASP station 55329#1, site NRW

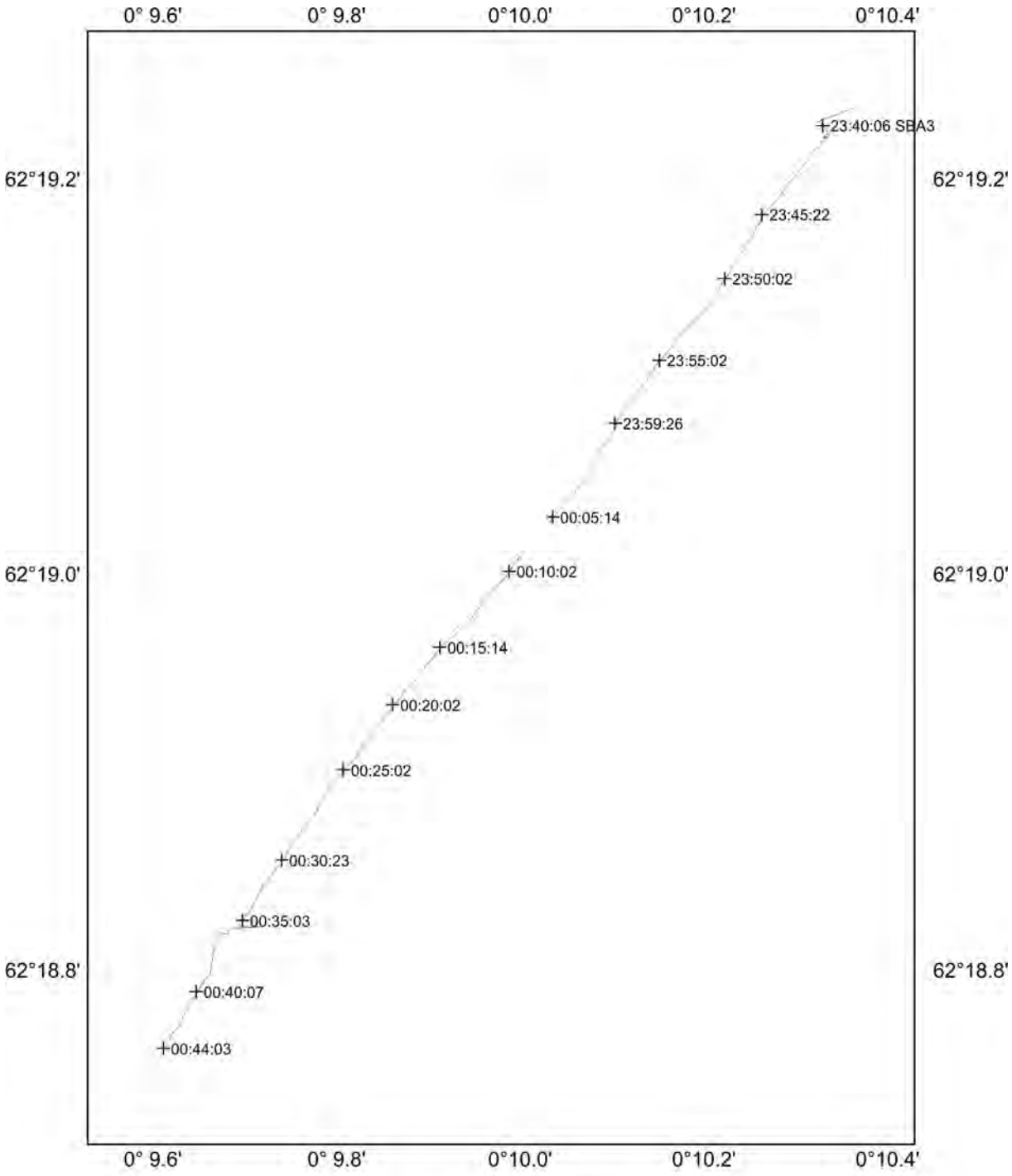


Chart 68. WASP station 55337#1, site SBA3

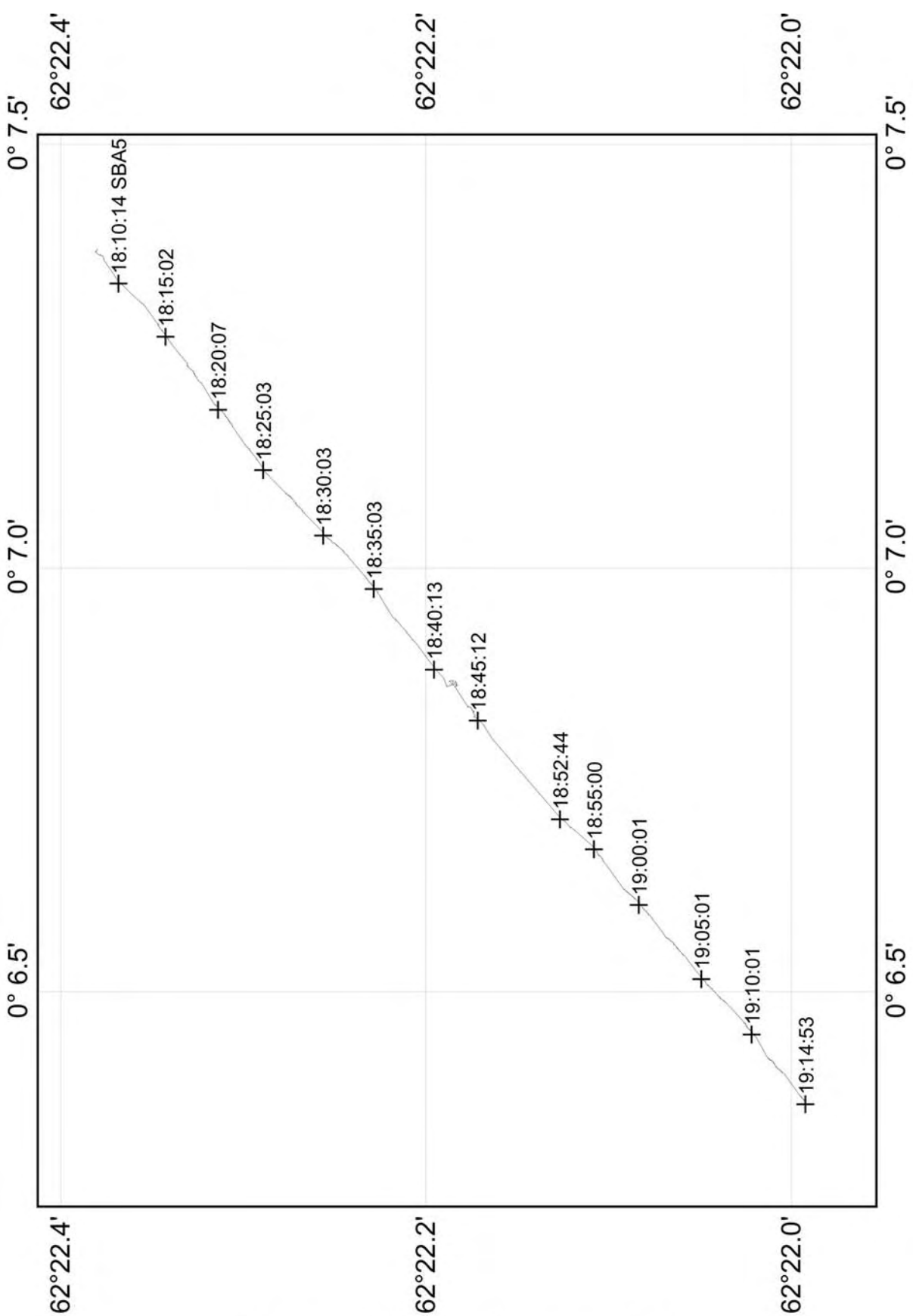


Chart 69. WASP station 55345#1, site SBA5

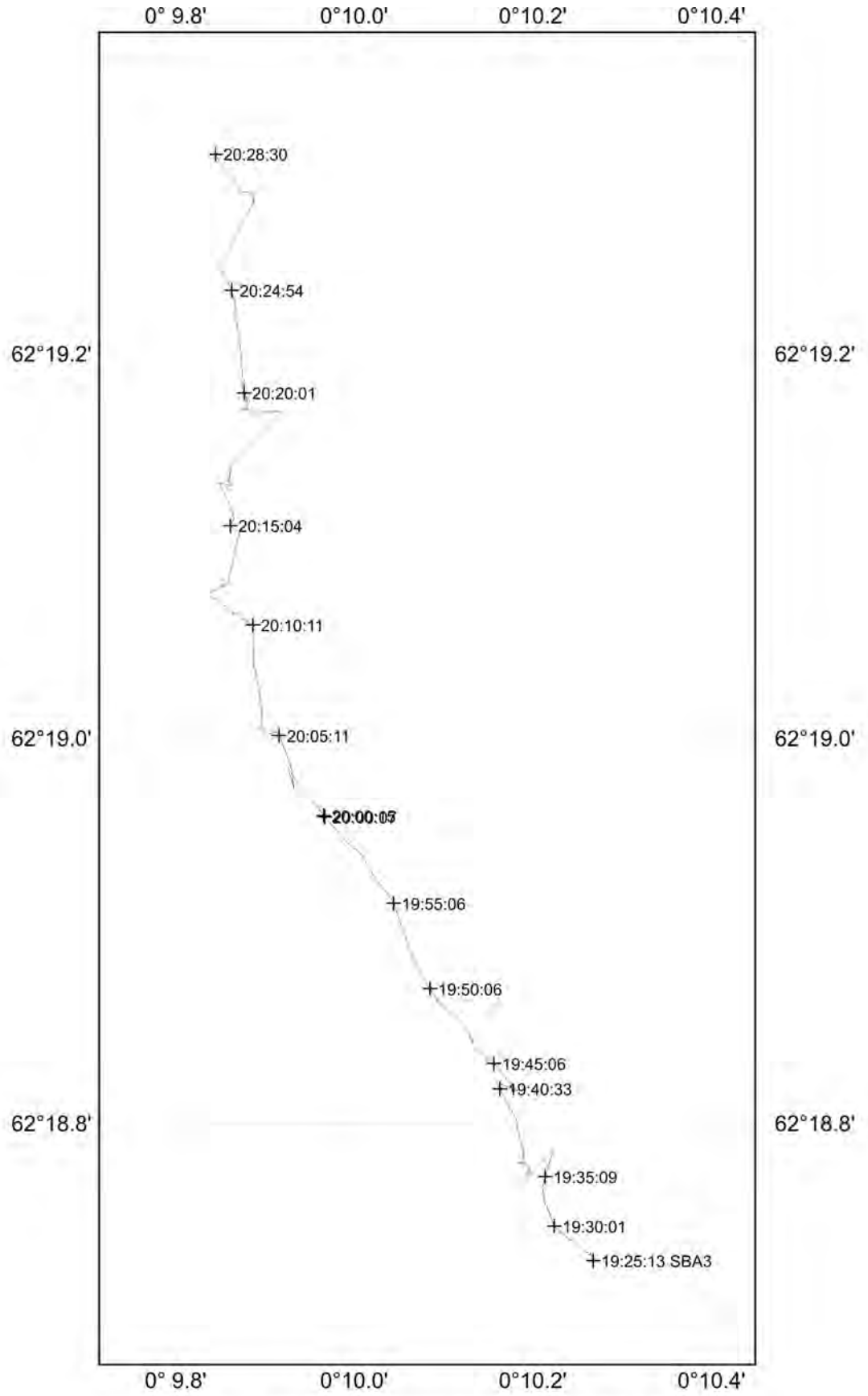


