IFM-GEOMAR REPORT

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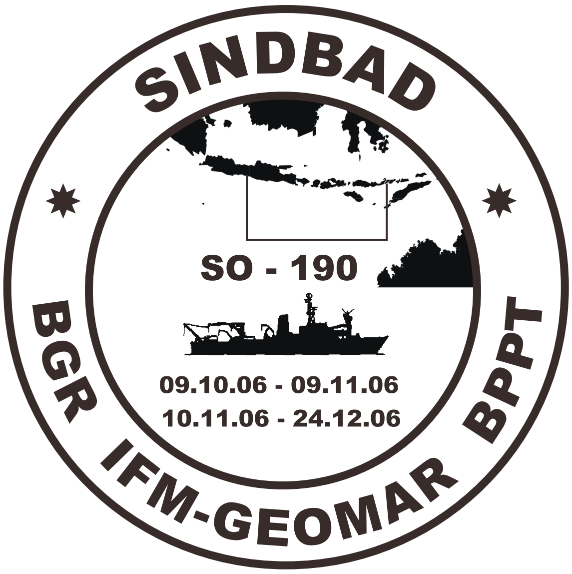
Leibniz-Institut für Meereswissenschaften
an der Universität Kiel

FS Sonne
Fahrtbericht / Cruise Report SO 190
SINDBAD

Seismic and Geoacoustic Investigations Along The Sunda-Banda Arc Transition

Darwin - Darwin
10.11.2006 - 24.12.2006



Berichte aus dem Leibniz-Institut
für Meereswissenschaften an der
Christian-Albrechts-Universität zu Kiel

Nr. 8
Januar 2007

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1.1 Summary

From November to December 2006 the RV *SONNE* cruise SO190-2 took place as part of the SINDBAD project (Seismic and Geoacoustic Investigations along the Transition from the Sunda to Banda Arc) south of the Indonesian archipelago to acquire various geophysical datasets between 112°E and 122°E. Here, along the neighboring segments of the Sunda-Banda margin active convergence and collision of three major lithospheric plates occurs: the Indo-Australian plate, the Eurasian plate and the Pacific plate. The resulting style of subduction varies from an oceanic-island arc type along the eastern Sunda margin to continental-island arc collision along the Banda margin. This unique natural laboratory allows us to investigate the modifications of the lower plate (increasing plate age to the East, variability in plate roughness, transition from an oceanic to a continental lower plate) as well as their effects on the tectonics of the upper plate (development of an outer high and forearc basin, accretionary and erosive processes) in neighboring margin segments along a 700 km transect.

We have chosen four major north-south oriented corridors for the data acquisition, located on different sections of the margin, at 113°E, 116°E, 119°E and 121°E. In addition, three shorter transects were investigated running perpendicular to the major corridors. All transects were covered with seismic wide-angle refraction data, and some of them also with vertical incidence reflection data. A total of 10 seismic wide-angle profiles were acquired with a total of 239 ocean bottom hydrophone or seismometer deployments. All instruments were successfully recovered. A cluster of 8 G-guns of 8 l each, i.e. nominally 64 l capacity of each shot was used as seismic source. A combined total number of 14.332 shots was fired along 1.020 nm of profiles during this cruise at an overall excellent performance rate.

Along the westernmost corridor,10 methane sensors were deployed in addition to the ocean bottom seismic stations. Furthermore, a short-term ocean bottom magnetotelluric profile of 6 stations was acquired in the 116° E corridor for the duration of the cruise. During the entire survey, bathymetric profiling was conducted and several long magnetic profiles were collected throughout the cruise.

The overall data quality varies within the different corridors with commonly good and some excellent data comprising quality results for the entire crust and the uppermost mantle. On profiles 11 and 12 within the 121°E corridor data quality varies strongly with some components being weak. This is probably related to locations with stronger seismic attenuation. Initial results from onboard data analyses exhibit a good data quality and profound results are expected.

1.2 Zusammenfassung

Als Teil des SINDBAD Projekts (Seismische und Geoakustische Untersuchungen entlang des Übergangs vom Sunda zum Banda Bogen) fand die FS SONNE Fahrt SO190-2 von November bis Dezember 2006 südlich des Indonesischen Archipels statt. Ziel dieser Expedition war es, einen umfangreichen geophysikalischen Datensatz zwischen 112°E und 122°E zu sammeln. Das Messgebiet im Bereich des Übergangs vom Sunda zum Banda Bogen ist gekennzeichnet durch das Aufeinandertreffen dreier großer Lithosphärenplatten: die Indo-Australische, die Eurasische und die Pazifische Platte. Der daraus resultierende Subduktionstyp variiert von Ozean-Inselbogen entlang des östlichen Sunda Bogens zu Kontinent-Inselbogen entlang des Banda Bogens. Der Einfluss der Beschaffenheit der subduzierten Platte (Alter, Rauhigkeit, ozeanischer bzw. kontinentaler Plattentyp) auf den Charakter der Subduktion (Ausbildung des Äußeren Hochs und Vorderbogen Beckens, Akkretion vs. Erosion) kann hier innerhalb eines Bereichs von nur 700 km ideal untersucht werden.

Die Datenerfassung erfolgte auf vier senkrecht zum Tiefseegraben verlaufenden Korridoren bei 113°E, 116°E, 119°E und 121°E. Zusätzlich wurden drei kürzere Bereiche parallel zum Graben untersucht. Innerhalb dieser Korridore wurden weitwinkelseismische Daten akquiriert, in einigen ausgewählten Teilstücken wurden zusätzlich auch seismische Steilwinkeldaten aufgenommen. Insgesamt 239 Ozeanbodenhydrophone und Ozeanbodenseismometer kamen dabei auf 10 Profilen erfolgreich zum Einsatz und konnten im Folgenden ohne Ausfälle geborgen werden. Ein G-Gun Array bestehend aus 8 Kanonen mit jeweils 8l Volumen diente dabei als seismische Quelle für insgesamt 14.332 Schüsse entlang von 1.020nm Profillänge. Das Array zeichnete sich dabei durch eine sehr hohe Zuverlässigkeit aus.

Im westlichsten Korridor unseres Messgebiets wurden zusammen mit den seismischen Stationen auch 10 Methansensoren auf dem Meeresboden installiert. Bei 116°E wurde außerdem zu Beginn des Fahrtabschnitts ein magnetotellurisches Profil, bestehend aus 6 Stationen, auf dem Meeresboden installiert, welches erst zum Ende der Fahrt wieder geborgen wurde. Zusätzlich wurden während der gesamten Reise bathymetrische Daten aufgezeichnet sowie einige längere Magnetikprofile.

Die Qualität der akquirierten seismischen Daten ist generell gut mit sogar einigen sehr guten Sektionen, was für die meisten Profile eine solide Modellierung der gesamten Kruste und des Kruste-Mantel Übergangs ermöglichen sollte. Schwache seismische Signale in einigen Bereichen auf Profil 11 und 12 sind wahrscheinlich auf eine außergewöhnlich starke seismische Dämpfung in diesem Gebiet zurückzuführen. Erste Ergebnisse der Modellierung konnten bereits an Bord erzielt werden und lassen auf solide zukünftige Ergebnisse hoffen.

2. Introduction

Active subduction zones and island arcs represent plate margins along which the oceanic lithosphere is downthrusted underneath a second lithospheric plate of continental or oceanic origin. The long-term evolution of subduction zones results in a high along-strike variability of tectonic and geologic parameters. This variability comprises a number of geologic/tectonic key parameters, e.g. the plate margin's age, the age and composition of the oceanic lithosphere, the convergence rate and direction as well as the thickness and origin of the trench sediments. The influence of these key parameters, which are mainly linked to the lower plate, on the tectonic evolution of the subduction complex, poses one of the targets of the SINDBAD project.

Subduction zones may grow by frontal or basal accretion against a seaward dipping or landward dipping 'backstop' (e.g. central Sunda margin, Aleutian margin, Barbados) and may be classified as a compressive regime. Extension and large-scale subsidence on the contrary originate from erosive processes, which are often favoured by a rough seafloor topography and a sediment-starved deep sea trench. The Sunda-Banda subduction zone, which marks the southern limit of the Indonesian archipelago curving along the islands of Java, Bali, Lombok and Sumbawa, is the site of the subduction of the Indo-Australian plate underneath Eurasia. The style of subduction varies from an oceanic-island arc type along the eastern Sunda margin to continental-island arc collision along the Banda margin. Thus a change from an accretionary to a non-accretionary/erosive regime may be expected, concurrent with a change in the tectonic forearc structures (i.e. growth of an accretionary prism and/or outer high and development of a forearc basin). This spectrum of tectonic/geologic variation regarding the lower plate as well as the upper plate along the Sunda-Banda margin make this plate boundary an ideal target to study detailed aspects of subduction zone processes.
The seismic analysis conducted during cruise SO190 will supply information on the system input to quantify the mass transfer from the deep sea trench to the deeper forearc. This investigation is the latest conducted during a suite of projects along this margin (SONNE cruises SO137, SO 138, SO176, SO179, SO186) and will improve our understanding of the influence of the lower plate variability on the tectonic evolution of the upper plate. Cruise SO190 comprises two legs: Leg 1 is conducted by the Federal Institute of Geosciences and Natural Resources, BGR, and is dedicated mainly to seismic multichannel data acquisition, complemented by gravity and magnetic studies. A location map of the MCS profiles acquired during SO190-1 is given in Figure 2.1.

Scientific investigations conducted during recent years have increasingly put their focus on the relevance of the lower plate, which represents a point of origin in the so-called 'subduction factory'. The influence of the lower plate is essential to processes of accretion, erosion and arc magmatism of the upper plate. The impact of this key feature on the evolution of the subduction complex of the Sunda-Banda margin off Indonesia is one of the prime targets of the investigations on SO190. Studies concentrate on the transition from oceanic lithosphere subduction to continental crust collision. The high degree of variability in tectonic forearc structures implies a transition from accretive to non-accretive/erosive subduction, manifested in the missing coherent outer high (fossil accretionary prism) and forearc basin (Fig. 2.2). The study area represents a unique natural laboratory in so far as along a 700 km transect the modifications of the lower plate (increasing plate age to the East, variability in plate roughness, transition from a oceanic to a continental lower plate) as well as their effects on the tectonics of the upper plate may be investigated in neighboring margin segments.

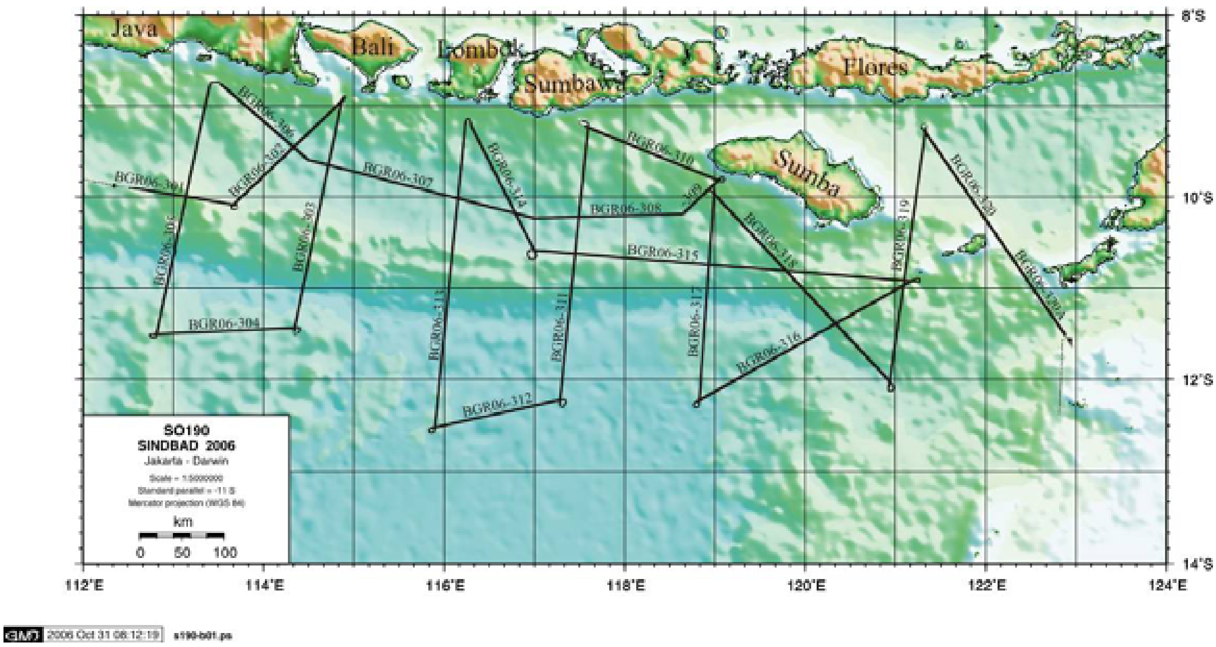

Figure 2.1: *Location map of seismic multichannel profiles acquired during Leg 1 of cruise SO190 lead by the BGR, Hanover, Germany.*

The present subduction system evolved after the Eocene collision of India with Eurasia and has been active since the middle Tertiary, as inferred from dating of the Sunda-system volcanism (Hamilton, 1988). Along strike variations in the characteristics of the lower plate are dramatic (Moore et al., 1980): oceanic lithosphere is subducted off Sumatra and West-Java, carrying a decreasing sediment cover with increasing distance from the Ganges-Brahmaputra system (sediment fill declines to 1.3 km in the trench off West-Java, whereas the trench is devoid of any fill in some sectors off Central Java). This decrease in sediment supply correlates to a diminishing accretionary prism and/or outer high: a subaerial accretionary complex is observed off Sumatra as a line of forearc islands, whereas it is found at 2000 m water depth off Western Java. As may be observed in Figure 2.2, the accretionary complex and outer high are developed as a coherent unit off western Java, corresponding to a well-developed forearc basin. These coherent forearc structures experience an abrupt change off Central Java (110°E) as documented by 60 km landward offset of the deformation front caused by tectonic erosion (Kopp et al., 2006). A coherently developed forearc basin is not present here and the outer high is characterized by isolated block structures. This area experiences the recent subduction of the Roo Rise (Masson et al., 1990) between 110°E and 115°E. The Roo Rise is a little investigated oceanic plateau, whose subducted is linked to the uplift of the forearc structures here. The landward offset of the deformation front as well as the subducting oceanic basement relief that tremendously increase seafloor roughness cause local tectonic erosion along this margin segment (Kopp et al., 2006; Wittwer et al., 2006).

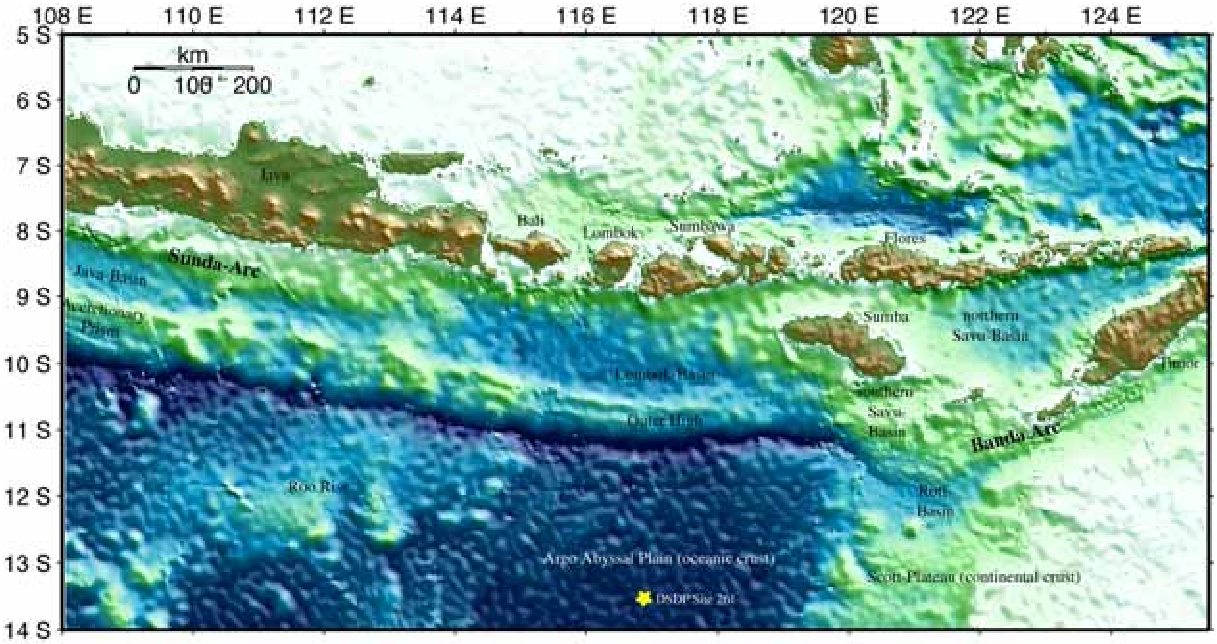

Figure 2.2: *Bathymetric map of the study area gained from satellite altimetry data. The Sunda trench parallels the islands of Java, Bali, Lombok, and Sumbawa. The transition to the Banda Arc occurs south of Sumba and corresponds to the change from an oceanic/island arc subduction to a continental crust/ island arc collision.*

East of the locus of the Roo Rise subduction, forearc structures are again well-developed, including the Lombok Basin and an accretionary prism/outer high (Fig. 2.2). Here, ‘normal’ oceanic crust of the Argo Abyssal Plain is subducting. Limited sediment supply is manifested in less than 100 m of trench fill. The geologic character of the Lombok basin is unknown and it is unclear, if active sediment accretion is occurring along this sector.

The transition from oceanic lithosphere subduction to a continental lower crust occurs to the east of the Lombok Basin at approximately 118.5°E-119.5°E (Van der Werff, 1995). Here, the contintal Scott-Plateau is subducted underneath the outer high, causing a large-scale uplift of the entire region at a rate of 0.5 cm/yr since the late Miocene (Stagg, 1978; Ludden und Gradstein, 1990). The occurrence of mud volcanoes in the Lombok forearc basin as well as along the deformation front implies dewatering processes as well as possible high fluid pressures.

All of these effects on the forearc structures are obviously related to the variability of the lower plate, especially to its oceanic/continental origin and its thermal character (plate age). The physical interaction between the lower plate and the forearc are still enigmatic, though. The most pressing questions include aspects on material transfer and balancing.

2.1 Aims of the project and objectives of cruise SO190 Leg 2

The main goal of the investigations conducted during cruise SO190 of RV SONNE comprises the relation between the variability of the lower plate and the tectonic evolution of the upper plate (development of an outer high and forearc basin, accretionary and erosive processes). The ‘raw materials’ (seafloor sediments, oceanic crust and mantle lithosphere) are carried into the system at the deep sea trench. The effect of these raw materials on the upper plate are controlled by a number of key parameters, including the convergence rate, the subduction angle and the physical and chemical characteristics of the lower plate (i.e. plate age, sediment cover and thickness, fluid content and petrology of the crust). The material transfer along and across strike of the margin (mass and fluids) is essential to the comprehension of the underlying physical processes. The seismic and geoacoustic measurements, combined with gravimetric and magnetic studies conducted during SO190 will allow a quantification of the raw materials and the key parameters and will enhance our comprehension of the actions and reactions of lower and upper plate. To cover the entire variation of the lower plate and its corresponding segmentation, 3 key sectors of investigation along the Sunda-Banda margin are chosen to conduct detailed studies: offshore eastern Java (subduction of rough oceanic crust causing local erosion of the upper plate between 112°E-14°E), in the area of the Lombok-Basin (subduction of old, Jurassic and possibly thickened oceanic lithsophere of the Argo abyssal plain causing the development of classical subduction zone features including the outer high, forearc basin and arc magmatism, 116°E-120°E) and in sector where continent/island arc collision is occurring in the vicinity of the Roti- and Savu basins (subcretion of continental crust, 121°E-122°E).

The following key aspects will be addressed:

--material input into the system: sediment supply, crustal structure, composition of the crust, crustal volatile content. How does the material input vary along the Sunda-Banda margin and which tectonic consequence does this trigger on the upper plate?

--influence of the subduction/subcretion (dip angle/taper) of rough oceanic crust off Java vs. continental crust off Flores on the evolution of forearc structures on the upper plate

-- repercussion of the lower slope on the subduction of oceanic basement relief (seamount subduction, retreat of the deformation front, landslides)

--material transfer through the system from the input into the trench to the forearc (accretionary/erosive processes, submarine mass transfer)

--geometry of the Lombok basin (sediment thickness, inversion structures caused by subduction of semaounts or ridge systems)

The neighboring segments of the Sunda-Banda margin offer insight into the entire spectrum of subduction processes (accretive -> non-accretive -> erosive, ocean-continent subduction -> ocean – island arc subduction -> continent-island arc collision).

2.2 Tectonic Framework

The Indonesian archipelago covers a geographic region where active convergence and collision of three major lithospheric plates occurs: the Indo-Australian plate, the Eurasian plate and the Pacific plate (Fig. 2.2.1). Different margins have developed here: The Andaman-Sunda-Banda margin with an extension of more than 5000 km is the largest and extends from the Bay of Bengal and the Andaman Sea in the northwest to Flores and Timor in the southeast (Hamilton, 1988). The northwestern portion of this plate boundary has been the site of ongoing geophysical and geological surveys since the early years of the last century (e.g. Brouwer, 1925; Vening Meinesz, 1940). It is regarded as a classical example for an accretionary type margin and was used to promote models of sediment accretion and on the evolution of forearc tectonic structures (e.g. Hamilton, 1979; Karig et al., 1979; Karig et al, 1980; Moore et al., 1980; Moore and Karig, 1980; Huchon and Le Pichon, 1984; Curray, 1989; Pubellier et al., 1992; Samuel, 1994; Samuel and Harbury, 1996; Schlueter et al., 2002; Kopp and Kukowski, 2003). The great earthquake couplet of 2004/2005 on the Sumatran sector of the margin spurged renewed interest in this margin and promoted unprecedented data (e.g. Science Special Issue, Vol. 308, 20 May 2005).

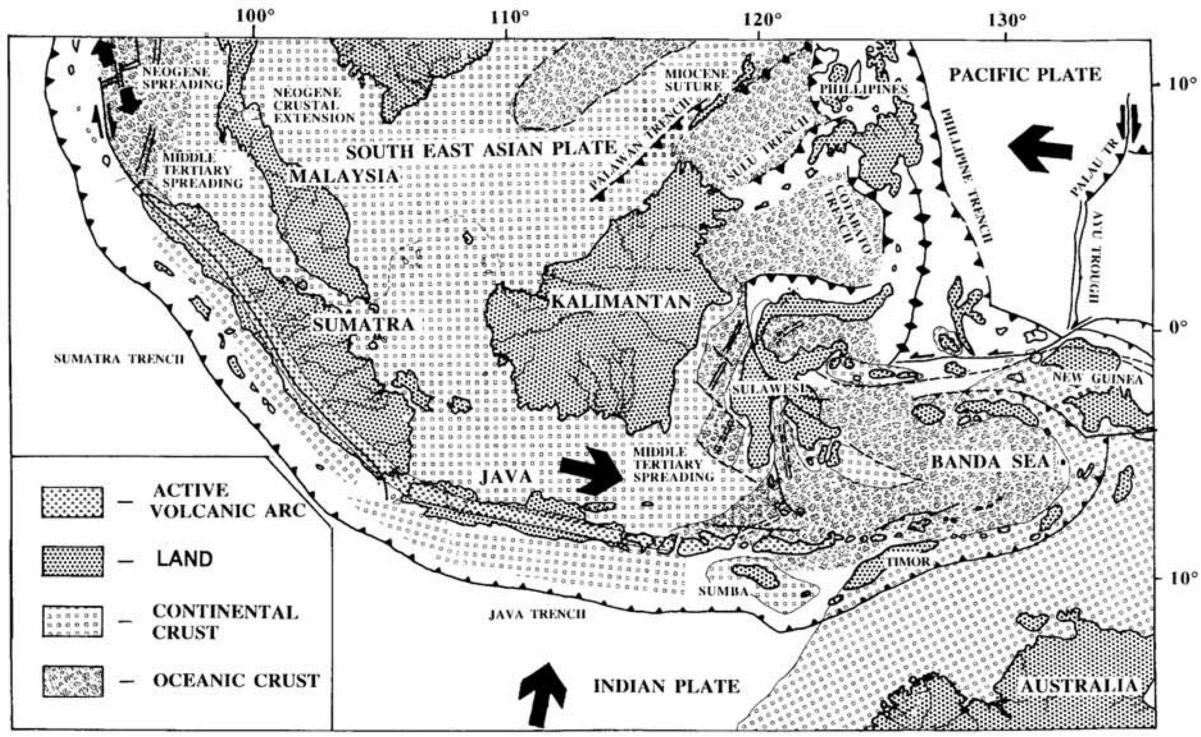

Figure 2.2.1: *Tectonic units of Indonesia: Three major lithospheric plates (Indo-Australia, Pacific plate and Eurasia) meet in SE Asia (from Van der Werff, 1995).*

The subduction of the Indian oceanic lithospheric plate along the Java trench occurs uninterrupted since the late Oligocene (Sclater and Fisher, 1974; Hamilton, 1988; Rangin et al., 1990). The convergence rate was app. 5 cm/a during the last 44 my-10 my; then increasing to 7 cm/a (Karig et al., 1980; Curray, 1989) and occurs in an almost orthogonal direction to the deep-sea trench. The island arc volcanism, originating in the Pliocene (Hamilton, 1979) reflects the tectonic setting along the margin: Volcanic material on East-Java, Bali, Lombok, and Sumbawa is of mafic to intermediate composition, documenting the transitional character at the alternation from a continental to an oceanic upper plate (Hamilton, 1988).

The tectonic framework of the eastern Sunda margin off Bali, Lombok and Sumba remains enigmatic. The transition from an ocean-island arc margin off Java to a continental-island arc collision along the Banda arc is further complicated by a number of microcontinents which have been trapped between the trench and the magmatic arc. The collision of island arcs and continents represents a crucial factor in the evolution of orogens, however, the underlying mechanisms are still not comprehended (De Boer, 1989; Robertson et al., 1991; Silver et al., 1991).

An additional focus will be put on the evolution of the forearc basins observed along this margin sector. These basins are obviously related to the subduction zone processes of the forearc and originate from these margin related processes. The evolution of forearc basins is observed in regimes of subduction accretion as well as subduction erosion so that its linkage to these mass transfer processes remains unclear (Dickinson and Seely, 1979; Dickinson, 1995). Thus these basins represent an important element at convergent margins (continental margins as well as island arcs). They are the locus of large accumulations of little deformed sediment, which are of special interest for commercial as well as scientific investigations (Lewis and Hayes, 1984; Carozzi, 1993). The development of forearc basins along the Sunda-Banda margin is primarily controlled by the extent of local basement structures that highly vary along the margin. Areas where basin subsidence correlates to the development of an accretionary prism (western and central Sunda margin) experience subsidence of basement structures due to sediment accretion and the subsequent growth of the prism (Matson and Moore, 1992) as well as a deepening of the subducting plate. Where these processes occur over some time and correlate to an increasing distance between the magmatic arc and the deformation front, ductile behaviour of the dipping lithospheric plate is observed, causing upward flow that may result in an uplift motion of the subduction complex (Pavlis and Bruhn, 1983).

2.3 East-Java

Off Java, convergence at a rate of 6.7 ± 0.7 cm/yr in a direction N11°E is approximately orthogonal to the trench, as determined by GPS measurements between Christmas Island and West-Java (Tregoning et al., 1994). At present, 135 Ma oceanic crust subducts off eastern Java (Moore et al., 1980; Masson, 1991) and crustal ages decrease to 96 Ma years off western Java and southern Sumatra [17, 39]. In correlation with an increasing distance from the Ganges-Brahmaputra Delta, trench sediment thickness decreases along strike of the margin. Sediment input from Sumatra and Java is trapped in the forearc basins here and does not reach the trench. The broad and morphologically well-developed trench along the western Sunda margin from Sumatra to western Java changes to a narrow, V-shaped structure off central and eastern Java (Ganie et al., 1987; Kopp and Flueh, 2005; Van Weering, 1989).
In association with the declining sediment supply to the southeast, the size and volume of the accretionary wedge observed off Sumatra and western Java shrinks steadily to the east, where the trench along extensive segments is devoid of any sediment fill.

Whereas large portions of the Sunda margin are considered accretionary, subduction characteristics along the central Java sector indicate erosive processes as the dominant mode of mass transfer (Kopp et al., 2006). The tectonic framework of the central Java margin, with a convergence rate of 6.7 cm/yr, insignificant sediment input and a pronounced seafloor roughness where the oceanic Roo Rise is subducting underneath Java, facilitates subduction erosion. Evidence for erosion comes from geophysical data off central Java: local erosive processes in the wake of seamount subduction are documented by a high-resolution bathymetric survey and result in an irregular trend of the deformation front sculpted by seamount collision scars (Fig. 2.3.1). Subduction of oceanic basement relief leads to large-scale uplift of the forearc, as recorded on a reflection seismic profile (Fig. 2.3.2) (Kopp and Flueh, 2005; Kopp et al., 2006; Wittwer et al., 2006), and to a dismemberment of the previous outer forearc high, giving way to isolated topographic elevations.

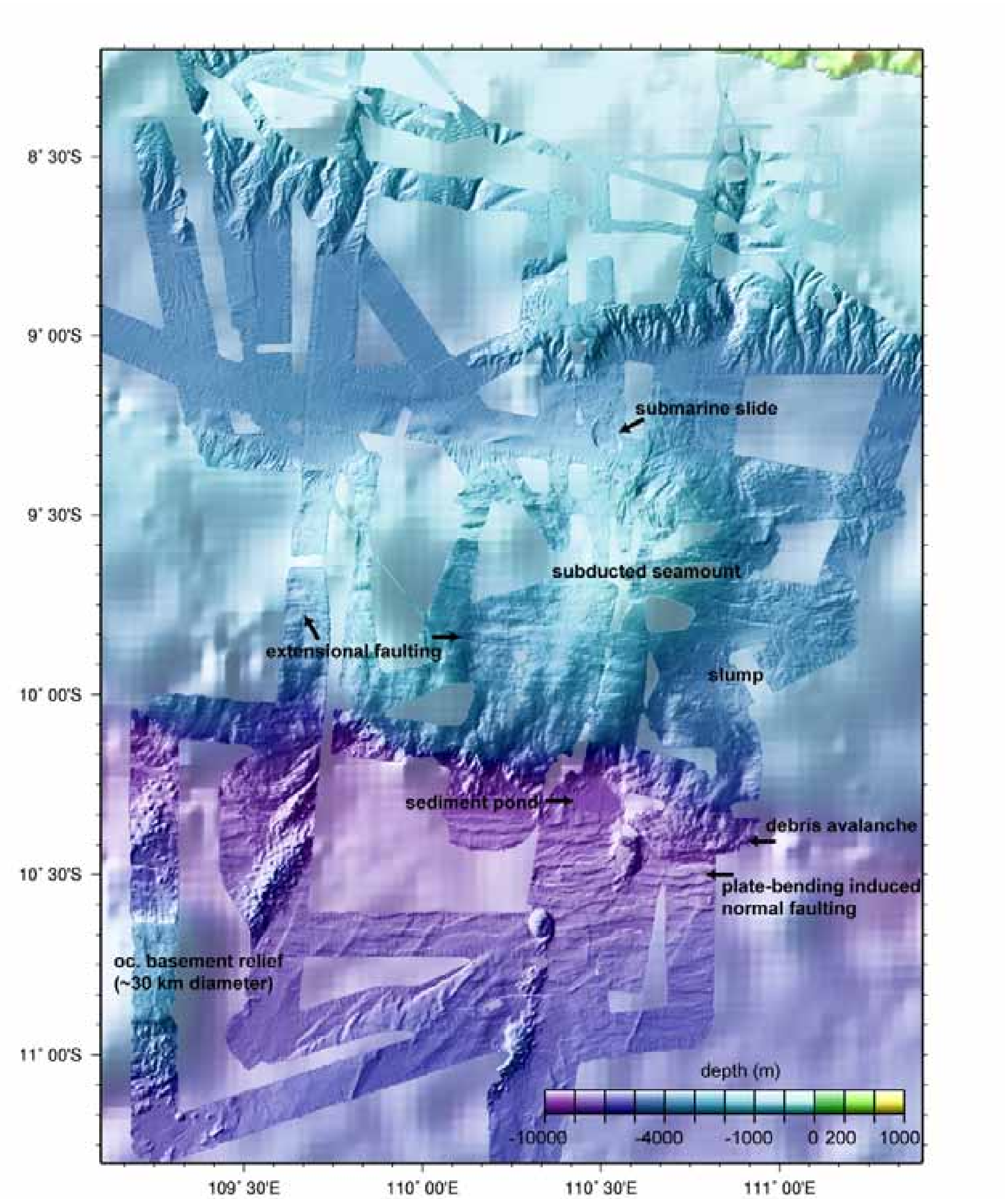

Figure 2.3.1: *High-resolution bathymetric survey of the central Java margin. The swath data are underlain by predicted bathymetry from satellite altimetry data (Sandwell and Smith, 1997). Recent subduction of a seamount results in uplift of the outer forearc high and in extensional structures cutting the middle slope. In the wake of seamount subduction, a retreat of the deformation front coincides with mass-wasting processes which form a local sediment pond in the otherwise sediment-starved trench. A slump at the flank of the subducted seamount caused a debris avalanche into the trench. The oceanic crust is characterized by extensive normal faulting parallel to the trench and is dotted by numerous seamounts and bathymetric elevations up to several tenths of kilometres in diameter. The continental slope in the north is cut by numerous canyons which act as pathways for terrigenous material fed to the forearc basin (from Kopp et al., 2006).*

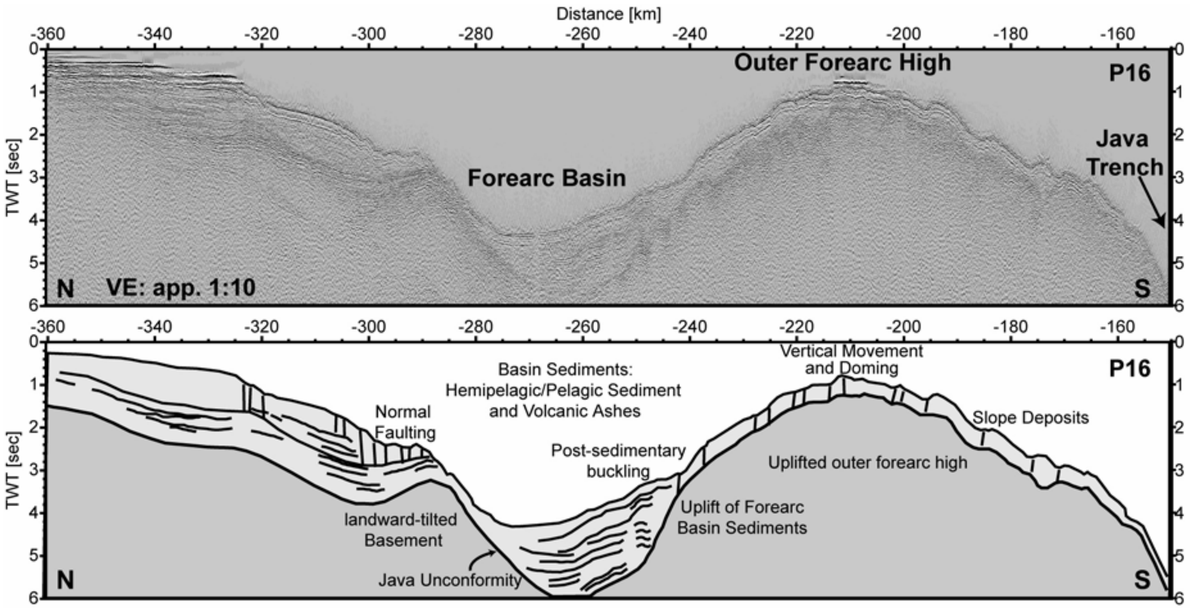

Figure 2.3.2: *Four-channel streamer section across the Java margin at app. 110°E. Uplift caused by the underthrusting of oceanic basement relief affects the outer forearc high, which reaches approximately 1000 m shallower water depth than in adjacent areas. The forearc basin strata onlap the outer forearc high and are tilted landward, indicating syndepositional and postdepositional vertical movement of the seaward portion of the basin and the forearc high. Recent deformation is also indicated by the landward-tilted basement north of the forearc basin (from Kopp et al., 2006).*

The broad retreat of the Java Trench and deformation front above the leading edge of the Roo Rise has exposed an area of approximately 25,000 km^2 of deeper seafloor formerly covered by the previous frontal prism. Frontal erosion coincides with a steepening of the lower slope angle in the central Java sector compared to the neighbouring segments (Fig. 2.3.3). In global compilations (Clift and Vannucchi, 2004), the key geological parameters of the central Java margin lie in the erosive regime (Fig. 2.3.4), reflecting the interplay of basement relief subduction, negligible sediment supply and a high convergence rate on the evolution of the margin.

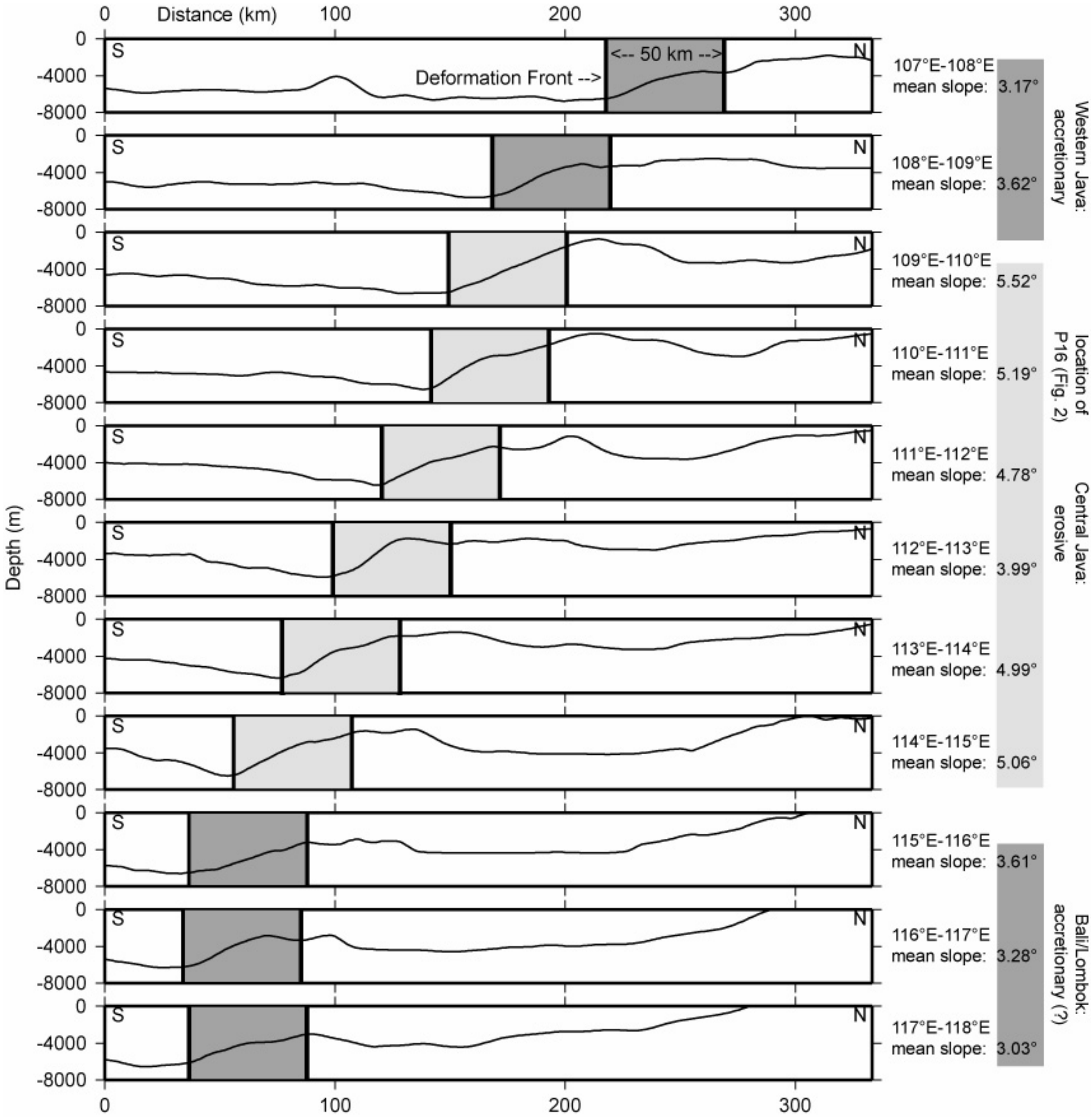

Figure 2.3.3: *Bathymetric tracks across the Java margin between 107°E and 118°E. The mean frontal slope presented here was calculated over a distance of 50 km from tracks taken every minute longitude and sampled at 0.01°. The tracks displayed run in a N-S direction and are representative for the geographical region indicated to the right of the track. The frontal slope between roughly 109°E and 115°E, where the Roo Rise is currently subducted underneath Java, is increased compared to the neighbouring regions, which is interpreted as an indication for subduction erosion (from Kopp et al., 2006).*

2.4 The Lombok-Basin

The Lombok-Basin is placed on the southeastern Sunda-Block (Letouzey et al., 1990) and is possibly underlain by thickned oceanic crust (Fig. 2.4.1). Its lateral extension is app. 600 km in a WNW-ESE direction subparallel to the island arc (Kartaadiputra et al., 1982) and it is approximately 120 km wide (Bolliger and DeRuiter, 1975; Curray et al., 1977). Its total area is ca. 70.000 km^2 at a water depth of more than 4000 m. To the north, the basin is limited by the island of Java, Bali, Lombok and Sumbawa and to the east by Sumba Island, separating the Lombok-Basin from its eastern counterpart, the Savu-Basin. The recent tectonic activity of the basin, which is in an early phase of evolution, is controlled by the subduction of the Argo abyssal plain and the collision of the Scott Plateau with the Sunda Block, causing the development of an outer high and the uplift of the eastern portion of the basin. The oceanic

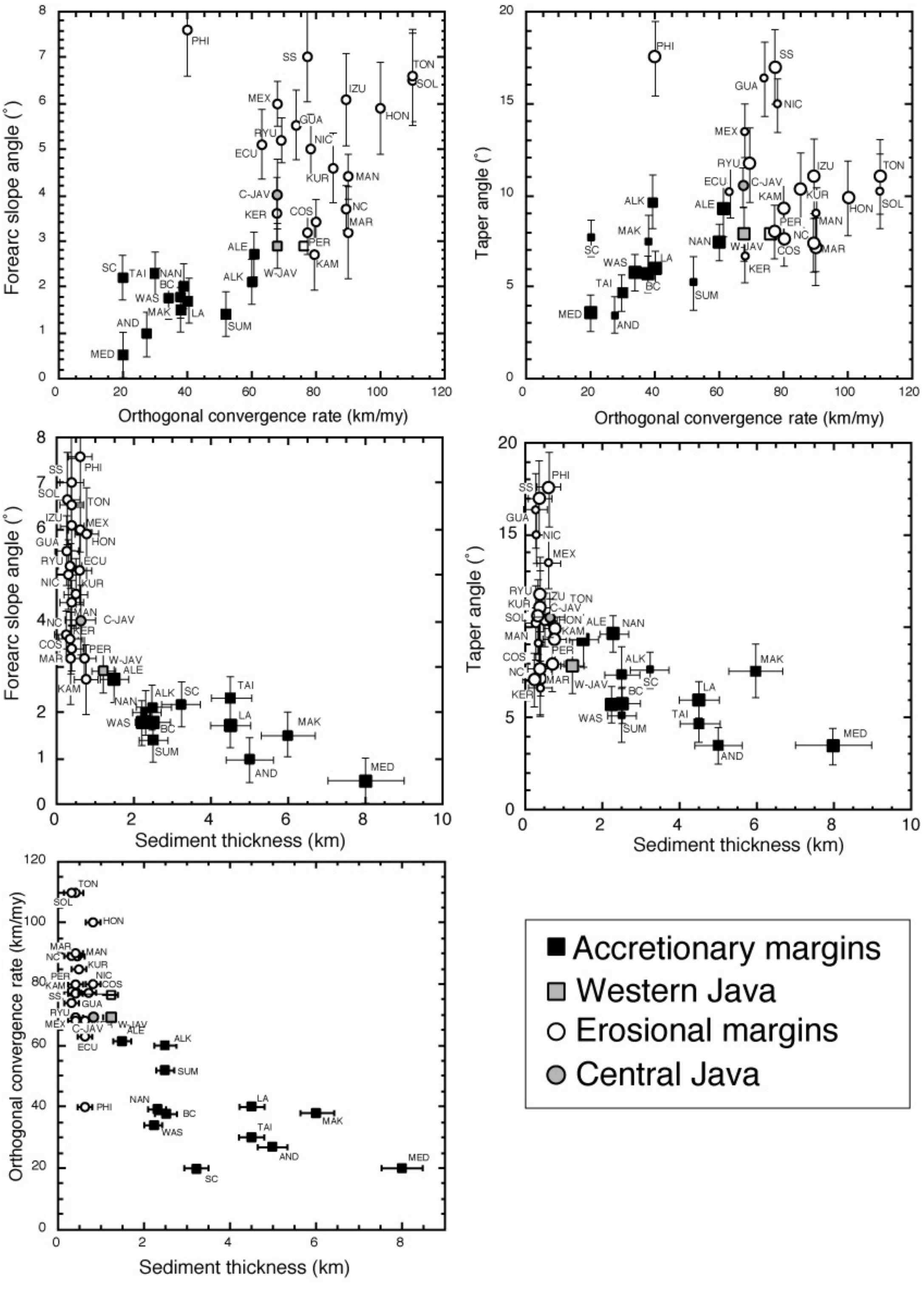

Figure 2.3.4: *Global compilation of convergent margins modified from Clift and Vannucchi (2004). Erosive and accretive systems map in two different regimes when plotted against geological key parameters. The central Java margin clearly maps in the erosive regime, whereas western Java experiences accretion (from Kopp et al., 2006).*

crust of the Argo abyssal plain originates from late Jurassic times to early Cretaceous and experiences extensional stress during its entrance into the trench. This causes trench-parallel, bending related extensional structures, coherent with charateristic extensional seismic activity (Abercrombie et al., 2001). The adjacent outer high shows an approximate extension of 100 km south of Bali, thinning to east to about 70 km south of Sumbawa.