Chart 70. WASP station 55353#1, site SBA3

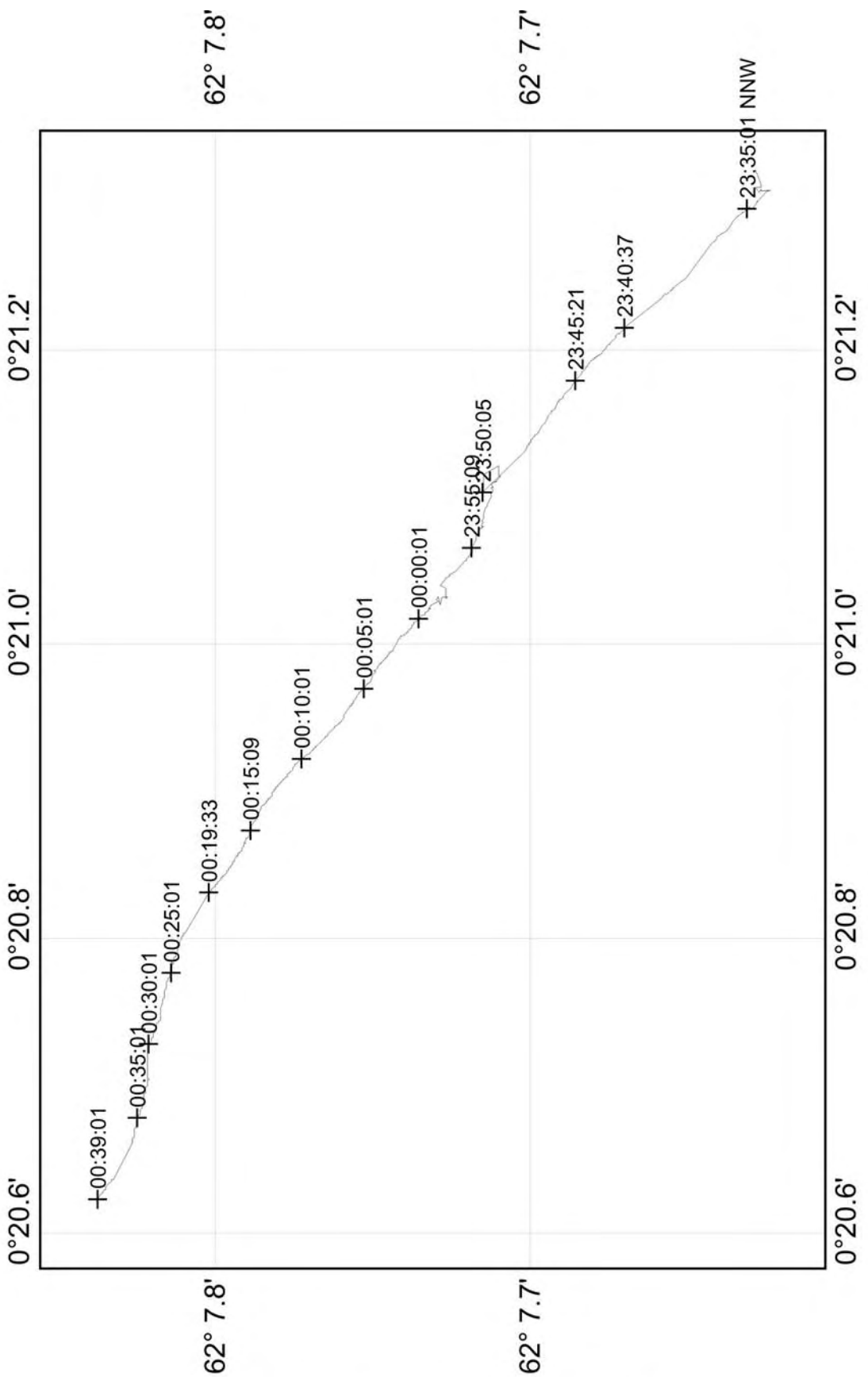


Chart 71. WASP station 55361#1, site NNW

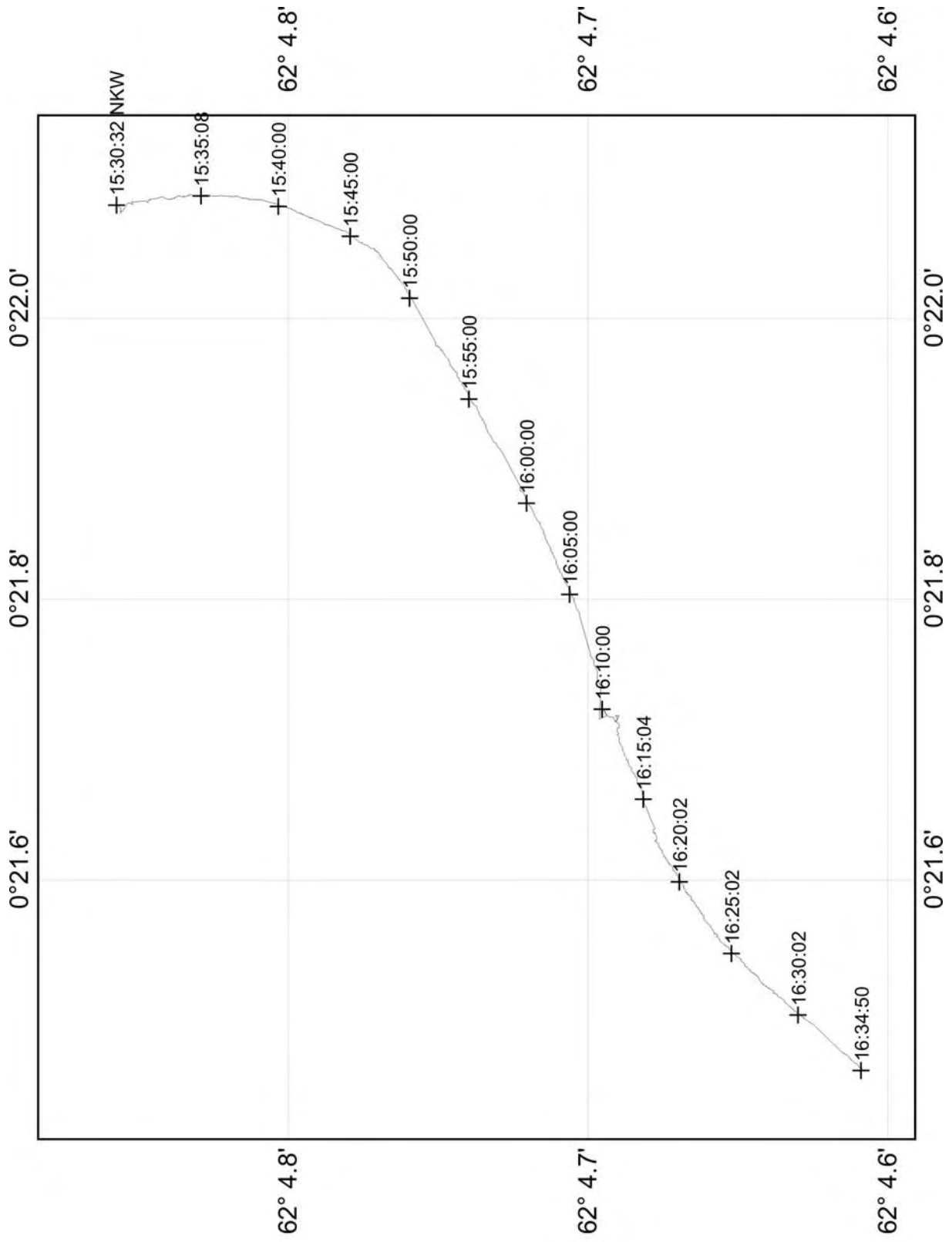


Chart 72. WASP station 55364#1, site NKW

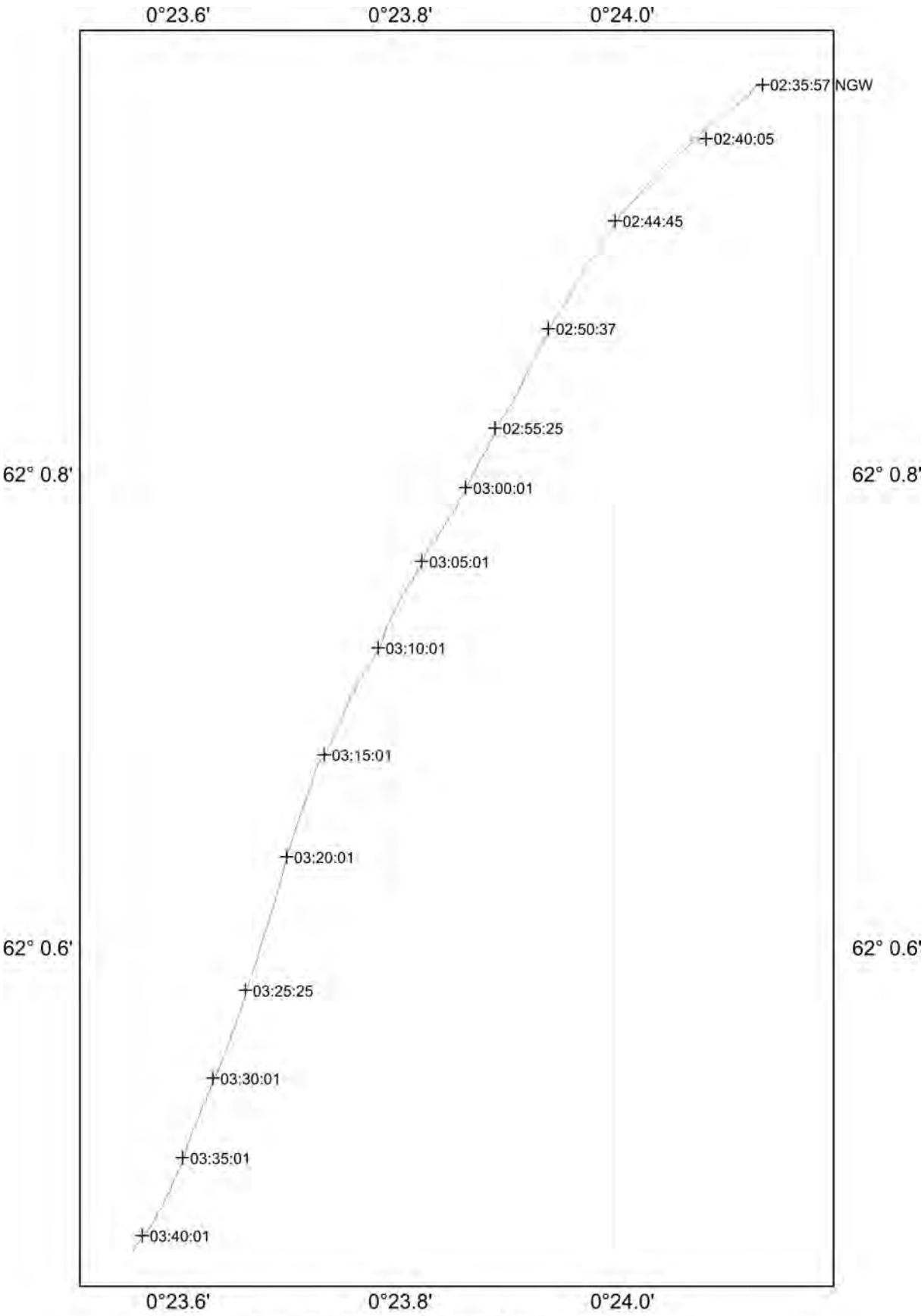