The composition of the upper plate is yet unknown: early refraction seismic studies (Curray et al., 1977) off Java and Bali show seismic velocities of 6.2 km/s (Station MSN18 in Fig. 2.4.1) and a thickness of 18 km, which was interpreted as thickned oceanic crust, whereas seismic velocities of 6.9 km/s (station MSN 20 south of Lombok) was interpreted as magmatic island arc crust (Hamilton, 1988). An alternative interpretation of van der Werff, 1995 suggests that thinned continental crust was incorporated into the outer high.

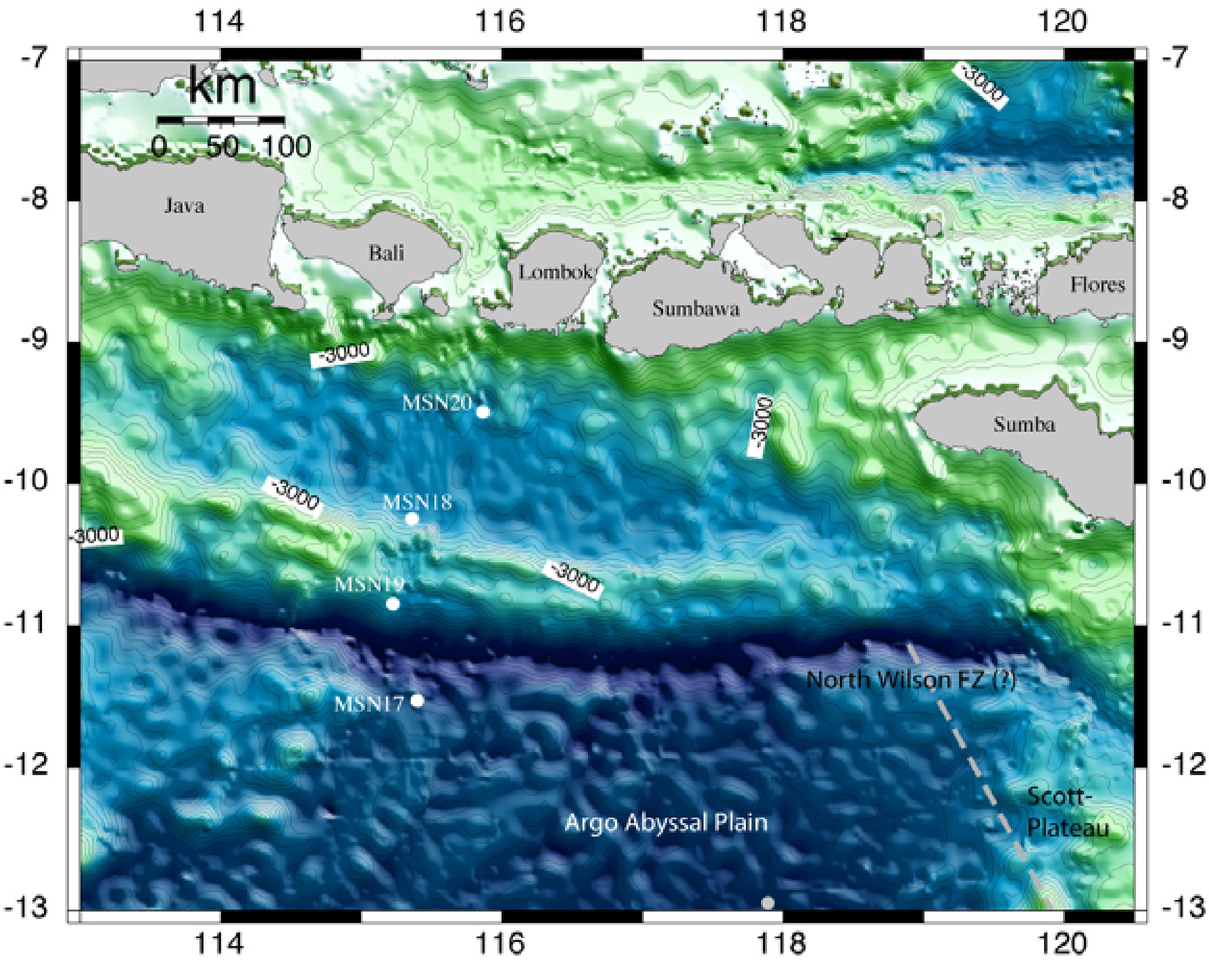

Figure 2.4.1: *Bathymetric map of the Lombok Basin gained from satellite altimetry data. White dots depict locations of early refraction seismic stations; grey dotted line tracks the postulated trend of the North Wilson Fault Zone.*

Five seismo-stratigraphic units were identified from single-channel seismic data (Snellius II) in the Lombok Basin (Van der Werff, 1995). The interpretation is additionally based on a multichannel seismic line acquired by Shell International (P7) (Bally, 1983) in 1971. Limited penetration and resolution only allowed the identification of major stratigraphic units . According to this interpretation, which will likely undergo major revision after the completion of cruise SO-190, especially after the MCS-data acquisition conducted by the BGR, Hanover, during leg 1, sediment thickness reaches 4.5 km. The underlying unit is interpreted as an

Eocene carbonat platform. If this interpretation holds, then it would imply that the basin experienced subsidence from near-surface to a depth of 5.5 km as observed today. The corresponding development of the outer high resulted in a sediment supply to the southern basin area, whereas the northern portion of the basin experienced sedimentation only after the evolution of the magmatic arc in the middle Miocene.

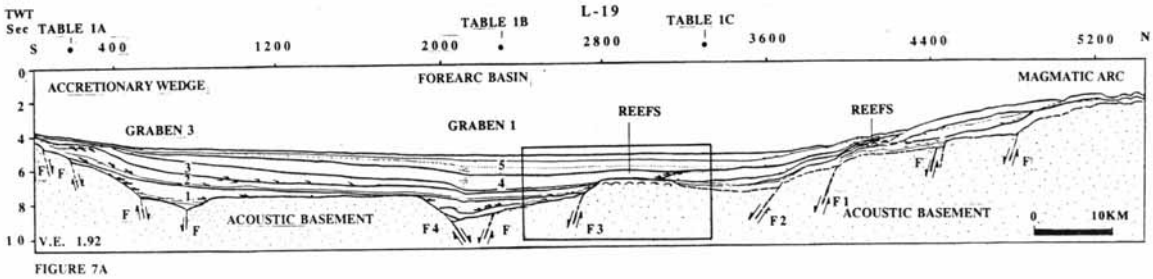

Figure 2.4.2: *Linedrawing of Shell International Profile P7 south of Bali. Sediment thickness reaches 4.5 km in the Lombok-Basin, overlying a carbonate platform. This would imply a total subsidence of 5.5 km since the Oligocene.*

The increasing convergence rate since the Miocene and the subsequent entrance of the Scott plateau into the subduction system (Pliocene to recent) resulted in a more pronounced plate coupling between the Indo-Australian and the Eurasian plates, causing uplift of the outer high and the southern portion of the forearc basin.

A suggested north-south trending strike-slip fault at 118°30’E (van der Werff, 1995) correlates to a retreat of the deformation front and a northward shift of the outer high of about 18 km. Additionally, this feature is located close to the seaward North Wilson Fault Zone (Fig. 2.4.1) (Hinz et al., 1978), implying a tectonic linkage between these faults. The investigations conducted during cruise SO190 will shed some light on the relation between these observed tectonic features and will enhance our understanding of the effects caused by the transition of oceanic to continental lower plate, which started app. 3 Ma with the arrival of the Scott Plateau (Hamilton, 1979).

Van der Werff et al. (1995) postulate that the island of Sumba, which is located south of the magmatic arc trending along the islands of Sumbawa and Flores, may be defined as a microcontinent. Sumba was accordingly incorporated into the forearc in the late Oligocene/early Miocene. This hypothesis is supported by paleo-magnetic studies (Wensink, 1994).

The occurrence of mud diapirs in the Lombok-Basin is observed on early seismic data (Fig. 2.4.2) (Van der Werff, 1995) and was verified by our collegues of the BGR during Leg 1 of SO190 (Chr. Mueller, pers. Communication). Mud diapirs are indicative of dewatering processes in the forearc. Mud diapirs are a common element of active continental margins and have previously been detected along the Sunda-Banda-Arc (Kopf, 2002). They are of fundamental importance for fluid-related processes on subduction zones. Expulsion of mud and water is commonly accompanied by expulsion of gases (methane) (Wiedecke et al., 2002). The regions of origin of these substances reach from a few meters below the seafloor to several kilometres (Kopf, 2002) and may thus effect the entire subduction complex.

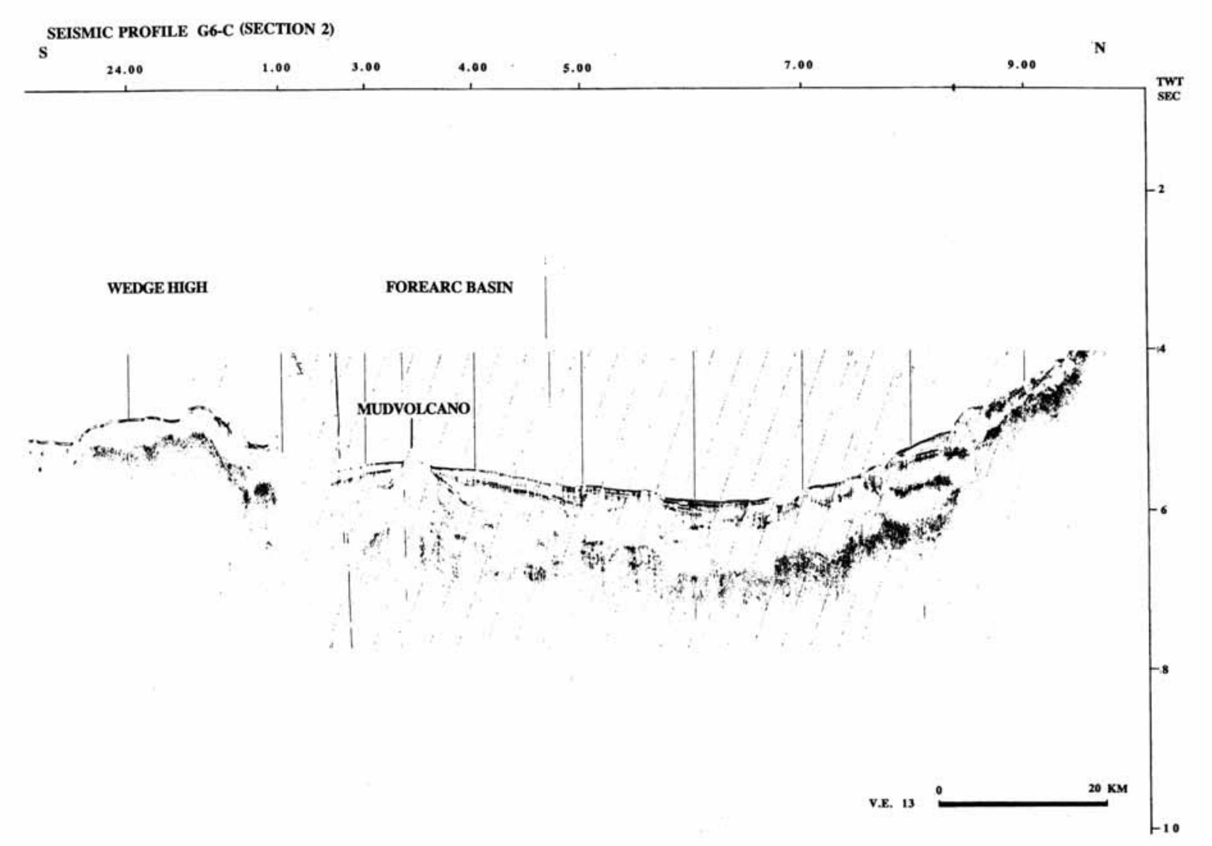

Figure 2.4.3: *Seismic section of a single channel profile acquired during the Dutch Snellius II expedition showing a mud diapir in the Lombok-Basin. Similar features were also discovered during Leg 1 of SO190.*

2.5 Roti-Basin / Savu-Basin

The Roti-Basin is located at the transition between the Java trench and the Timor trough. The Savu-Basin, located between the islands Sumba and Timor, documents the forearc compensation with regards to the Australian-Eurasian collision, which occurs since the late Miocene (Harris, 1991) (Fig. 2.2). The convergence of the Australian plate occurs in a NE direction (N20-30E) at a rate of app. 7-8 cm/a (De Mets et al., 1990; Smith et al., 1990). Assuming an average convergence rate of 7 cm/a for the past 5 my, approximately 350 km of continental crust has been underthrust underneath the Savu-Basin. Due to its increased buoyancy, the continental crust will increasingly resist subduction, causing an upward motion and uplift of the southern Savu-Basin and correlating relative subsidence of the northern basin. A number of authors have postulated that the subducted Australian plate has detached at a depth of app. 50-100 km under the Savu-Basin from the deeper subducted lithosphere (Osada and Abe, 1981; McCaffrey et al., 1985; van der Werff, 1995).

The Savu-Basin has an areal extent of 52.000 km^2 and a maximum water depth of 3470 m (Kartaadiputra et al., 1982). To the north, the magmatic island arc, whose volume diminishes eastwards, borders the basin. This correlates to the increasingly younger volcanic activity (Hamilton, 1988).
The basin is characterized by E-W trenching morphological highs, separating the northern Savu basin from its southern counterpart (Karig et al., 1987) (Fig. 2.2). The basement underneath the northern Savu-Basin reaches a thickness of 12-14 km (Beiersdorf and Hinz,

1980; Kartaadiputra, 1982) and possibly consists of thickened oceanic crust (van der Werff, 1995). The southern Savu-Basin, which is underlain by continental crust (Chamalaun et al., 1982), has been interpreted as a remnant of an ancient, thinned passive continental margin, which existed here before the arrival of the Sumba-microcontinent (van der Werff, 1995). The southern portion of the Savu-Basin experiences recent uplift along the Sumba-Ridge (Reed, 1986; Van Weering et al., 1989A). Sumba Island represents the subaerial portion of this ridge, which underwent uplift at a rate of 0.5 cm/a since the Miocene (Pirazolli et al., 1991; Fortuin et al., 1992; Fortuin et al., 1994). Uplift of the Sumba Ridge is related to the collision of the continental Scott-Plateau and the resulting tectonic subcretion underneath the forearc (Reed, 1985; Harris, 1991). Prior to this vertical motion history, the entire area comprised a single, uninterrupted basin. The collision of the Scott-Plateau with the southern margin resulted in overthrusting of the outer high over the basin, incorporating sedimentary deposits of the forearc basin into the outer high in an ‘accretive’ mode of transfer (Reed, 1985).

The evolution of the Savu-Basin following the collision auf the Australian margin is mainly controlled by pre-existing forearc structures. The corresponding tectonic activity thus focuses on existing weak zones, which have been reactivated (van der Werff, 1995). The recent tectonic framework characterized by the collision and underplating of continental crust underneath the Savu-Basin poses an end-member in the subduction cycle and will ultimately lead to the abandonment of this subduction zone and to a possible re-initiation of subduction to the north.

3. Participants

3.1 Scientists - SO 190 Leg 2

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Tamara Worzewski	SFB574
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3.2 Crew - SO 190 Leg 2

Oliver Meyer	Master
Detlef Korte	Chief Mate
Heinz Ulrich Büchele	2nd Mate
Nils Aden	2nd Mate
Dr. Konrad Raabe	Surgeon
Werner Guzmann-Navarette	Chief Engineer
Klaus-Dieter Klinder	2nd Engineer
Jörg Buss	2nd Engineer
Uwe Rieper	Electrician
Dariusz Zebrowski	Electrician
Jörg Leppin	Chief Electrician
Matthias Grossmann	System Operator
Volker Blohm	Fitter
Tino Förster	Motorman
Przemyslaw Marcinkowski	Motorman
Frank Tiemann	Chief Cook
Kryzstof Oryszewski	2nd Cook
Gerlinde Grübe	Chief Steward
Przemyslaw Ziecina	2nd Steward
Winfried Jahns	Bosum
Torsten Bierstedt	A. B.
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Figure 3.1.1: Participants of cruise SO190 Leg 2, Darwin-Darwin.

4. Agenda of cruise SO190 Leg 2

Cruise SO 190 Leg 2 "SINDBAD" started on November 10, 2006, in Darwin, Australia. Altogether 18 scientists embarked on RV SONNE in Darwin, comprising the international group of scientists from Indonesia, Germany and Russia. The transit from Darwin to the study region started at 09:30 11.11.2006 and was intensely used for the preparation of the scientific equipment and installation of hardware. After leaving the Australian EEZ on Monday, 13.11 at 08:30, the logging of the Simrad Echosystem was activated and continued throughout the cruise.

Soon after the ship stopped and all release systems for the ocean bottom recorders were successfully tested to a depth of 4100 m, including a CTD measurement. The velocity profile obtained was used for all mapping activities east of 114°40´ E, while a profile obtained at 111° E during the previous leg was used to the west. Some further mapping was conducted before the first seismic profile was shot.

Along Profile 21 a total of 21 instruments was deployed during the night 14/15.11., shots were fired into them for 15 hours and all instruments were recovered by midday 16.11. During the transit to the next line, the magnetometer was deployed and successfully recorded the magnetic field strength.
The next profile was a north-south oriented line at 116° E, and besides 29 OBH/OBS also six OBMT-Stations were deployed to record for the duration of the cruise. Shooting along this 140 nm long profile was done with a 60 sec shot interval. All instruments were recovered in the evening of 20.11. For the next two days, the trench and forearc high were mapped in detail, and the magnetometer was deployed in addition.

We then continued to move further west and reached the westernmost area at 113°E, where at first 21 instruments (OBS57 to OBS77) were deployed along the strike line P41. Deployment started on 23.11. and recovery was finished in the morning of 25.11. With the magnetometer deployed two bathymetric profiles were acquired, before deployment of 30 instruments (OBS78 to OBS107) along the southern part of the dip line (Profile 42) began on 26.11. Shooting extended for 120 nm and all instruments were successfully recovered on 28.11. During this deployment we also equipped five OBS with an additional methane sensor. The extension of this line (Profile 43) towards the coast was achieved from 29.11. to 01.12. Altogether 22 instruments (OBS108 to OBS129) were used. When shooting along the northernmost part of the profile, a four-channel streamer was also deployed, since the MCS data acquired on the previous leg by the BGR, Hannover, Germany terminated ca. 20 nm off the coast. All seismic data recovered were of excellent quality. The following two days were used to map the area between the trench and the forearc high, again the magnetometer was deployed.

We subsequently set course towards Lombok Island, where the extension of Profile 31 was planned. Another 24 instruments (OBH130 to OBS153) were deployed along this profile and recovered after shooting with a 60 s trigger interval at a speed of 5.0 kn. In the morning of 06.12. , all instruments were successfully recovered, and the data quality turned out to be excellent again. Together with profile 31 the total profile length is 360 km, and the recordings from altogether 54 instruments will make it possible to determine the seismic wavefield in detail.

After a 30 hour transit along the lowermost slope we reached the working area at 121°E. Starting in the evening of 07.12. thirty (OBH154 to OBH183) instruments were deployed at 3.5 nm spacing, and subsequently the airguns were deployed and a 118 nm long profile was shot. Towards the end, the four-channel streamer was deployed, since our profile (P11) extended beyond the coverage of MCS line BGR06-319. Shooting was terminated at 06:00 09.12., and the southernmost 16 instruments were recovered to be redeployed in the extension of the array to the north (OBH184 to OBH199). Shooting along the northern part of the transect (P12) was done on 10.12. at a speed of 5 kn and with a trigger interval of 60 s. All instruments were recovered in the evening of 11.12.

For Profile P22 at about 119° E altogether 30 instruments (OBH200 to OBS229) were deployed south of Sumba Island with an average spacing of 4 nm, leaving a 15 nm wide gap across the trench. Shooting started at midnight 12./13. December and was terminated at 06:00 on 14.12. Subsequent recovery of the 30 instruments lasted for 22 hours.

During the transit from 110° E to 116° E the magnetometer was deployed. The last seismic profile to be collected was P33, a strike line in the center of Lombok Basin. In the evening of 15.12., the deployment of 16 OBH/OBS (OBH230 to OBH245) commenced. Shooting along this ca. 60 nm long profile was conducted on 16.12. and all instruments were recovered early in the morning of 17.12. This ended the seismic acquisition of SO190-2, with a total of 239 instruments deployed and recovered. A total of 14.332 airgun shots were fired along 1.020 nm of profiles.

The remaining hours of 17.12. and part of 18.12. were used to recover the six OBMT stations, which were deployed during the early days of the cruise. With an ascend speed of about 30 meters per minute a considerable waiting time was used for instruments that were deployed in deep water (maximum around 5800 m). Despite this shortcoming, all six instruments were recovered and apparently had recorded data continuously and without problems.

The remaining time of the cruise was used to further map the trench and slope areas east of 116° E, also initiating the transit back to Darwin. For profiles on the oceanic crust the magnetometer was deployed. Upon reaching the Australian EEZ, the Simrad data logging was turned off on 20.12. at 11:00 local time.

SONNE reached the pilot station in Darwin at 17:00 on 22.12., terminating the successful cruise SO190-2 after 41.5 days at sea, cruising for 8575 nm. Throughout the cruise weather conditions were perfect, always calm seas and blue skies, only interrupted two or three times by a short rainy and windy period for a few hours.

In Figure 4.1 a track plot of SO190-2 is shown.

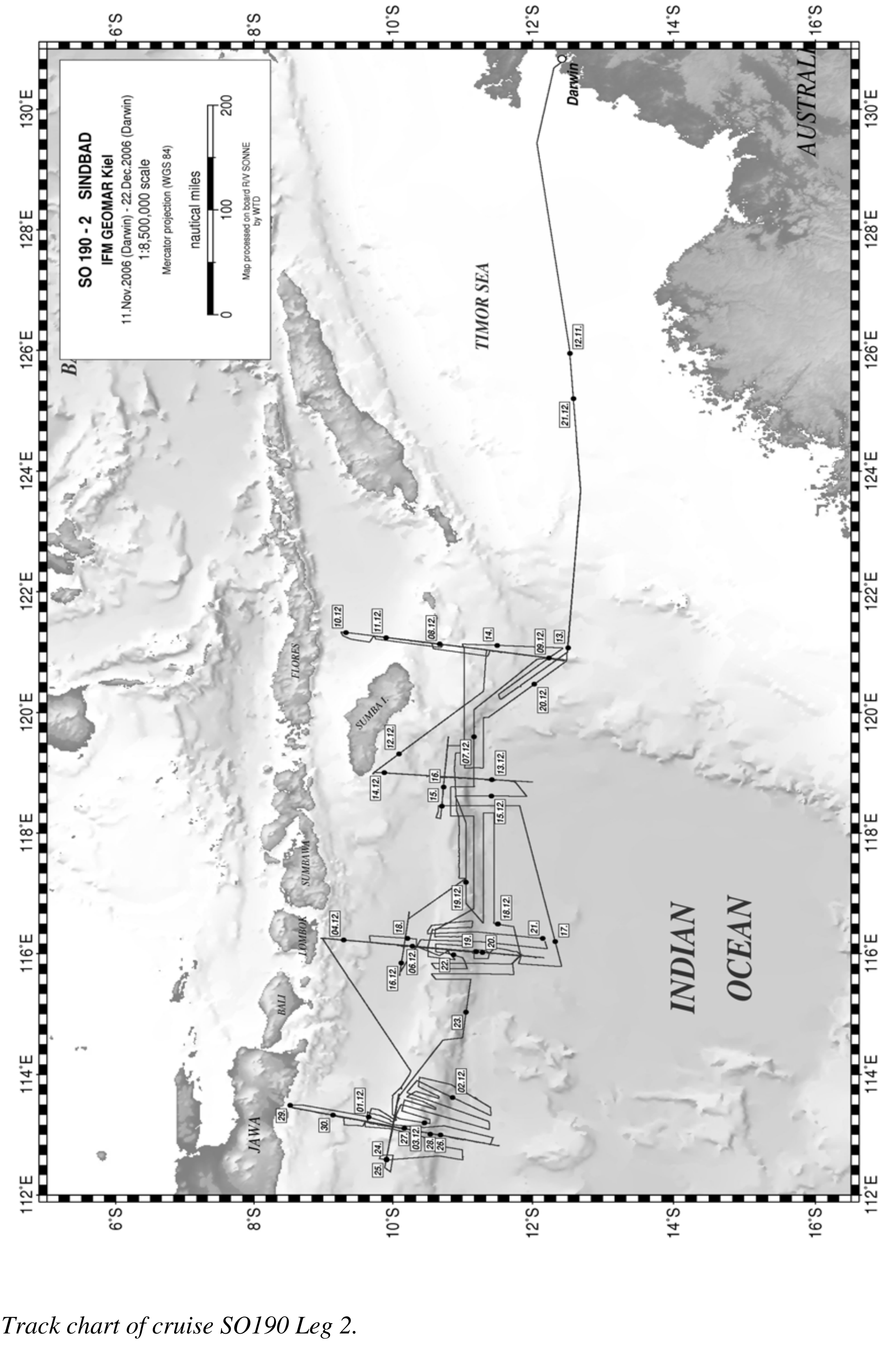


Figure 4.1: *Track chart of cruise SO190 Leg 2.*

5. Scientific equipment
5.1 Shipboard equipment
5.1.1 Navigation

A crucial prerequisite for all kinds of marine surveys is the precise knowledge of position information (latitude, longitude, altitude above/below a reference level). Since 1993 the global positioning system (GPS) is commercially available and widely used for marine surveys. It operates 24 satellites in synchronous orbits, thus at least 3 satellites are visible anywhere at any moment (Seeber, 1996). The full precision of this originally military service yields positioning accuracies of a few meters. In the past this was restricted to military forces and inaccessible to commercial users (Blondel and Murton, 1997). Since about 2000 the full resolution is generally available (with an accuracy in the order of 15 m). During this cruise the operation of the differential (DGPS) option was not requested as standard precision coordinates are precise enough for seismological monitoring stations.

GPS-values as well as most other cruise parameters are continuously stored in the navigation database, and are distributed via the DVS- ("data distribution system") on the ship's network.

5.1.2 Simrad EM120 swathmapping bathymetry system

The EM120 system is a multibeam echosounder (with 191 beams) providing accurate bathymetric mapping up to depths exceeding 11000 m. This system is composed of two transducer arrays fixed on the hull of the ship, which send successive frequency coded acoustic signals (11.25 to 12.6 kHz). Data acquisition is based on successive emission-reception cycles of this signal. The emission beam is 150° wide across track, and 2° along track direction (Fig. 5.1.2.1). The reception is obtained from 191 overlapping beams, with widths of 2° across track and 20° along it (Fig. 5.1.2.1). The beam spacing can be defined as equidistant or equiangular, and the maximum seafloor coverage fixed or not. The echoes from the intersection area (2°*2°) between transmission and reception patterns (Fig. 5.1.2.1) produce a signal from which depth and reflectivity are extracted.

For depth measurements, 191 isolated depth values are obtained perpendicular to the track for each signal. Using the 2-way-travel-time and the beam angle known for each beam, and taking into account the ray bending due to refraction in the water column by sound speed variations, depth is estimated for each beam. A combination of phase (for the central beams) and amplitude (lateral beams) is used to provide a measurement accuracy practically independent of the beam pointing angle. The raw depth data need then to be processed to obtain depth-contour maps. In the first step, the data are merged with navigation files to compute their geographic position, and the depth values are plotted on a regular grid to obtain a digital terrain model (*DTM)*. In the last stage, the grid is interpolated, and finally smoothed to obtain a better graphic representation.

Together with depth measurements, the acoustic signal is sampled each 3.2ms and processed to obtain a cartographic representation, commonly named mosaic, where grey levels are representative of backscatter amplitudes. These data provide thus information on the sea-floor nature and texture; it can be simply said that a smooth and soft seabed will backscatter little energy, whereas a rough and hard relief will return a stronger echo.

The EM120 was used continuously during cruise 190 Leg 2. Bathymetric data were processed routinely onboard during the survey, using the NEPTUNE software from Simrad, available on board and the academic software MB-System from Lamont-Doherty Earth Observatory. Subsequently, the data collected during SO190 Leg 2 were merged with data collected during the previous leg and during previous cruises and maps were generated which are shown in Figures 6.1.1 through 6.1.6.

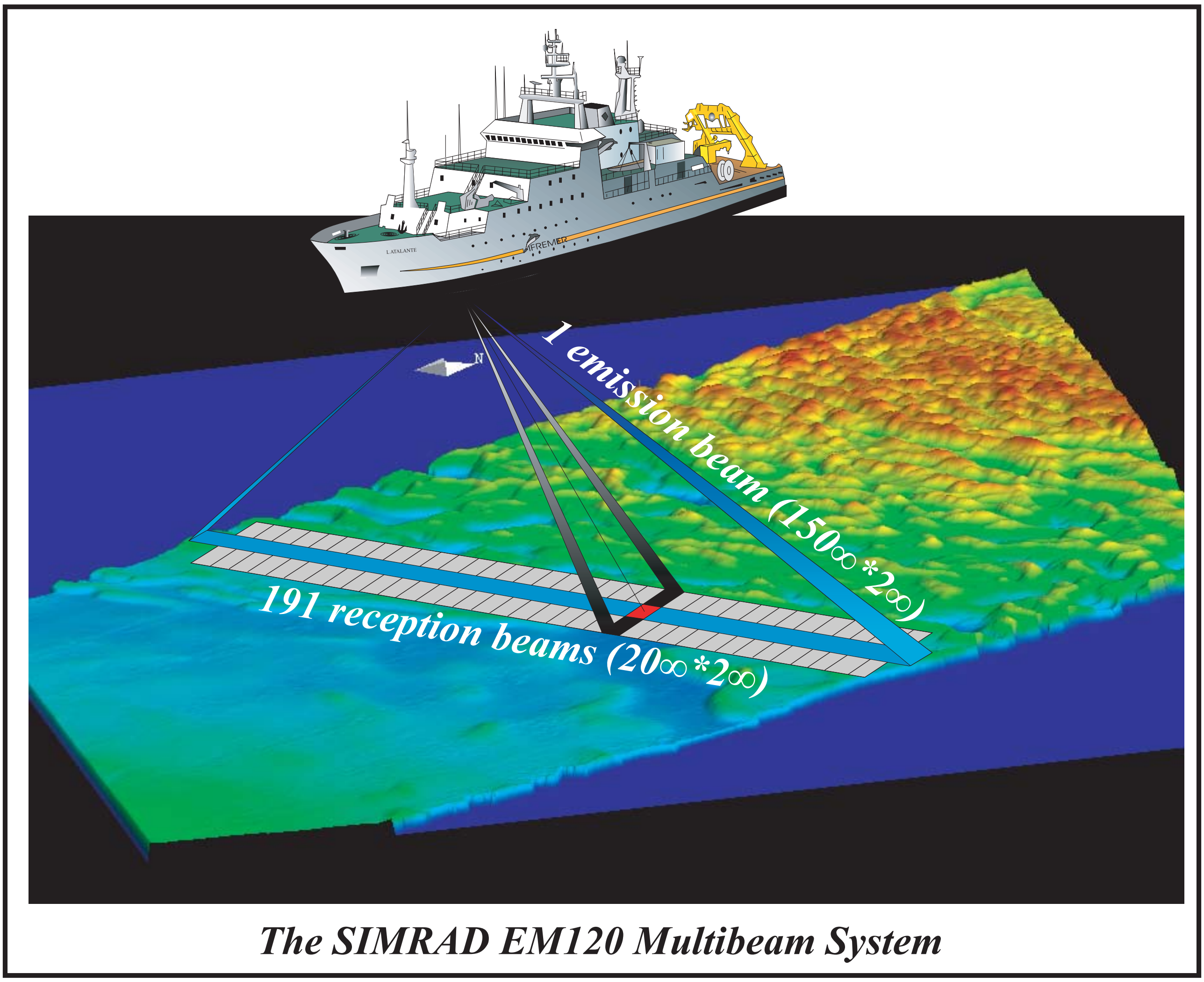


Figure 5.1.2.1: *Acquisition method for bathymetric and backscatter data from the Simrad EM120 system (crossed beams technique).*

5.1.3 Parasound

The PARASOUND system works both as a low-frequency sediment echosounder and as a high-frequency narrow beam sounder to determine the water depth. It utilizes the parametric effect, which produces additional frequencies through nonlinear acoustic interaction of finite amplitude waves. If two sound waves of similar frequencies (here 18 kHz and e.g. 22 kHz) are emitted simultaneously, a signal of the difference frequency (e.g. 4 kHz) is generated for sufficiently high primary amplitudes. The new component travels within the emission cone of the original high frequency waves, which are limited to an angle of only 4° for the equipment used. Therefore, the footprint size of 7% of the water depth is much smaller than for conventional systems and both vertical and lateral resolution is significantly improved.

The PARASOUND system is permanently installed on the ship. The hull-mounted transducer array has 128 elements within an area of 1 m^2. It requires up to 70 kW of electric power due to the low degree of efficiency of the parametric effect. In 2 electronic cabinets, beam formation, signal generation and the separation of the primary (18, 22 kHz) and secondary frequencies (4 kHz) is carried out. Using the third electronic cabinet located in the echosounder control room, the system is operated on a 24 hour watch schedule.

Since the two-way travel time in the deep sea is long compared to the length of the reception window of up to 266 ms, the PARASOUND System sends out a burst of pulses at 400 ms intervals, until the first echo returns. The coverage in this discontinuous mode is dependent on the water depth and also produces non-equidistant shot distances between bursts.

The main tasks of the operators are system and quality control and to adjust the start of the reception window. Because of the limited penetration of the echosounding signal into the sediment, only a short time window close to the sea floor is recorded.

In addition to the analog recording features with the b/w DESO 25 device, the PARASOUND System is equipped with the digital data acquisition system ParaDigMA, developed at the University of Bremen. The data is stored on removable hard disks using the standard, industry-compatible SEGY-format. The 486-processor based PC allows for buffering, transfer and storage of the digital seismograms at very high repetition rates. Of the emitted series of pulses, usually only every second pulse can be digitized and stored, resulting in recording intervals of 800 ms for a given pulse sequence. The seismograms are sampled at a frequency of 40 kHz, with a typical registration length of 266 ms for a depth window of ~200 m. The source signal is a band limited, 2-6 kHz sinusoidal wavelet with a dominant frequency of 4 kHz and duration of 1 period (250 µs total length).

The PARASOUND system was not used during this cruise.

5.1.4 CTD data

The CTD rosette onboard RV SONNE was deployed during cruise SO190 to measure physical oceanographic parameters (Fig. 5.1.4.1.). The CTD station was run to a water depth of 1800 m at a velocity of 1 m/s continuously measuring the sound speed in-situ. The sound velocity profile is shown in Figure 5.1.4.2.

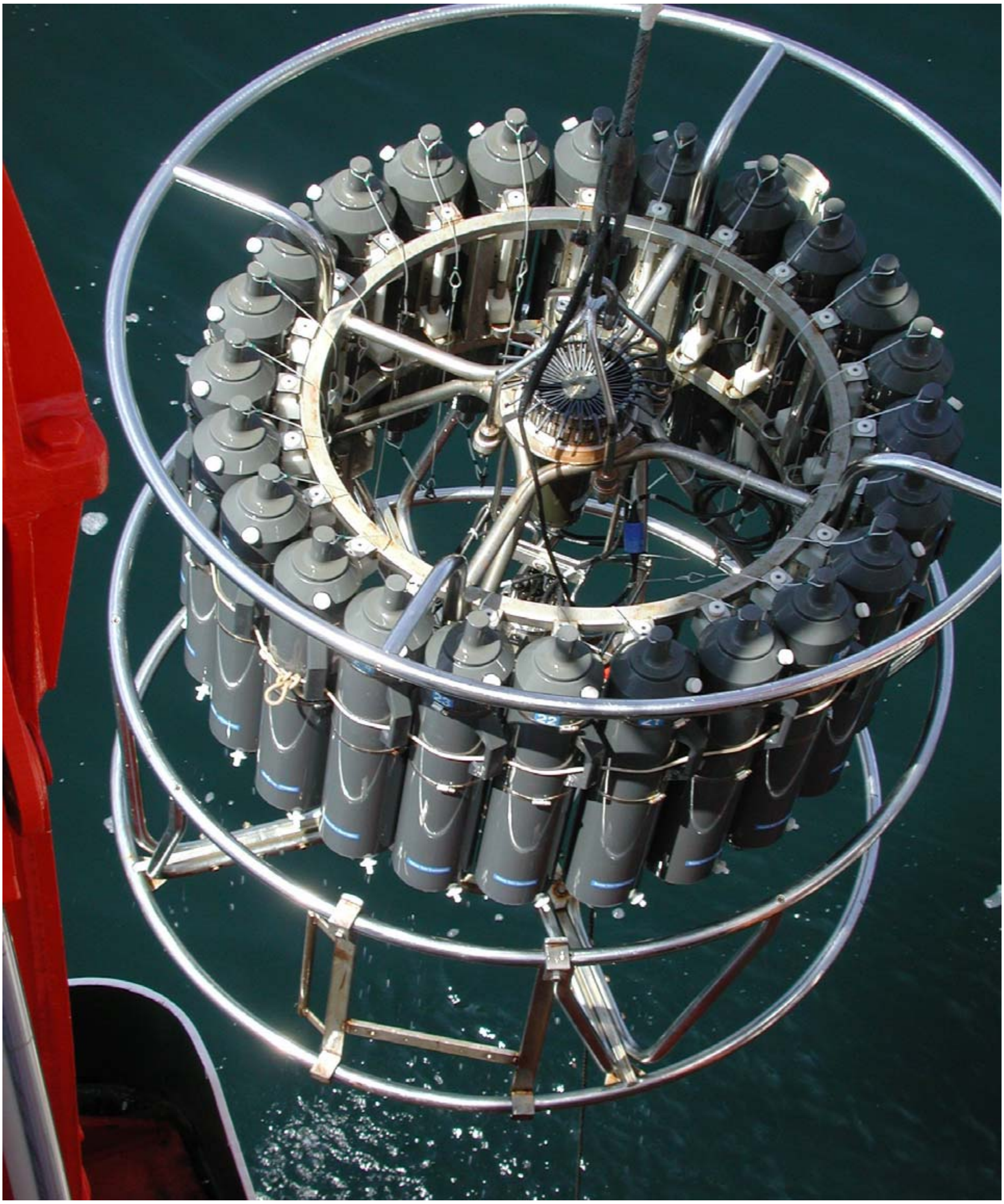


Figure 5.1.4.1: *RV SONNE's onboard CTD rosette upon deployment.*

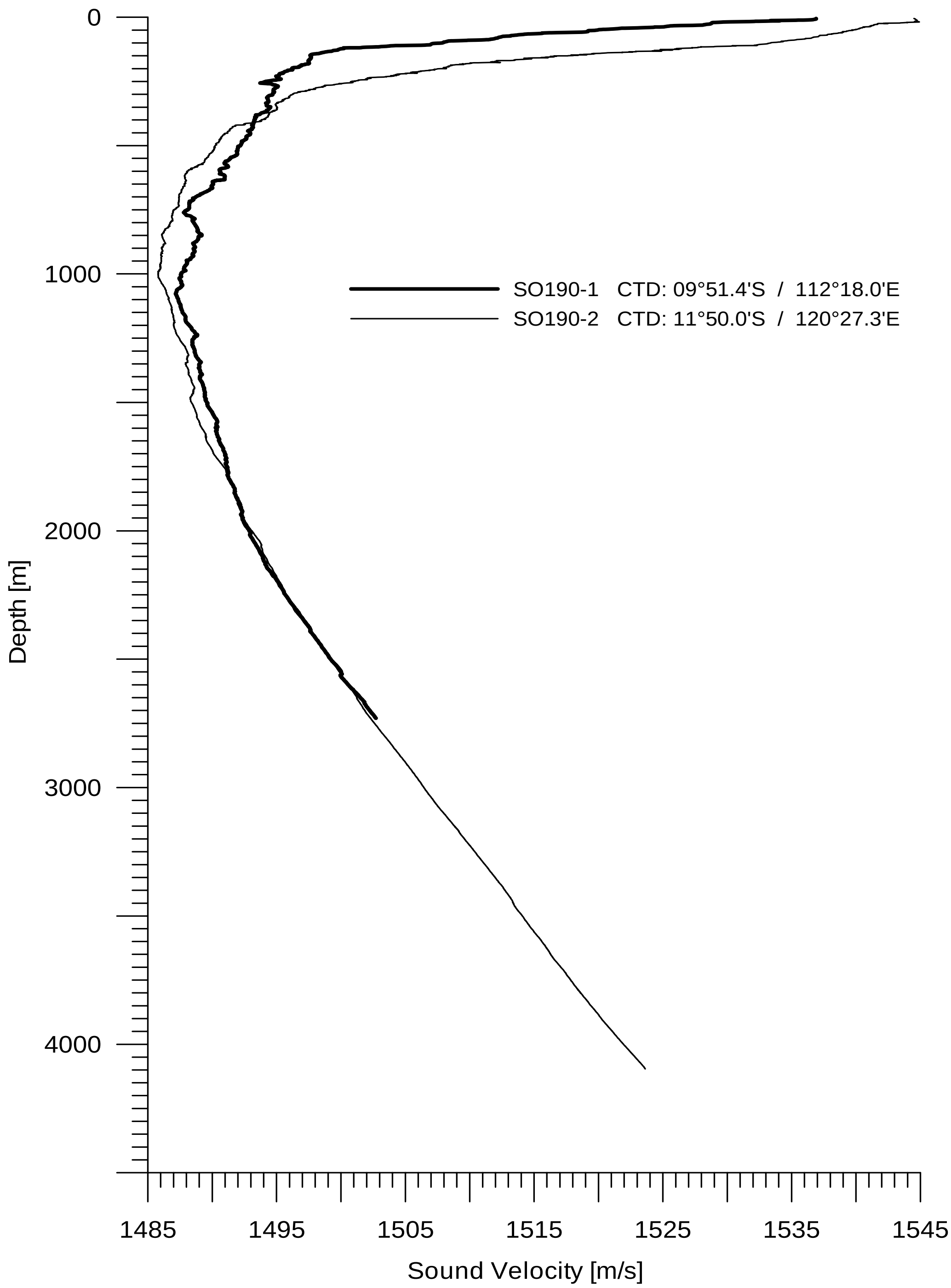


Figure 5.1.4.2: *Sound velocity profile obtained from CTD measurement during SO190-1 on 13.10.2006 at 09:43 UTC and the SO190-2 profile on 13.11.2006 at 04:24 UTC.*

Accurate sound velocity profiles are needed for calibration of the water sound velocity to transfer the echo times of the bathymetric swath mapping into water depth. The velocity profile exhibits the typical curvature with similar characteristics of measurements conducted elsewhere.
The sound velocity profile of SO190-1 are used from 114°40 E to the west and the sound velocity profile of SO190-2 are used from 114°40 E to the east.