Chart 73. WASP station 55368#1, site NGW

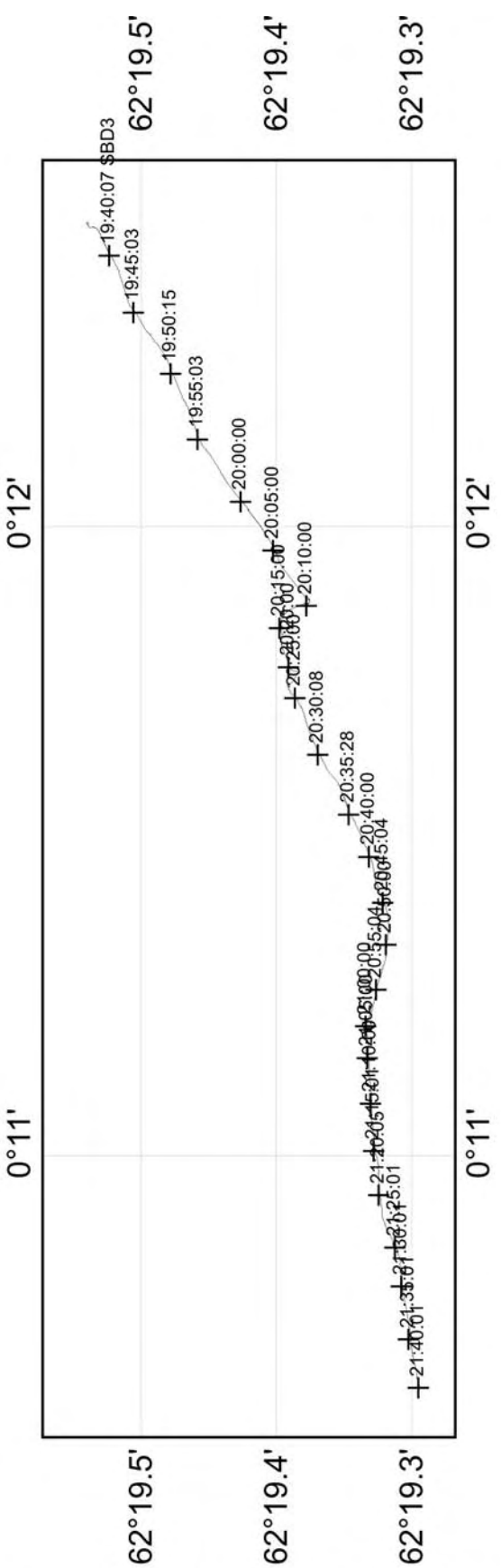


Chart 74. WASP station 55389#1, site SBD3

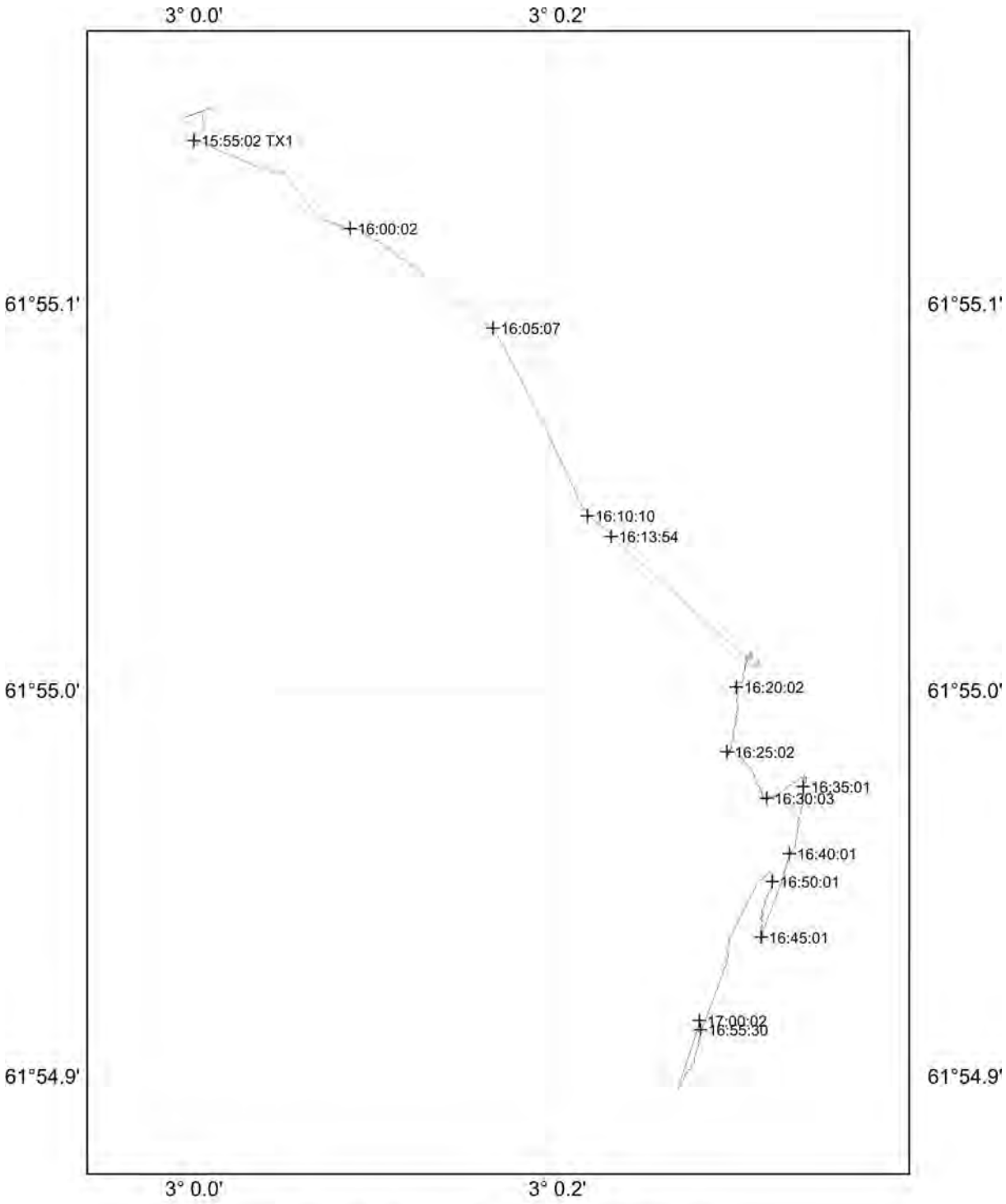


Chart 75. WASP station 55391#4, site TX1

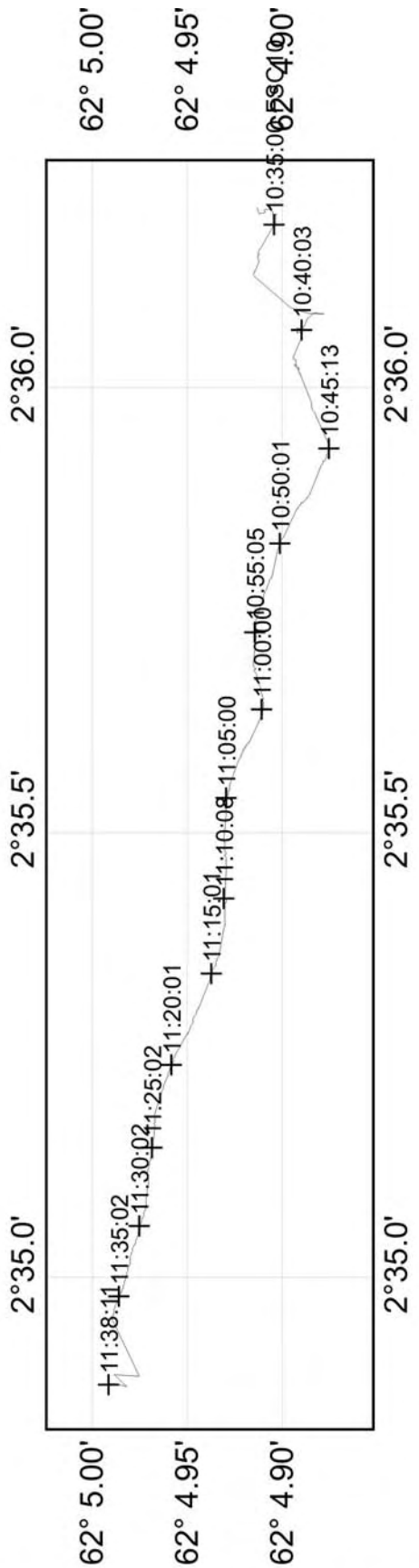


Chart 76. WASP station 55394#4, site FSC10

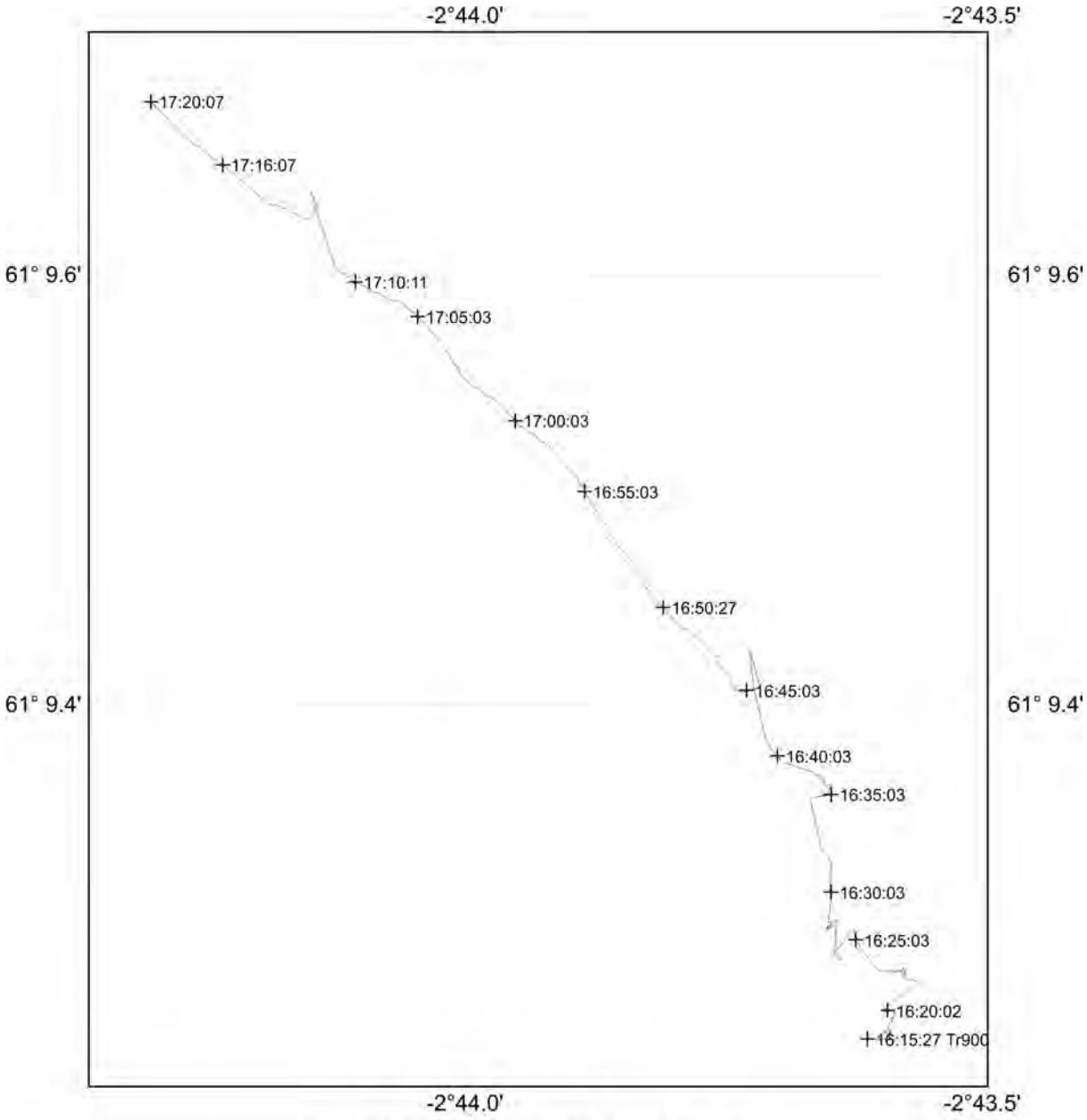


Chart 77. WASP station 55401#3, site Tr900

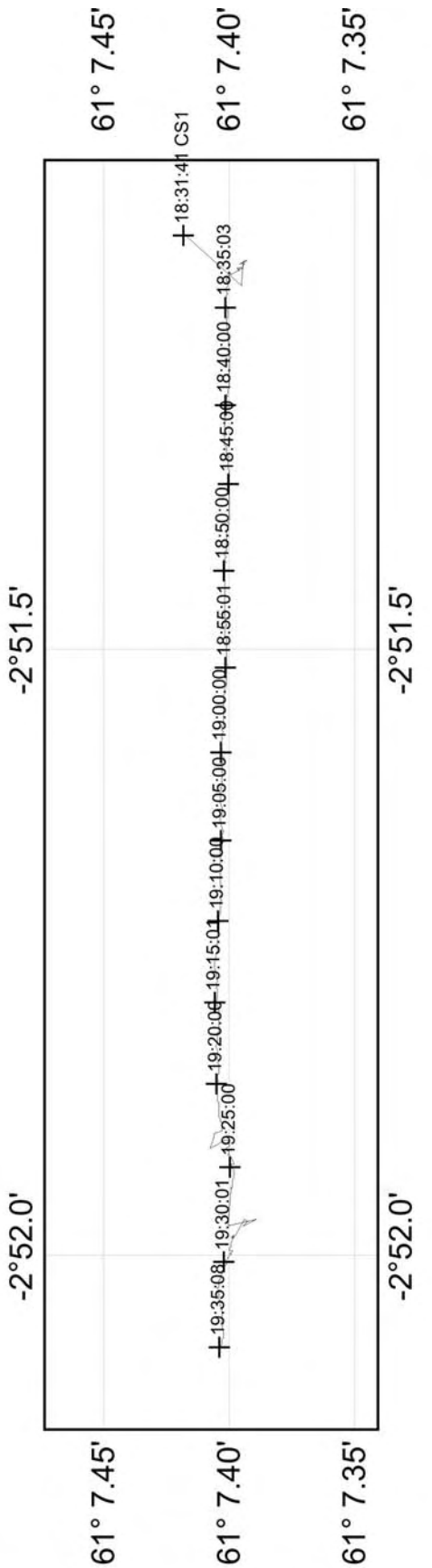


Chart 78. WASP station 55427#1, site CS1