5.2 Computer facilities for bathymetry and seismic data processing

The experiments and investigations during SO190 required special computing facilities in addition to the existing shipboard systems. For programming of ocean bottom stations, processing and interpretation of seismic data and analysis of magnetics, several PC-workstations and a dedicated PC-laptop were installed by the wide angle and bathymetry groups of IFM-GEOMAR.

Due to the large amount of data transfer IFM-GEOMAR installed a workstation cluster onboard comprising the following systems:

1	”caicos”	INTEL Pentium 4 3.2 GHz	2 CPU, 1 GB memory	375 GB disks, 4x PCMCIA	Windows XP Linux (Suse 10.1)
2	”potosi”	INTEL Pentium 4 3.2 GHz	2 CPU, 1 GB memory	375 GB disks, 4x PCMCIA	Windows XP Linux (Suse 10.1)
3	”crimea”	AMD Duron 700 MHz	1 CPU, 128 MB memory	68 GB disks, 6x PCMCIA	Windows XP Linux (Suse 9.3)
4	”roorise”	AMD Duron 700 MHz	1 CPU, 128 MB memory	68 GB disks	Windows XP Linux (Suse 10.1)

In addition to these computers, several laptops were used and two Macintosh computers for the seismic modeling and interpretation with the forward modeling program MacRay were available. For plotting and printing one Kyocera Mita FS6020 Postscript Laserprinter (papersize A3 and A4) as well as the shipboard color plotters were available.

The workstation cluster was placed in the Magnetiklabor and the Reinlabor where "roorise" was used for working on the bathymetry data, whereas the other three PCs were used to work with the seimic data. The huge amount of data and thus data transfer required a high-performance network, which was accomplished by a switched twisted-pair ethernet. A 24-port ethernet switching-hub (3COM-SuperstackII 3300) with an uplink connection of 100 Mbps maintained the necessary network performance. A shiboard router was used to allow for communication between the IFM-GEOMAR and the shipboard network in order to keep the shipboard network undisturbed by the workstation cluster. This provided the additional benefit of a simplified network configuration. The workstations used the same IP-addresses and network configuration as at IFM-GEOMAR so no further setup work was necessary. Sharkoon 250 GB usbdiscs were used as backup system. They were formatted to allow for backup of files larger than 2 GB, typical sizes for seismic data files.

This network setup showed a reliable and stable performance, and no breakdowns were observed.

5.3 Seismic Instrumentation
5.3.1 OBH/OBS

The Ocean Bottom Hydrophone (OBH)

The first IFM-GEOMAR Ocean Bottom Hydrophone was built in 1991 and tested at sea in January 1992. This type of instrument has proved to have a high reliability; more than 4000 successful deployments were conducted since 1991. A total of 8 OBH and 22 OBS instruments were available for SO190-2. Altogether 239 sites were deployed for refraction seismic profiles during the SO190-2 cruise.
The principle design and a photograph showing the instrument upon deployment are shown in Figure 5.3.1. The design is described in detail by Flueh and Bialas (1996).

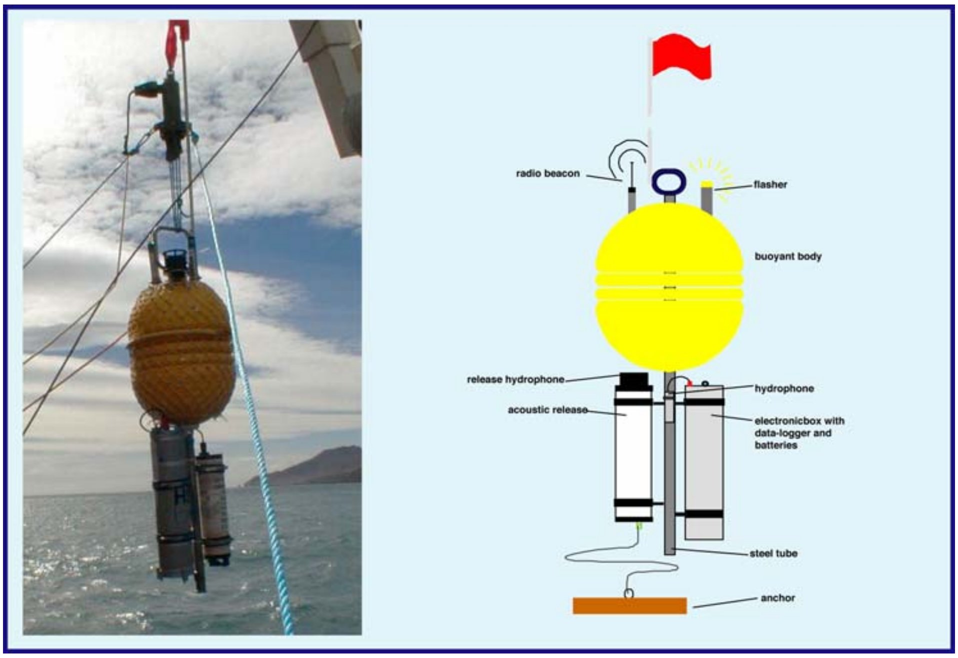
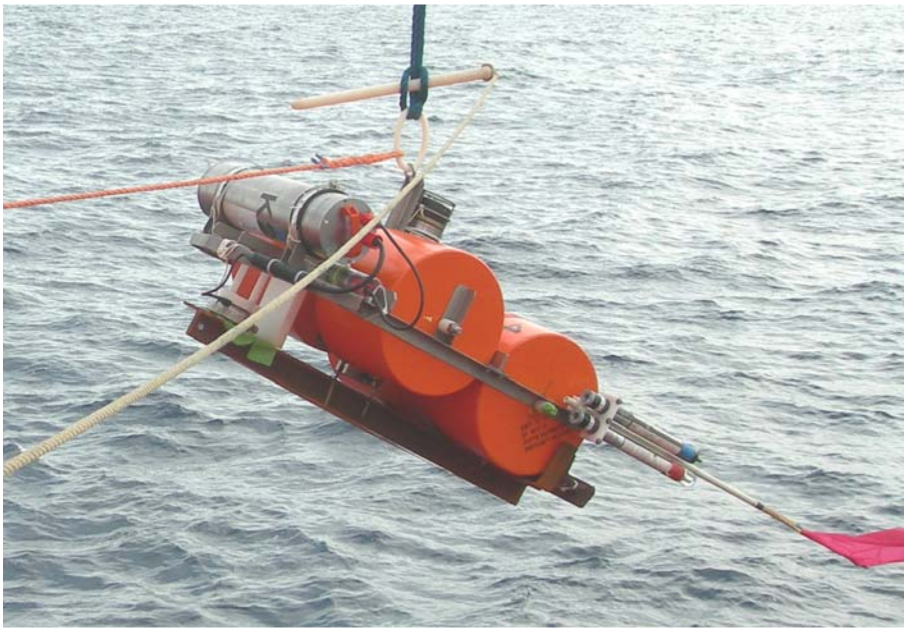


Figure 5.3.1: *Principle design of the IFM-GEOMAR OBH (right panel, after Flueh and Bialas, 1996) and the instrument upon deployment (left panel).*

The system components are mounted on a steel tube, which holds the buoyancy body on its top. The buoyancy body is made of syntactic foam and is rated, as are all other components of the system, for a water depth of 6000 m. Attached to the buoyant body are a radio beacon, a flash light, a flag and a swimming line for retrieving from aboard the vessel. The hydrophone for the acoustic release is also mounted here. The release transponder is a model *RT661CE* or *RT861* made by *MORS Technology* which recently became *IXSea*, or alternatively a *K/MT562* made by *KUM GmbH*. Communication with the instrument is possible through the ship's transducer system, and even at maximum speed and ranges of 4 to 5 miles release and range commands are successful. For anchors, we use pieces of railway tracks weighing about 40 kg each. The anchors are suspended 2 to 3 m below the instrument. The sensor is an *E-2PD* hydrophone from *OAS Inc.*, the *HTI-01-PCA* hydrophone from *HIGH TECH INC* or the *DPG* hydrophone, and the recording device is an *MBS, MLS* or *MTS* recorder of *SEND GmbH*, which is contained in its own pressure tube and mounted below the buoyant body opposite the release transponder (see Figure 5.3.1).

The IFM-GEOMAR Ocean Bottom Seismometer 2002



The IFM-GEOMAR Ocean Bottom Seismometer 2002 (OBS-2002) is a new design based on experiences gained with the IFM-GEOMAR Ocean Bottom Hydrophone (OBH; Flueh and Bialas, 1996) and the IFM-GEOMAR Ocean Bottom Seismometer (OBS, Bialas and Flueh, 1999). For system compatibility the acoustic release, pressure tubes, and the hydrophones are identical to those used for the OBH. Syntactic foam is used as floatation body again but this time in a less expensive cylinder shape. The entire frame can be dismounted for transportation, which allows storage of more than 50 instruments in one 20" container. Upon cruise preparation onboard all parts are screwed together within a very short time. Four main floatation cylinders are fixed within the system frame, while additional disks can be added to the sides without changes. The basic system is designed to carry a hydrophone and a small seismometer for higher frequency active seismic profiling. The sensitive seismometer is deployed between the anchor and the OBS frame, which allows good coupling with the sea floor. While the OBS sits on the seafloor, the only connection from the seismometer to the instrument is a cable and an attached wire, which retracts the seismometer during ascent to the sea surface. The three component seismometer (*KUM*) is housed in a titanium tube, modified from a package built by Tim Owen (Cambridge) earlier. Geophones of 4.5 or 15 Hz natural frequency are available. The signal of the sensors is recorded by use of the *Marine Longtime Recorder (MLS),* and *Marine Tsunameter Seismocorder (MTS)*, which are manufactured by *SEND GmbH* and specially designed for long-time recordings of low frequency bands. The hydrophone can be replaced by a differential pressure gauge (DPG) as described by Cox et al (1984).
While deployed to the seafloor the entire system rests horizontally on the anchor frame. After releasing its anchor weight the instrument turns 90° into the vertical and ascends to the surface with the floatation on top. This ensures a maximally reduced system height and water current sensibility at the ground (during measurement). On the other hand the sensors are well protected against damage during recovery and the transponder is kept under water, allowing permanent ranging, while the instrument floats at the surface.

Marine Broadband Seismic Recorder (MBS)

The so-called *Marine Broadband Seismic* recorder *(MBS;* Bialas and Flueh, 1999*)*, manufactured by *SEND GmbH*, was developed based upon experience with the DAT-based recording unit Methusalem (Flueh and Bialas, 1996) over previous years. This recorder involves no mechanically driven recording media, and the PCMCIA technology enables static flash memory cards to be used as non-powered storage media. Read/write errors due to failure in tape handling operations should not occur with this system. In addition, a data compression algorithm is implemented to increase data capacity. Redesign of the electronic layout enables decreased power consumption (1.5 W) of about 25% compared to the *Methusalem* system. Depending on the sampling rate, data output could be in 16 to 18 bit signed data. Based on digital decimation filtering, the system was developed to serve a variety of seismic recording requirements. Therefore, the bandwidth reaches from 0.1 Hz for seismological observations to the 50 Hz range for refraction seismic experiments and up to 10 kHz for high resolution seismic surveys. The basic system is adapted to the required frequency range by setting up the appropriate analogue front module. Alternatively, 1, 2, 3 or 4 analogue input channels may be processed. Operational handling of the recording unit is similar to that of the *Methusalem* system, or a file can be loaded via command or automatically after power-on. The time base is based on a DTCXO with a 0.05 ppm accuracy over temperature. Setting and synchronising the time as well as monitoring the drift is carried out automatically by synchronisation signals (DCF77 format) from a GPS-based coded time signal generator. Clock synchronisation and drift are checked after recovery and compared with the original GPS units. After software pre-amplification the signals are low-pass filtered using a 5-pole Bessel filter with a -3 dB corner frequency of 10 kHz. Then each channel is digitised using a sigma-delta A/D converter at a resolution of 22 bits producing 32-bit signed digital data. After delta modulation and Huffman coding the samples are saved on PCMCIA storage cards together with timing information. Up to 4 storage cards may be used. Data compression allows increase of this capacity. Recently, technical specifications of microdrives (disk drives of PCMCIA type II technology) have been modified to operate below 10° C, therefore 2 GB drives are now available for data storage. After recording the flashcards need to be copied to a PC workstation. During this transcription the data are decompressed and data files from a maximum of four flash memories are combined into one data set and formatted according to the PASSCAL data scheme used by the *Methusalem* system. This enables full compatibility with the established processing system. While the *Methusalem* system did provide 16 bit integer data, the 18 bit data resolution of the *MBS* can be fully utilised using a 32 bit data format.

The Marine Longtime Seismograph (MLS)

For the purpose of low-frequency recordings such as seismological observations of earthquakes during long-term deployments of about one year time a new data logger, the Marine Longtime Seismograph (MLS) was developed by *SEND GmbH* with support by IFM-GEOMAR.

The MLS is again a four channel data logger whose input channels have been optimised for 3-component seismometers and one hydrophone channel. Due to the modular design of the analogue front end it can be adapted to different seismometers and hydrophones or pressure sensors. Currently front ends for the Spahr Webb, PMD and Güralp seismometers as well as for a differential pressure gauge (DPG), a pressure sensor of high sensitivity and the OAS/HTI hydrophone are available. With these sensors we are able to record events between 50 Hz and 120 s. The very low power consumption of 250 mW during recording together with a high precision internal clock (0.05 ppm drift) allows data acquisition for one year. Data storage is done on up to 12 PCMCIA type II flashcards or microdrives, now available with a capacity of up to 2 GB. The instrument can be parameterised and programmed via a RS232 interface. After low pass filtering the signals of the input channels are digitised using Sigma-Delta A/D converters. A final decimating sharp digital low-pass filter is realised in software by a Digital Signal Processor. The effective signal resolution depends on the sample rate and varies between 18.5 bit at 20 ms and 22 bits at 1 s. Playback of the data is done under the same scheme as described for the MBS above. After playback and decompression the data is provided in PASSCAL format from where it can be easily transformed into standard seismological data formats.

The Marine Tsunameter Seismocorder (MTS)

This data logger is based on the experiences with the MBS and MLS devices. The GEOLON-MTS has been developed by *SEND GmbH* and is a high precision instrument for acquisition, processing, storage of seismic signals and additionally pressure data. Like the MLS it is optimised for long time (more than 1 year) standalone operation on the ocean bottom, data storage capacity is also up to 12 PCMCIA cards. The four channel data logger is prepared for connection with a hydrophone (also different types like e.g. HTI, OAS, or the Differential Pressure Gauge, DPG) and different types of three component seismometers as described above for the MLS.
Additionally a digital absolute pressure gauge can be connected to the auxiliary connector, which were not used during SO190-2.
Playback of the data is done according to the scheme described for the MBS and MLS above. After playback and decompression the data is provided in PASSCAL format.

5.3.2 Streamer

In addition to the ocean bottom seismic recorders for cruise SO190-2 a 4 channel mini streamer was tested and used for the first time. The streamer was deployed along the profiles, where the OBH/S profiles were extended compared to the BGR-reflection seismic profiles acquired during SO190-1, and therefore no streamer data was available. The streamer was manufactured by S.I.G. *(Service et Instruments de Geophysique, France)*. The system comprises several parts: four 12 m long active sections with 24 hydrophones spaced at 0.5 m. The lead-in cable is 150 m long and directly connected to the lab. The individual hydrophones are omnidirectional and have a flat frequency response from 10 to 1000 Hz. The sensitivity is –90 dB, re 1V/µbar, +-1 dB. Two preamplifiers were available, one with 32 db and one with 35.5 db gain. They are hosted right in front of the active section of the streamer. The hydrophones are mounted in an oil-filled polyurethane pipe of 25 mm diameter, with a nominal density of 1.13 gr/cm3. The tow depth can to be controlled by supplying the lead-in cable with air and the depth can be monitored at the depth monitor integrated in the system with the power supply. During the SO190-2 cruise it was towed at a depth of 6 m. The streamer had to be deployed and recovered manually.
A four channel MBS data logger (s.a.) was used to record the seismic signals of the G-gun clusters. Direct water wave arrival and reflection signals could be well observed using the online display capabilities of the MBS device (s.a.) already.
Due to the close distance between the two G-gun arrays at the stern of SONNE it was decided not to deploy the streamer madcap through the guns but to use the portside magnetometer boom on the Backdeck. Deployment and towing was guided through the large diameter rolls

of the IFM-GEOMAR magnetometer to avoid strong bending. With 7 m offset to the vessel the streamer was towed in safe distance to the port gun array.

5.3.3 Airgun System
G-gun Cluster

As the main seismic source G-gun clusters manufactured by *Sercel Marine Sources Division* (former *SODERA*) and *Seismograph Services Inc.* were operated in two arrays. Eight guns were set up in four clusters, carried by two 5 m long frames (Figure 5.3.2). All guns were fired through the IFM-GEOMAR LongShot airgun source controller manufactured by *RealTime* using the shipboard photo trigger of the *Preussag* telemetry system (see External Trigger below).
Each cluster comprises of two 520 cinch (8 l) G-guns (Figure 5.3.2) and the cluster arrangement provides a good primary to bubble signal ratio. Operating eight guns provides a volume of 64 litres, but should benefit in radiated energy from the multiple guns and the high working pressure. The G-guns were operated at 210 bar. For this purpose a second compressor was set up by RF onboard SONNE to increase the 140 bar pressure from the onboard *Leobersdorfer* unit to 210 bar. Profiles were shot at 40s and 60s shot interval. Using this interval the pressure could be kept between 205 and 210 bar with seldom dropped due to blow off from the safety valve. The single delay times of the guns kept constant during this time and hence should provide a consistent shape of the source signal.

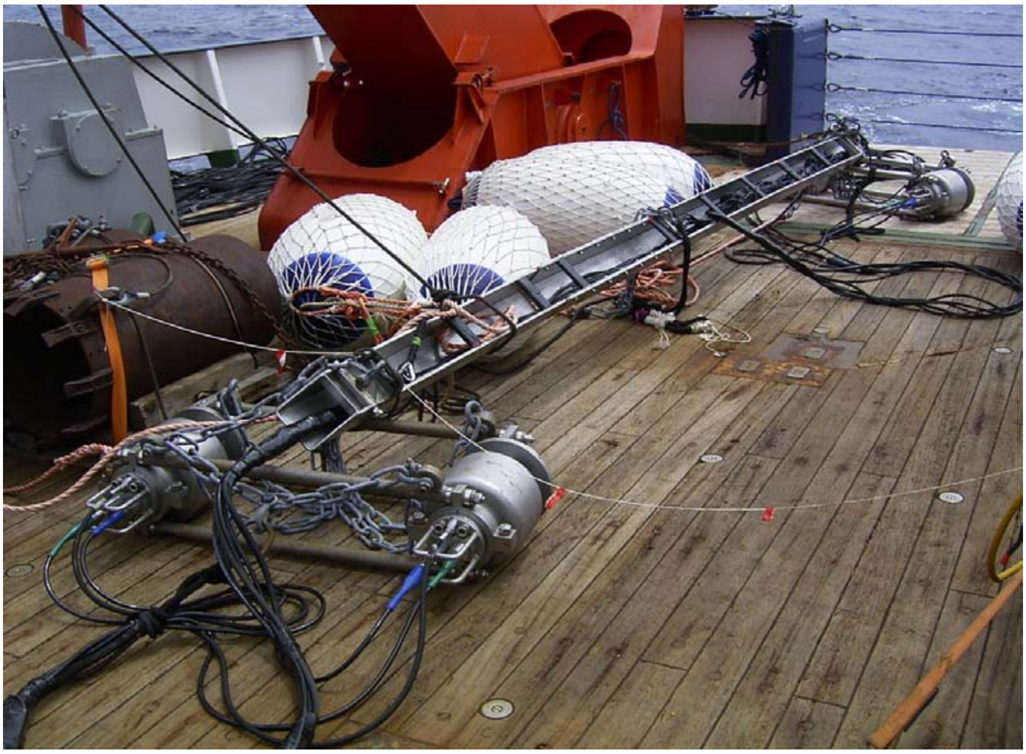


Figure 5.3.2*: Picture of a 5 m long G-gun Cluster carrier. Two G-gun clusters are mounted below the carrier, while four Polyform floatation are visible on the left hand side.*

The gun carriers (each 5 m long) were deployed through the inside of the A-frame, while towing was done by the aft mooring winches, which cables were guided through blocks on the outside ends of the A-frame (Figure 5.3.3). For lifting purposes winches on top of the A-frame were used. First the winch of the A-frame lifted one gun carrier, which was then guided behind the aft of the vessel. Here the towing winch took over the weight while the back of the carrier already tipped into the water. Now the hoisting rope was attached to the towing rope and finally the entire carrier was lowered into the water. Meanwhile four F11 size *Polyform* buoys were pushed into the water, acting as flotation for the frame. Towing depth was 8m during SO190-2 cruise.

Figure 5.3.3: *Starboard side G-gun carrier during recovery.*
The gun frame is lifted by the hoisting rope with a winch on top of the A-frame. Starboard towing wire can be seen directing towards the top left where it is led through a roll on the outside part of the A-frame.

This operation procedure allowed to deploy the guns and frame in horizontal position, which minimizes the danger of destroying pipes and cables. As the mooring winch does operate much faster than the assistant winch of the A-frame danger caused by the moving frame for people and equipment was further reduced. The two pairs of F11 size floatation on each carrier had been fixed at front and end so that the end float could be dropped into water prior to lowering of the carrier while it floats away from the vessel. The front buoy was kept on slip on the back post of the A-frame. It was dropped into water when the carrier started floating and hence cross cuts with ropes and floats was avoided. As well danger to crew working within the A-frame space was avoided. The entire procedure now allows deployment lifting the front of the gun carrier only about 2 meters out of the water. During recovery procedure the hoisting rope on top of the A-frame allowed to keep the gun carrier in horizontal position all the time as well. Next the second carrier was deployed/recovered in the same manner.

External trigger during SO190-2

Since the replacement of the old *Atlas* ANP navigation system on the bridge by the new DSHIP system from *Werum* GPS controlled seismic trigger signals are no longer available. Therefore the control device of the digital camera used with the *Preussag* OFOS telemetry system was used to provide a trigger signal for the airgun shots. The impulse was delivered to the *LongShot* trigger box. The trigger pulses from the OFOS system, necessary for subsequent data processing and instrument location, were stored on a MBS recorder and displayed in real time to double check. For this process the same time basis was used as for the OBH. A test of the timing reliability of the *LongShot* trigger box was performed consisting of a synchronous recording of the OFOS trigger signal and the Clock Time Break (CTB) of the *Longshot* device, i.e. a TTL pulse that is 5 ms wide and representing the aim-point or the time when the guns are firing. This aim-point was set to be 60 ms after the OFOS trigger pulse, but the test resulted in a delay of 155 ms pointing to an additional internal delay of the *Longshot* trigger box. After careful analysis of the direct arrivals and multiples in the seismic data, a delay of 135 ms with respect to the OFOS trigger pulse was determined, thus indicating a time shift of 20 ms of the airgun firing time given by the CTB pulse.
Exact position calculation for the shot time should be done by later post-processing using shot time and UTC time values stored with GPS coordinates in the ship's data base.

5.4 Methane Sensors

The detector of the METS (Franatech) methane sensor is a semi-conductor. Adsorption of hydrocarbons on the active layer leads to electron exchange with oxygen and thus to modification of the conductivity of the active layer, which the electronic converts into a voltage. A membrane desorbs dissolved gasses of the surrounding water into the gas phase containing the detectors. The diffusion is driven by Henry's Law. The direction is conditioned to the concentration gradient between water and gas phase, and within the membrane itself. The sensor is calibrated at relative humidity of 100%. Operational temperature range: -2°C to +60°C, calibration range 2 – 20°C; Methane: 50 nanomol/l – 10 µmol/l Response: Reaction time: 1 to 3 sec. t90-time: 5 to 30 min dependent on turbulences. Typical range limits are concentrations between 50 nmol/l and 10 µmol/l, and temperatures between 2 and 20°C.
The data logger is different to those of the seismic recorders. It is mounted in one pressure tube together with a seismic data logger both of them sharing one power source. The methane sensors are then mounted on OBS instruments together with the seismic sensors.

5.4.1 Methane Data

The configuration of the data logger and the download management is run under Windows-based software. For data storage, a 512 MB Secure Digital Card (SD-Card) is used. The logging interval is the time between two records of data on the SD-card. It can be set between 1 and 90 min, and between 1 and 24 hours. The acquisition time is the time within the logging interval during which measurement values are acquired and averaged.
Each sensor is calibrated under reference condition (25°C, 1 bar, 0 ‰ salinity) for a sensor-specific conversion formula. The output conversion formula describes the relation between the sensor signal output-voltage (U1 and U2) and the concentration of dissolved methane. U1 and U2, methane, and temperature voltage, are converted to the methane concentration C (in µmol/l) and gas temperature T (in °C). The conversion formula for each sensor is given in Figure 5.4.1. Over time the sensors drift and the specific calibration formulae are not applicable anymore. However with different calibration formulae not the absolute methane concentration can be obtained but still variations in the methane concentration, which we a re interested in. Sensors T31 and T28 did not drift, so their calibration formulae are valid and the data shown from those sensors (Figs. 5.4.4, 5.4.6-5.4.8) are absolute methane concentrations. Most stations provided reasonable data, which are displayed in Figures 5.4.2 – 5.4.11.

Seismic Profile 41

Along seismic profile 41, five methane sensors were deployed together with seismic stations. The locations of the instruments are shown in Figure 6.3.1.1. Data was recorded from all sensors and small regional variations in the methane concentration are observed (see Figs. 5.4.2-5.4.6). A local anomaly might be mapped on stations OBM67 and OBM68 between Julian day 328.1 and 328.3 (compare Figs. 5.4.3 and 5.4.4) which might be related to enhanced venting through faults cutting the seafloor.

Conversion Formula

METS T27

$$C = \exp\left(1.316 * \ln\left(\left(0.910+6.462 * \exp\frac{-U_1}{0.980}\right) * \left(\frac{1}{U_2} - \frac{1}{-1.069 + 6.810 * \exp\frac{-U_1}{1.356}}\right)\right)\right)$$

$$T = (21.573 * U_1) - 3.221$$

METS T28

$$C = \exp\left(1.297 * \ln\left(\left(2.639+7.840 * \exp\frac{-U_1}{0.474}\right) * \left(\frac{1}{U_2} - \frac{1}{-3.477 + 9.401 * \exp\frac{-U_1}{1.949}}\right)\right)\right)$$

$$T = (21.128 * U_1) - 1.438$$

METS T29

$$C = \exp\left(1.314 * \ln\left(\left(1.108+5.893 * \exp\frac{-U_1}{0.799}\right) * \left(\frac{1}{U_2} - \frac{1}{-0.935 + 6.503 * \exp\frac{-U_1}{1.312}}\right)\right)\right)$$

$$T = (21.537 * U_1) - 0.560$$

METS T30

$$C = \exp\left(1.266 * \ln\left(\left(1.043+10.112 * \exp\frac{-U_1}{0.767}\right) * \left(\frac{1}{U_2} - \frac{1}{-0.554 + 5.667 * \exp\frac{-U_1}{1.257}}\right)\right)\right)$$

$$T = (21.375 * U_1) - 4.874$$

METS T31

$$C = \exp\left(1.370 * \ln\left(\left(1.456+6.853 * \exp\frac{-U_1}{0.547}\right) * \left(\frac{1}{U_2} - \frac{1}{1.086 + 6.955 * \exp\frac{-U_1}{0.720}}\right)\right)\right)$$

$$T = (21.340 * U_1) - 3.221$$

Figure 5.4.1: Calibration formulae for the methane sensors.

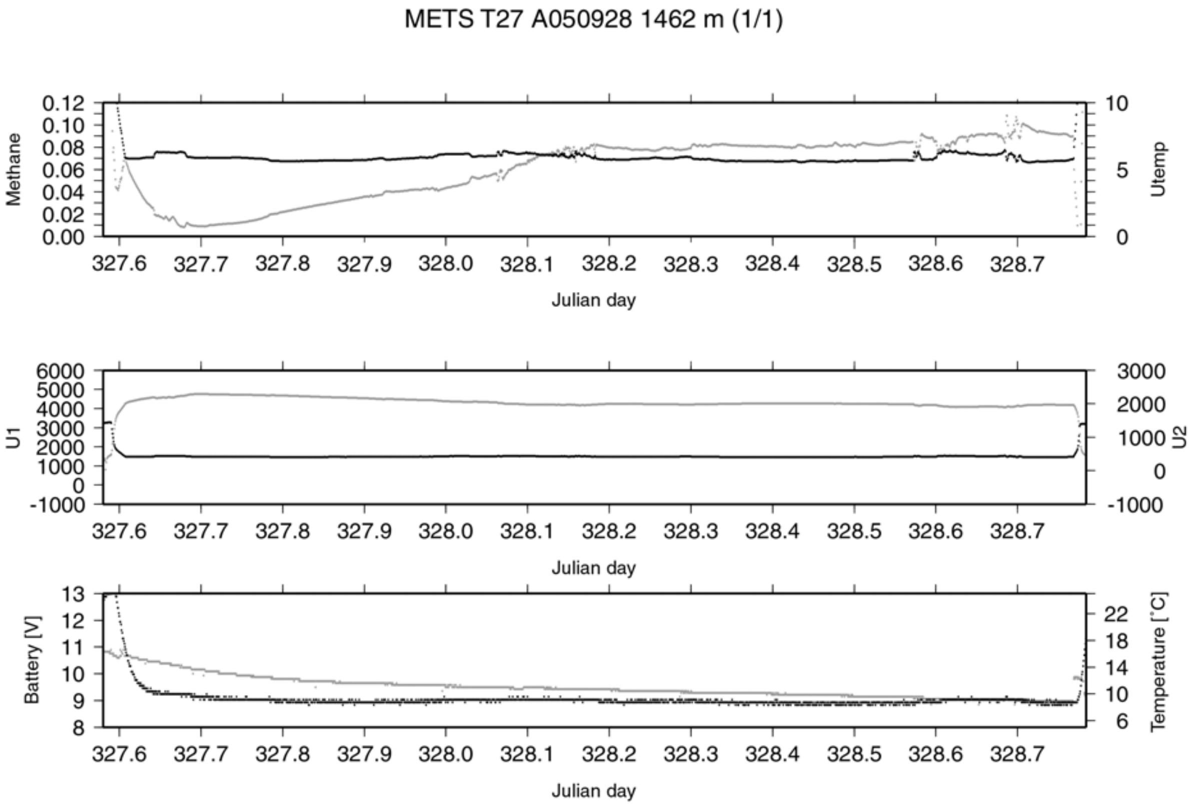


Figure 5.4.2: Raw data (bottom and middle, U [mv]), methane data (top, methane concentration [μmol/l]), OBM66.

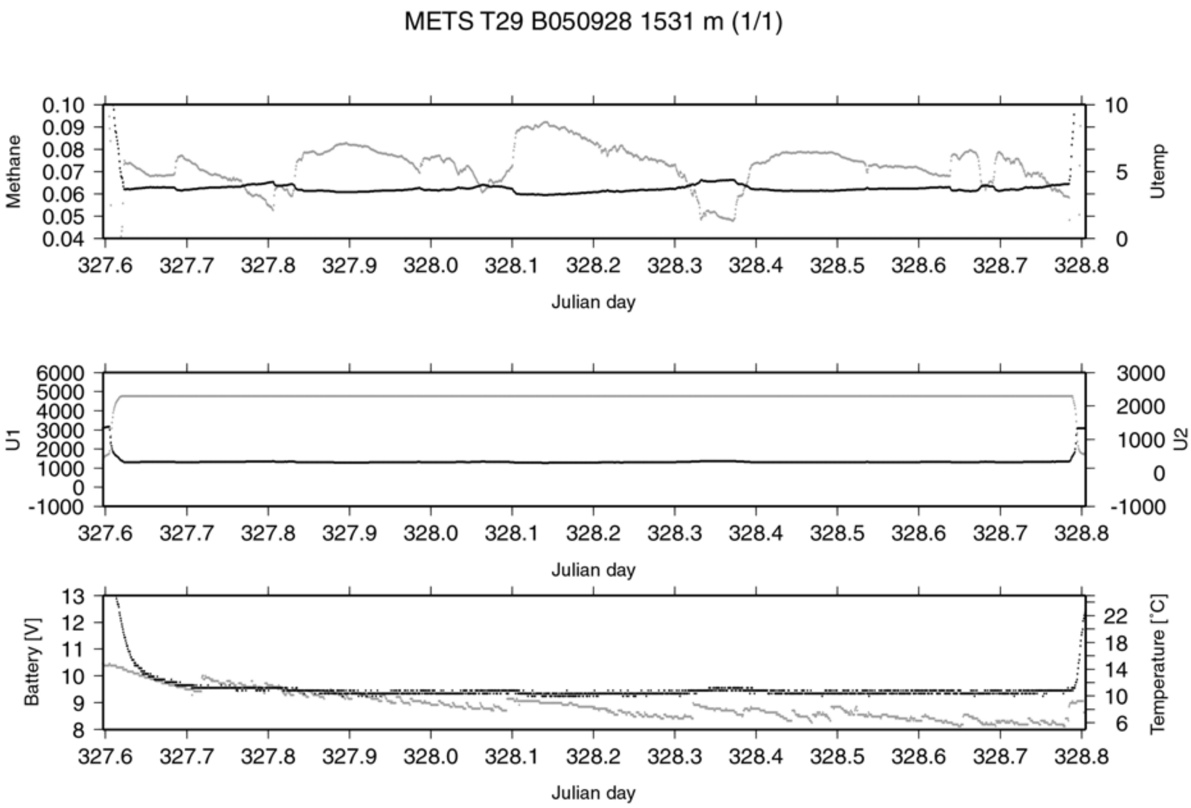


Figure 5.4.3: Raw data (bottom and middle, U [mv]), methane data (top, methane concentration [μmol/l]), OBM67.

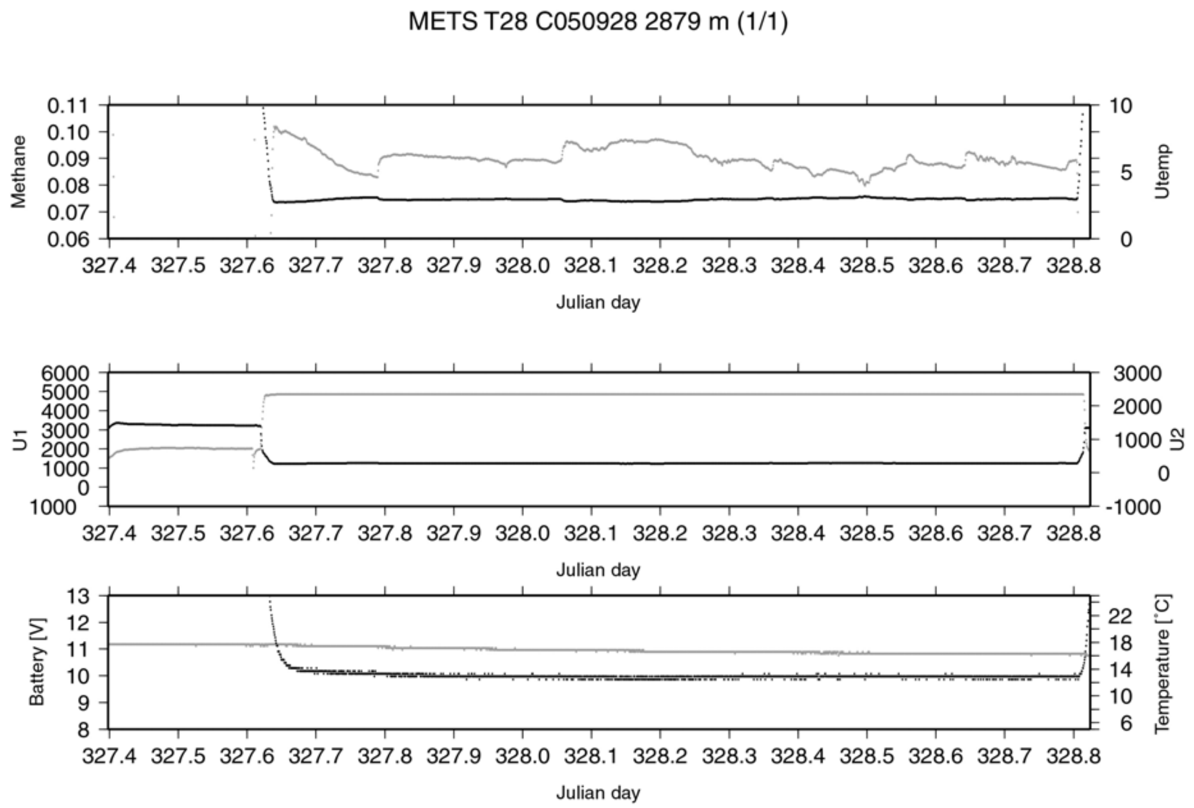


Figure 5.4.4: Raw data (bottom and middle, U [mv]), methane data (top, methane concentration [μmol/l]), OBM68.

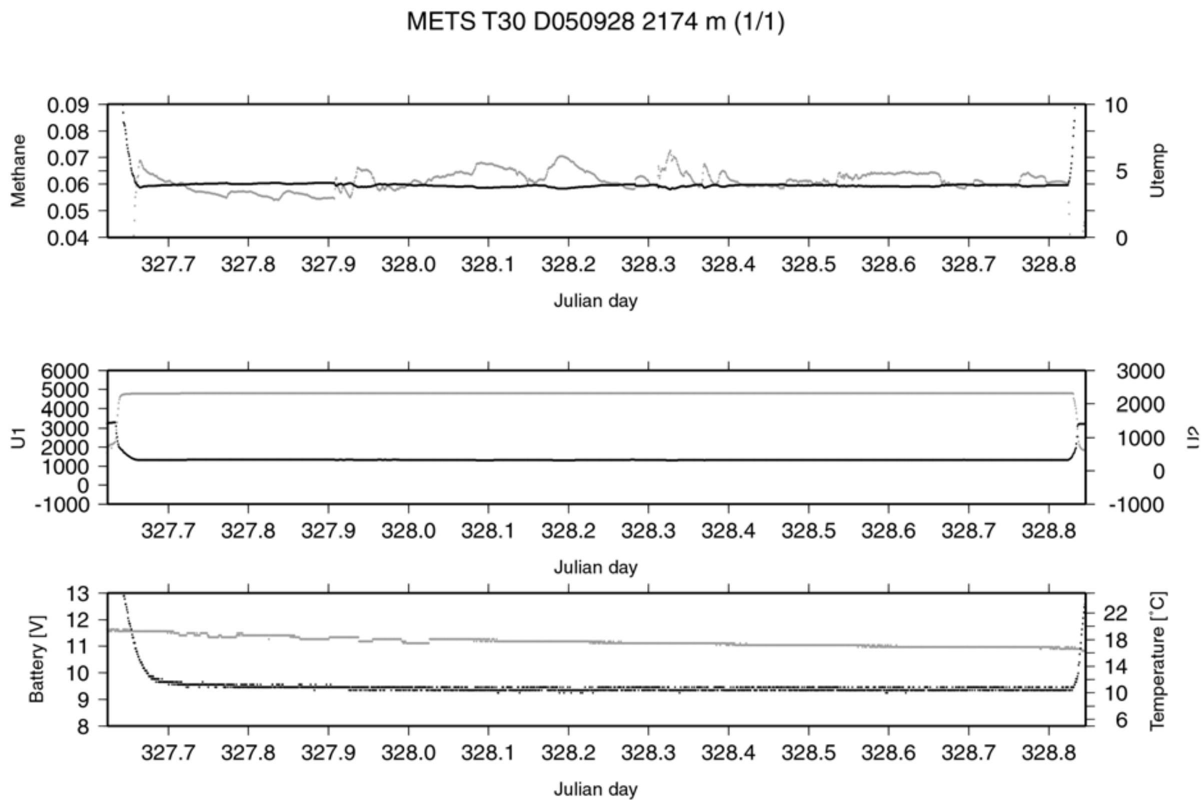


Figure 5.4.5: Raw data (bottom and middle, U [mv]), methane data (top, methane concentration [μmol/l]), OBM69.