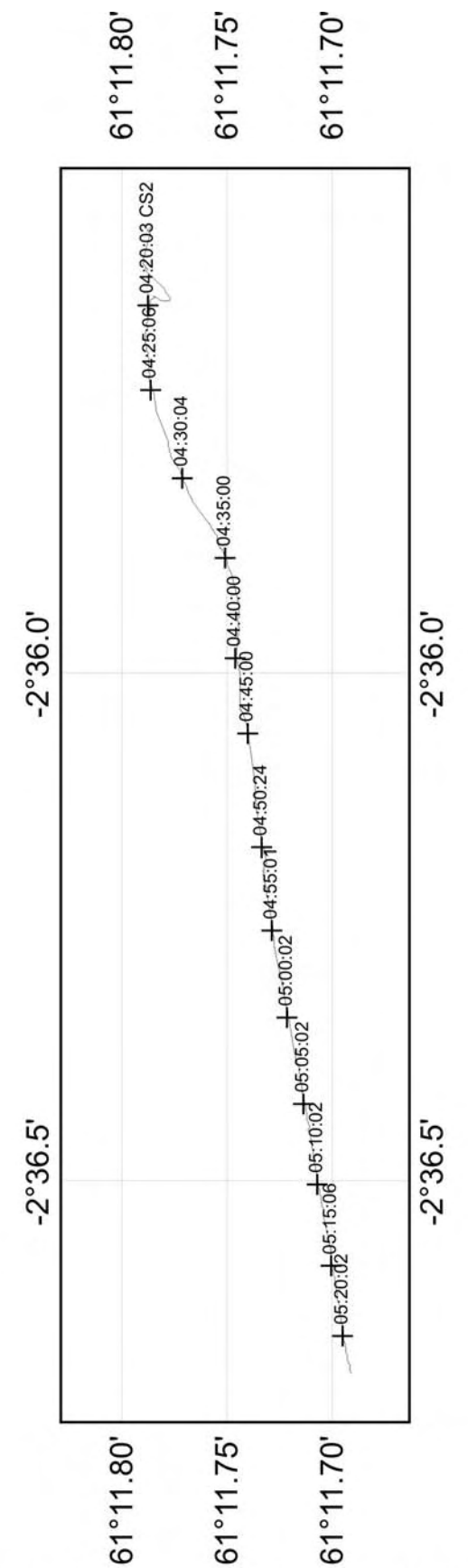


Chart 79. WASP station 55431#1, site CS2

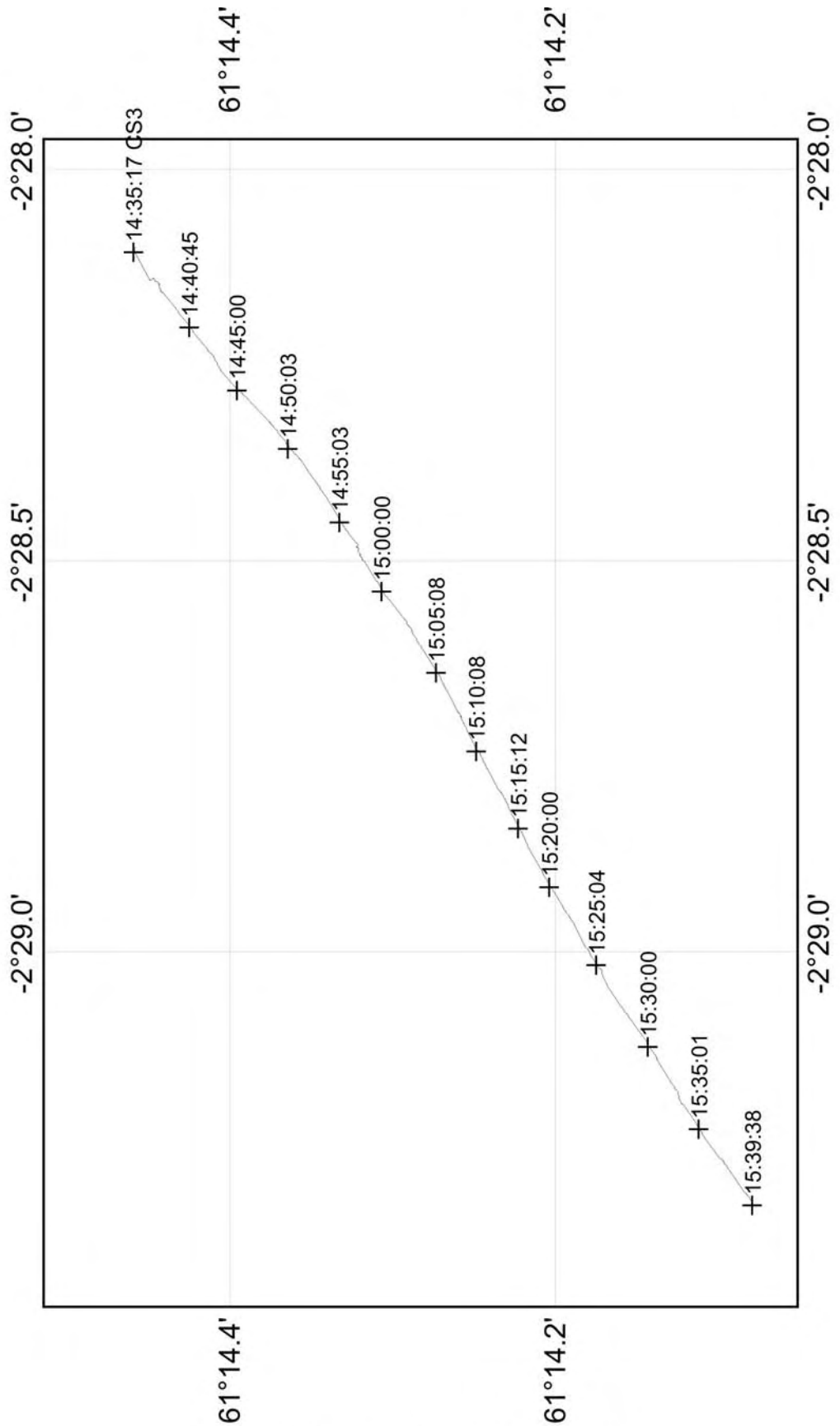


Chart 80. WASP station 55433#3, site CS3

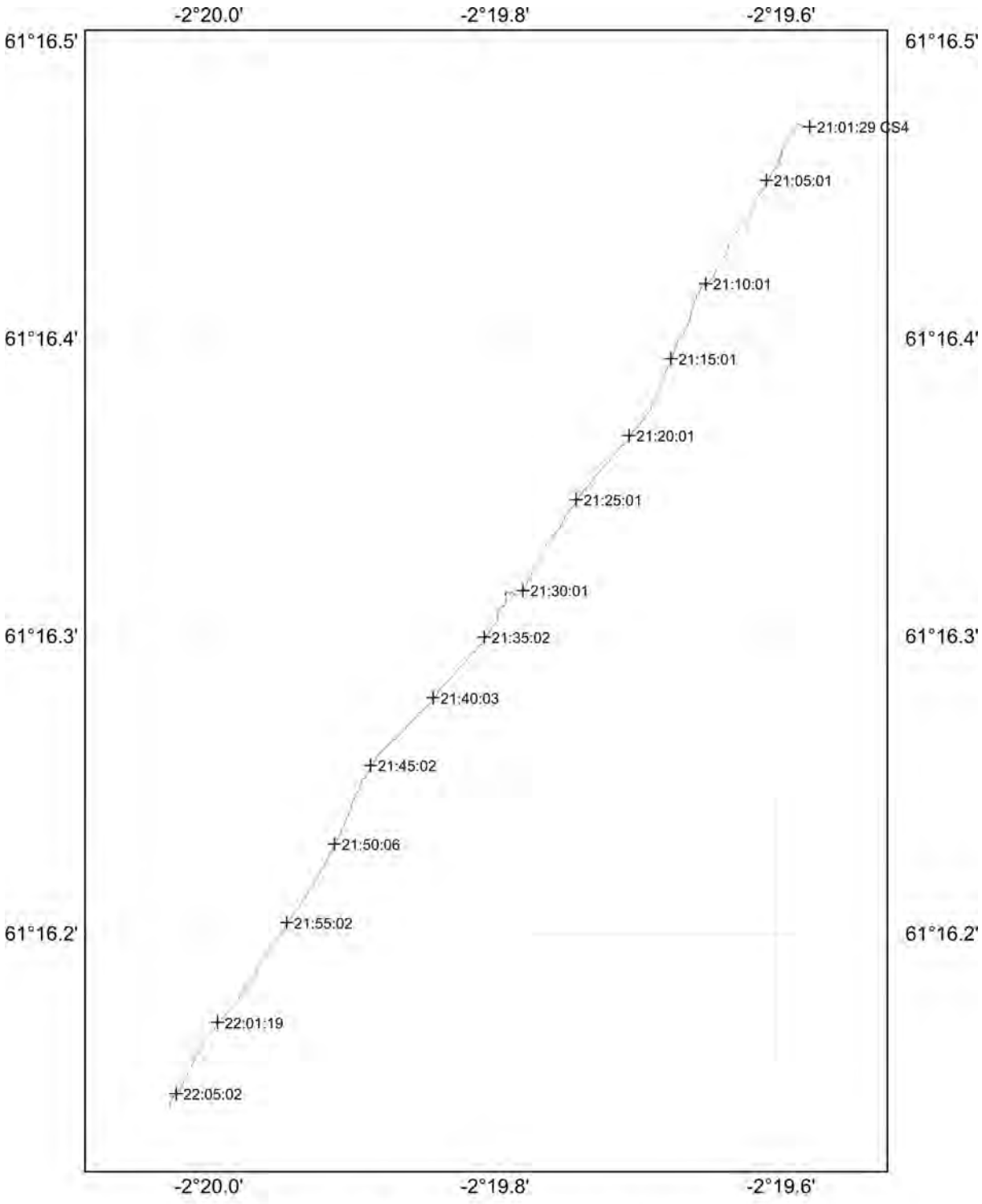


Chart 81. WASP station 55434#3, site CS4