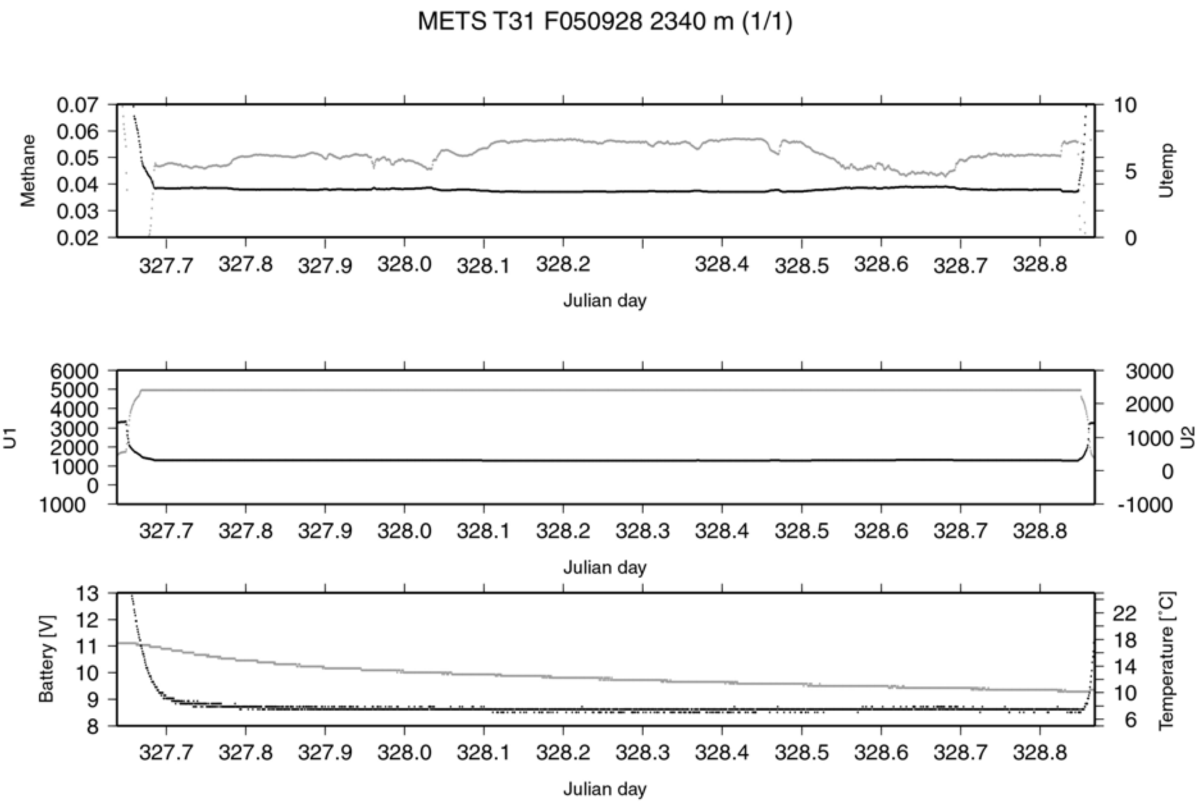


Figure 5.4.6: Raw data (bottom and middle, U [mv]), methane data (top, methane concentration [μmol/l]), OBM70.

Seismic Profile 42

Along the same corridor at 113°E, the five methane sensors were deployed again along profile 42. Here, as well as on the profile before small regional variations in the methane concentration can be observed at different stations, e.g. the negative peak at Julian day 330.4 at stations OBM78 and OBM80 (Figs. 5.4.7 and 5.4.8).

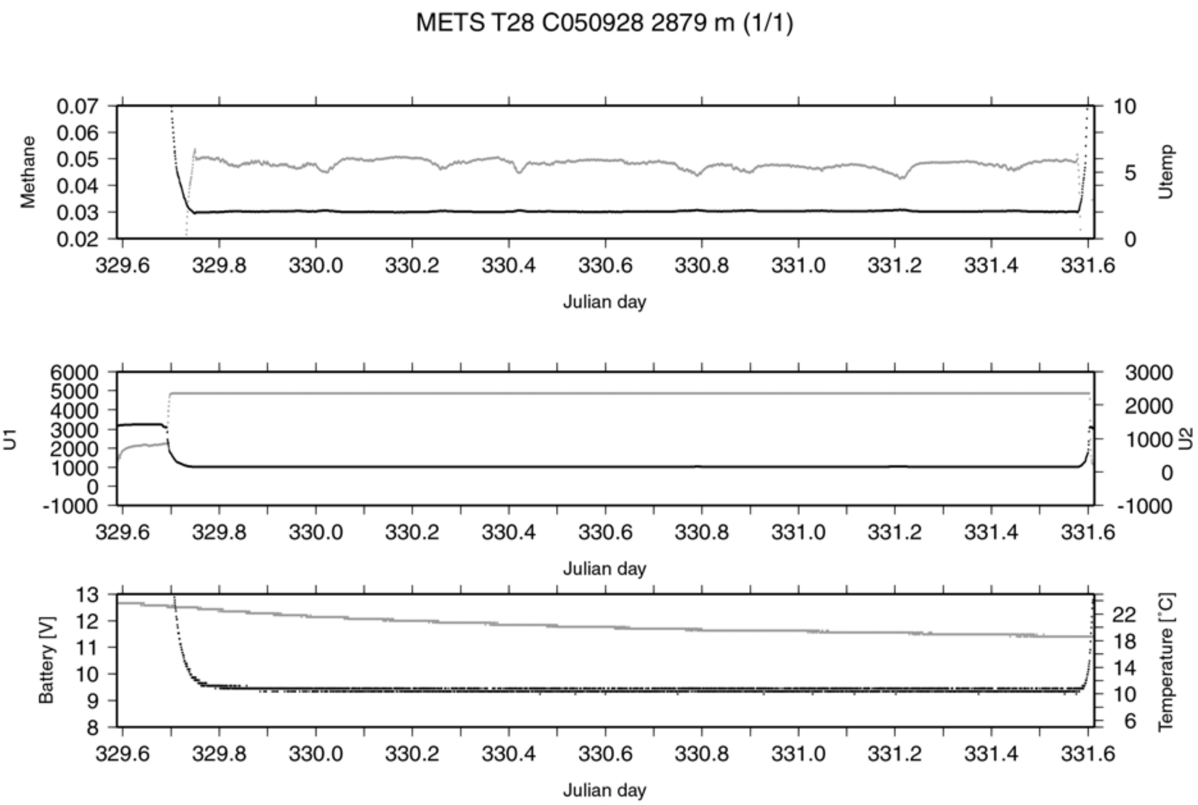


Figure 5.4.7: Raw data (bottom and middle, U [mv]), methane data (top, methane concentration [μmol/l]), OBM78.

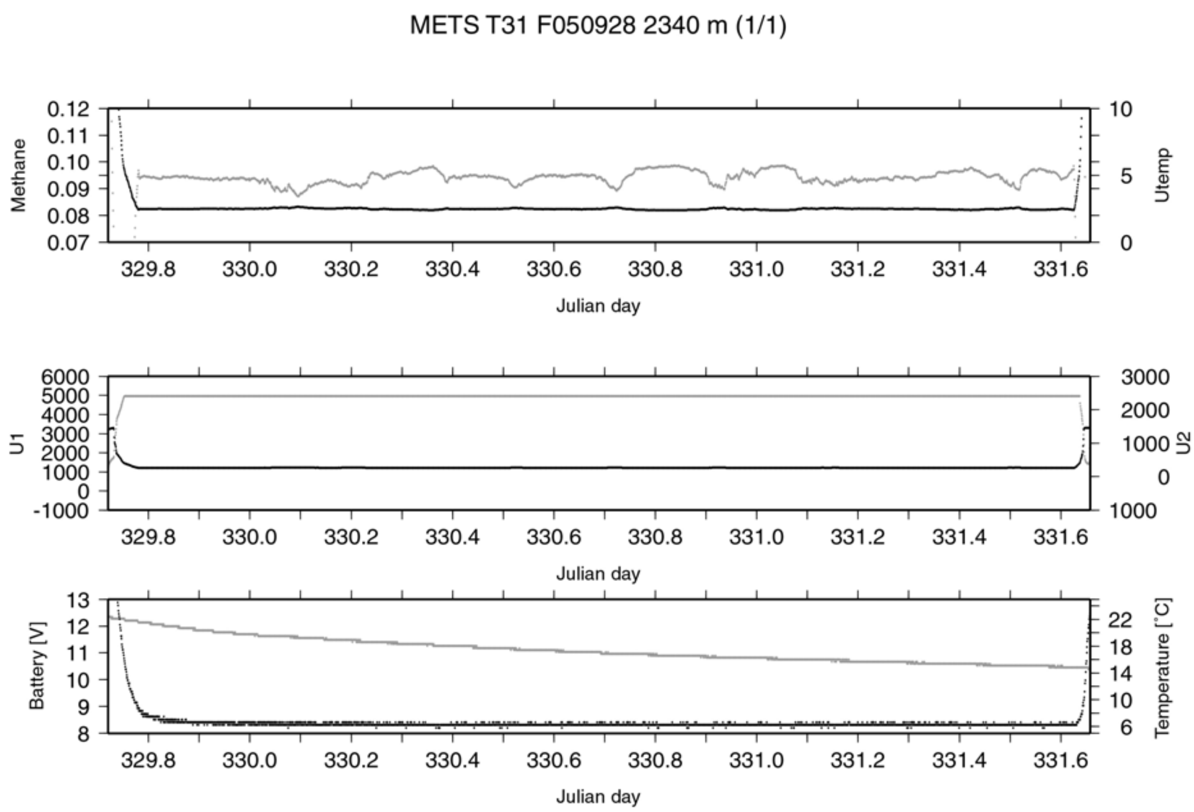


Figure 5.4.8: Raw data (bottom and middle, U [mv]), methane data (top, methane concentration [μmol/l]), OBM80.

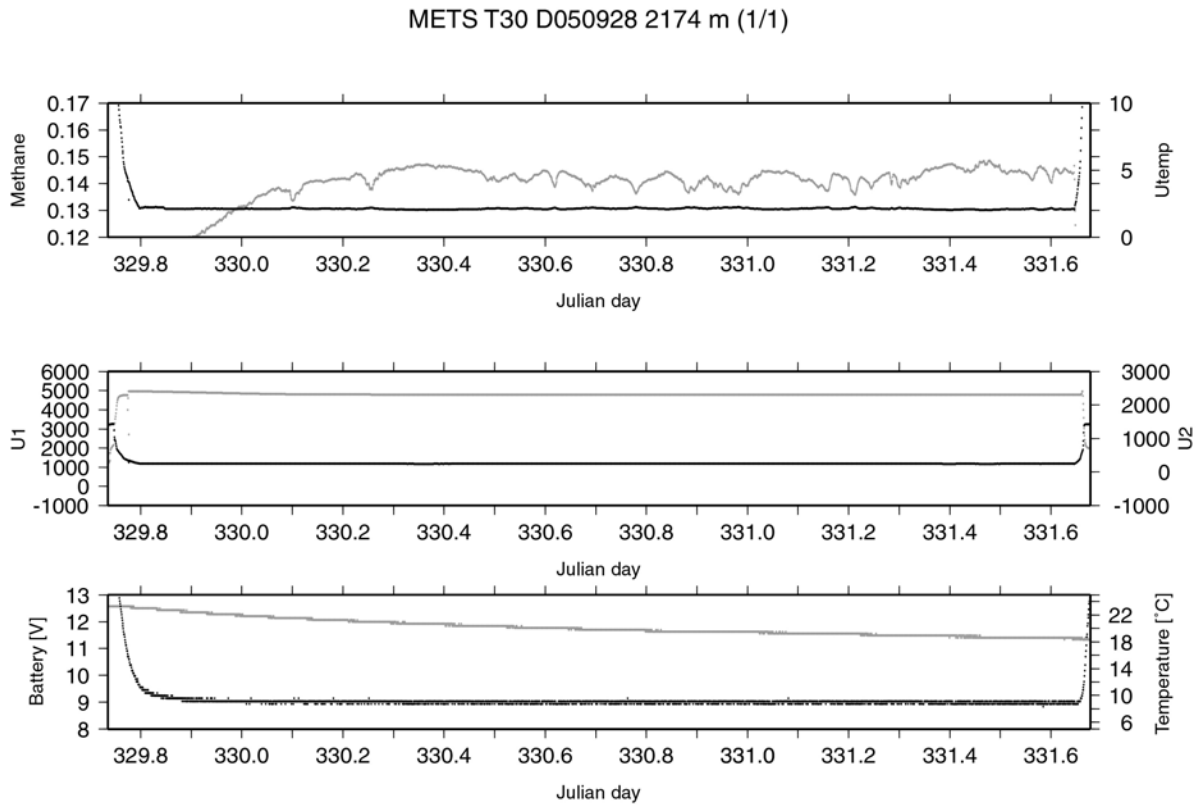


Figure 5.4.9: Raw data (bottom and middle, U [mv]), methane data (top, methane concentration [μmol/l]), OBM81.

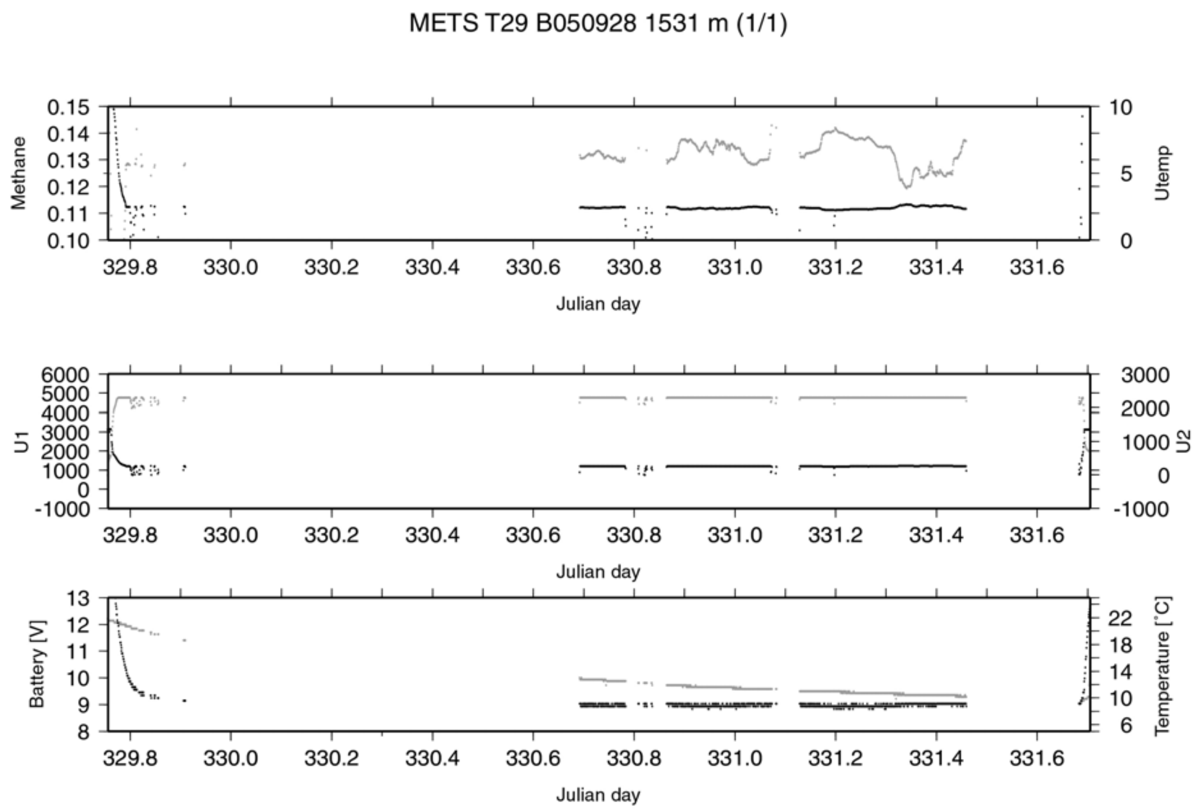


Figure 5.4.10: Raw data (bottom and middle, U [mv]), methane data (top, methane concentration [μmol/l]), OBM82.

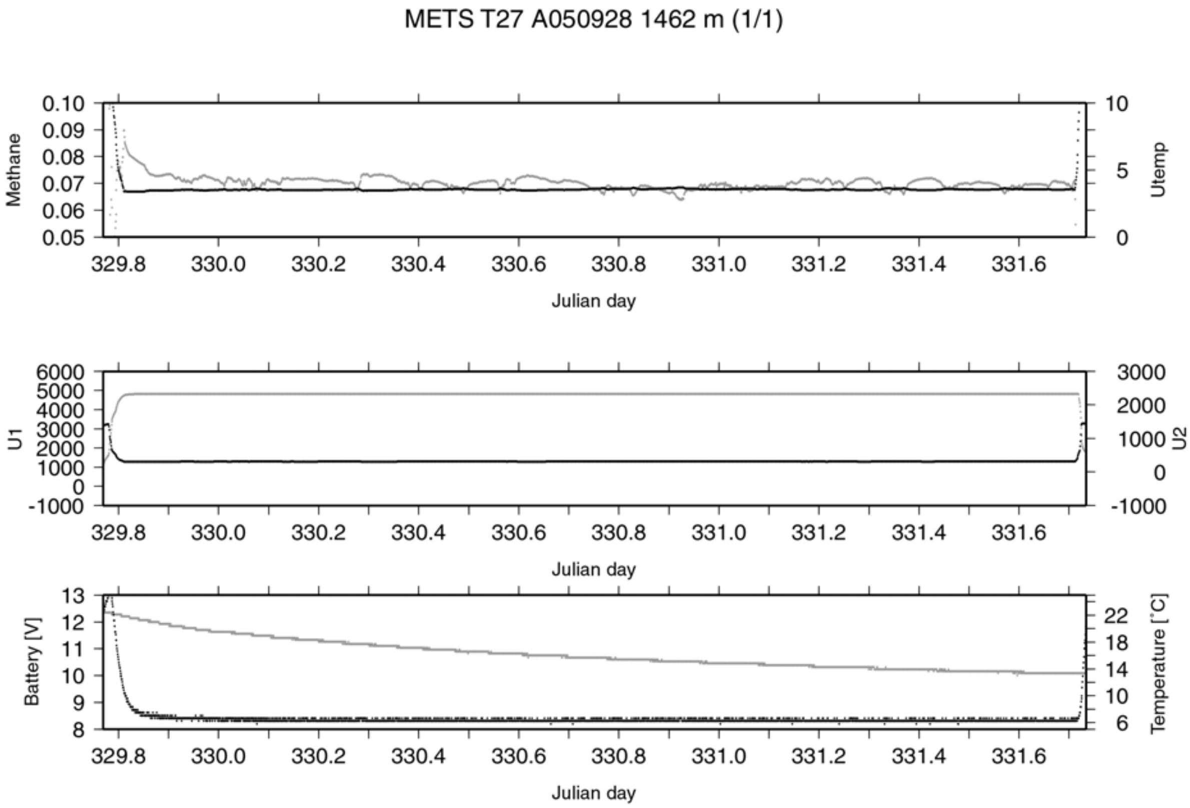


Figure 5.4.11: Raw data (bottom and middle, U [mv]), methane data (top, methane concentration [µmol/l]), OBM83.

5.5 Magnetotelluric Instrumentation

For testing a newly constructed system for seafloor magnetotelluric measurements, six ocean bottom MT (OBMT) instruments were deployed on cruise SO 190-2.
This instrument measures the natural temporal geomagnetic and geoelectric (telluric) field variations in a period range from T = 0.2 s – DC (possible sampling rates are 10Hz, 5Hz, 1Hz and 1/60Hz.).
The OBMT-System is constructed at IFM-Geomar according to ocean bottom seismometers. The recording instrument inside the titanium cylinder is designed and constructed by MAGSON GmbH and contains:

- a three component fluxgate magnetometer,
- two E-field channels for recording the electric field in two components,
- a dual axes tilt meter for measuring pitch and roll,
- a realtime clock (RTC), and
- a temperature sensor.

The instrument is equipped with an internal data logger for instrument control and data storage on compact flash cards. The OBMT-System is a free falling system with a non-magnetic anchor made of aluminium and concrete to avoid distortion of data due to induction effects, and has an acoustic release for recovery. A photo showing the instrument upon deployment is shown in Fig.5.5.1, a sketch is given in Fig. 5.5.2.

Fluxgate Sensor:
The magnetic field is measured with a vector compensated ringcore fluxgate sensor. It consists of two crossed ringcores, three pick-up coils and a tri-axial Helmholtz coil system for field feedback. The vector compensation reduces the cross field influence on the measurement. Scale values and non-orthogonality depend only on stability of the feedback coil system. Because of stable temperature conditions on seafloor, the use of the three component mini sensor without additional support materials is applicable. Thermal expansion coefficient of the feedback coil system is about 24ppm/°C. Noise level of ringcores is in the order of 10pT/$\sqrt{Hz}$ @ 1Hz.

Digital Fluxgate Magnetometer Principle:
The main property of the digital fluxgate magnetometers is the direct digitization of the second harmonic of the excitation frequency, which contains the magnetic field information. Filters and phase-sensitive demodulators are not used. Analog-to-digital conversion close to the sensor reduces the amount of analogue parts, which often cause drift problems or show deviations in the component values, and it highly increases the robustness against environmental influences (e.g. temperature change and electromagnetic disturbances).
These considerations lead to the design of mainly digital sensor electronics. First, the sensor output (sense) signal is amplified by an instrumentation amplifier. Next, it is digitized by a 16-bit analogue-to-digital converter exactly in the minimum and maximum of the second harmonic of the excitation frequency. The FPGA (Field Programmable Gate Array) calculates the difference between both measurements and stores the result in an accumulator. This measurement will be repeated for a programmable number of excitation periods. A FPGA internal RISC (Reduced Instruction Computer) processor calculates from the accumulated ADC (Analog/Digital Converter) values and the last set DAC (Digital/Analog Converter) feedback value the magnetic field value, transmits the results to the data logger and calculate a new set of DAC feedback values.
The feedback system is driven by two 16bit DA-Converters for each component, the first one to compensate the Earth's field and the second one to operate the sensor in a reduced range. Therefore two measurement modes are available. The full range mode coverts the whole Earth's magnetic field range and the variometer mode works in a limited range of +/-2.000nT.
The reason to separate the field compensation into coarse and fine range is the differential

nonlinearity (DLN) of the DA-Converter. Reduced operation range in variometer mode guarantees, that nonlinearity is smaller than the resolution. Using a higher internal sampling rate and cascaded DA-Conversion the resulting dynamic range corresponds to 24bit. The resolution on the background of the Earth's field is still 10pT.

Ocean Bottom MT electronics:
The electronics consists of magnetometer electronics, electric (E-) field measurement, tilt and temperature measurement and the data logger with real time clock (RTC) and power management. B- and E- field will be measured in time synchrony, triggered by the 1Hz signal of the RTC.
The internal data acquisition rate is 100Hz. Dependent on the selected storage frequency, data output as well as system time, inclination, temperature and instrument status are stored on the flash disk. Furthermore, data logging and instrument control with an external unit via RS232 is possible.

Optionally, a time table may be programmed to determine settings of mode, sampling rate and format for any time chosen. This option allows, as an example, a broadband recording at shallower depth from high frequent sampling in the beginning switching automatically to long period measurements, since it may save disk capacity and battery.

Electric field sensors
Electric field fluctuations are determined by measuring the potential difference (U) between pairs of electrodes, which are connected via shielded cable to form a dipole and fixed nearby the ground at known distances (d) round about 10m apart: E=U/d.
In this system we use four unpolarizable Ag-AgCl electrodes for probing the electric field (2x two dipoles). Two dipoles are required in order to ascertain the two horizontal components of the electric field. They are configured orthogonal to each other being fixed to four tubes of each 5 m length (see fig.5.5.1).

Technical data:

Magnetic (B) –Field
sensor type: 3- component fluxgate,
vector compensated
Feedback coil system: Self-supported sensor construction
expansion coefficient: 24ppm/°C
dimensions: height 4cm, diameter: 5cm
Sensor weight: 50 g
orientation: orthogonal (X,Y,Z)
Measurement ranges:
-full range mode: ±60.000nT / DNL: 350pT
-variometer mode: ±2.000nT / DNL: 20pT
resolution: 10pT
noise: <10pT/Hz @1Hz
long term stability: <10nT/Year
linearity: <0.002%
offset drift <1nT/°C in Earth field <0.05nT/°C in reduced field

Electric (E) –Field
ranges: ±1,25V Gain 1 & ±20mV Gain 64
ADC: 24 Bit with programmable Gain
noise: < 10nV/$\sqrt{Hz}$ @ 1Hz
(short circuit without electrodes)

Tilt
sensor type: spectron SSY0091P
range: ±20 degrees
accuracy: ±0,6 degree

Temperature
range / resolution: -50 & +100°C / 0,1°C

RTC
Dallas RTC:
power consumption
accuracy:
50µW
2ppm
Seascan based module:
power consumption
accuracy: (optional / under development)
25mW
0,1ppm

Data Logger
mass storage: Compact flash up to 8GByte
storage frequency: 10, 5, 1 and 0,1 Hz
interface: RS232, 38.400Baud, ASCII

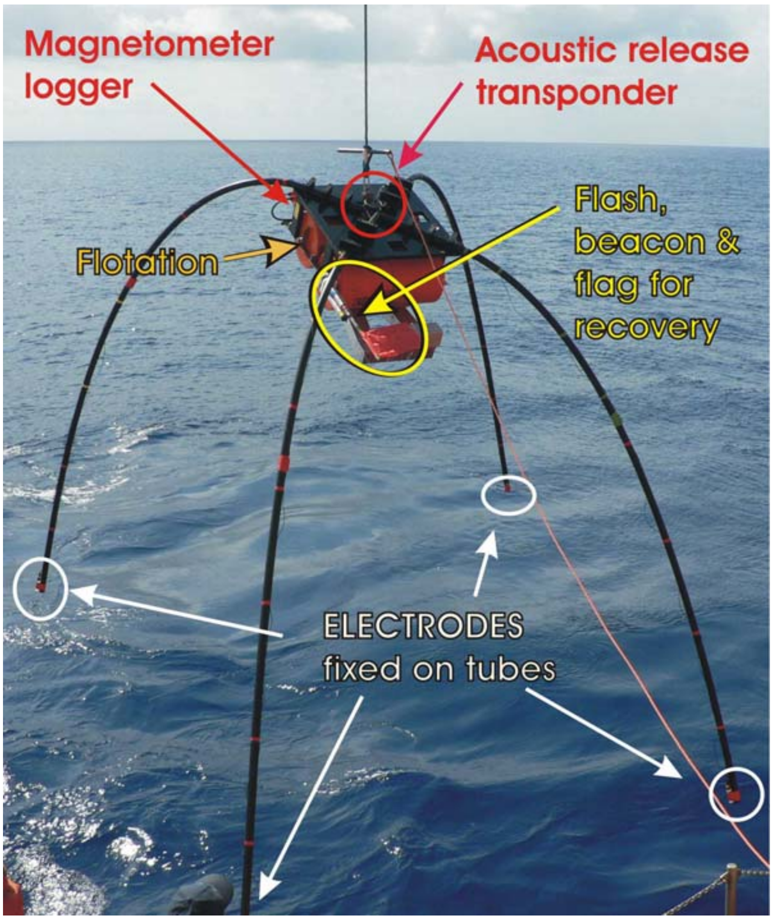


***Fig.5.5.1.: The** OBMT upon deployment.*

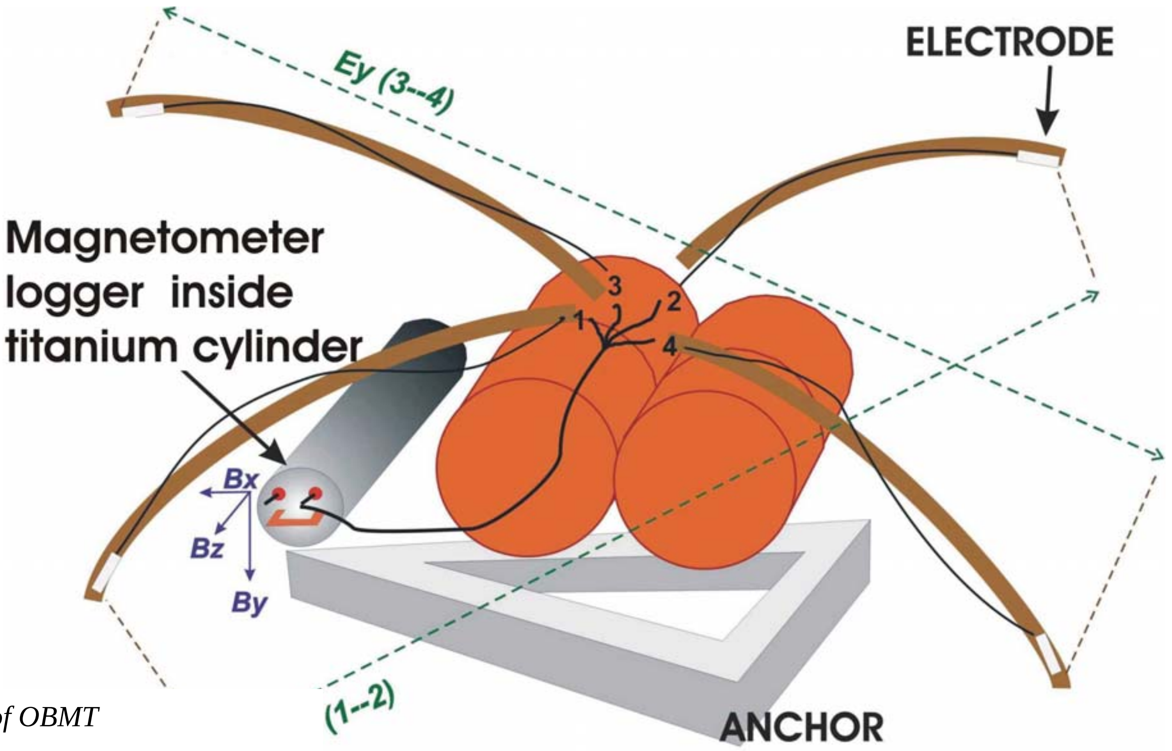


***Fig.5.5.2:** sketch of OBMT*

5.6 Magnetometer

A GeoMetrics G801/3 Marine Proton Magnetometer was deployed during cruise SO190-2 to record the Earth's magnetic field. It was deployed during transit between seismic profiling in regions where no magnetic recordings are available from the previous leg. The primary aim was to record magnetic reversals. The seafloor has inherited these reversals during its creation at the Indo-Australian spreading center. These magnetic reversals indirectly provide the age of the seafloor.

The G801/3 magnetometer consists of a gasoline-filled sensor attached to a 250-m-long marine cable and a control unit. The sensor essentially consists of two coils. During the polarization cycle an electric current generates a strong magnetic field in one of the coils and forces the magnetic moments of the protons of the gasoline to be aligned for a short time parallel to the applied field. During the following measuring cycle, i.e. when the electric current is turned off, the protons start realigning themselves with the Earth's magnetic field. According to the moment preservation law, this happens by precession of the protons with a frequency proportional to the intensity of the geomagnetic field. The AC electric current forced by the precession of the protons is picked up by the second coil, is amplified, counted and transformed into magnetic field intensity values (measuring unit: 10^{-9} Tesla = 1 nT).

In order to minimize the influence of the ship's hull, the sensor of the magnetometer is towed ~180 m behind the ship. This distance between the ship and the sensor is sufficient to minimize the magnetic influence of the vessel resulting in a resolution of about 5 nT. On board of R/V Sonne, the winch was placed on the port back deck and the sensor is towed to the port side of the vessel. A boom led the cable about 7 m to the side of the ship in order to prevent it from colliding with the ship.

Before data acquisition, the tow fish was dissembled and the membrane condition checked, after which the gasoline was filled in. The measured values of the total intensity magnetic field were displayed on a console and written as digital output coded in BCD values. The system was set to deliver one data value every 3 seconds via digital multiport interface to a PC, where the data are stored as a function of UTC time in ASCII tables. After data backup the files were transferred to one of the processing PC. GPS coordinates and time were taken from the ship's navigation system and assigned to each magnetic stamp on the basis of the recorded time. The magnetic and the navigation data were resampled to a 10-s interval. After optional median filtering they were displayed using GMT plot routines (Wessel and Smith, 1995).

6. Work Completed and Preliminary Scientific Results

6.1 Bathymetric Survey

For a better understanding of the subduction zone processes, a detailed knowledge of the relation between the variability of the lower plate and the tectonic evolution of the upper plate is required. Sound imaging of the ocean floor has in recent years been recognized as a powerful tool to correlate seismic depth profiling (in x-z-direction) to surface morphology (in x-y-direction, thus adding a third dimension). Extensive bathymetric mapping is necessary in order to be able to create an image of the ocean floor morphology. One of the objectives of cruise SO 190 was to extend the area with reliable bathymetric coverage along the Sunda Arc subduction zone.

The bathymetric survey of this leg was carefully planned in close cooperation with the previous as well as the following leg in order to avoid duplicate mapping. In addition, bathymetric data of the cruises SO 190-1 were available and were used for the compilation of the maps. Figure 6.1.1 shows a compilation of all bathymetric data mapped with RV SONNE during SO 190-2, and Figure 6.1.2 shows a map of data acquired during SO 190-1 and SO 190-2. More data from cruises SO 176 and SO 179 are included in Figure 6.1.3, which covers a larger area. During SO 190-2 two areas were mapped in detail, one centered on 113° E and the other one on 116° E. All data were acquired using the Simrad EM120 multibeam system of RV SONNE. The raw bathymetric data were processed onboard during the cruise. The maps were created using the Generic Mapping Tools (GMT).

The 113° Corridor

The surveyed area in the 113°E corridor is centered on the Java trench and the adjacent areas (Roo Rise to the south, outer high to the north). The coordinates span the area between 112°E-114°30'E and 8°30'S-12° S. The data were augmented by the data mapped during SO 190-1. The compilation of the entire SO 190 bathymetric data along this corridor is shown in Figures 6.1.4 and 6.1.5.
The study area is located between the Java Shelf and the Roo Rise, which is found south of the Java trench. The Java trench has a maximum depth of 6500 m in this area. A ridge is approaching the trench at 113° E. The outer high reaches water depths of less than 1000 m. The oceanic crust is characterized by extensive normal faulting parallel to the trench and is spotted by bathymetric elevations and some seamounts.

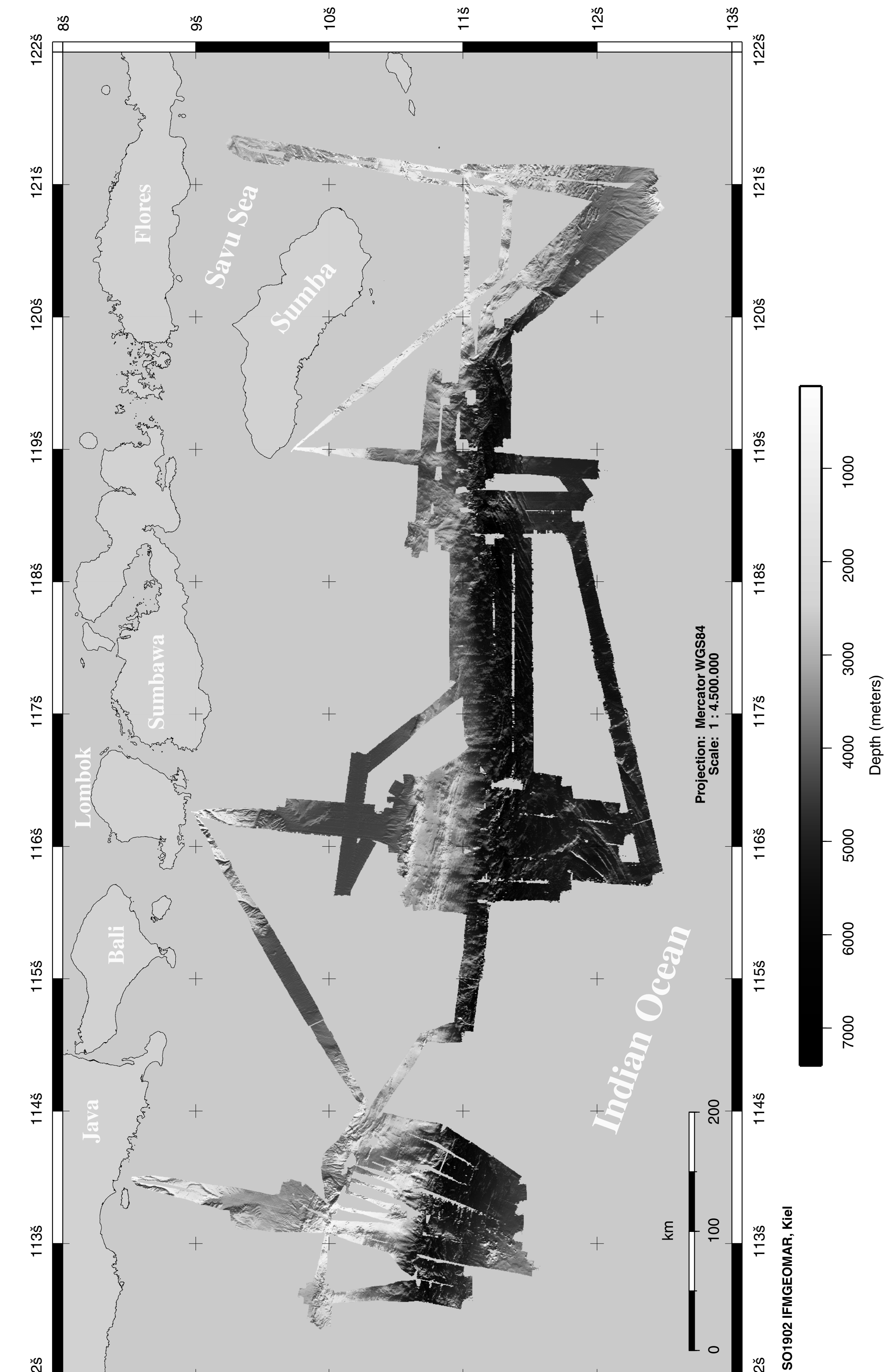


Figure 6.1.1: Overview of the bathymetric data acquired during cruise SO190-2. Bathymetry is grey shade coded.

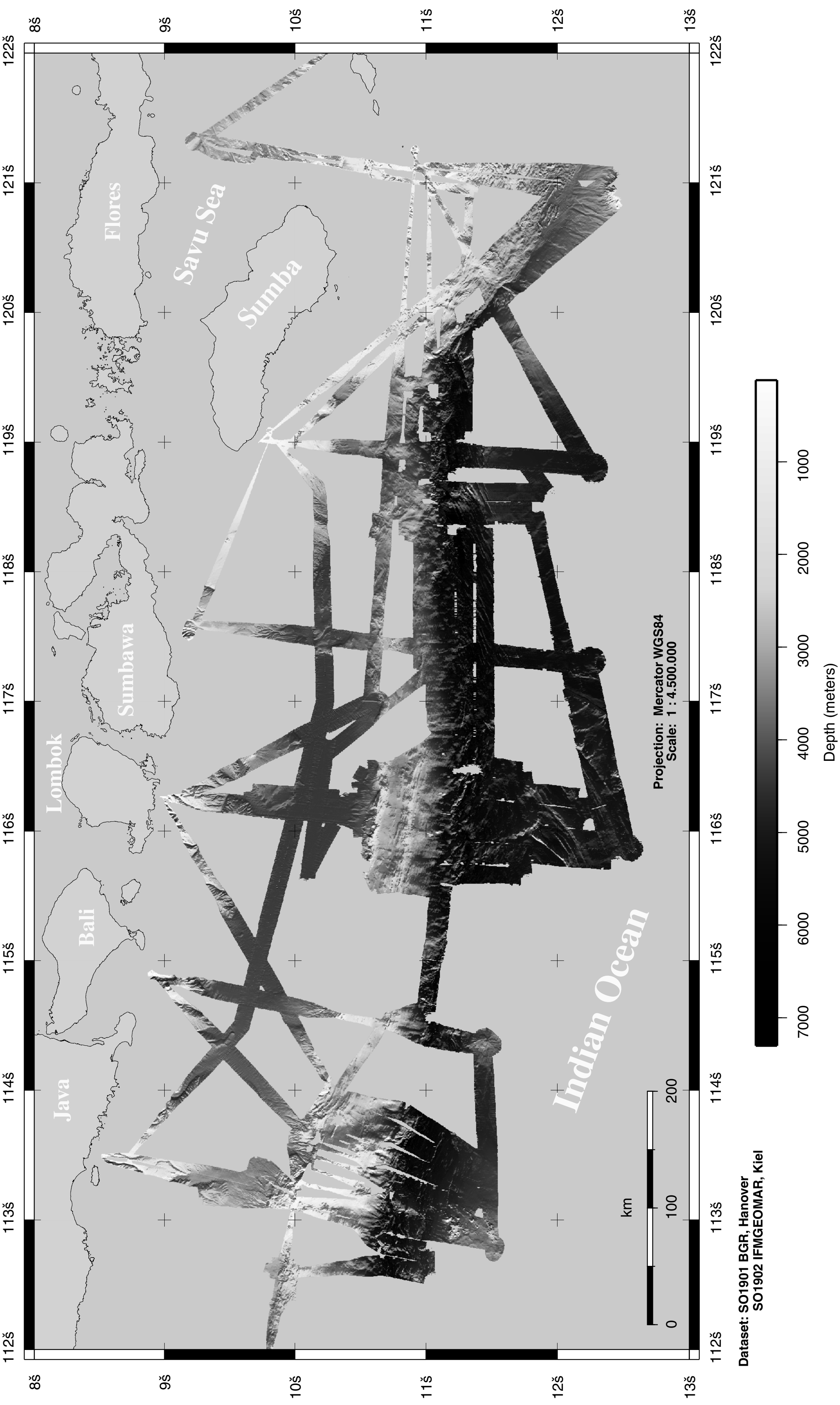


Figure 6.1.2: Overview of the bathymetric data acquired during the SO190 cruises. Bathymetry is grey shade coded.

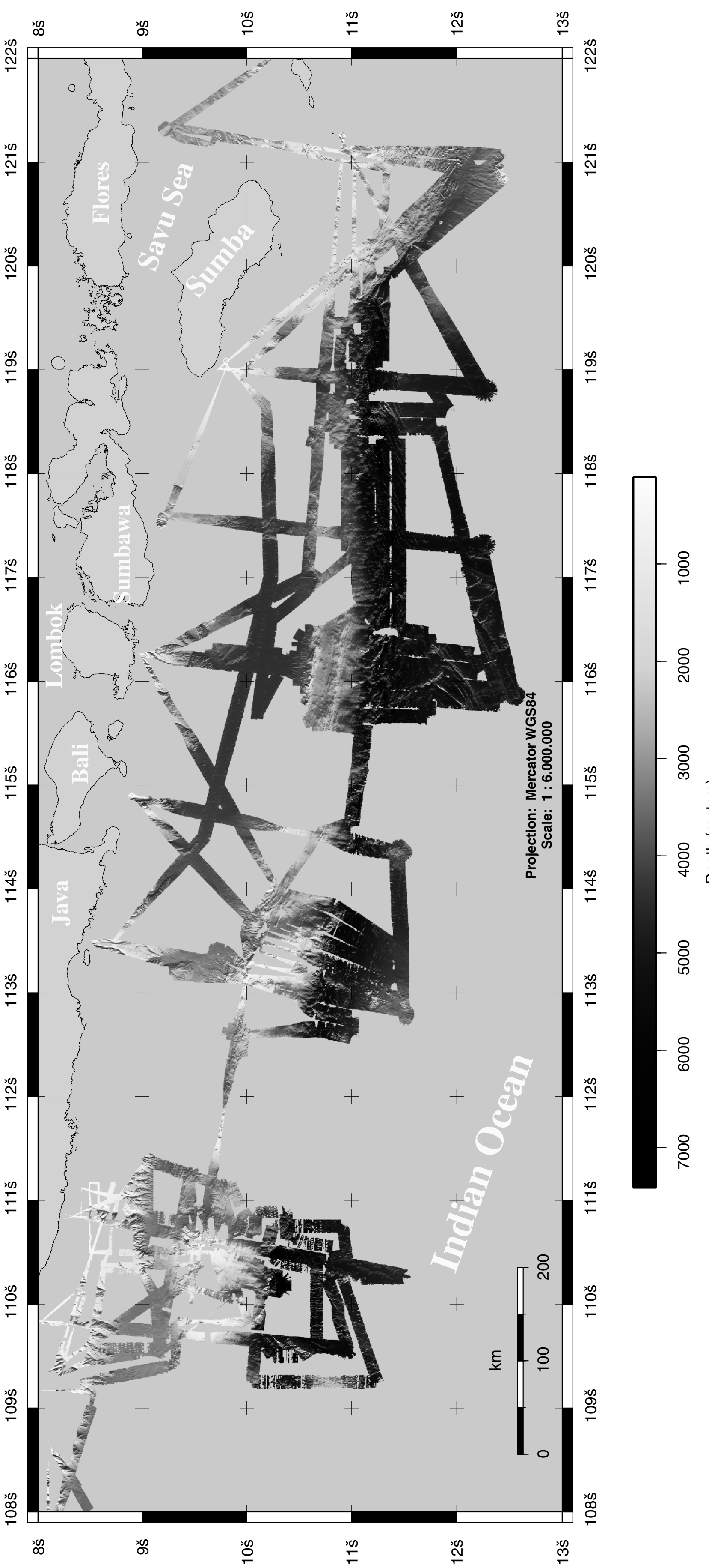


Figure 6.1.3: Overview of the bathymetric data acquired during all RV Sonne cruises. Bathymetry is grey shade coded.

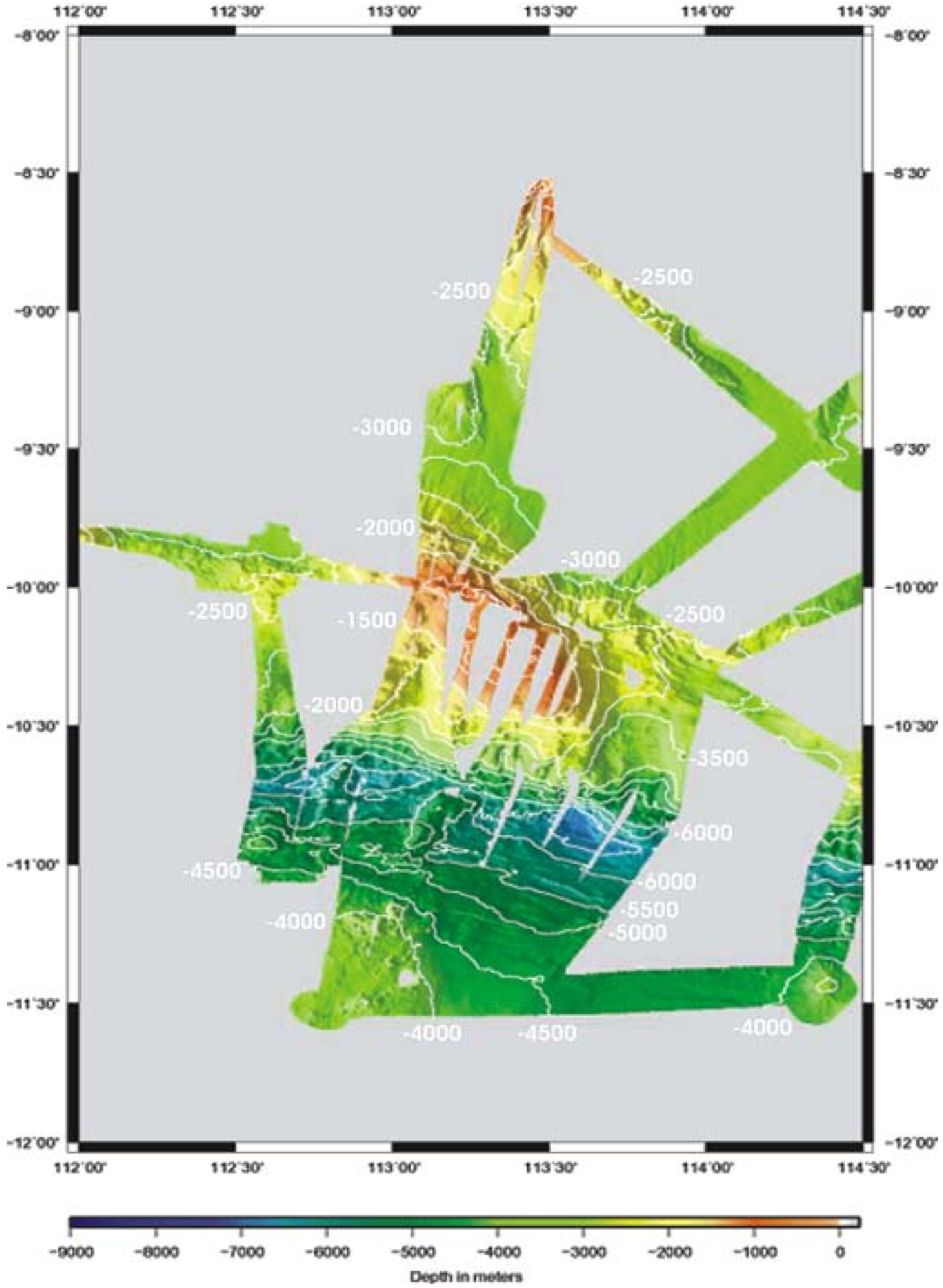


Figure 6.1.4: This Map shows a complete compilation of all available data in the 113°E corridor. Isoline distance is 500 m**.**

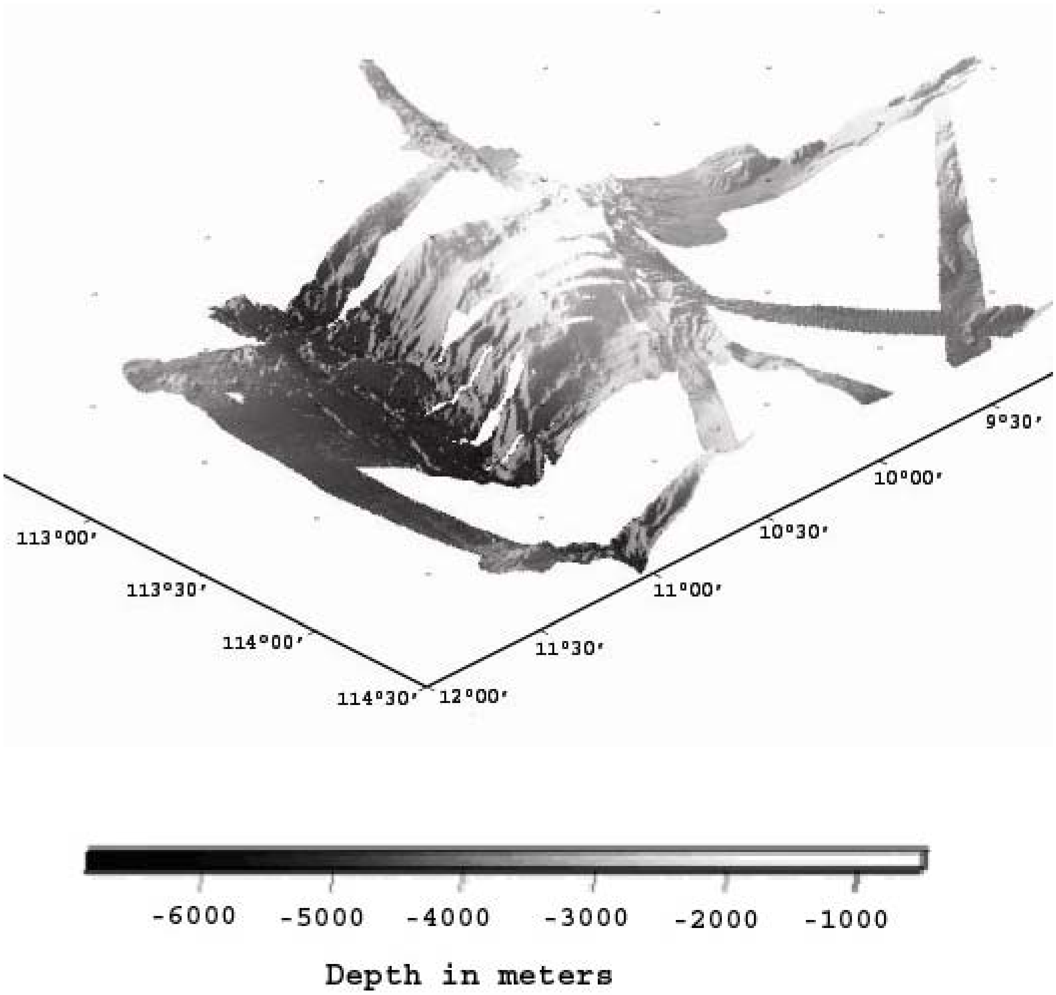


Figure 6.1.5: Perspective view of the morphology of the area.

The 116° Corridor

Swath mapping in the 116°E corridor focused on the area between 9°00'S – 12°75'S and 115°00'E – 117°00'E. Again, bathymetric data collected during the previous leg of cruise SO190 were incorporated into the data set (Fig. 6.1.6.).
The otherwise plain oceanic crust displays some bathymetric lineaments, entering the Sunda trench at an oblique angle. The Sunda trench in this area reaches depths of more than 7000 m. In the outer high northward of the trench is characterized by two trench parallel ridges. A large embayment is interpreted as a slide scar, documenting slope failure and subsequent mass transport into the trench. The crests of the two ridges composing the outer high reach depths of up to 3400 m. The adjacent Lombok Basin to the north displays a plain seafloor at 4500 m water depth.

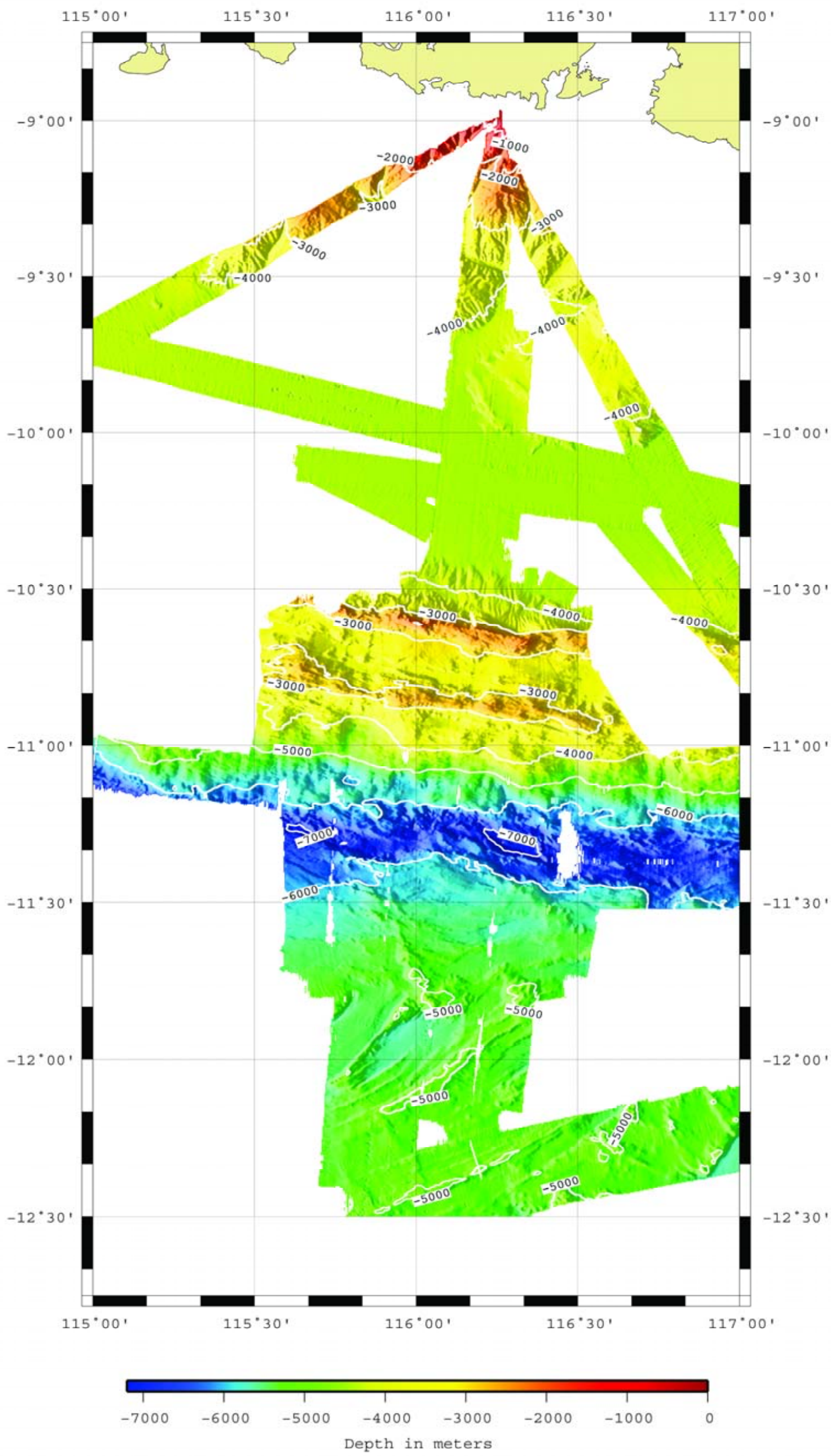


Fig.6.1.6: Compilation of bathymetric data of SO190-2, SO190-1 between 9°00'S – 12°75'S and 115°00'E – 117°00'E

6.2. Magnetic Data

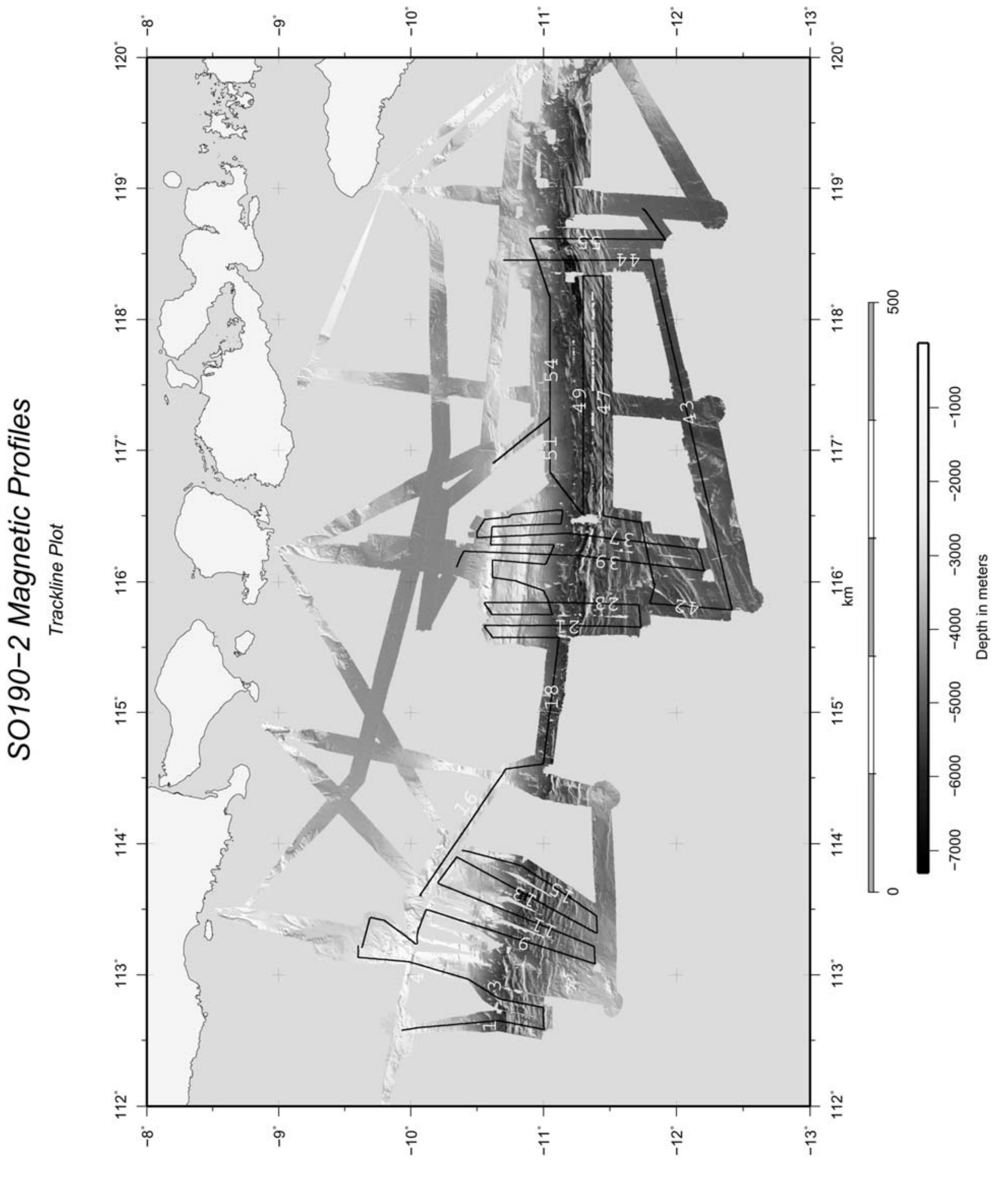
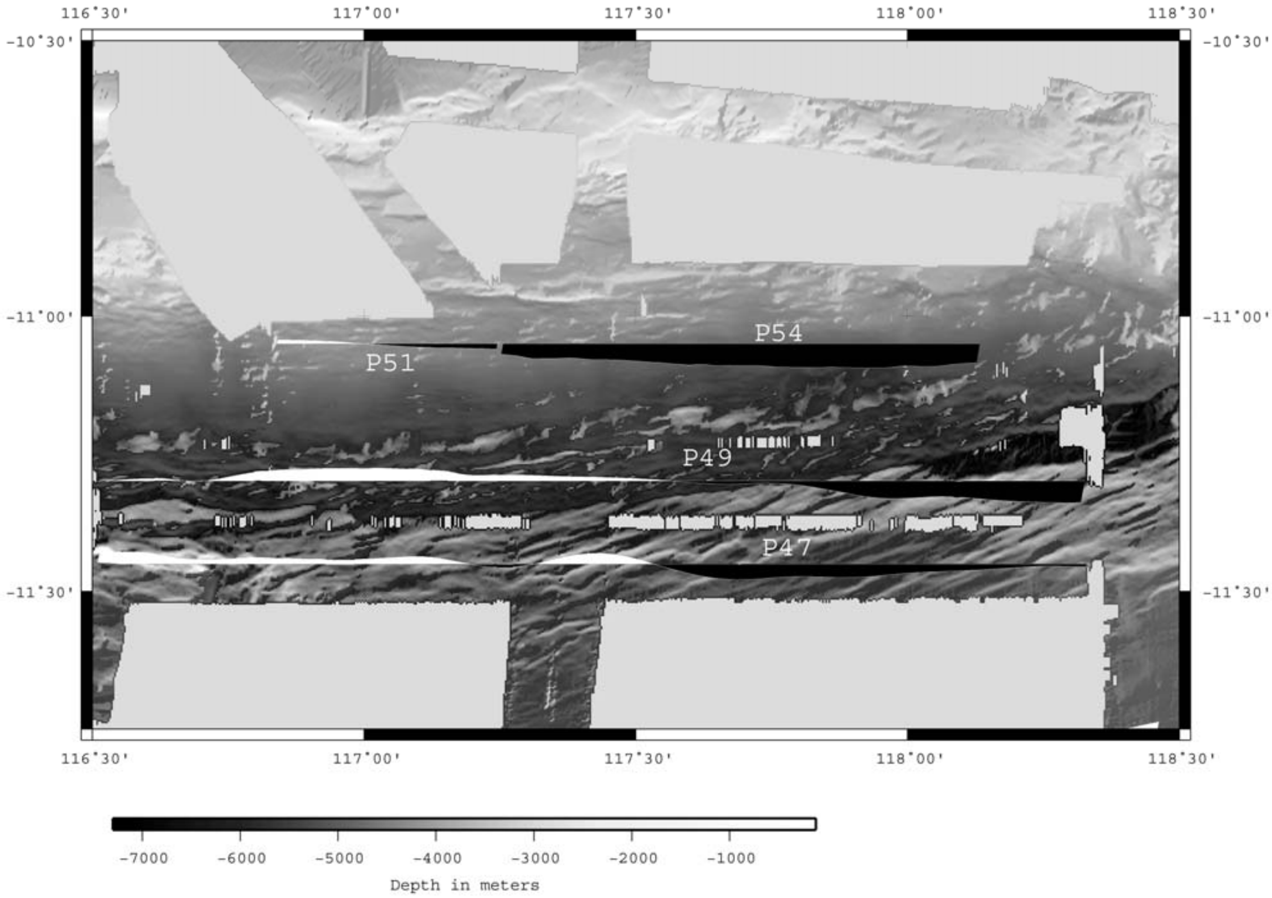


Figure 6.2.1: Magnetic track lines of SO 190-2, background: bathymetric map of the area.

During R/V SONNE cruise SO190-2 magnetic profiles were collected along a loose grid covering the trench and outer high. The magnetometer was deployed on the transit between the seismic profiles and during swath mapping. The profile locations can be found in the Appendix 9.3. A track chart is given in Figure 6.2.1.

The aim of magnetic investigations is twofold: The magnetic stripe pattern on the incoming oceanic crust will yield information on crustal age, whereas the magnetic signature above tectonic features such as fossil ridges, fracture zone etc. supplies important tectonic and geologic information.

Therefore the magnetic data transmitted from the magnetometer to the ship was stored as time series as a function of UTC time. Later, the ship's navigation was merged with the magnetic field data by using the UTC time as common basis. Afterwards the time series were reduced by a fixed value of 46600nT and filtered to see the long wavelength anomalies. No further corrections were applied. The resulting anomalies are in the order of +/- 500 nT.



.

Fig. 6.2.2: Magnetic profiles in between Corridor 116° & Corridor 119°. High-resolution bathymetry is displayed in the background . The profiles trend parallel to the trench. The total field values are reduced using a fixed value of 46600 nT. The positive anomalies are shown in white and the negative anomalies are shown in black.

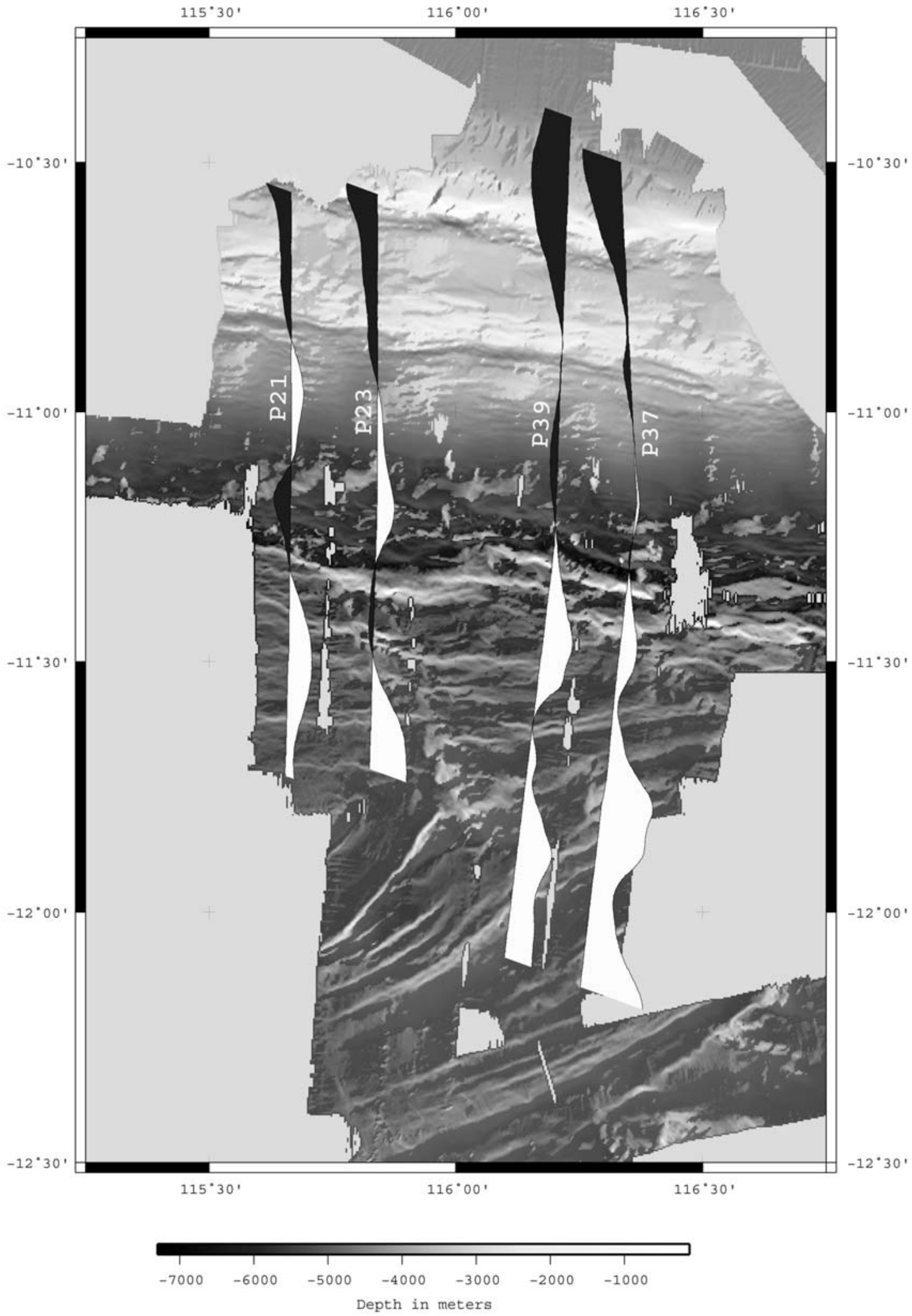


Figure 6.2.3: Magnetic profiles in Corridor 116°. The field values are reduced by a fixed value of 46600 nT. Resulting positive anomalies are plotted in white, negative ones are shown in black. The profiles are orientated perpendicular to the trench.

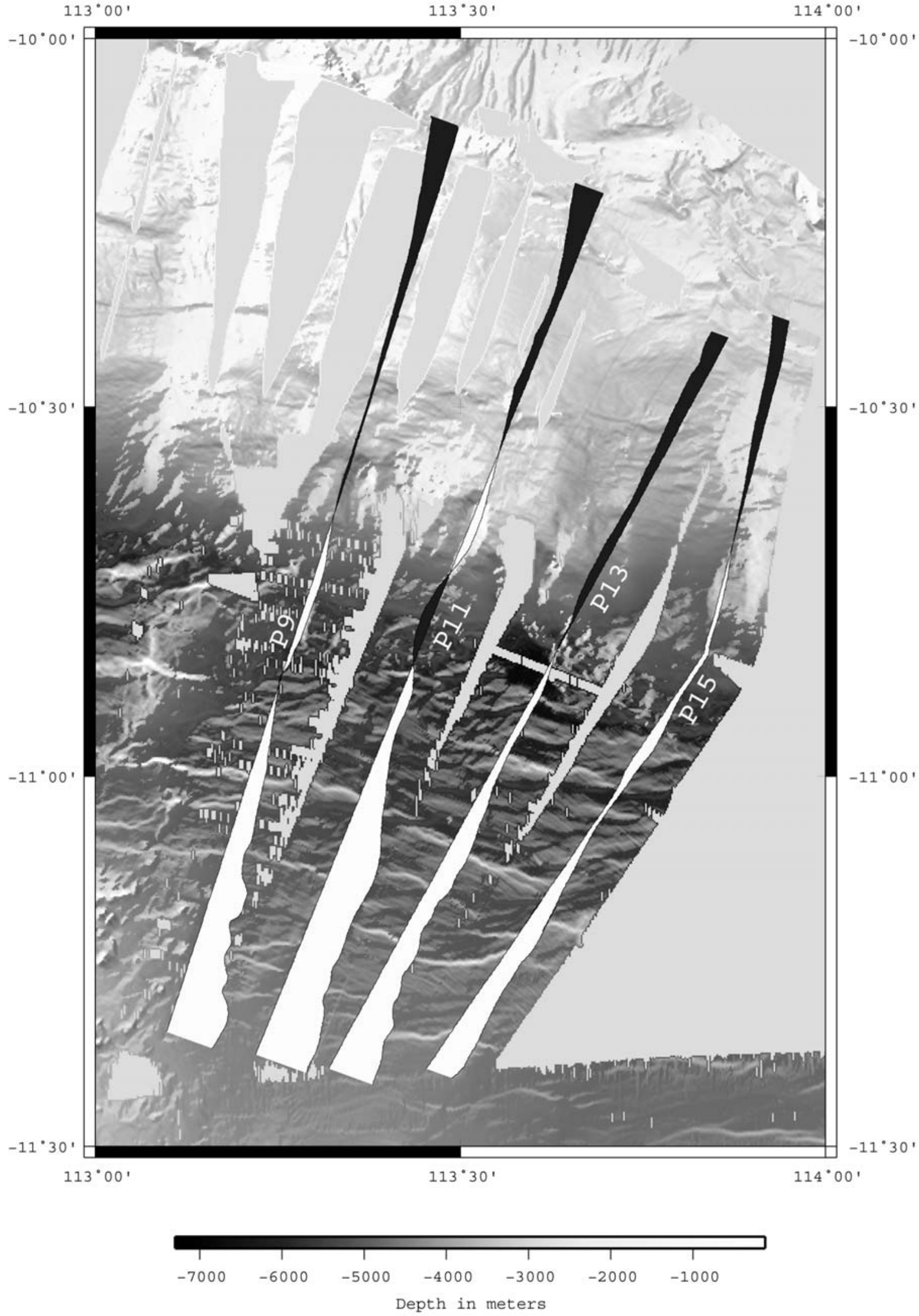


Figure 6.2.4: Magnetic profiles in the 113°E corridor. The field values are reduced by a fixed value of 46600 nT. Resulting positive anomalies are plotted in white, negative ones are shown in black. The profiles are orientated perpendicular to the trench.

6.3. Seismic Data

The main objective of SO190-2 was to collect seismic wide-angle data along profiles in different tectonic settings. These data were to complement the multichannel seismic reflection data collected during the preceeding cruise SO190-1 (Müller et al., 2006). Profiles were therefore chosen coincident with the reflection lines of SO190-1, though sometimes extended closer to shore or further seaward. Altogether 10 profiles were collected, with a maximum of 30 OBH/S deployed at one time. The profiles cover four working areas, in three of these areas two profiles were merged into a single dip line across the plate boundary. Three profiles are strike lines along the outer arc high or the forarc basin. In total, 239 deployments of ocean bottom seismic recorders were made. Airguns were typically shot at 60 s trigger interval with a ships speed of 5 knotts along nearly 1900 km of profiles. Two of the strike lines were shot with a trigger interval of 40s. In Figure 6.3.1 an overview of the seismic profiles is given.
In this chapter the processing and interpretation tools are described, to be followed by a presentation of some data and some preliminary interpretation of the data made onboard for each working area (chapters 6.3.1 to 6.3.4). Further information on instrumentation and airgun shots are given in Appendices 9.1 and 9.2, and all data are visualized in the accompanying data report.

- **The processing scheme**

The OBH/S data recorded in continuous mode on the MLS, MBS, and MTS units have to be converted into standard trace-based SEG-Y format for further processing. The necessary program structure was mainly taken from the existing REFTEK routines and modified for the OBH requirements and IFM-GEOMAR´s hardware platforms.
The flow chart shown in Figure 6.3.2 illustrates the processing scheme applied to the raw data. A detailed description of the main programs follows below:

SEND2X program package:

For the PC-cards used with the MBS, MLS, and MTS recorders, data expansion and format conversion into REFTEK data format is performed using a Linux based PC. The program package send2x consists of the routines **mlsread**, **mtsread**, **mbsread**, **resample** and **seg-ywrite** and is used to read data from the flashcards used during recording, to decompress the data and finally write it onto the PC's hard disk using PASSCAL data format. Either 16 or 32 bit storage is available. Alternatively, the current version allows the conversion of raw data into a binary file, an audio-wave file, or into the SEG-Y format if an appropriate shot file is available.

While processing the MLS/MTS recordings many time slips of one sampling interval were detected by the send2x software, typically at a rate of one time slip every 1-2 hours. The time slips are caused by mismatch of the actual sampling rate of the MLS/MTS recorder compared to the desired sampling rate. This mismatch arises because the clock rate of the crystal oscillator in the MLS/MTS recorder is temperature dependent (Klaus Schleisiek, SEND GmbH, pers. comm.). The temperature dependence is known and corrected for in the determination of the system time, but for performance reasons the sampling pulses are directly generated from the oscillator signal without any time correction. The **send2x** routine detects when the accumulated inaccuracies of the sample rate cause an effective timing error of one sample, but it only reports and does not correct the "time slip".
The resulting total time error was on average 200 to 400 ms for the wide-angle profiles, showing clearly the necessity of a special time slip correction for the MLS/MTS data. A correction for the time slips is applied with the **resample** routine.

Detailed description of individual routines:

mlsread, mbsread, mtsread
These programs are used to convert raw data acquired by the GEOLON-MLS/MBS/MTS or MTS-M data logger. At first, the raw data of all PCMCIA cards belonging to one recording session as well as the corresponding MLS/MBS.SYS file must be copied to a directory using e.g. the cp command. The programs are used to decompress and convert the raw seismic data into the internal send2x format. In case of mtsread the raw data of the absolute pressure gauge will be converted into ASCII format and stored in a separate file. The name of this file will be generated automatically with the extension **.pressure**

resample
Data recorded with the GEOLON-MLS and GEOLON-MTS or MTS-M may show so-called "time slips" (see above), due to differences between the long term stabilization of the internal clock and the sample frequency clock. Thus, within a given sample period, less or more samples than required are recorded, e.g. 99 samples instead of 100. If this misalignment of sample periods and samples actually collected is influencing the precision of your experiment, you can correct the data using RESAMPLE. RESAMPLE does not correct time slips for other SEND Data Loggers, but may be used for correction of filter influences and adjusting skew times.

segy-write
segy-write converts the data stored in s2x format to standard SEG-Y format. The option --reftek is used for creating a pseudo SEG-Y trace consisting of one header and a continuous data trace containing all samples, as used by the PASSCAL suite of seismic utility programs. For each channel (normally pressure, vertical velocity, and velocity along two mutually perpendicular horizontal directions for OBS; pressure for OBH) one file is created with the name derived from the start time, the serial number of the Methusalem system, and the channel number. The program allows optional 16bit or 32bit output. The file size of the pseudo-SEGY file is directly related to the recording time. For instance, a recording time of one hour sampled at 200 Hz (16 Bit) will produce a file size of 1.44 MB per channel. A record with two channels and a recording time of two days will produce a total data volume of 70 MB.

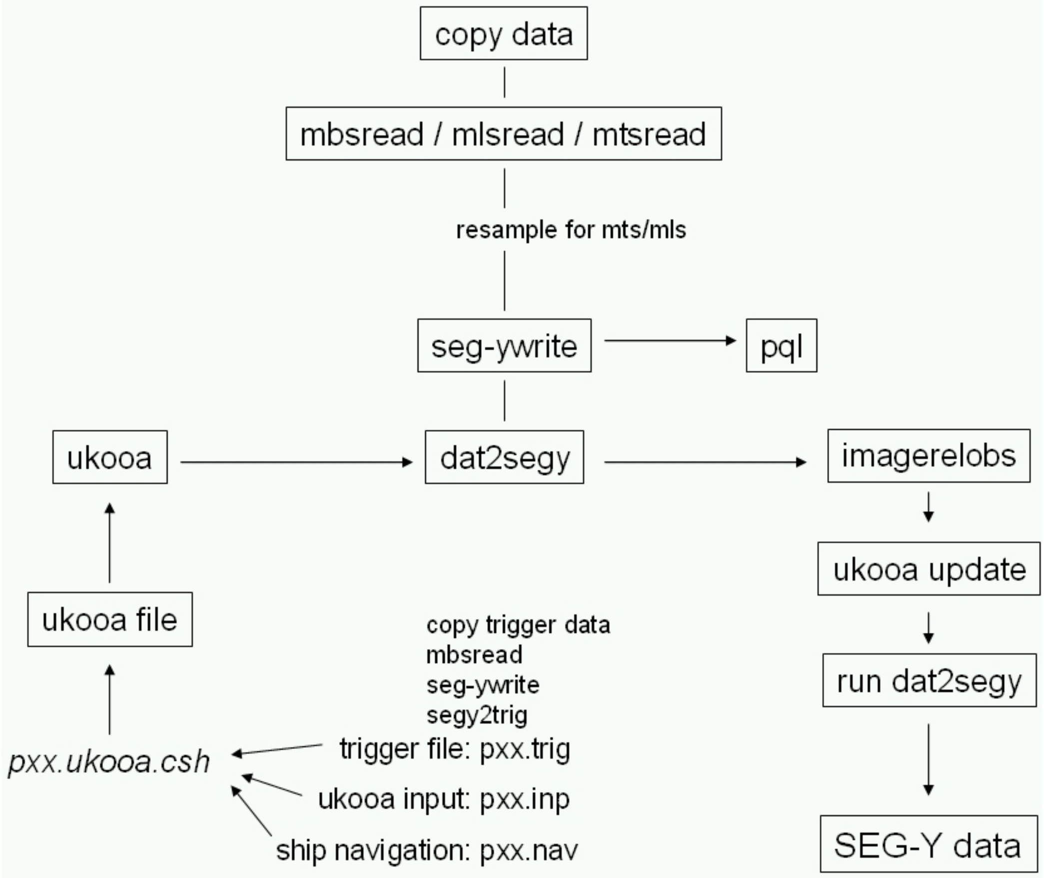


Figure 6.3.2: *Processing flow of seismic refraction data (OBS/OBH) from raw data to SEG-Y records.*

Other programs used for regular processing:

pql2
pql2 (Passcal Quick Look 2) is a simple display program for continuous seismic data. Its interactive zooming capability allows a rapid inspection of data quality.

segy2trig
The trigger signal, provided by the airgun control system, is recorded on an additional MBS unit during the shooting period. The trigger data are treated similarly to regular seismic data and are downloaded to the hard disk via the mbsread and seg-ywrite programs. Then, the segy2trig program detects the shot times in the data stream by identifying the trigger signal through a given slope steepness, duration and threshold of the trigger pulse. The output is an ASCII table consisting of the shot number and the shot time. Accuracy of the shot time is one of the most crucial matters in seismic wide-angle work, and must be reproduced with a precision of a few ms. Due to this demand the shot times have to be corrected with the shift of the internal recorder clock. Additionally, the trigger file contains the profile number, the start/end time of the profile and the trigger recording. The shot times are part of the ukooa file, which links them with the source coordinates.