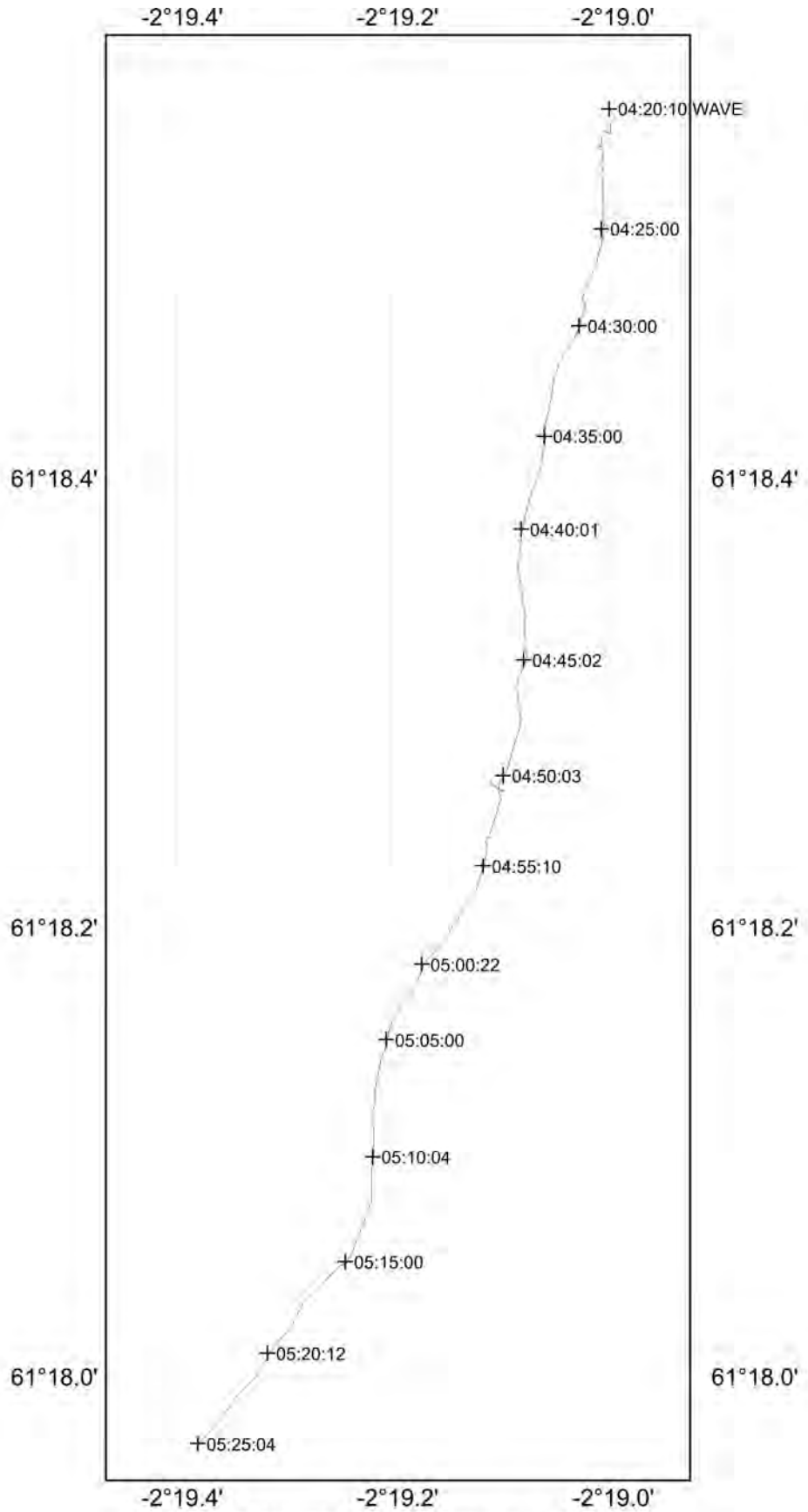


Chart 82. WASP station 55436#1, site WAVE

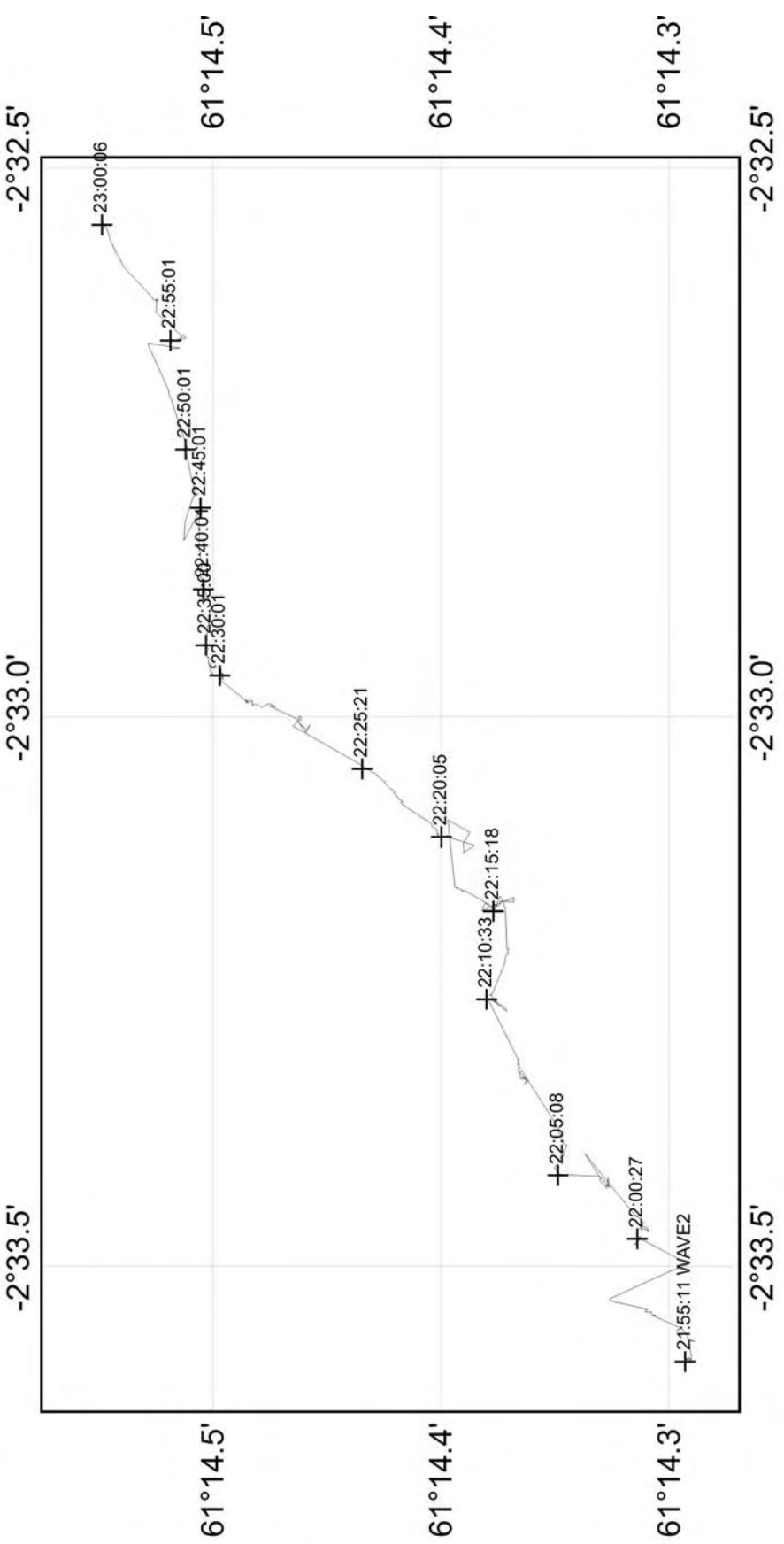


Chart 83. WASP station 55442#1, site WAVE2

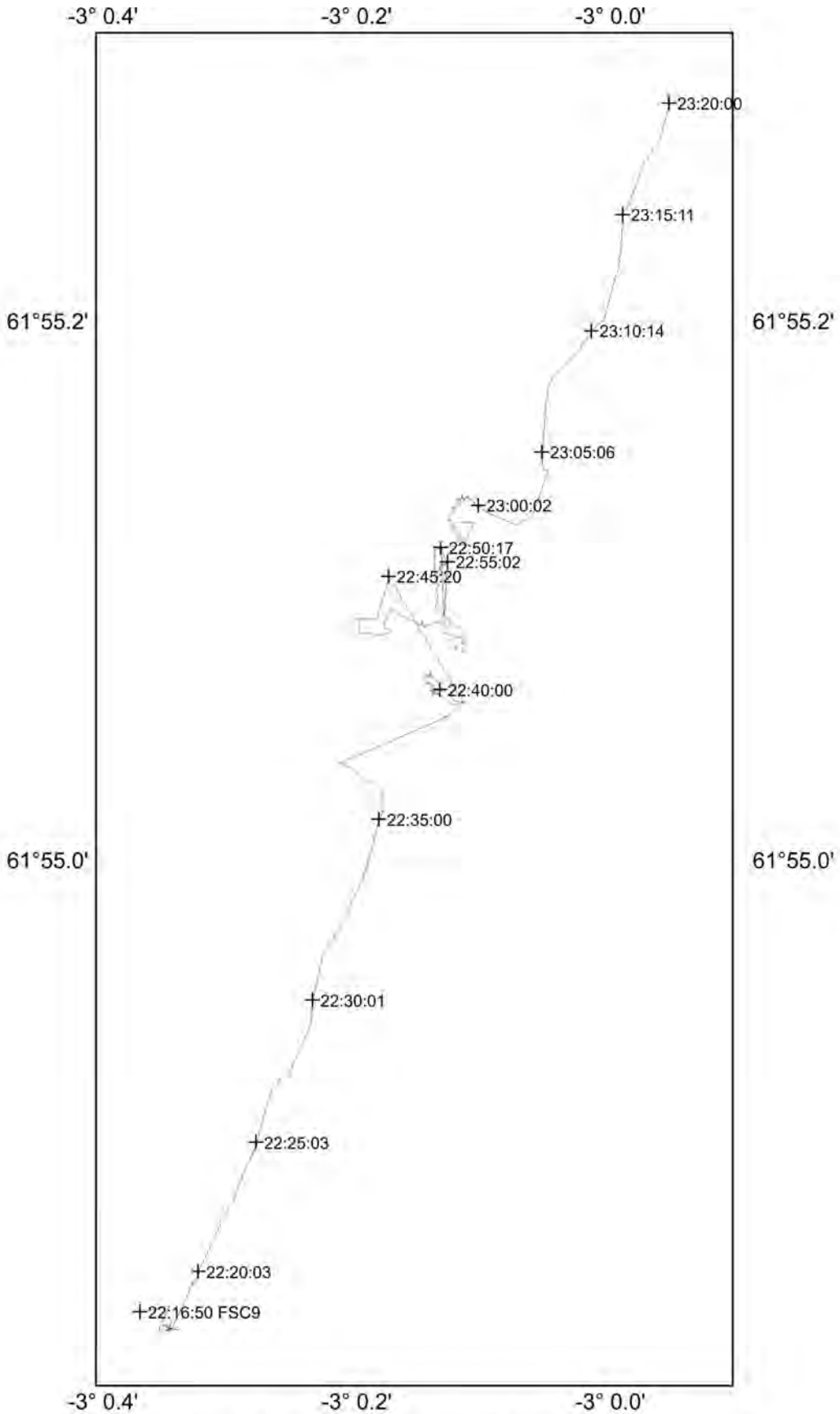


Chart 84. WASP station 55447#1, site 'FSC9'