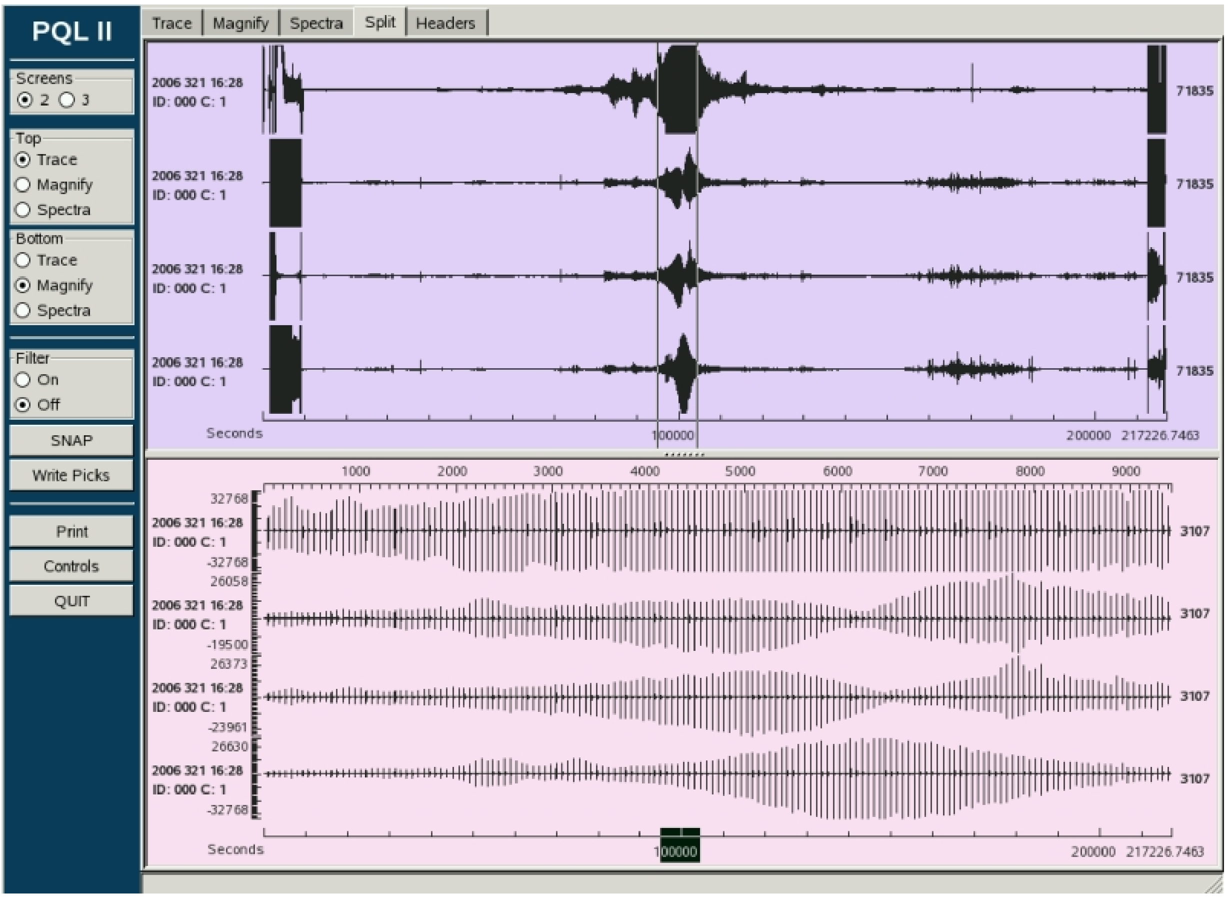


Figure 6.3.3: *Screenshot of pql2 showing 4 channel obs data (pressure; vertical, horizontal, perpendicular horizontal component) for the complete time-span of recording (top) and a close-up taken at the time of shooting (bottom).*

ukooa

The ukooa program is used to establish the geometric database by calculating the positions of sources at any given shot time and offset from the ship. The source is placed on the ship track using simple degree/meter conversions and then written to a file in UKOOA-P84/1 format. Corrections for offsets between antenna and airguns as well as consistency checks are included. This file will be used when creating a SEG-Y section via the dat2segy program. The program requires the trigger file to contain the shot times, navigation, and a parameter file containing information for the UKOOA file header as basic input information.

dat2segy

The dat2segy program produces standard SEG-Y records either in a 16 or 32 bit integer format by cutting the single SEG-Y trace (the seg-ywrite - - reftek output) into traces with a defined time length based on the geometry and shooting time information in the ukooa file. In addition, the user can set several parameters for controlling the output. These parameters are information about the profile and the receiver station, number of shots to be used, trace length, time offset of the trace and reduction velocity (to determine the time of the first sample within a record). Also the clock drift of the recorder (skew) is taken into account and corrected for. For the MLS data the total time error resulting from the observed time slips described above was subtracted from the clock drift value. The final SEG-Y format consists of the file header followed by the traces. Each trace is built up by a trace header followed by the data samples. The output of the dat2segy program can be used as input for further processing with SEISMOS or Seismic Unix (SU).

imagerelobs

Because of drifting of the OBH and OBS instruments during deployment and inaccuracies in the ship's GPS navigation system, the OBH positions may be mislocated by up to several 100 m. Since this error leads to asymmetry and incorrect traveltime information in the record section, it has to be corrected. This is accomplished with the program relobs.
For input, the assumed OBH location, shot locations and the picked traveltimes of the direct wave near to its apex are needed. To simplify the picking a static correction with a hyperbolic equation was performed to flatten the direct wave. This yields a much more coherent direct arrival which would normally suffer from strong spatial aliasing in the uncorrected section making it difficult to track. By shifting the OBH position, relobs minimizes the deviation between computed and real travel times using a least mean square fitting algorithm (assuming a constant water velocity). The source offset, i.e. the distance from the research vessel's GPS position to the center of the airgun array, was determined to be 90 m.

Besides these main programs for the regular processing sometimes additional features are needed for special handling of the raw data:

segyhdr
The routine segyhdr prints all the header values of the raw data on the screen.

segyshift
Segyshift modifies the time of the first sample, allowing the whole raw data trace to be shifted by a given value. This is very useful when shifting the time base from Middle European Time to Greenwich Mean Time or any local time. Because of recording problems, the data sometimes show a constant time shift, which can be corrected as well with segyshift.

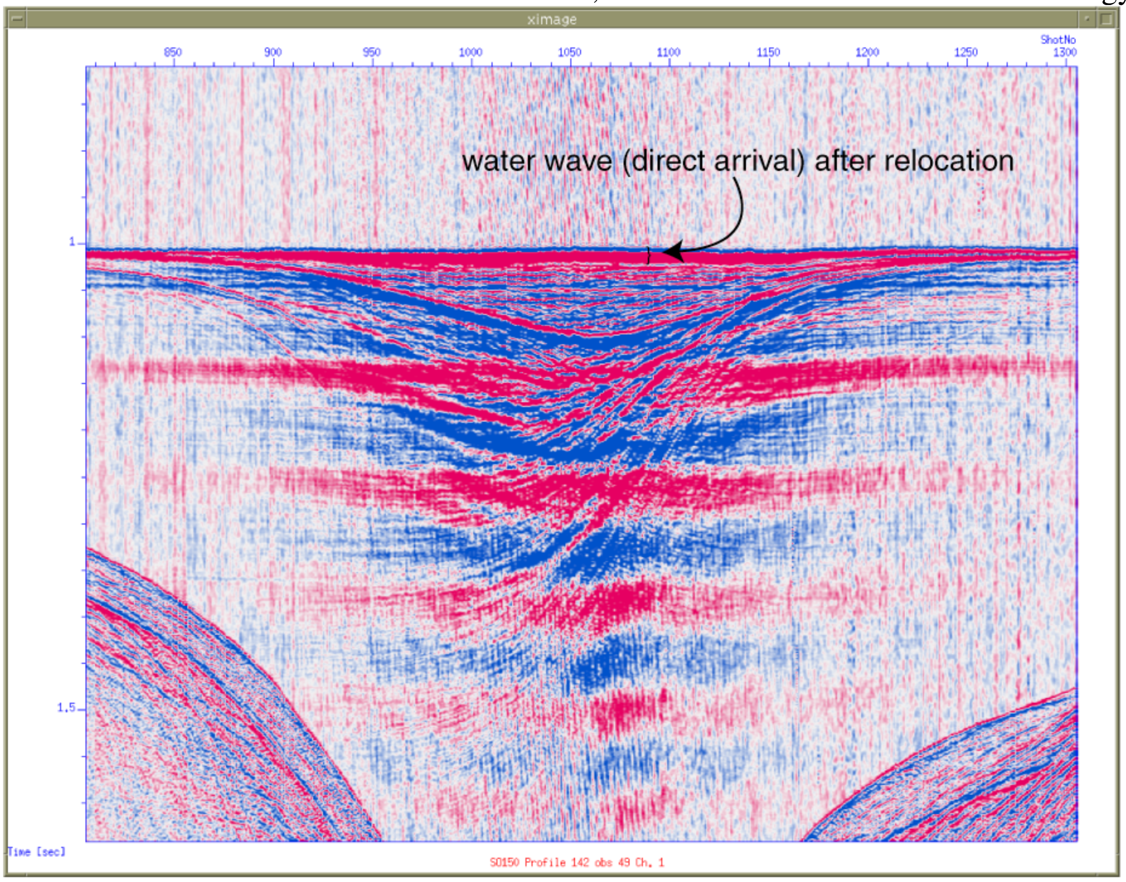


Figure 6.3.4: *Example of a re-located (after using imagerelobs) station for which the direct arrival (blue and red phase indicated by the small black bracket) has been flattened.*

Directory structure

The directory structure displayed below is usually set up for each seismic profile. The data directory contains the raw data files and the PASSCAL data files, which are to be converted to SEGY-format and stored in the perm directory. The ukooa directory contains the information on the navigation and the ukooa files which are used for geometry installation. shells contains different shell scripts (e.g. for plotting etc.), gmt also contains plotting files for location maps etc. The picks directory stores the OBH/OBS pick files as well as all input files to the MacRay and TOMO2D modelling programs (see below).

- **OBH/OBS data analysis and processing**

Frequency filter analysis: To determine the frequencies of the seismic energy, filter panels with narrow frequency band passes for the offset range of -45 - 70 km are shown in Figure 6.3.6. and Figure 6.3.7. The amplitude spectra of the used Butterworth frequency filter operators are characterized by linear slopes. The filter is described by four corner frequencies, i.e. lower stop/pass band boundary and upper pass/stop boundary. The main energy of the phase between 3 and 5 s is between 3-25 Hz and for the direct wave it reaches up to more than 73 Hz. As a broad frequency range is contained in the data, time and offset dependent filtering was applied (see below).

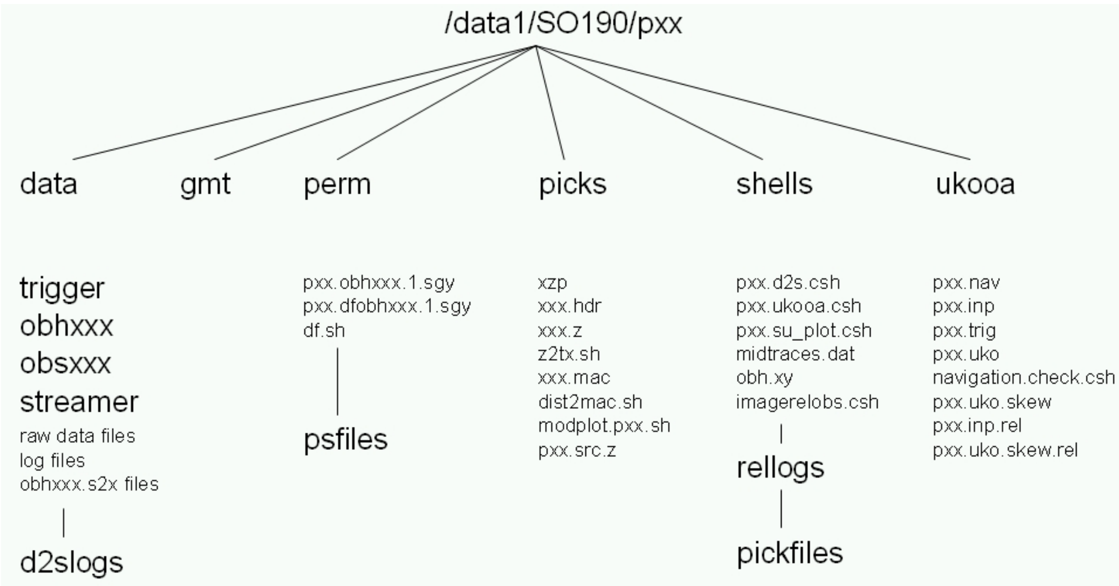


Figure 6.3.5: *Schematic diagram of Linux directory structure used for active seismic experiments. Additional directories (e.g. rayinvr, tomo2d) may be added.*

Deconvolution analysis: To improve the temporal resolution of the seismic data a deconvolution is applied to compress the basic seismic wavelet. The recorded wavelet has many components, including the source signature, recording filter, and hydrophone/geophone response. Ideally, deconvolution should compress the wavelet components and leaving only the earth's reflectivity in the seismic trace. We applied Wiener deconvolution in successive trace segments, based on the following assumptions:

1. The earth's reflectivity is 'white'.
2. The wavelet shows the minimum-delay phase behavior.

As in these wide-angle data the amplitude spectra of the seismic traces vary with time and offset (e.g. reflected, refracted pp phases and reflected ps and ss phases), the deconvolution must be able to follow these time and offset variations. To improve especially the spatial resolution of the seismic data a multi-trace deconvolution also called rollalong deconvolution, which uses autocorrelograms averaged over a number of traces, is performed to compress the basic seismic wavelet. Here, each trace is divided into 3-s data gates with 1-s overlaps, in which time invariant deconvolution operators are computed from the average autocorrelation function of 11 traces. The operator is recalculated for every trace in each data segment and applied. The overall deconvolved trace results from a weighted merging of the independently deconvolved gates.

Raw data are input for the deconvolution process. As several recordings were influenced by a DC shift, a 1-3-Hz high-pass minimum delay Butterworth frequency filter with 60 dB attenuation between the pass and reject zone was applied prior to deconvolution in order to center the amplitudes around zero.
The deconvolution test panels are shown in Figure 6.3.8, Figure 6.3.9 and Figure 6.3.10 for the offset ranges -45 - 70 km. Constant operator length of 100 ms (predictive lag excluded) with a variation of the prediction lag from 10 to 60 ms are displayed for a multi-trace deconvolution (avere=11). The best compromise between temporal resolution and signal-to-noise ratio is obtained for an operator length of 100 ms including a predictive length of 40 ms which was chosen for the processing of the data sets of this cruise. After deconvolution, an offset- and time-variant Butterworth filter with minimum-phase characteristic was applied. As the seafloor depth changes along the seismic lines, each trace was statically corrected to a fixed seafloor travel time of 11 s based on the water depth before filtering. This information is available in the trace headers. After this filter was applied, the data were shifted back to their original travel times.

Processed data: Comparison of the unprocessed data in Figure 6.3.11 (upper panel) to the preprocessed data in Figure 6.3.11 (lower panel) shows a clear compression of the wavelet signal and an increase in signal-to-noise ratio, especially in the far offset range. For the picking of events and model building by raytracing or tomographic inversion both sections were used to keep all available seismic information.

Final processing sequence

- Input: SEGY-data, 4 ms or 5 ms sampling rate with complete geometry information
- Tapering the first 0.5 s to zero to reduce the response of the debias filter operator
- Butterworth highpass (debias)
- Gated Wiener deconvolution: gate length 3 s, overlap 1 s, length of merge region 1 s, operator length 100 ms (prediction interval included), prediction interval 40 ms
- Static correction to a fixed seafloor traveltime of 11 s
- Time and offset-dependent Butterworth frequency filter

On time-shifted traces with a reduced time scale of 6 km/s the following filter parameters were used:

lower stop/pass	upper pass/stop (Hz)	offset(m)	beginfull(s)	endfull(s)
1/10	65/85	0	0	12.8
		8000	0	12.6
		48000	0	0
1/5	45/60	0	13.7	14.3
		8800	13.5	14.4
		13200	13.0	13.9
		52000	2.0	4.7
		107000	0.5	1.0
1/5	30/40	0	15.3	16.8
		11700	15.1	16.6
		19200	14.8	16.3
		61700	7.0	10.1
		114000	2.0	3.0
		152000	1.5	2.4
1/5	20/30	0	19.0	trace length
		20000	18.4	trace length
		130000	3.5	trace length

- **Data archiving**

All seismic raw data and the final processed SEGY data were archived on external usbdisks.

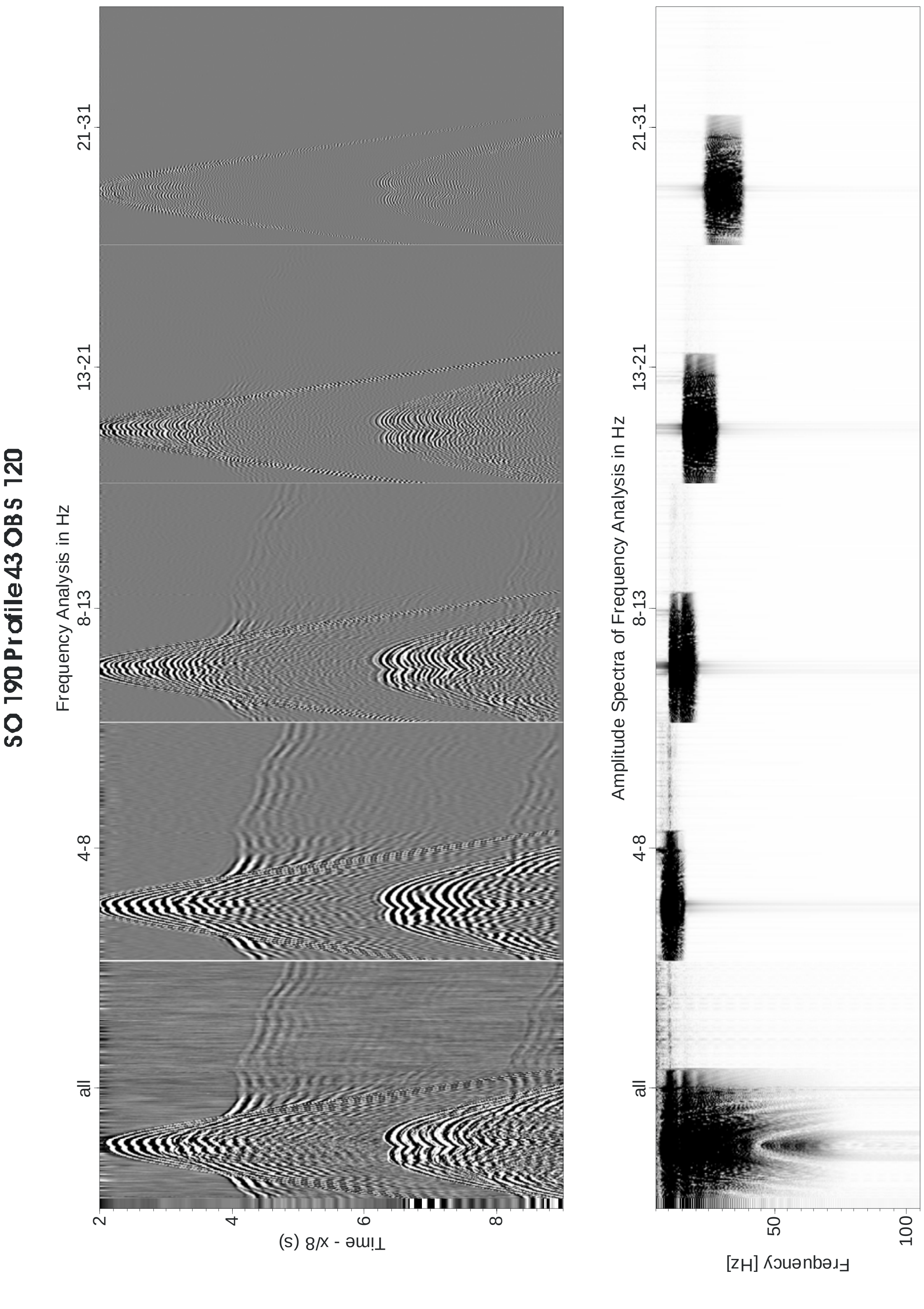


Figure 6.3.6: *Frequency analysis: frequency range 4-31 Hz.*

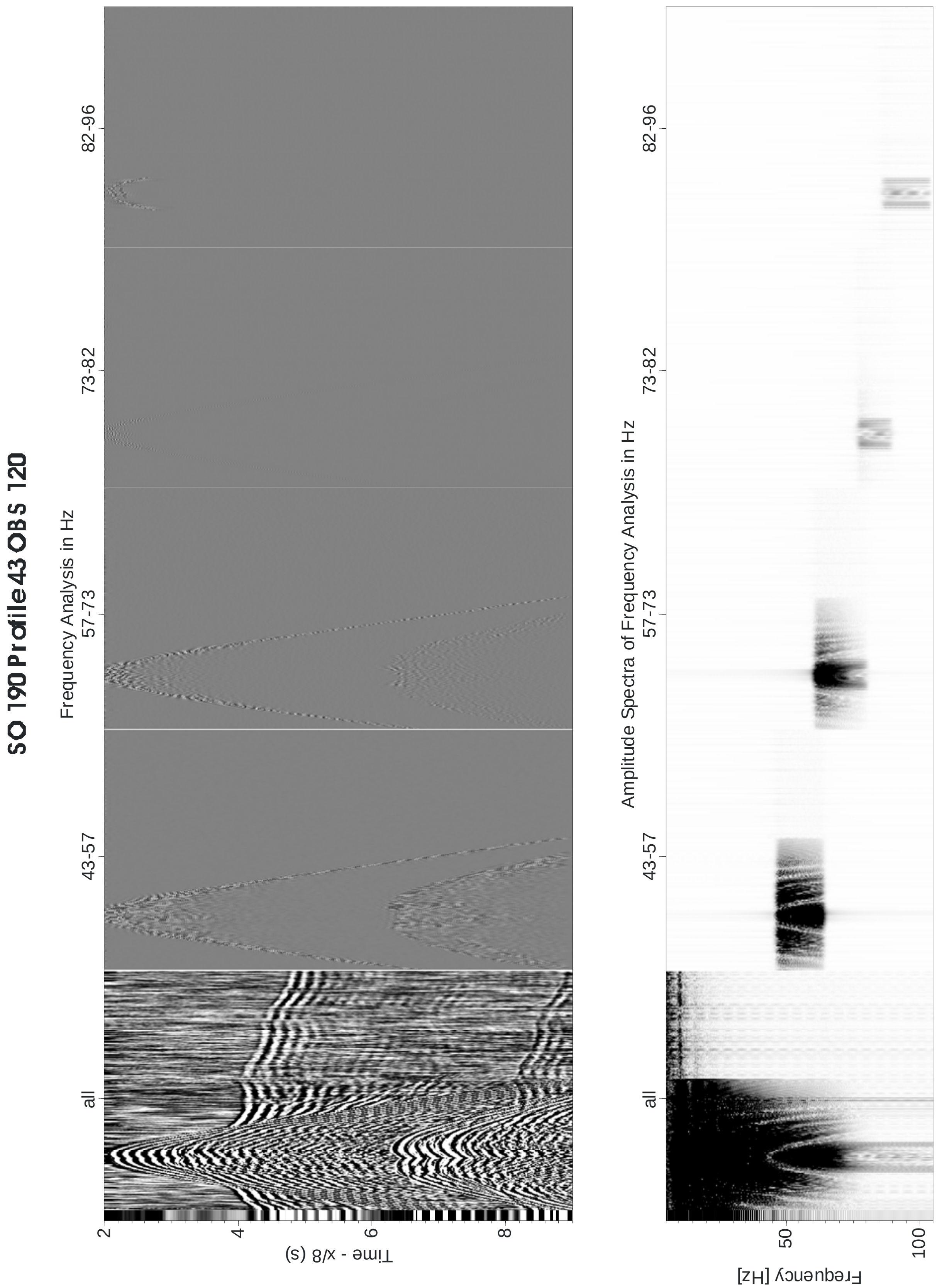


Figure 6.3.7: *Frequency analysis: frequency range 43-96 Hz.*

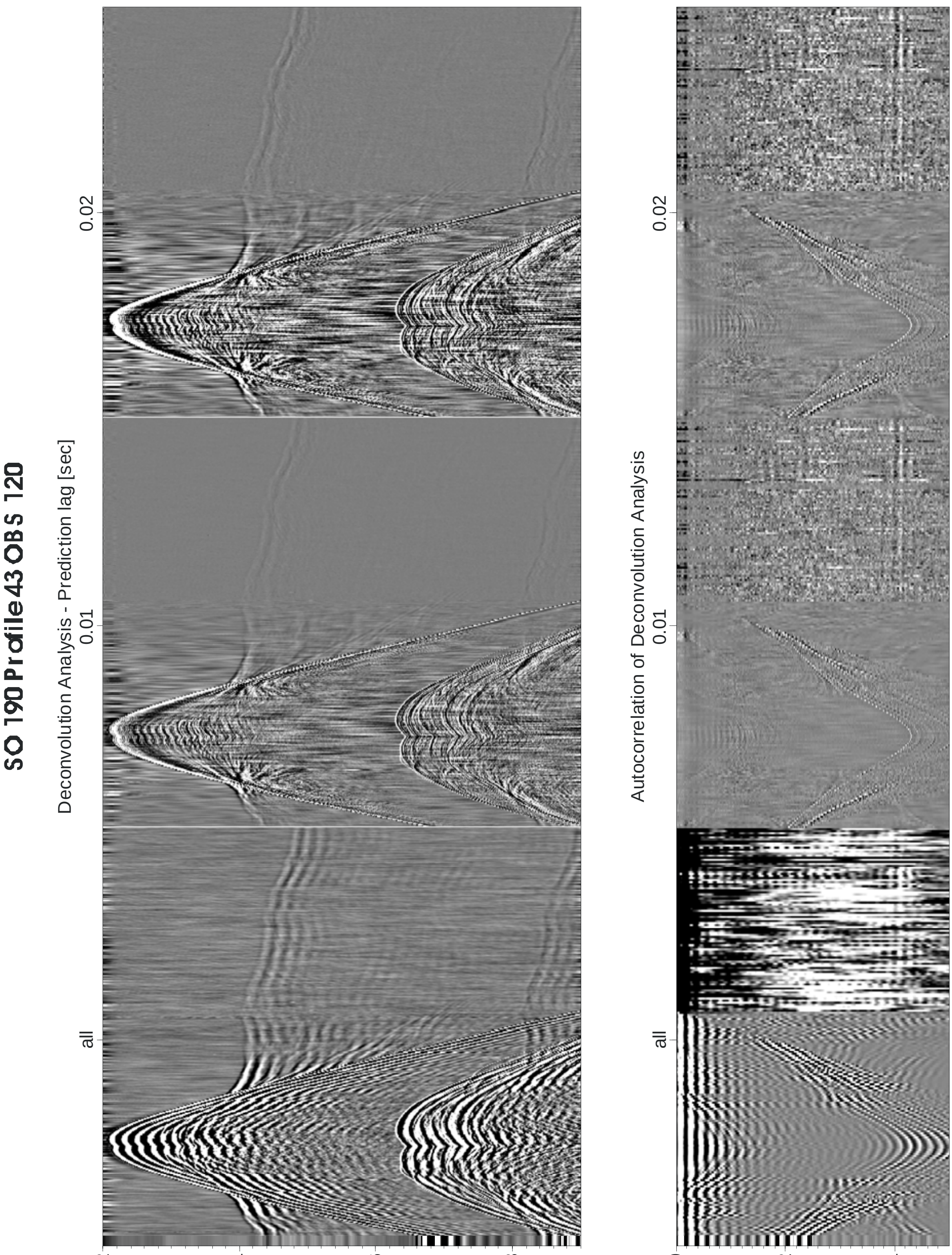


Figure 6.3.8: *Deconvolution test panels with prediction lag 10ms and 20ms.*

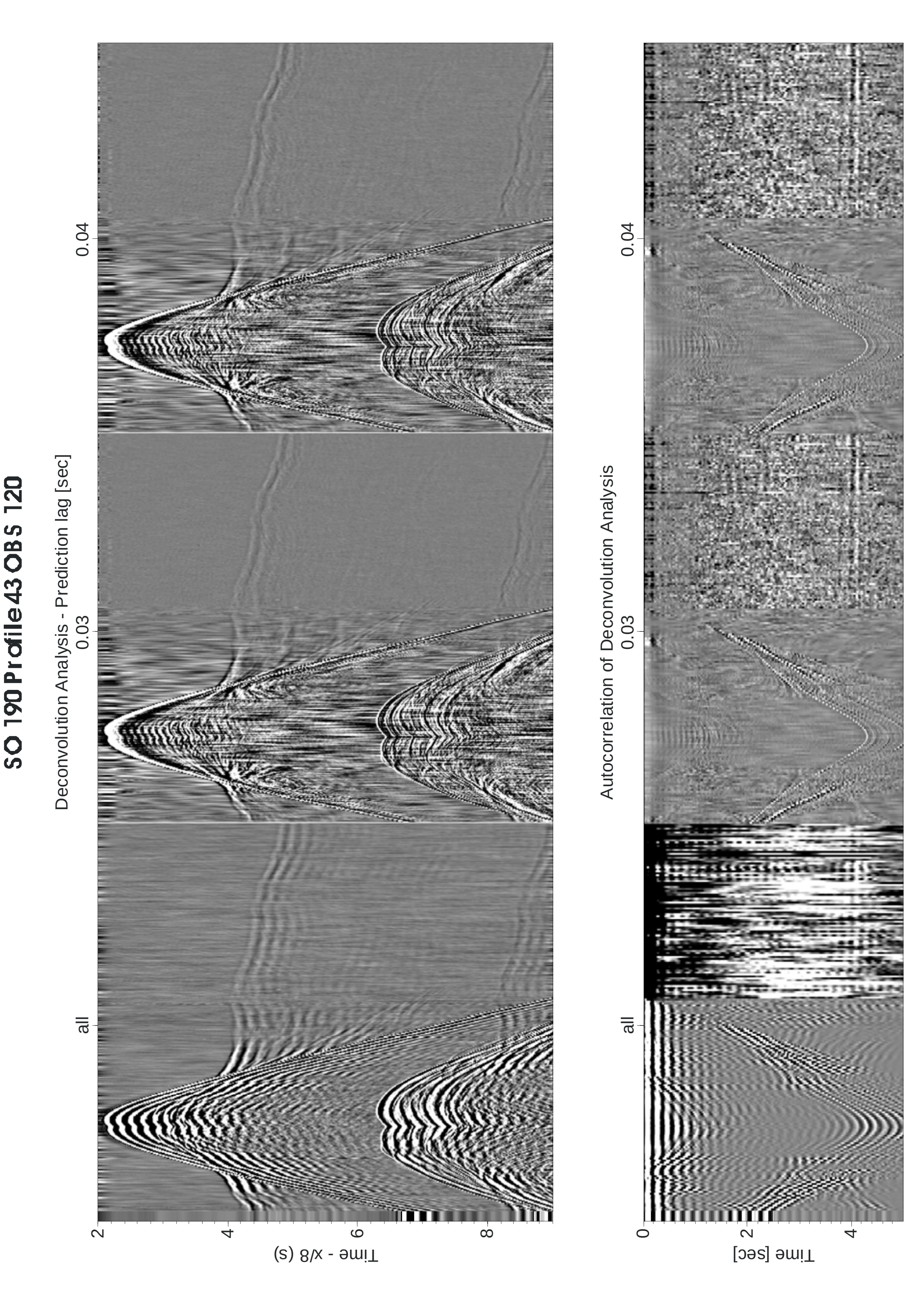


Figure 6.3.9: *Deconvolution test panels with prediction lag 30ms and 40ms.*

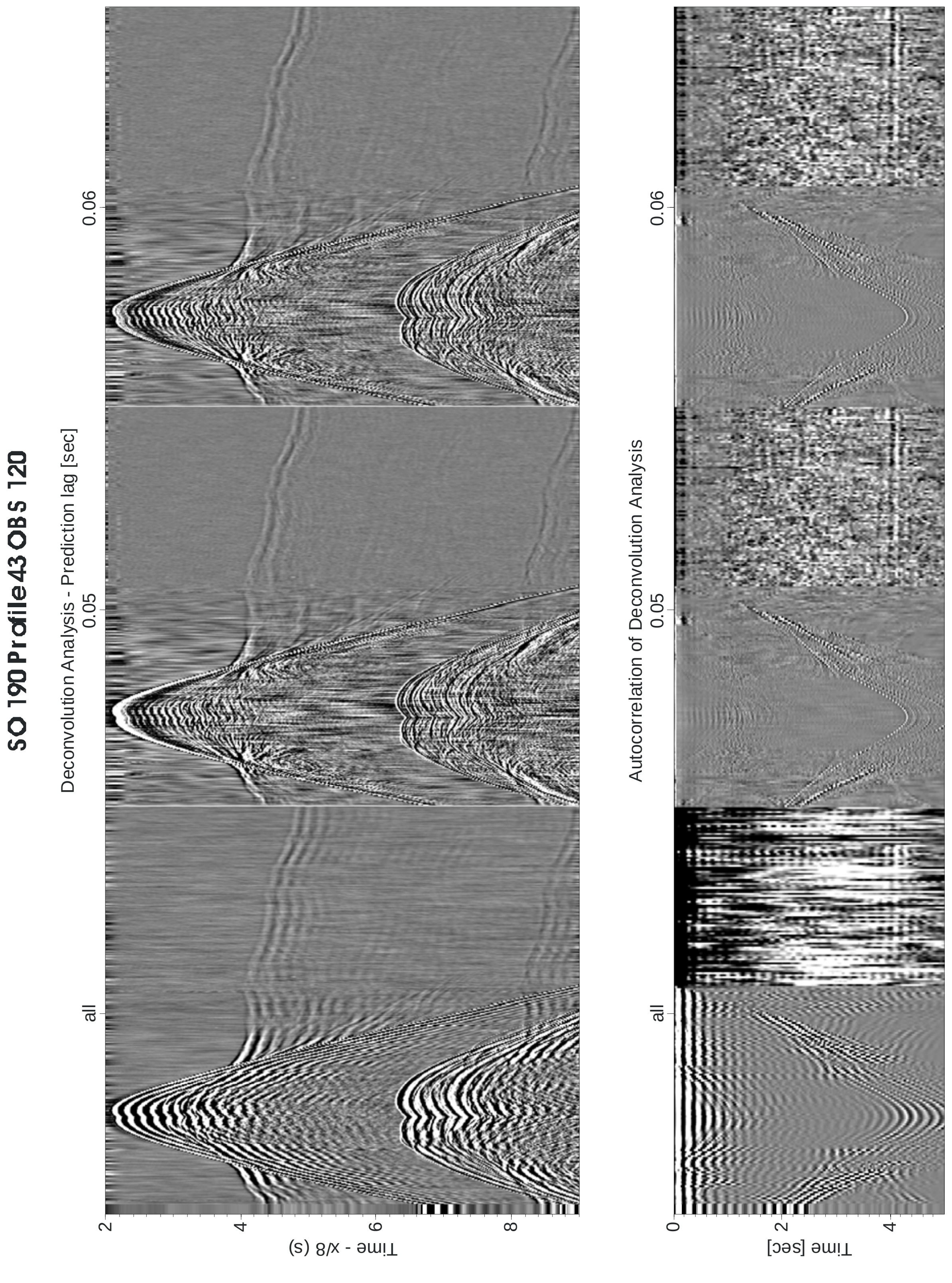


Figure 6.3.10: *Deconvolution test panels with prediction lag 50ms and 60ms.*

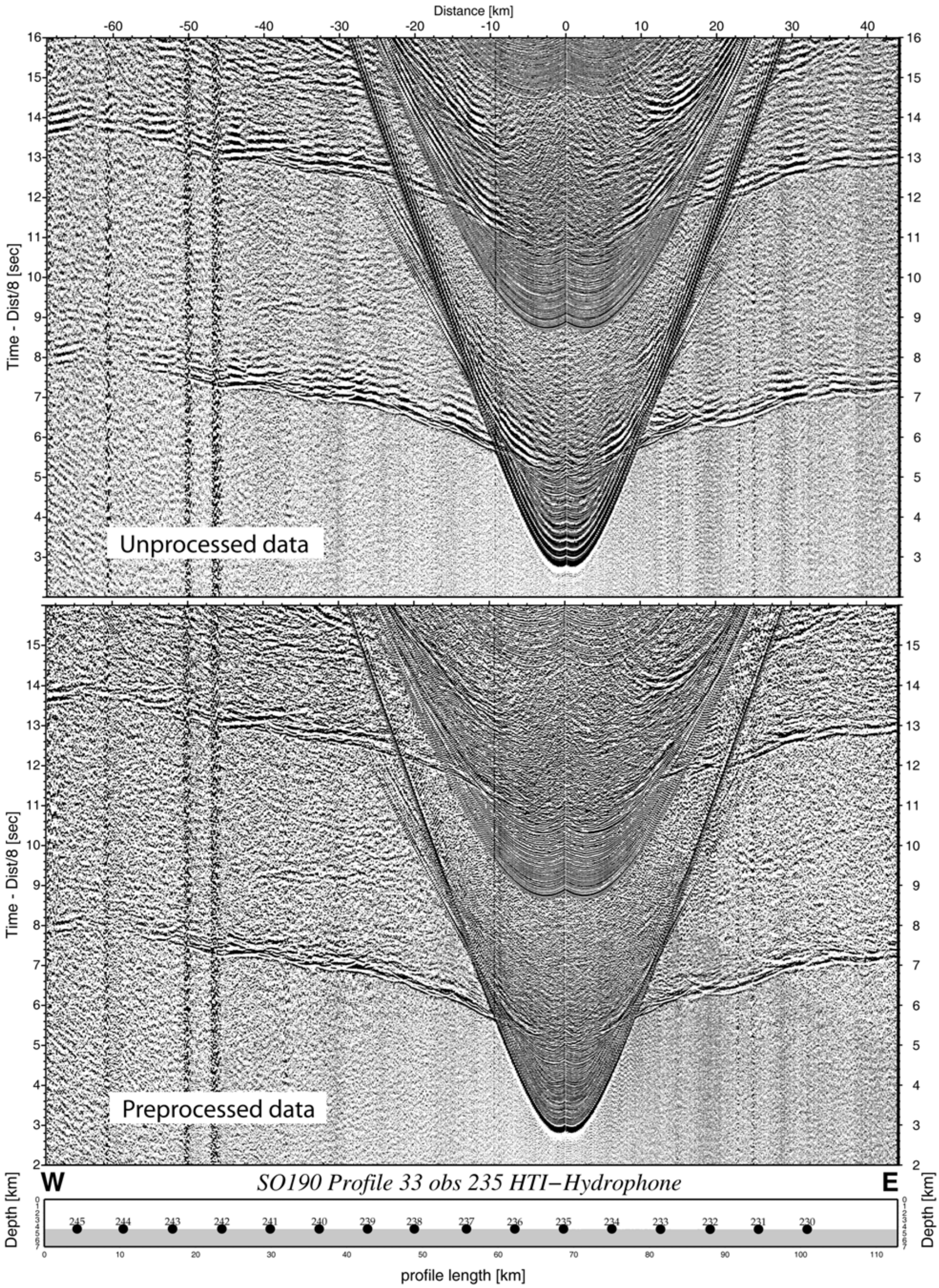


Figure 6.3.11: *OBS 235 before (upper panel) and after preprocessing (lower panel).*

- **Modeling of OBH/S data**

Forward ray tracing

To obtain the deep structure of the margin and the *P*-wave velocity field, two methods were used: a forward modeling technique using the MacRay program and a joint refraction and

reflection tomography using the Korenaga code TOMO2D (Korenaga 2000; Korenaga, et al 2000). The starting models for both methods include the known bathymetry. The resulting models of the combined analysis of the reflection and refraction seismic data are shown in chapters 6.3.1 – 6.3.4. The major horizons (top of oceanic crust, subducting slab, top of the crystalline basement identified in the MCS sections are correlated with the reflection phases from the wide-angle data at zero offset to provide a starting model for forward modelling (Luetgert 1992; Zelt 1999).
The reflection and refraction arrivals were identified and picked on all seismic OBH/S sections. Picking accuracy in the seismogram sections is better than 50 ms for the near offset range (i.e. ±100 m with a velocity of 2 km s−1), as well as for oceanic crustal phases, and is better than 100 ms for large offsets (i.e. ±500 m with a velocity of 5 km s−1) where seismic phases interfere with strong multiple reverberations of the direct wave from previous shots.

Forward ray tracing (MacRay)
With this technique not only the first arrivals but also later refracted and reflected phases could be used to resolve complicated structures on the profiles. A 2-D seismic ray tracing method was applied using the MacRay program (Luetgert 1992). Calculated traveltimes from the velocity model are compared with the seismic refraction datasets. The strong multiple arrivals observed in some OBH/S stations were used to identify seismic events, e.g. *P*n- phase of the subducting slab.

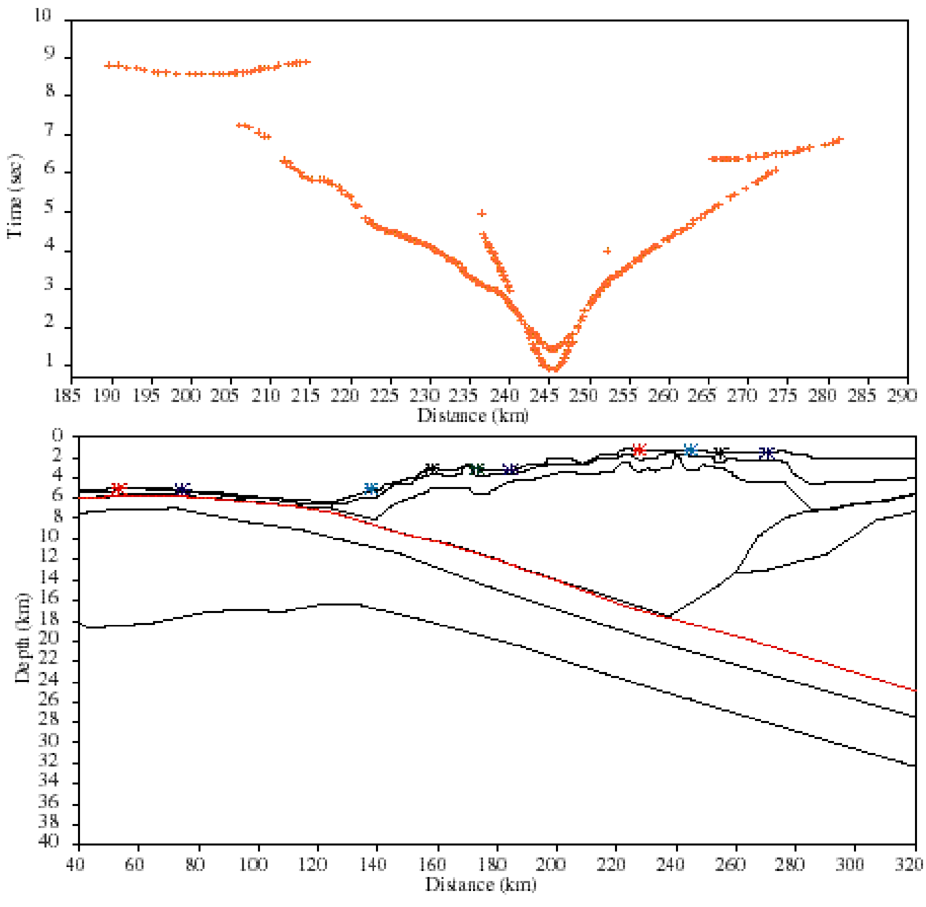


Figure 6.3.12: *MacRay travel time picks and velocity model.*

Joint Refraction and Reflection Tomography (TOMO2D)

The joint refraction and reflection tomography package used for modelling is TOMO2D (Korenaga, 2000). The method is iterative, and new ray paths are calculated during each iteration by using Fermat's principle to linearize the inversion. A combination of smoothing and damping constraints is applied in order to regularize the system of equations and to

restrict the maximum amount of model updates not to violate the linearization assumptions. Finally, the linear system of equations is solved using the sparse matrix solver LSQR (Paige and Saunders, 1982).
The forward algorithm is a hybrid scheme based on the shortest path (or graph) method and the ray bending method. The hybrid scheme is implemented on an irregular grid and achieves the desired accuracy by adjusting the graph template size, which makes it a very flexible and efficient tool for the calculation of ray paths and traveltimes. By forcing seismic ray paths to follow the connections of a network, one introduces errors in the ray geometry and in the traveltime along the ray. Ray paths usually travel zig-zag in homogeneous or smooth velocity zones, resulting in longer ray paths and higher traveltimes. Errors are worst in propagation directions which are poorly covered by available connections. Therefore, Korenaga et al. (2000) utilized a forward star to obtain a good coverage of search directions for available ray paths. For crustal velocity models, where the vertical velocity gradient usually dominates the horizontal gradient, a star that preferentially searches the downward direction has shown favorable characteristics with respect to an isotropic star with the same number of nodes (Van Avendonk et al., 2001). In this study, the results of the SPM within the hybrid algorithm only serve as an initial guess for subsequent ray bending refinements. Therefore, ray paths and traveltimes should be close enough to the true ones to ensure that the ray bending technique will not fail to converge to a global minimum traveltime path. Moreover, iterating the ray bending method from a poor SPM solution proves to be slower and makes the hybrid ray tracer less efficient (Van Avendonk et al., 2001). In our case, we use a mixed fifth/tenth order forward star, identical to the one used by Korenaga et al. (2000) and similar to the 3x7 forward star used by Van Avendonk et al. (2001) who both worked on refraction datasets with somewhat comparable geometries.
The bending method used in the TOMO2D code uses a conjugate gradient search where rays are parameterized as beta-splines. This approach avoids inaccuracies in concave slowness regions (low velocity zones) and results in a considerably higher accuracy and efficiency.
For the inversion process, a “creeping strategy” (Shaw and Orcutt, 1985) is applied, which regularizes the model perturbation with respect to the solution of the previous iteration. Each inversion step must be small (to account for the linearization assumptions) and is controlled by a total of four weighting parameters (two for damping and two for smoothing). After each inversion step, a solution is obtained that is closer to the minimum, but still lies within the limits of linearity. Subsequently, new ray paths and traveltimes are computed with the new model and the inversion is initialized again. A series of these iterative steps can change an initial model dramatically if such a fit is required by the data.
The two dimensional velocity model is parameterized as a shared mesh beneath the seafloor. Seafloor topography is explicitly included in the method by vertically sharing the columns of nodes to follow local seafloor relief. Grid node spacing can vary both in the horizontal and vertical dimensions. Bilinear interpolation is used in each parallel shaped grid cell, resulting in a smooth velocity field between different cells. Grid node spacing is the same for forward calculations and for the inverse step. Thus, the mesh must be fine enough to account for an accurate forward theoretical result. It should be finer than the expected velocity variations caused by the spatial limits of structural features not to introduce any bias to the tomographic velocity solution. For the steep vertical and lateral velocity gradients that typify subduction structure a nodal spacing in the order of hundreds of meters or less is necessary.
A reflector is represented as an array of linear segments whose nodal spacing is completely variable and independent of that used in the velocity grid. The horizontal coordinate of each segment is held constant, whereas its vertical value is updated in the inverse solution. Although a velocity discontinuity at the reflector is fundamental for the generation of reflected phases, this is not explicitly treated in the modelling. Instead, a “floating reflector” approach is used to update reflector depths freely without changing adjacent velocity nodes.

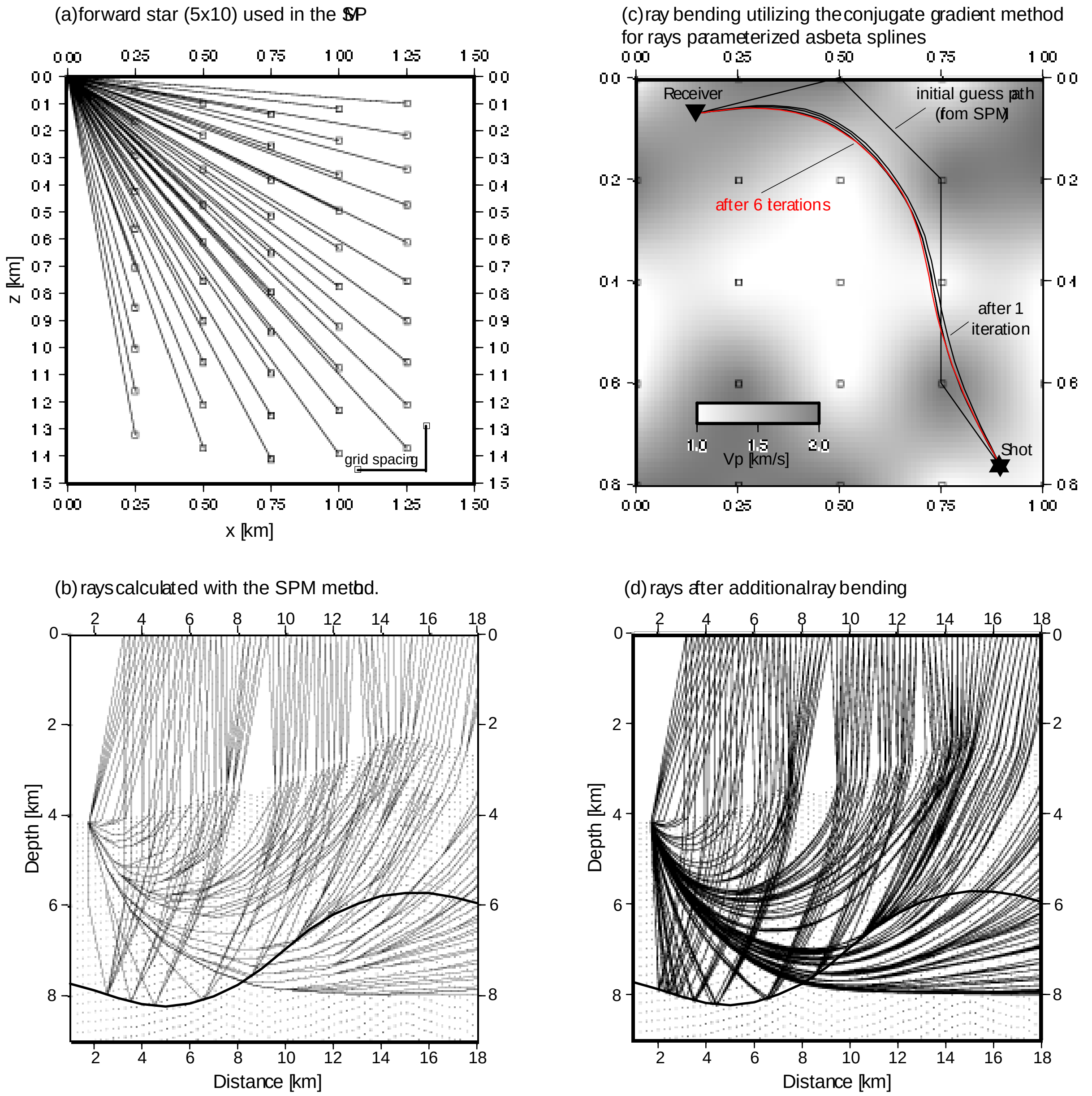


Figure 6.3.13: *Hybrid forward algorithm. (a): Forward star used in the shortest path method with no vertical exaggeration. (b): Rays calculated with the SPM. (c): Bending with conjugate gradients from an initial guess path in a complicated medium, with velocities smoothly varying from 1.0-2.0 km/s. Traveltimes: initial guess path 0.825996s, after 6 iterations 0.786604s (no analytic solution known). (d): Rays of figure (c) after additional ray bending.*

Parameter adjustment

For all profiles, a laterally varying horizontal node spacing of 250m is employed. Vertical node spacing linearly increases from 100m at the seafloor to 250m at a depth of 10km below seafloor and is then kept constant at 250m for the deeper model areas. Thus, a higher spatial resolution due to better ray coverage is anticipated for the upper parts of the models. Furthermore, increasing velocity node smoothing with depths for both horizontal and vertical correlation lengths is used in order to reduce small-scale model structure at greater depths, which would not be resolvable with the available dataset anyway.

To minimize the influence of the a priori chosen smoothing length scales on the structural interpretation of geologic features in the velocity models, vertical and horizontal correlation lengths are not allowed to vary laterally. Additionally, in order to ensure comparability of the derived model structure, the parameterization of smoothing length scales is the same for all profiles. Throughout the modelling, a horizontal correlation length of 2 km at the seafloor increasing linearly to 8 km at the bottom and a vertical correlation length increasing linearly from 0.2 km at the seafloor to 1.5km at the bottom of each model is used. Since there is a tradeoff between the chosen correlation lengths and the corresponding smoothing weights in terms that a higher smoothing weight compensates a lower correlation length, but at the same time requires clearly less computational memory during the inverse calculations, the smoothing length scales are chosen rather less conservatively. For reflector nodes, the corresponding smoothing length scales are sampled from the horizontal 2D velocity correlation lengths at the appropriate depths. Individual smoothing weights for each model are tested using a single-step inversion and are later held fixed during all iterations. Appropriate smoothing weights should minimize the roughness of the tomographic output models but at the same time decrease significantly the data variance.

Sweeps on velocity and depth damping weights are done at each iteration to restrict the average perturbation of velocity and reflector nodes to maximal 5%. With increasing number of iterations, model updates become smaller, and hence damping is not required anymore. Depending on the chosen starting model, damping is stopped after 1-3 iterations.

In order to obtain a starting model, a 1D velocity-depth profile is expanded laterally along the whole model range, starting for all velocity nodes at their individual seafloor depth. A flat-lying reflector completes the obtained 2D starting model, which can be regarded as pretty far away from the real subsurface structure.

For the derived starting models initial RMS traveltime misfits can reach up to 800ms with a corresponding normalized X^2 of 120. Initial model updates exceed our predefined bounds, hence damping is applied for the first iterations. After 10-15 iterations, the RMS misfit is reduced by 70-90% to typical values of 70-90ms ($X^2 \approx$ 2-3) for the preliminary models presented in the following sections.

6.3.1 The 113°E Corridor

In this area covering the Java Shelf and the adjacent Roo Rise altogether three deployments of OBH/S were made, as shown in Figure 6.3.1.1. Profile 41 is a strike line along the forearc high, here 21 instruments (OBS57 to OBH77) were deployed. P42 is the seaward part of the dip line, in total 30 instruments (OBS78 to OBH107) were in operation. Another 22 instruments (OBH108 to OBS129) were deployed on the remaining part towards the coast on Profile 43. For line P41 the shooting interval was set to 40 s, while for P42 and P43 it was at 60 s. The gun depth was 8 m for the starboard array along all three profiles. For the portside array on lines P41 and P42 it was set to 12 m, and 8 m for P43. For the final 80 km of Profile 43 (shooting from south to north) a four channel streamer was also deployed to image sedimentary structure where line BGR06-305 terminated 20 nm off the coast.

Profiles were chosen coincident with BGR lines BGR06-301 and BGR06-305, the composite results of these are shown in Figures 6.3.1.2 and 6.3.1.3. The data are generally of good quality, a few selected examples are shown in Figures 6.3.1.4 to 6.3.1.9. Details on instrumentation and shots can be found in Appendices 9.1 and 9.2.

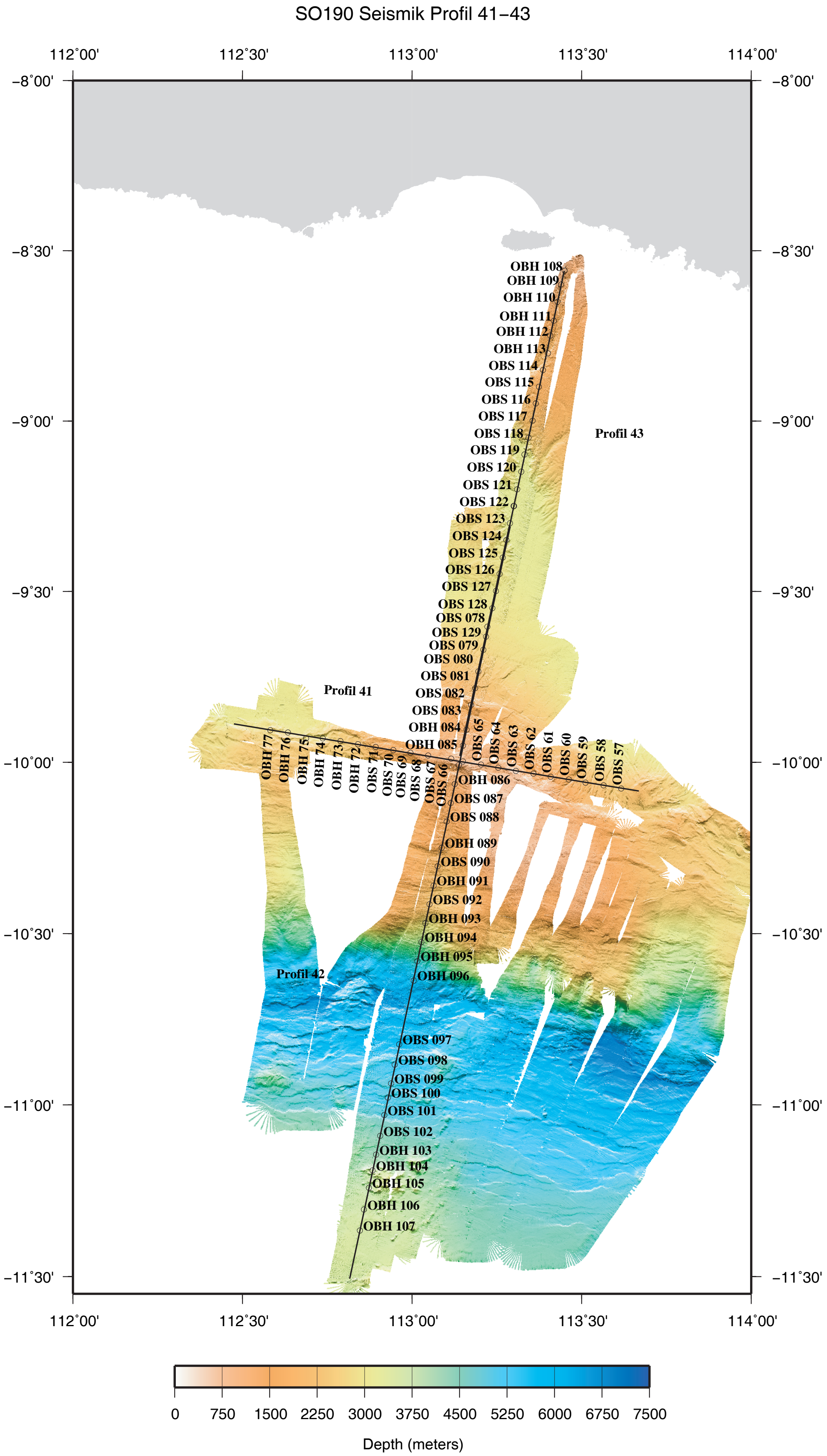


Figure 6.3.1.1: Overview of the refraction seismic profiles along corridor 113°E. Bathymetry is underlain and grey shade coded.

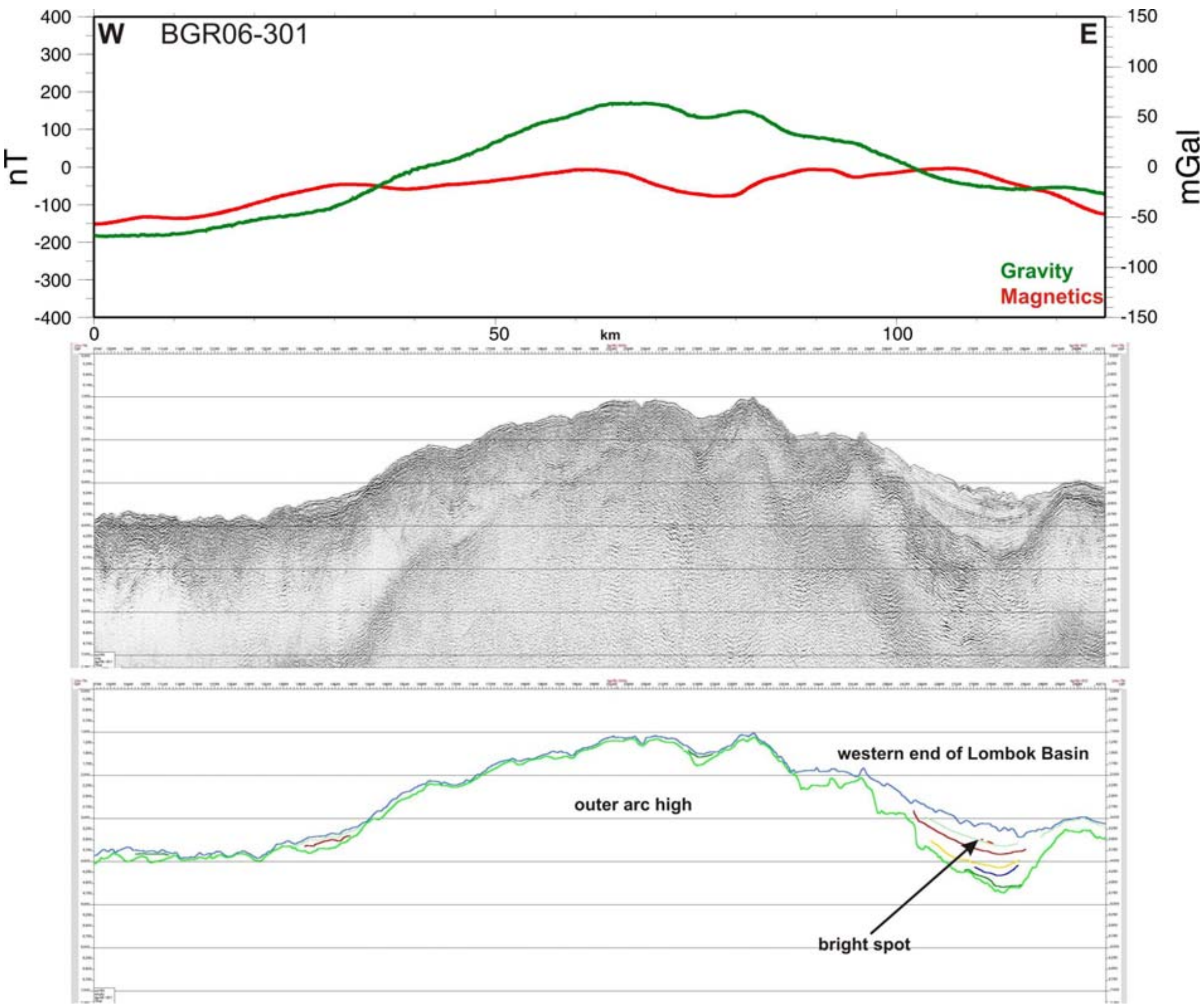


Figure 6.3.1.2: Magnetic and gravimetric data, top. MCS profile BGR06-301, migrated time section, middle. Interpretation of seismic data, bottom.

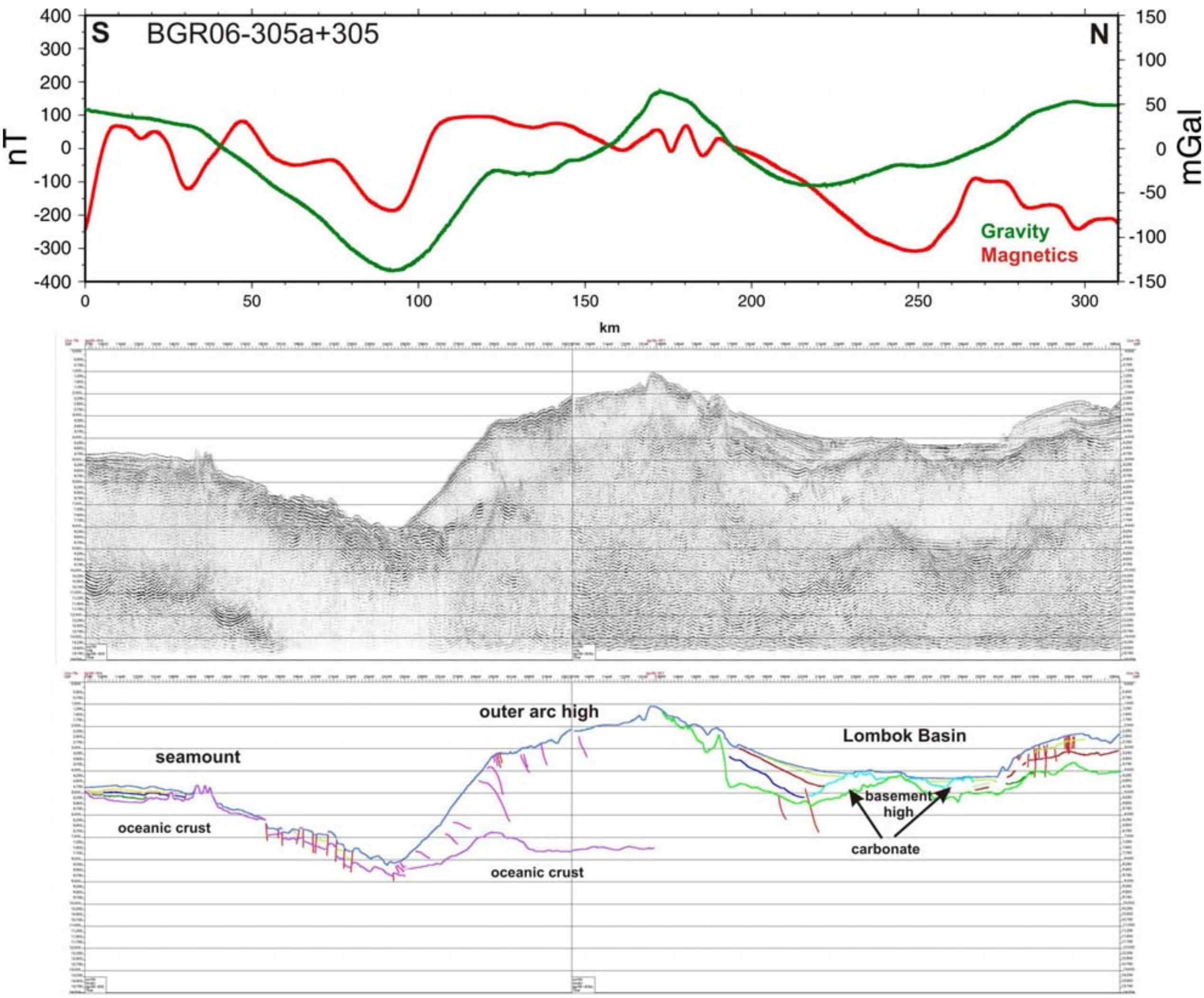


Figure 6.3.1.3: Magnetic and gravimetric data, top. MCS profile BGR06-305 and -305a, time section, middle. Interpretation of seismic data, bottom.

A preliminary onboard interpretation was achieved for Profile 41 using the joint reflection and refraction tomography package TOMO2D (cf. chapter 6.3). As a simple starting model a 1D velocity depth profile was used with velocities ranging from 2.0 km/s at the sea floor to up to 8.0 km/s at a depth of 20 km bsf (see Fig. 6.3.1.10 a). Additionally, a flat lying intra-crustal reflector was placed at a depth of 7 km bsl. based on the identification of a number of strong reflected phases from these depths. The RMS obtained for this model is 240 ms. For the iterative approach, a damping scheme was applied allowing for max. 5% velocity and reflector updates per iteration. For the smoothing constraints, depth depending horizontal correlation lenghts ranging from 2 km at the sea floor to 8 km at the model bottom were used. To allow for more vertical than lateral velocity structure, vertical correlation lengths of 0.2-1.5 km were chosen a factor smaller. After 18 iterations, the RMS dropped to 69 ms for both reflected and refracted rays, which falls well within the limits of the assigned pickuncertainties of 30-100 ms.

The corresponding tomographic output model is shown in Figure 6.3.1.10 b. Areas with no ray coverage are masked. Synthetic traveltimes obtained from this model reveal a good fit for the upper portions of the model. However, there are still major discrepancies to the observed picks discernable for some deep turning rays and reflected phases (cf. Fig. 6.3.1.10 d), which might be due to remaining velocity structure and in places bad reflector picks.

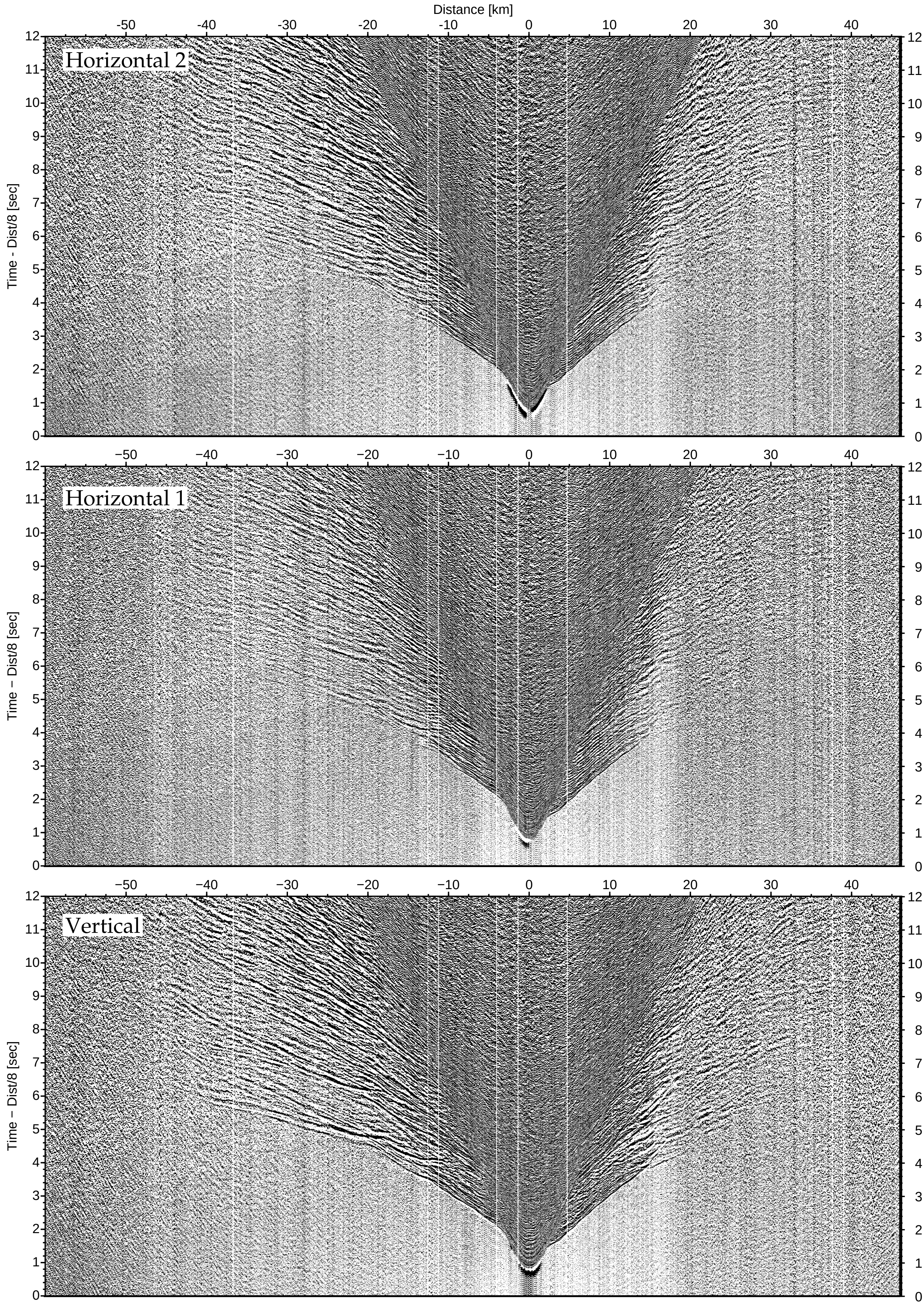


Figure 6.3.1.4: Record sections from obs 064 (HTI/Owen−4.5Hz Geophone), Profile 41.

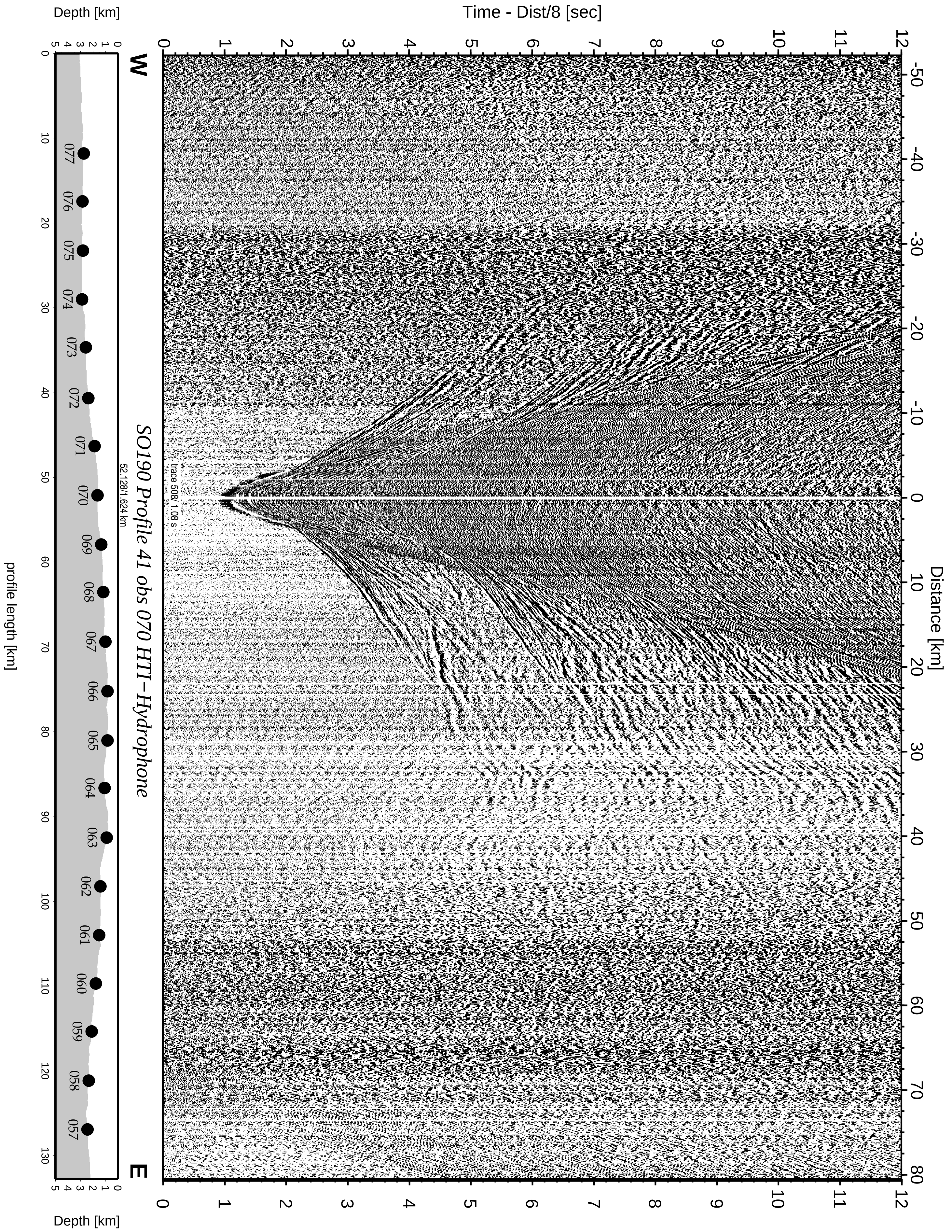


Figure 6.3.1.5: Record section from obs 070 HTI−Hydrophone, Profile 41.

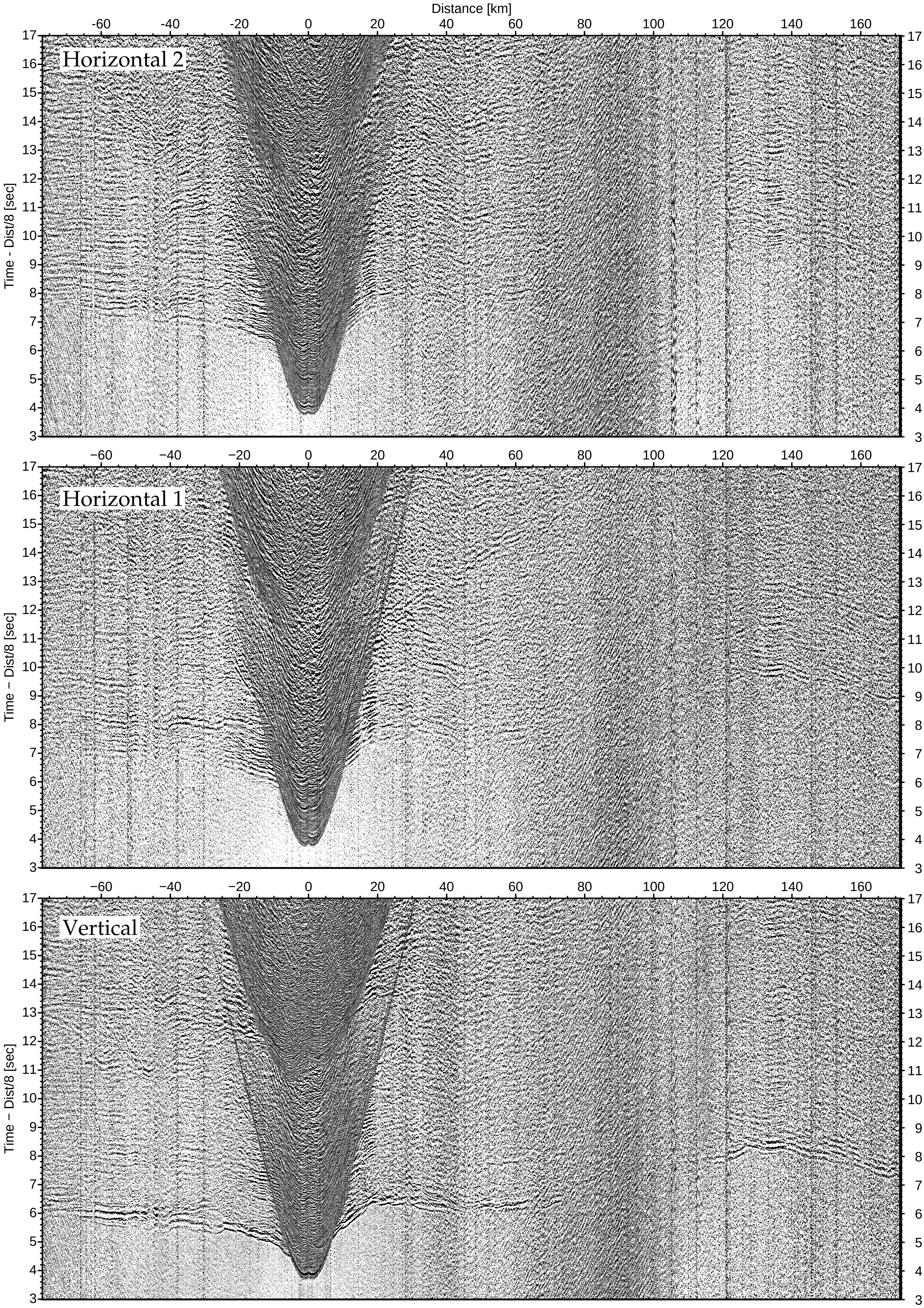


Figure 6.3.1.6: Record sections from obs 097 (HTI/Owen−4.5Hz Geophone), Profile 42.

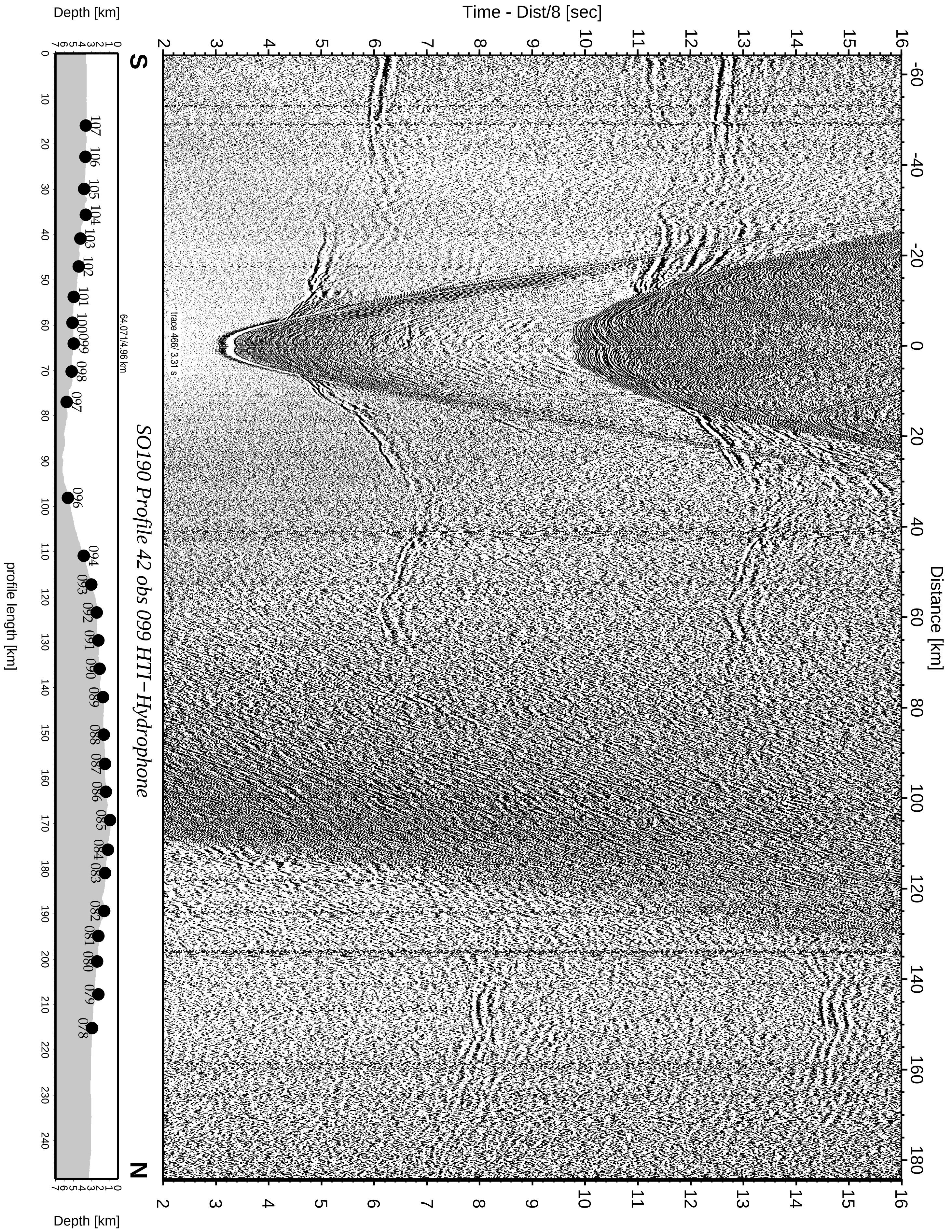


Figure 6.3.1.7: Record section from obs 099 HTI−Hydrophone, Profile 42.

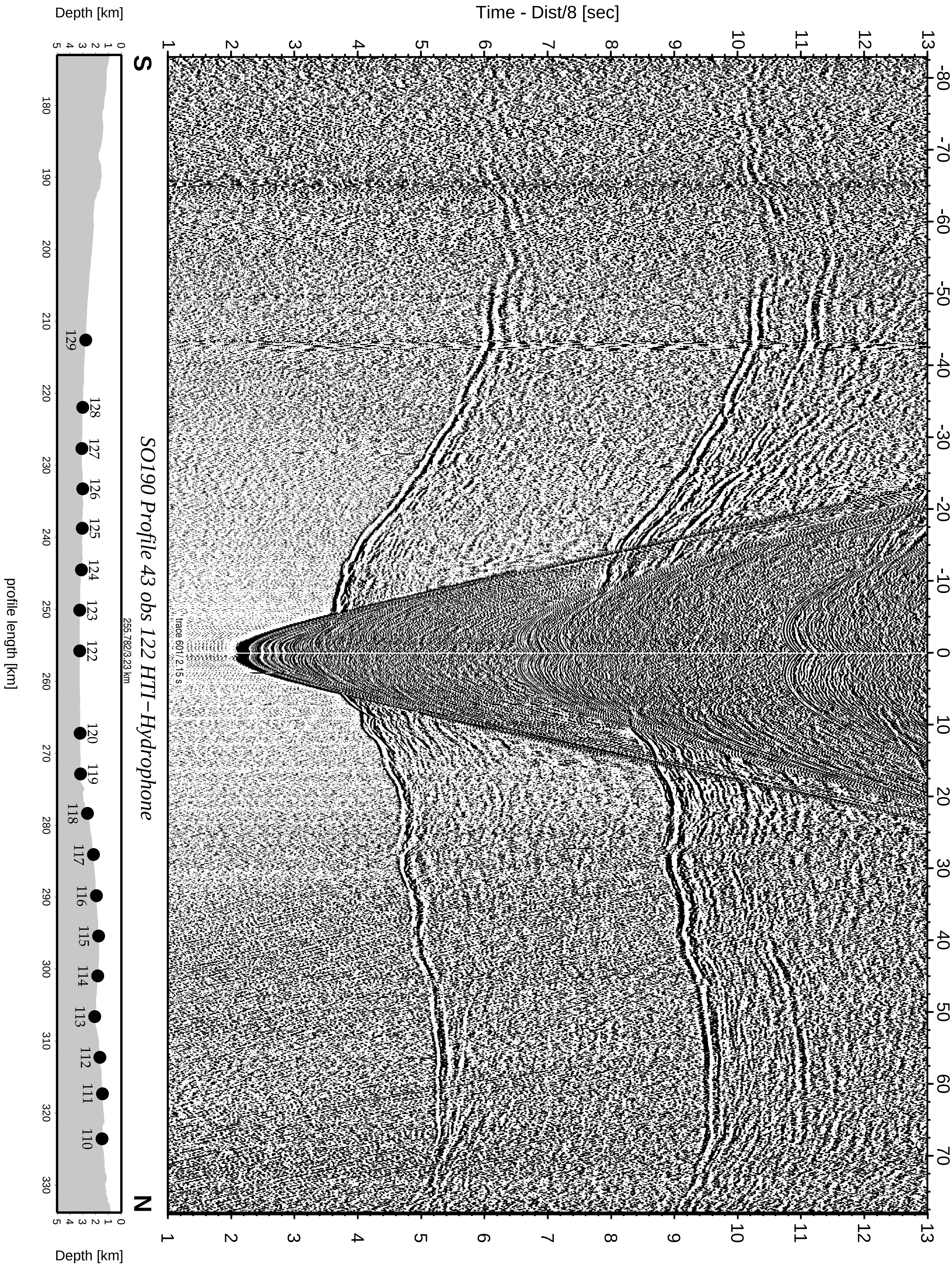


Figure 6.3.1.8: Record section from obs 122 HTI−Hydrophone, Profile 43.