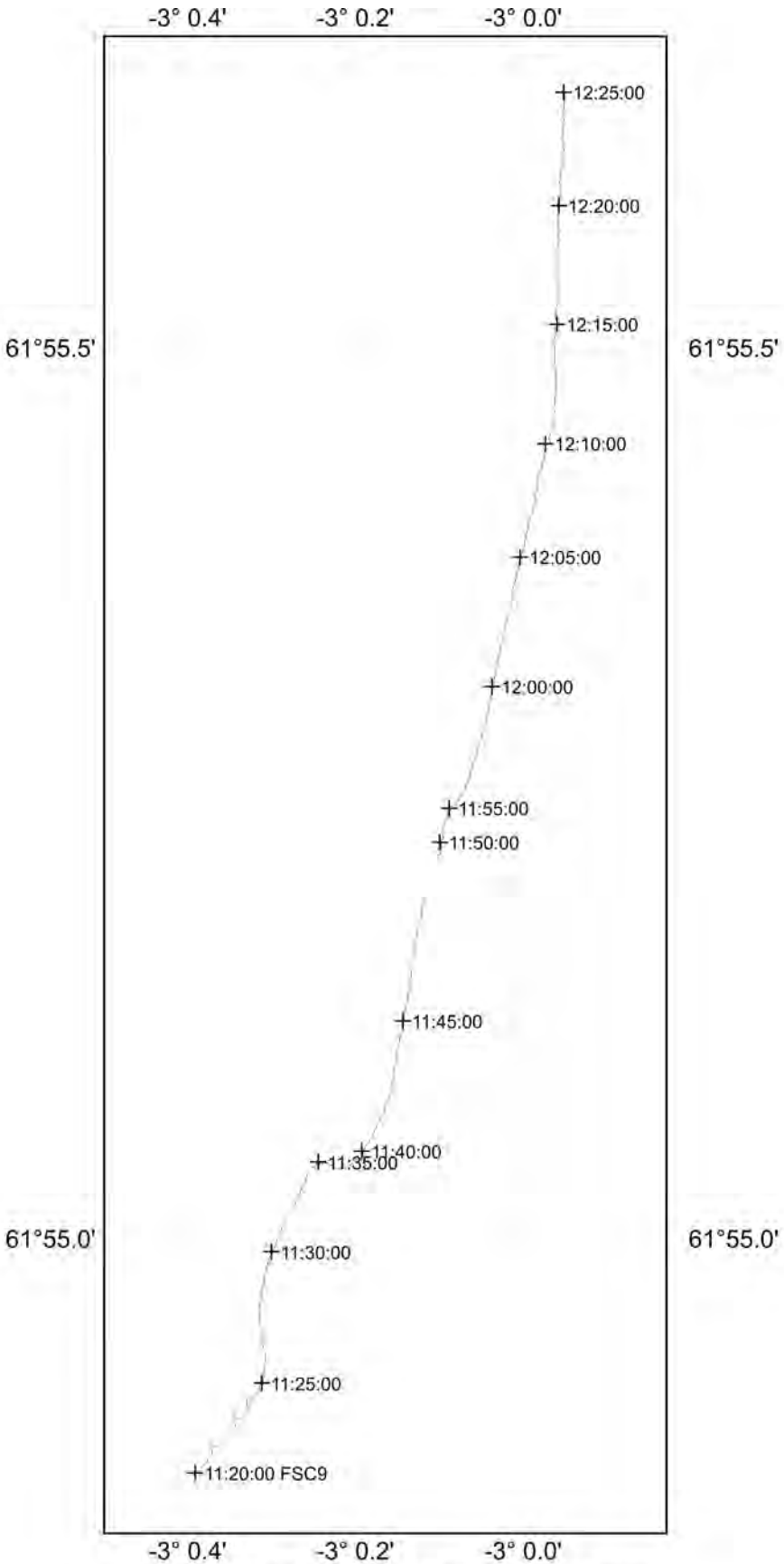


Chart 85. WASP station 55447#7, site 'FSC9'

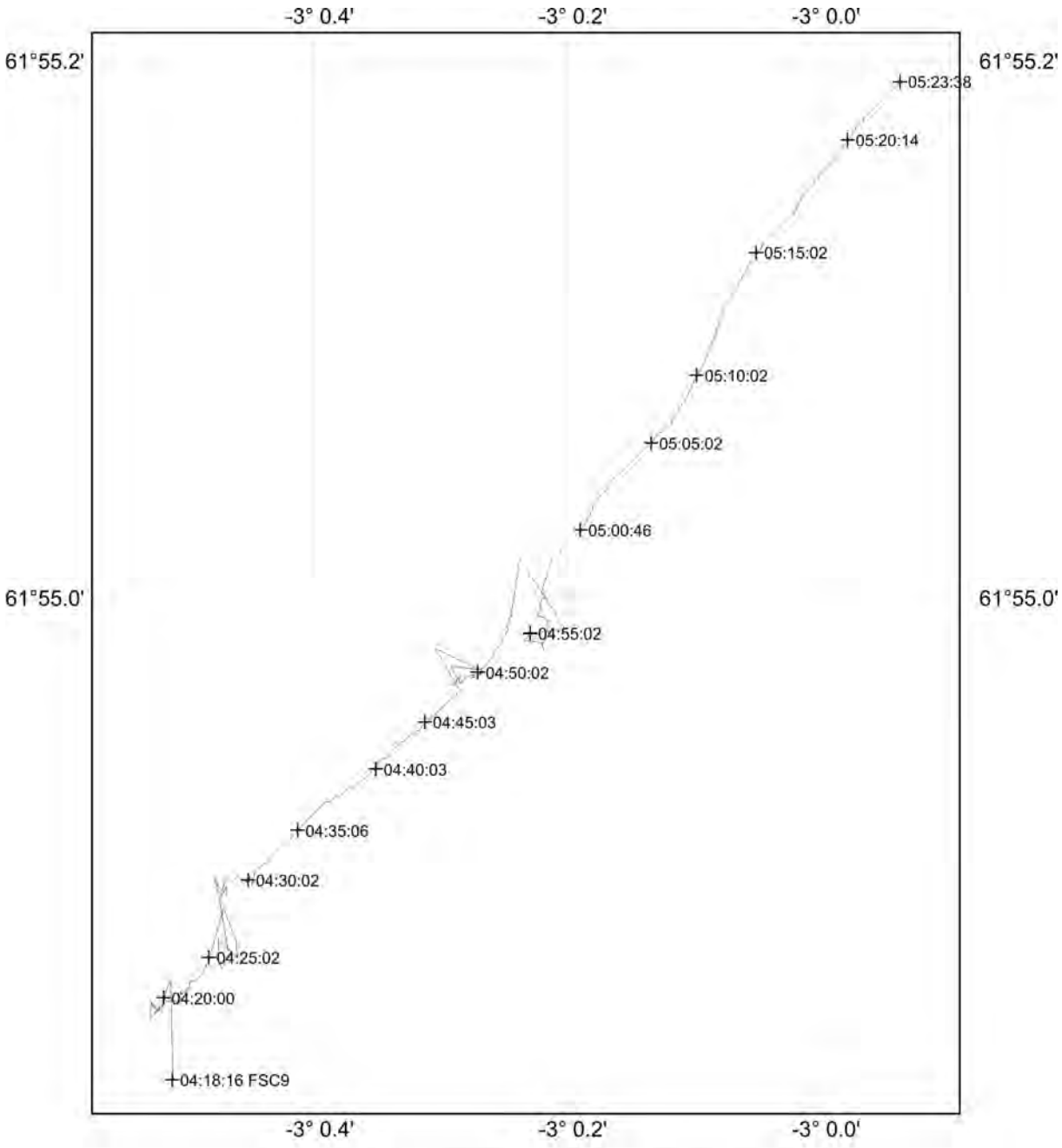


Chart 86. WASP station 55447#16, site 'FSC9'

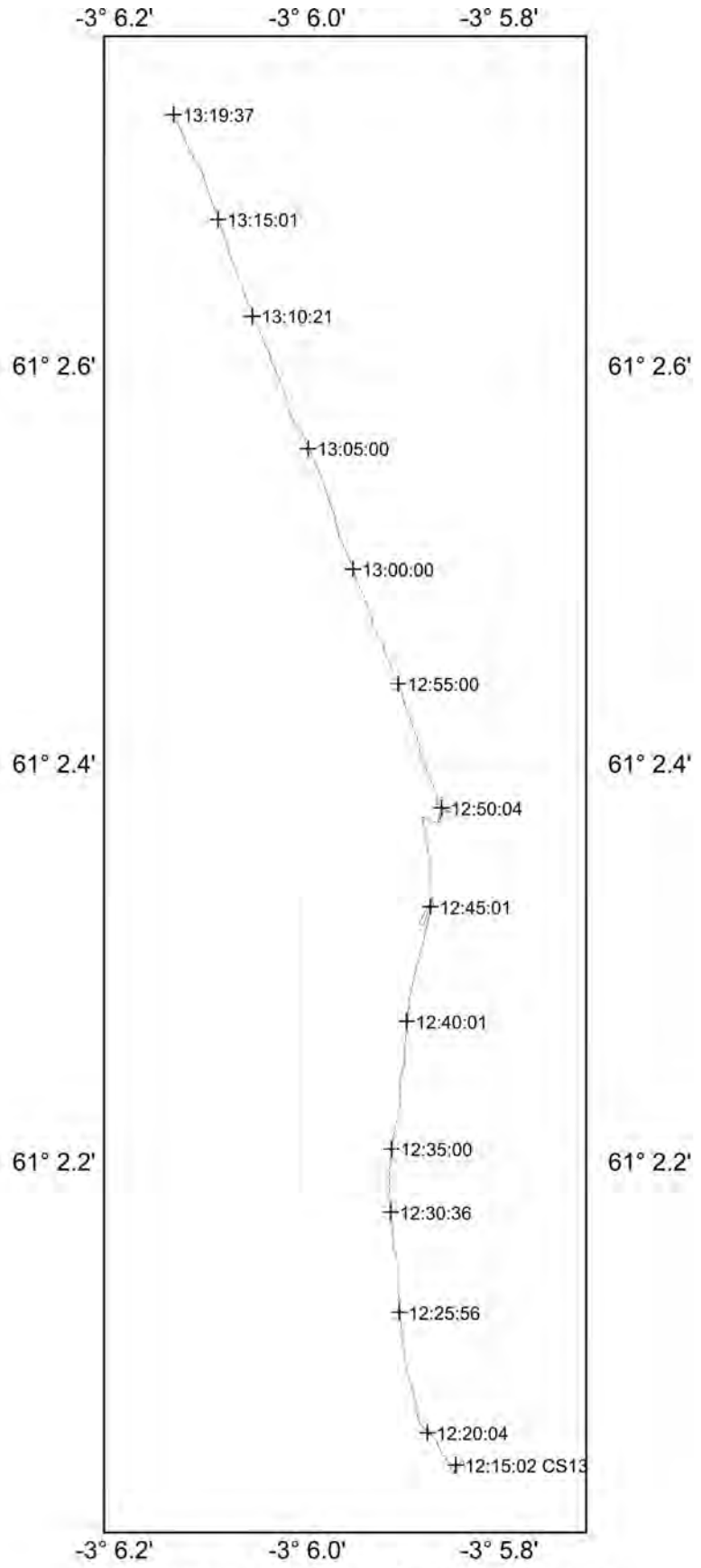


Chart 87. WASP station 55448#1, site CS13

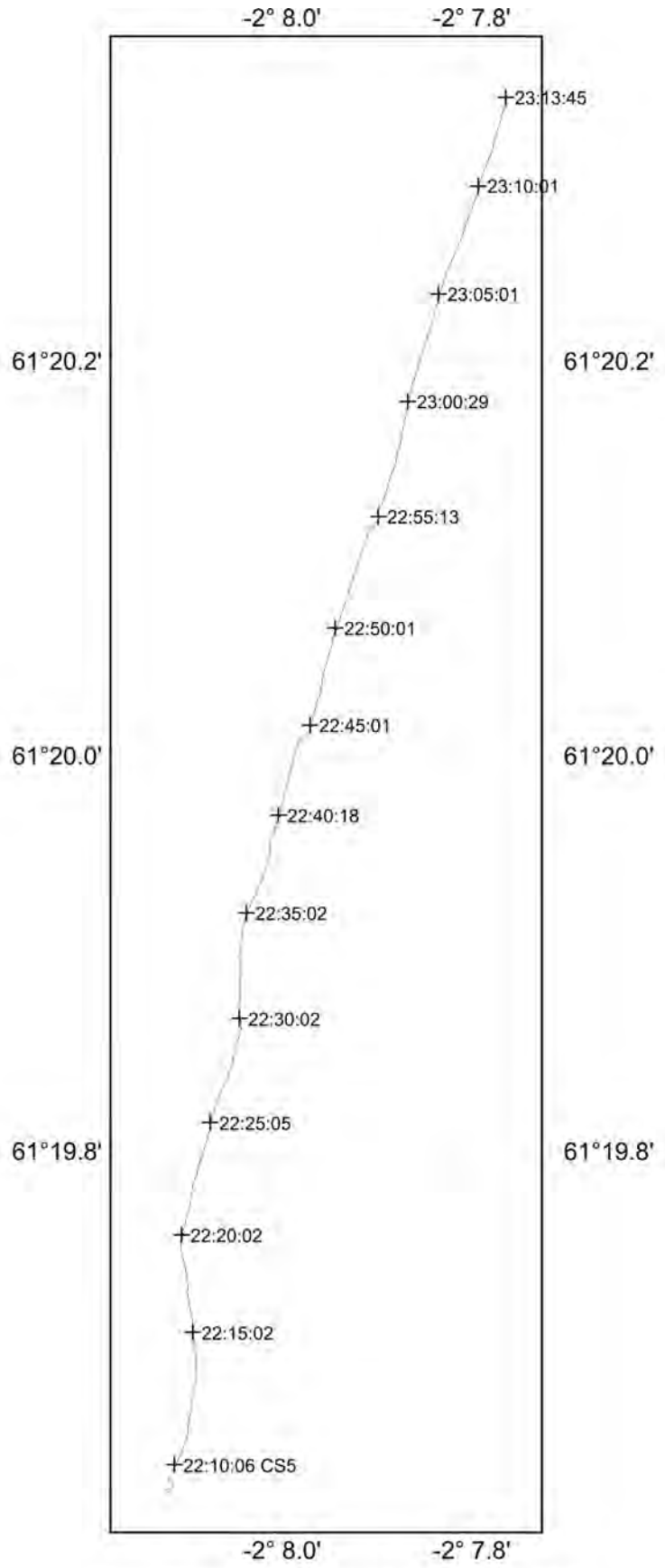


Chart 88. WASP station 55451#1, site CS5

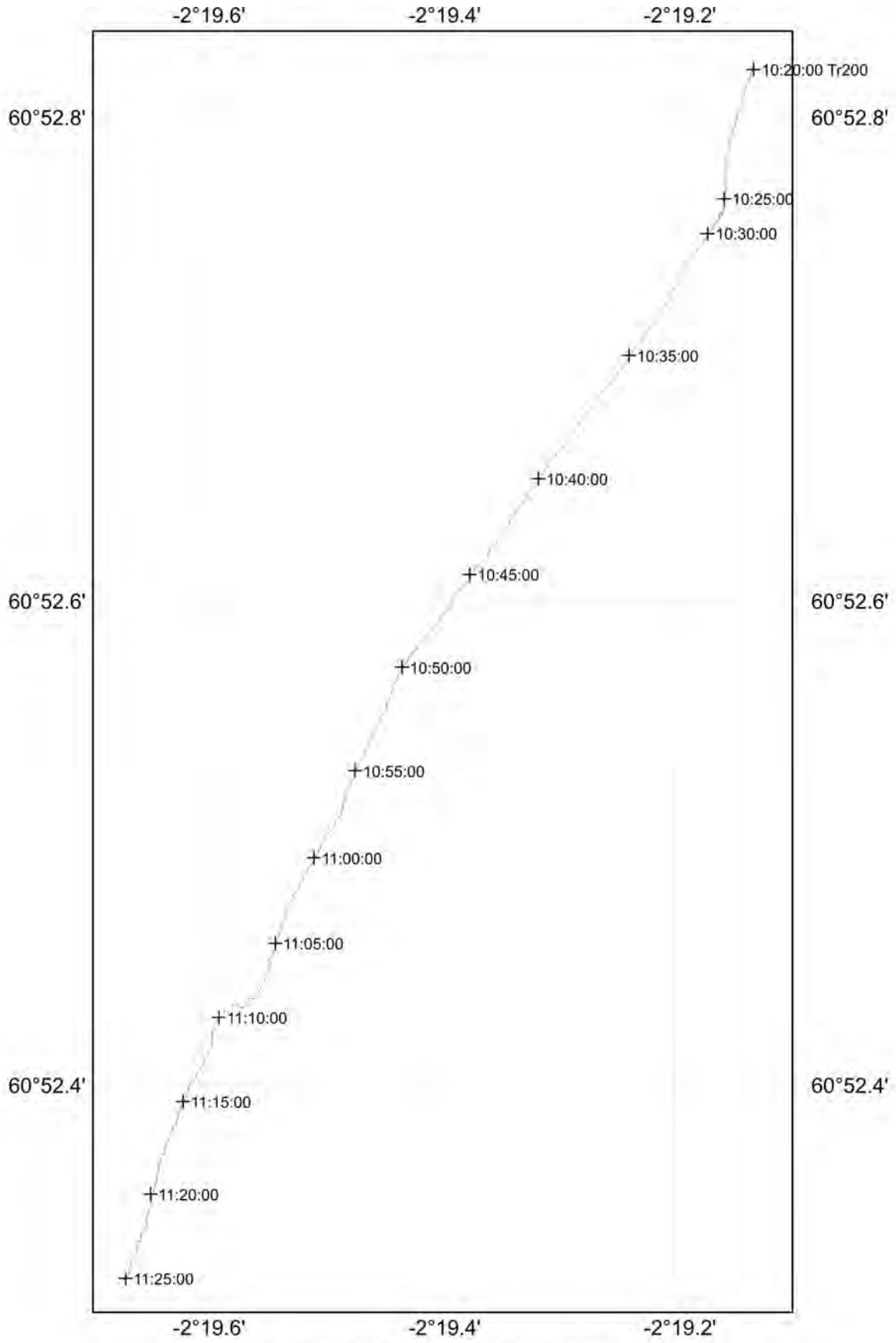


Chart 89. WASP station 55456#1, site Tr200