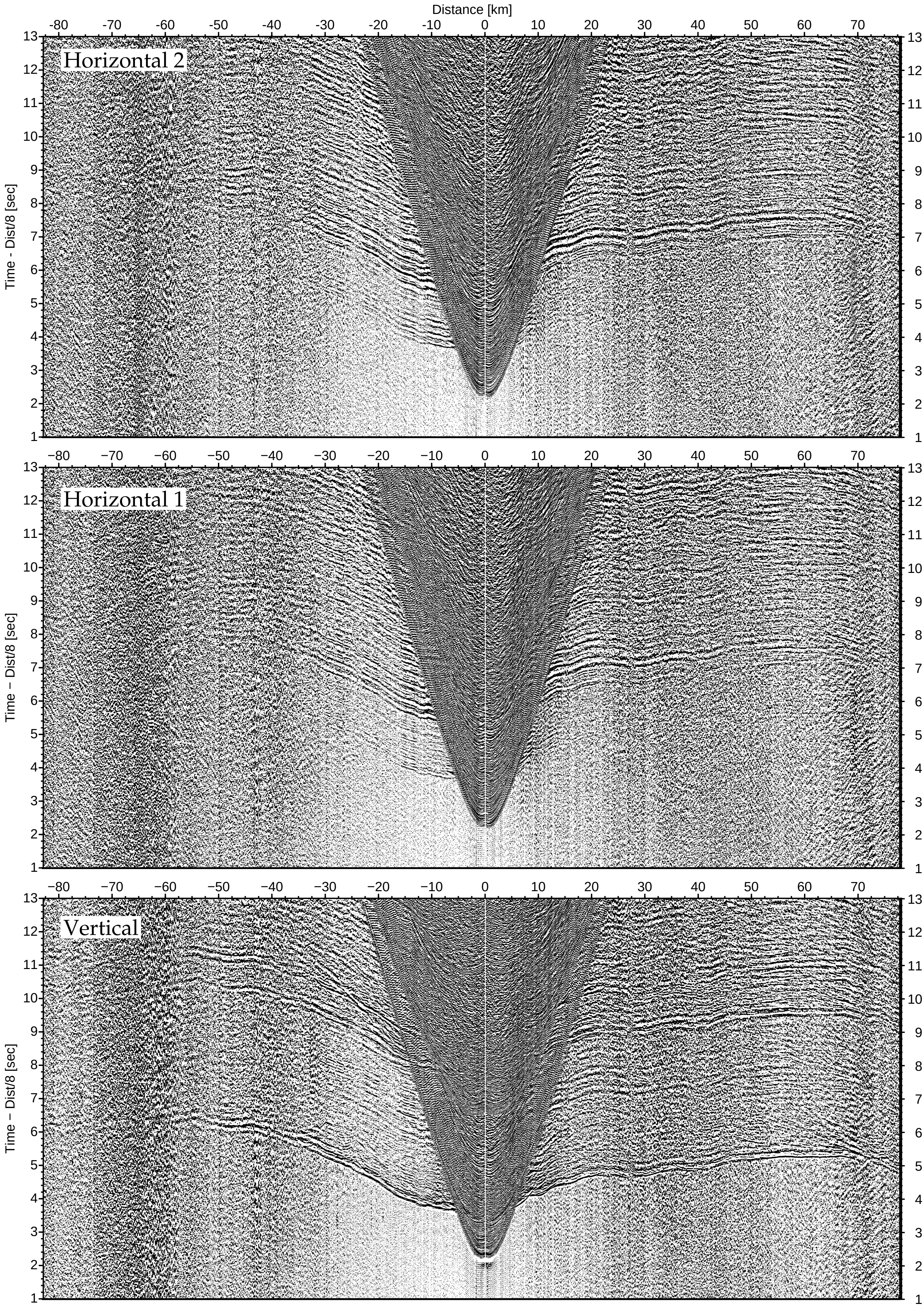


Figure 6.3.1.9: Record sections from obs 122 (HTI/Owen–4.5Hz Geophone), Profile 43.

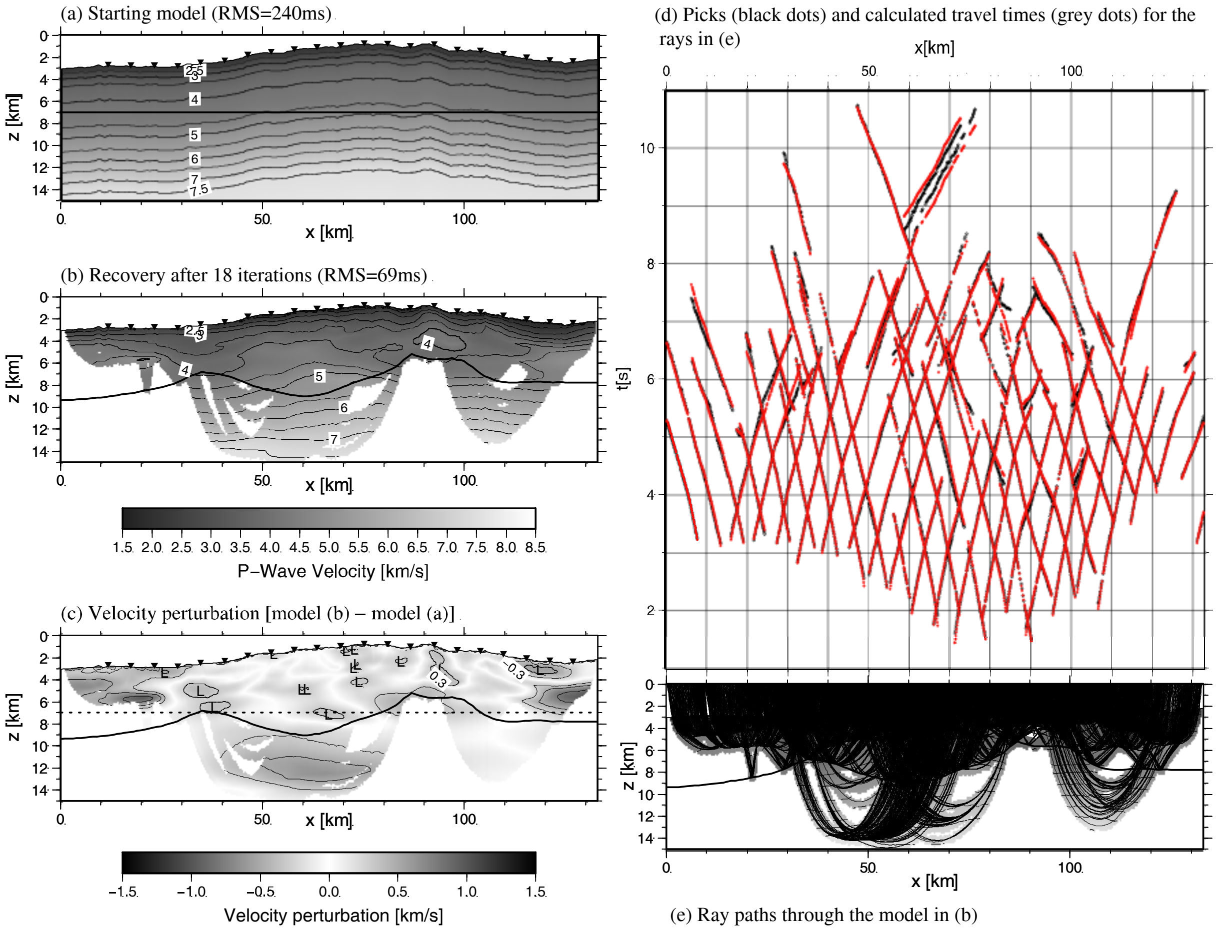


Figure 6.3.1.10: Preliminary results obtained from tomographic modeling for Profile 41. a) Starting model used for the inversion. b) Tomographic output model after 18 iterations. c) Velocity perturbation. d) Traveltime fit. e) Ray paths through the preferred output model.

The tomographic output in Figure 6.3.1.10 b shows considerable lateral velocity variations with lower velocities for upper model portions >110 km profile length, which might indicate a thickened sedimentary section here. This is in close agreement to the results obtained from the BGR streamer data (cf. Fig. 6.3.1.2) and marks the beginning of the adjacent Lombok Basin. Similar structures, albeit less pronounced, can be observed near 30 km profile distance. In between, slightly higher velocities coincide in places with small elevations of the seafloor (e.g. at 90 km), which again fits well to the high-resolution streamer data. Ray coverage in the deeper model areas is quite sparse. However, obtained velocities do not reach up to typical mantle velocities here.

A preliminary interpretation of the oceanic crust part of Profile 42 was obtained by using the travel time picks of stations 97 to 197. The resulting model, using the ray tracing code MacRay is shown in Figure 6.3.1.11. The model is divided into five interfaces. The upper interface marks the sedimentary layer and for simplicity an average velocity of 1.6 km/s was assumed. The thickness of this layer was partly determined from the MCS-data of line BGR06-305 (Fig. 6.3.1.3). Below the water column, the sedimentary layer is interrupted by a seamount at 35 km. The second layer shows the northwards dipping upper part of the oceanic crust and has an average velocity gradient from about 3.7 - 4.2 km/s at the top to 5.4-6.2 km/s at the bottom of the layer. The velocities increase slightly from north towards south as the accretionary wedge is approached, which may be due to compaction of this downgoing slab. The third layer shows the northwards dipping lower part of the oceanic crust. The average velocity gradient ranges from about 6.5-6.6 km/s at top of the layer to 7.1-7.2 km/s at the bottom of the layer. The upper mantle has not yet been modelled in great detail, a velocity of 8.1 km/s below Moho is based on matching critical distances of PMP reflections. No diving waves through the mantle can be seen in the data.

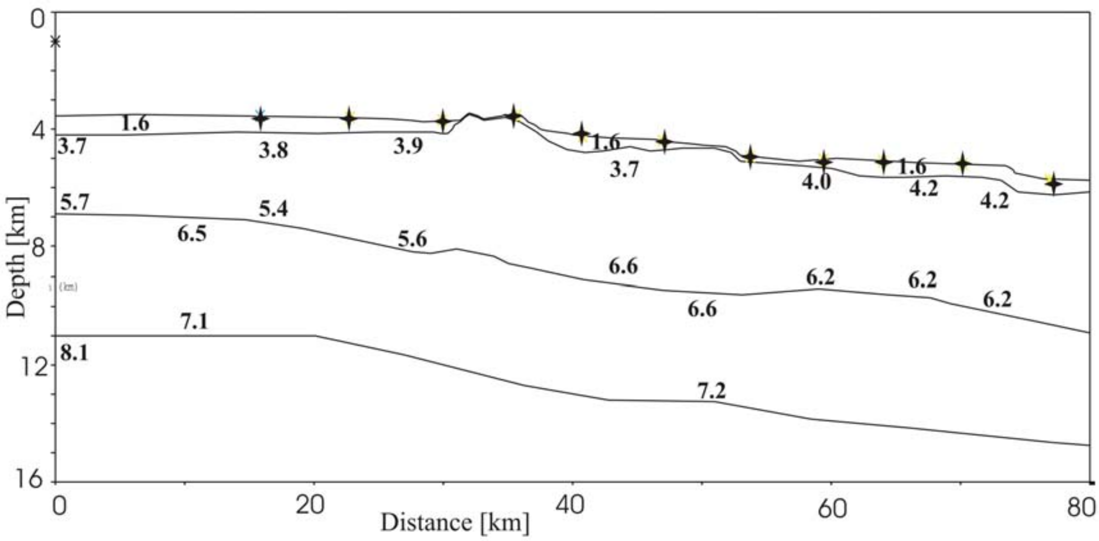


Figure 6.3.1.11: Preliminary model of Profile 42, obtained using MacRay. Stars mark the locations of the OBH/S on the sea bottom.

An interpretation of the accretionary complex and forearc basin along Profile 42 is based on the travel time picks of stations 96, 94-82. The resulting model obtained using the ray tracing code Mac Ray is shown in Figure 6.3.1.12. It is divided into five interfaces. The first layer is the water column with a velocity of 1.5 km/s. Under the ocean bottom is a sedimentary layer whose thickness is determined from the MCS–data of line BGR06-305 (Fig. 6.3.1.3) and for simplicity a constant velocity of 1.6 km/s was assumed. The third layer comprises the consolidated sediment of the decreationary complex and forearc high and the island arc basement.
In this domain, the velocity field shows a strong gradient in the upper 4-6 km, with velocities between 2.2 and 2.7 km/s at the top and between 4.0 and 5.8 km/s at the bottom. Superimposed is a horizontal velocity gradient. Below a depth of 6-8 km, the velocity gradient is almost zero. Close to the trench from 95 to 105 km according to the distance scale in Figure 6.3.1.12, a pronounced Low velocity zone is found above the subducting oceanic crust. The plate boundary is modeled by using near vertical reflections, as seen in the MCS data of profile BGR06-305 and on the OBH/OBS record sections. No attempt was made to determine the velocity field of the subducting oceanic crust. The dip of the plate boundary is 5° for the first 40 km. With a slope from the forearc high to the trend of 5°, the taper is 7°.

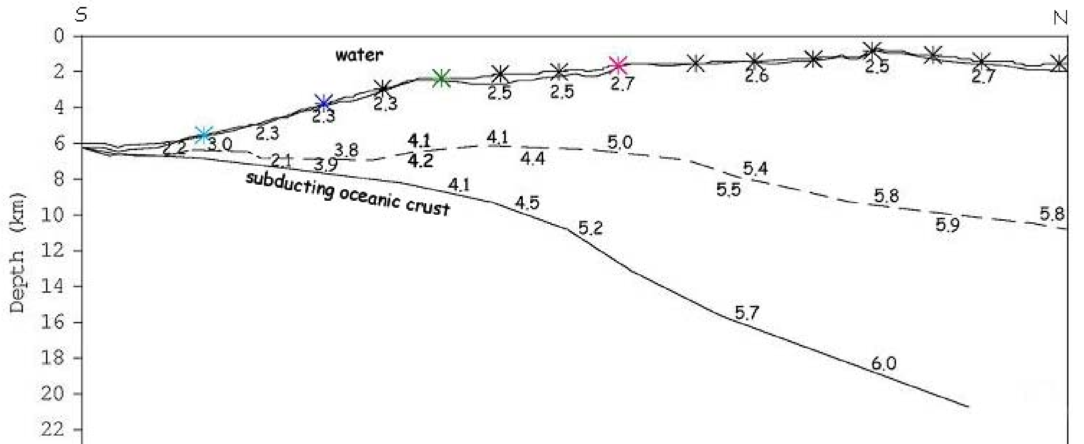


Figure 6.3.1.12: Preliminary model of Profile 42, obtained using Mac Ray. Stars mark the locations of the OBH/S on the sea bottom.

Preliminary modelling and interpretation of Profile 43 was attempted onboard. Two different approaches have been used in order to constrain the P velocity and structure models, suitable for the preliminary interpretation. 1) Ray tracing forward modelling approach, with a use of MacRay software; 2) Tomographic traveltime inversion code after Korenaga (2000).
The model obtained, using the ray tracing code is shown on Figure 6.3.1.13. The model shows the presence of four interfaces in the depth range from 0 to 24 km below sea bottom. The first interface generally located at about 1 km below sea bottom, with the exception of the 10 km long section of the profile centred around 70 km offset. This interface is the lower boundary of the slow sedimentary layer just below the sea floor. The P velocity in the layer changes from 1.6 km/s at the top to 1.9 km/s at the bottom. The second interface shows significant topography. In the southern part of the profile upto the offset of 70 km the depth to the interface is varying from 1 to 3 km from the sea bottom. At the central part of the profile around offset of 70 km interface is at the sea bottom. In the northern part of the profile depth to the interface is in the range from 1 to 4 km from the sea floor. This interface is interpreted as a boundary between the basement of the crust and the sedimentary layer above it. The velocity in the layer above the interface are varying from 2.0 km/s at the top to 3.0 km/s at the bottom. The interface high, located around offset of 70 km is interpreted as a ridge, running parallel to the trench, mostly not covered with the sediments in it's central part. Next interface is interpreted as a boundary between the upper and lower crust. Interface is located at the depth of about 10 km at the southern and northern edges of the profile and at about 12 km at the central part of the profile. The layer laying above this interface and associated with the upper crust shows velocities of 4.5 km/s at the top and 6.2 km/s at the bottom.
Interface four is believed to be Moho discontinuity in this profile. It's depth, varying from 20 to 24 km. In the assumption that this interface is Moho, the lower crust shows a range of seismic velocities of 7.05 km/s at the top to 7.4 km/s at the bottom. General thickening of the lower crust northwards is noticeable from the model. Mantle layer was modelled with the seismic velocities of 8.1 km/s at the top.

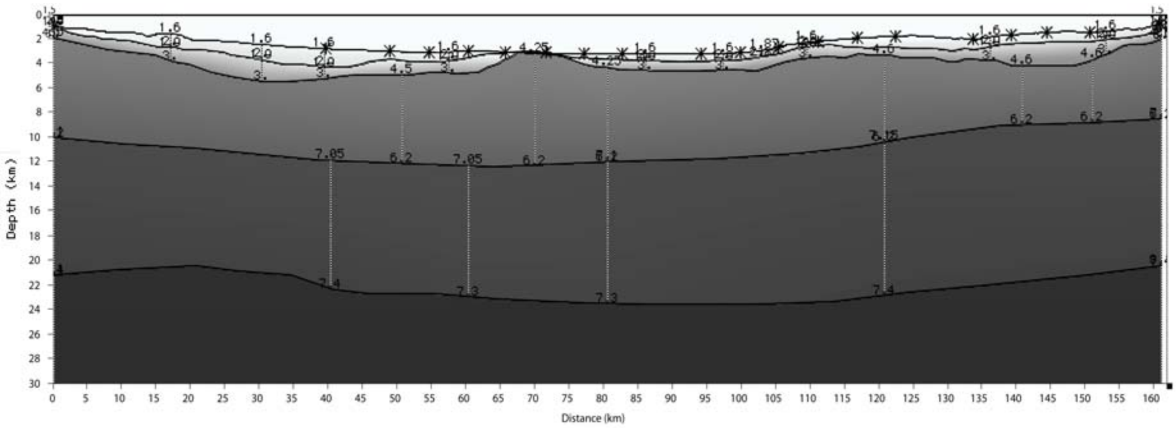


Figure 6.3.1.13: Preliminary model of Profile 43, obtained using MacRay. Stars mark the location of OBH/S on the sea bottom.

Tomographic traveltime inversion has been also performed on the dataset collected from Profile 43. For the preliminary modeling only refracted phases were considered. Modeling was done on a regular grid of 161x30 km with a spatial sampling of 0.25 km. The starting model was chosen to be a model with a gradient velocity distribution with depth. Figure 6.3.1.14 shows the starting model, preferred preliminary model and ray paths coverage through the model space. The preliminary model shows the presence of the slow sedimentary filling just below the sea bottom with average velocities ranging from 1.6 km/s to 2.7 km/s at deeper sections. The geometry of the sedimentary basins together with the location of the basement high is in a good agreement with the model obtained from the ray tracing. The deeper sections of the model show the presence of a large number horizontally oriented

velocity anomalies, however this can be caused by a lack of ray paths coverage at depth. In general the structures resolved by tomographic inversion below 10 km are in agreement with the model from the ray tracing, but due to the poor ray paths coverage during the preliminary modeling, it is difficult to compare two models.
The joint interpetation of the two models, obtained with different techniques suggests that below Profile 43 is an island arc type structure with two basins filled with sediments, both of about 3 km deep. It is possible separate upper and lower crust at the depth of around 11 km. The interpreted Moho is located at around 22 km below this profile.

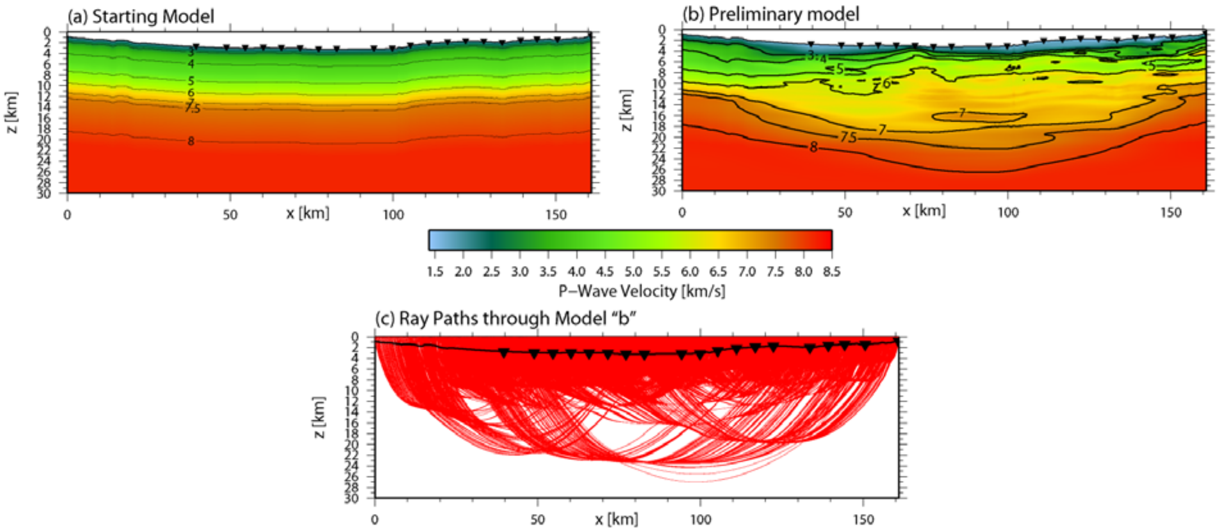


Figure 6.3.1.14: Preliminary model of Profile 43, obtained with tomographic traveltime inversion. (a) Starting model. (b) Preferred preliminary model. Figures (a) and (b) shows P-wave velocity distribution. (c) Ray paths coverage in model (b). Black triangles show the positions of OBH/S on the sea bottom. Black line in figure (c) shows sea bottom bathymetry.

6.3.2 The 116°E Corridor

In this area, south of Lombok Island (see Fig.: 6.3.2.1), the MCS profile BGR06-313 had been acquired during leg 1 of SO190 (Müller et al., 2006), see Figure 6.3.2.2. Starting in the south, 29 instruments were deployed on 17. and 18.11. with 3.5 nm spacing (Profile 31), with a gap of approx. 15 nm in the trench area, where waterdepth exceeds 6000 m. After shooting into this line (4.5 kn, 60 s triggerinterval) all instruments were recovered on 20.11. P31 was augmented by another deployment of 24 instruments (OBH/S 130 – OBH/S 153) to the north reaching the coast of Lombok (Profile 32). These data were collected from 04. to 06.12..Together, P31 and P32 form a 360 km long transect. Later, from December 15. to 17., a 60 nm long strike line was acquired in the center of Lombok Basin (Profile 33, OBH/S 230 to OBH/S 245). For the landward part of P32 and all along P33 the four channel streamer was deployed to record the sedimentary sequences. The line BGR06-313 is shown in Figure 6.3.2.2, and some data examples are given in Figures 6.3.2.3 to 6.3.2.8. All other data are summarized in the data report and details on instrumentation and shots can be found in Appendices 9.1 and 9.2.

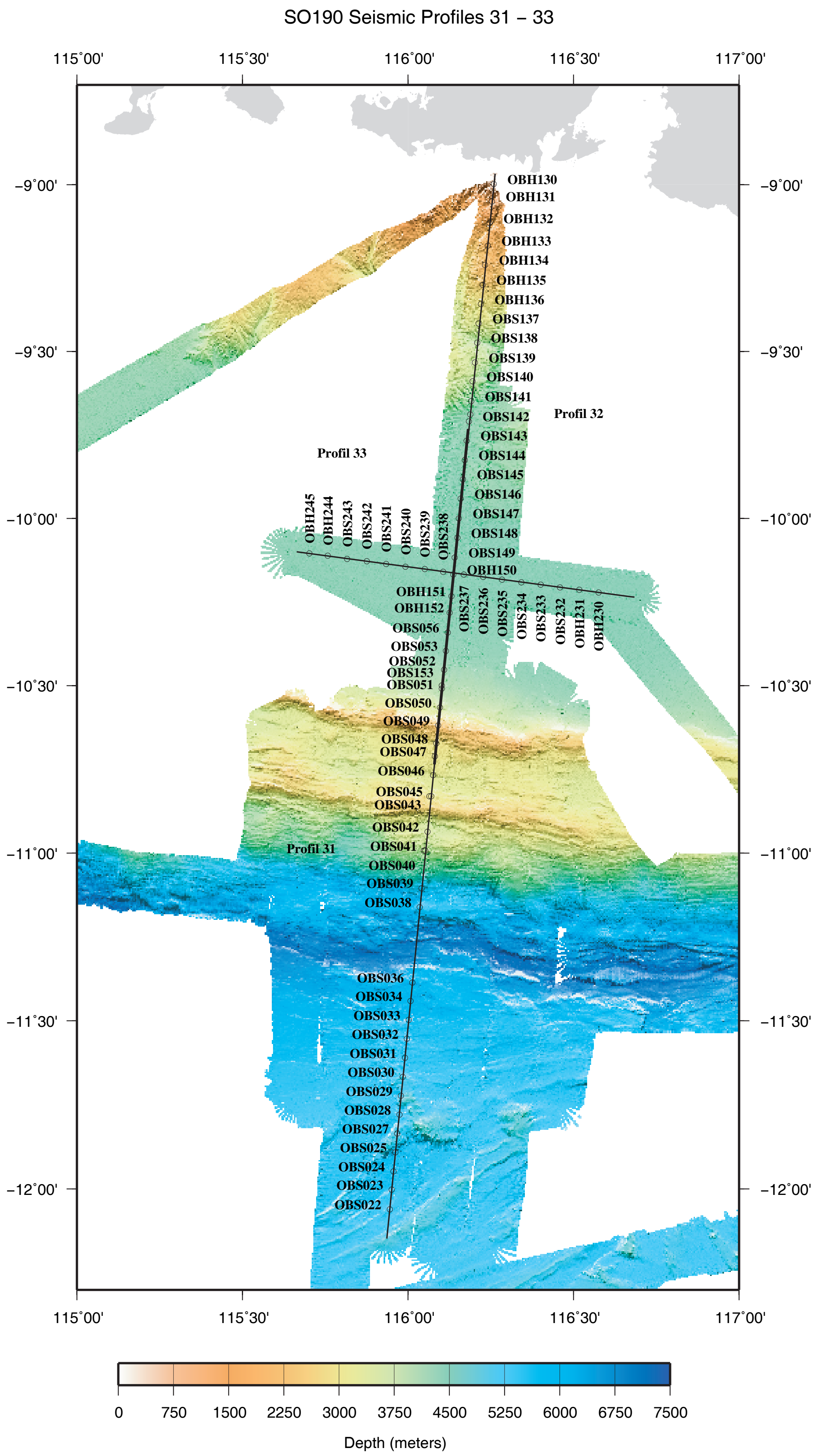


Figure 6.3.2.1: Overview of the refraction seismic profiles along corridor 116°E. Bathymetry is underlain and grey shade coded.

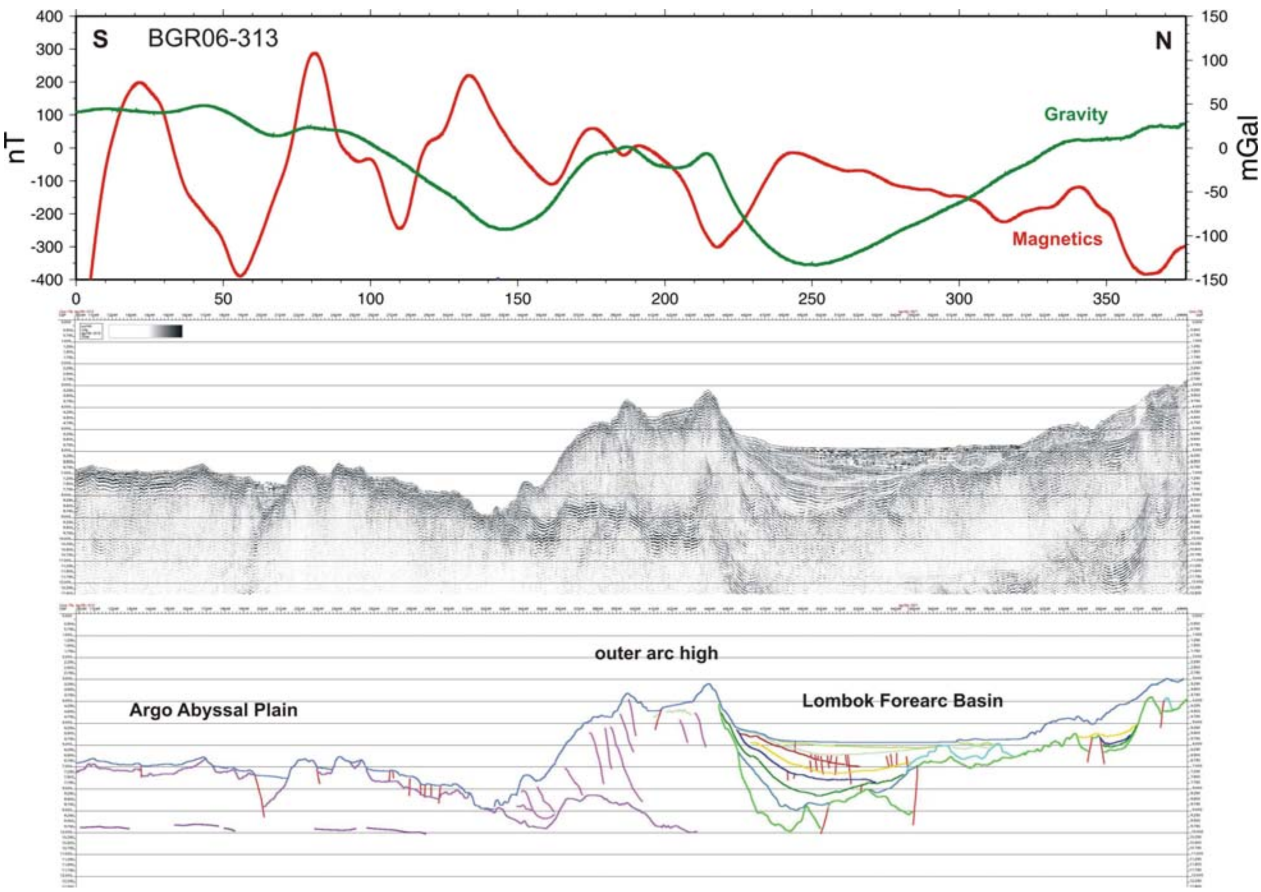


Figure 6.3.2.2: Magnetic and gravimetric data, top. MCS profile BGR06-313, migrated time section, middle. Interpretation of seismic data, bottom.

The oceanic crust

A preliminary interpretation of the oceanic crust part of Profile 31 was obtained by using the travel time picks of stations 22, 24, 28, 30, 32 and 36. The resulting model, using the ray tracing code MacRay is shown in Figure 6.3.2.9. It is divided into five interfaces. The upper interface marks the sedimentary layer and for simplicity an average velocity of 1.6 km/s has been assumed. The thickness of this layer could be determined from the MCS-data of line BGR06-313. Below the water column, the sedimentary layer is interrupted by several basement outcrops. The second layer shows the northwards dipping upper part of the oceanic crust and has an average velocity gradient from about 4.35 km/s to 4.5 km/s at the top to 6.2 km/s at the bottom of the layer. The velocities are regionally lower at offsets from 12 km to 18 km with 3.1 km/s at the top and 6.0 km/s at the bottom of the layer. The third layer shows the northwards dipping lower part of the oceanic crust. The average velocity gradient reaches from about 6.6 km/s at the top of the layer to 7.5 km/s at the bottom of the layer. The velocities are regionally higher at offsets from 33 km to 45 km with 6.6 km/s at the top and 7.2 km/s at the bottom of the layer. This might be related to the thick basement outcrop in this region. The upper mantle has not yet been modeled in great detail, the rather low velocities of 7.7 km/s below Moho are based on matching critical distances of PMP reflections. No diving waves through the mantle are seen in the data.

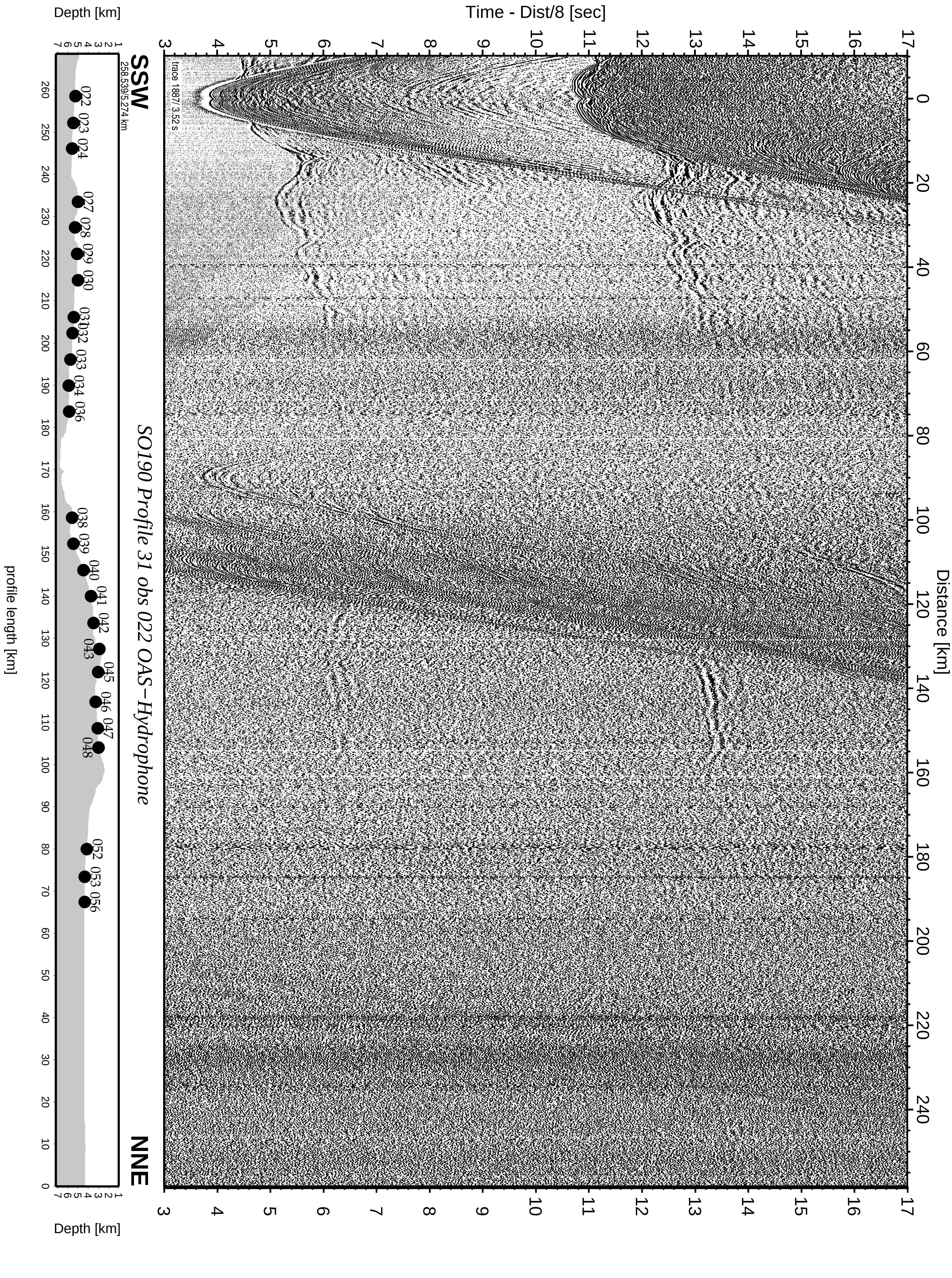


Figure 6.3.2.3: Record section from obs 022 OAS−Hydrophone, Profile 31.

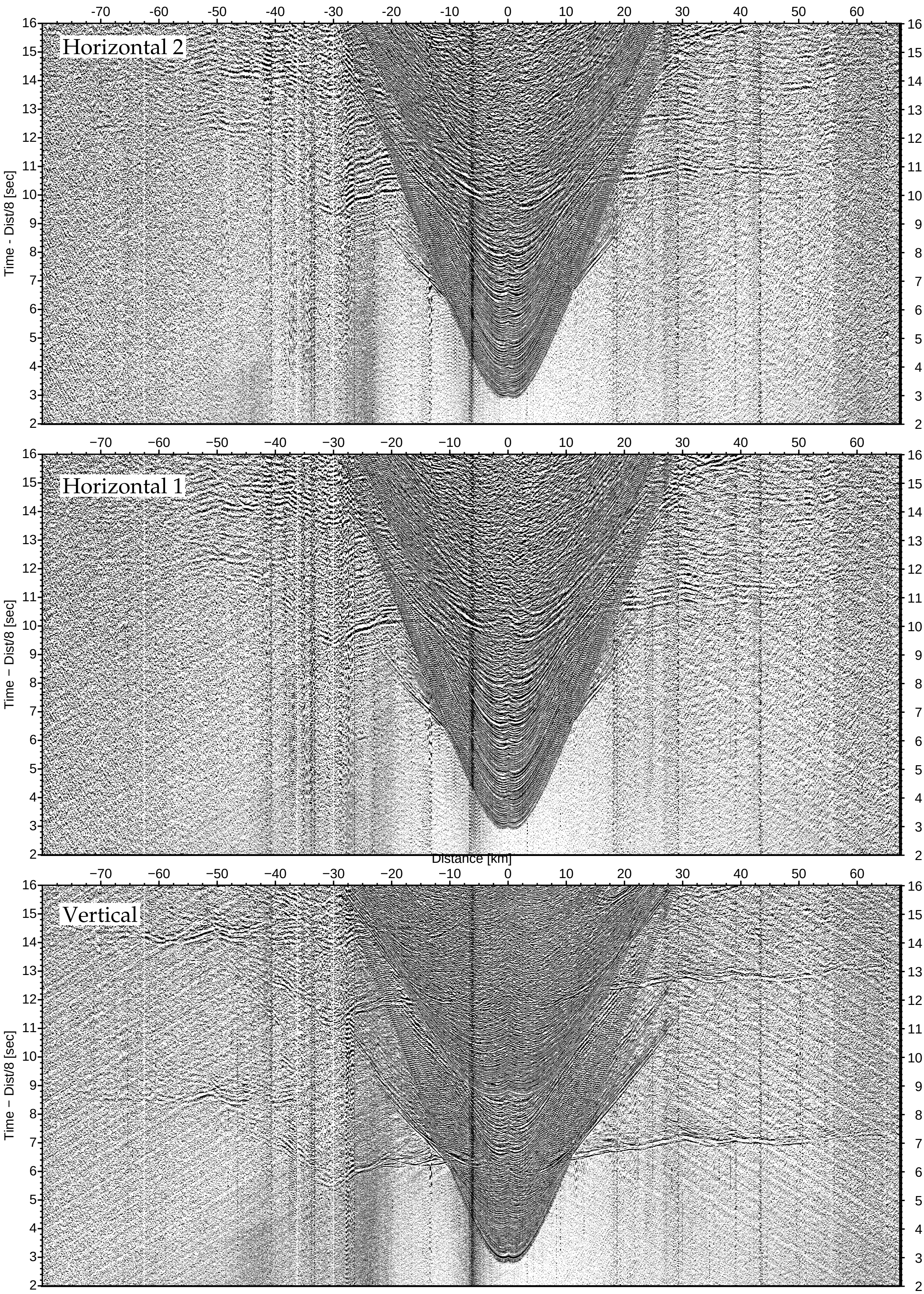


Figure 6.3.2.4: Record sections from obs 056, Profile 31.

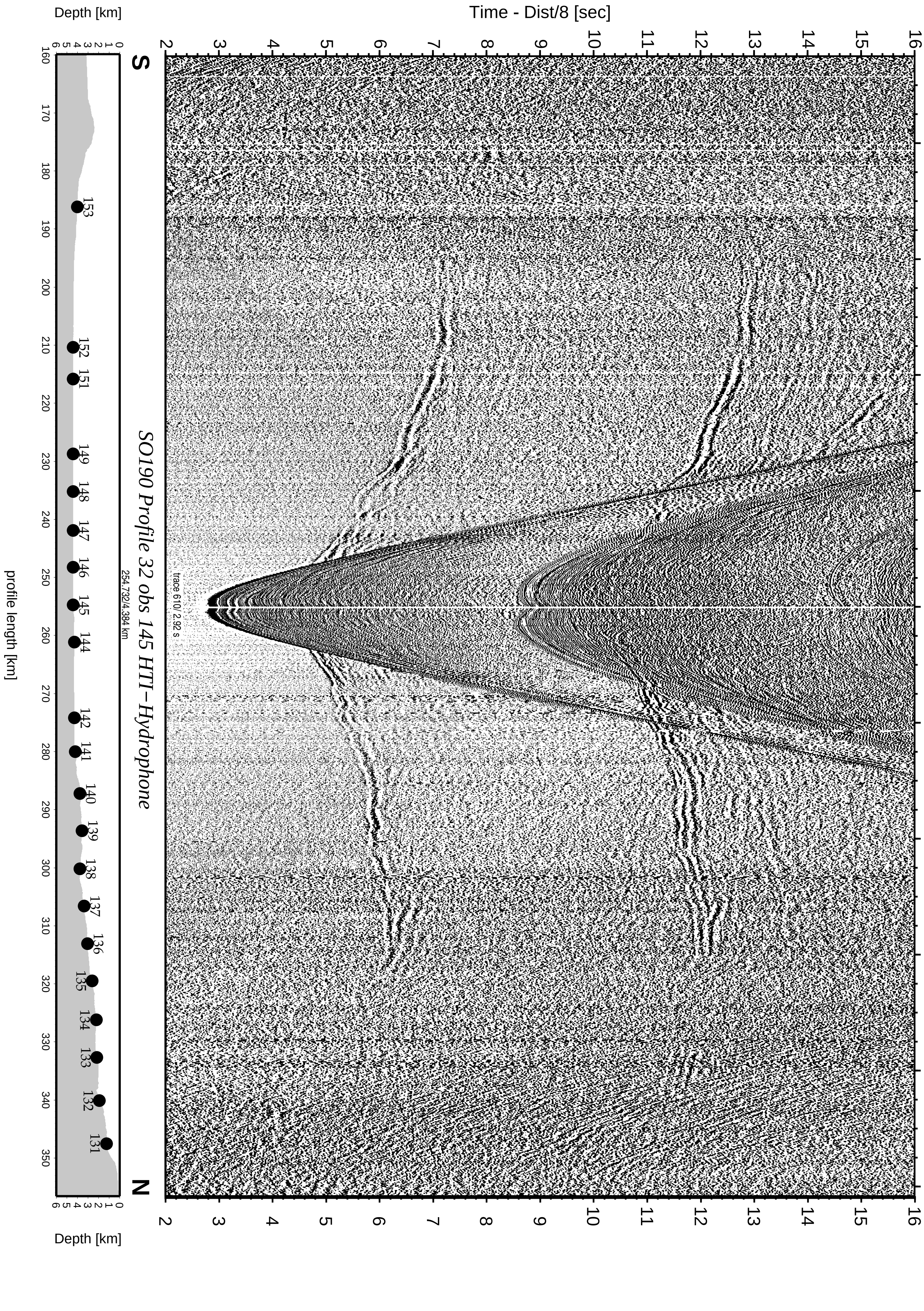


Figure 6.3.2.5: Record section from obs 145 HTI−Hydrophone, Profile 32.

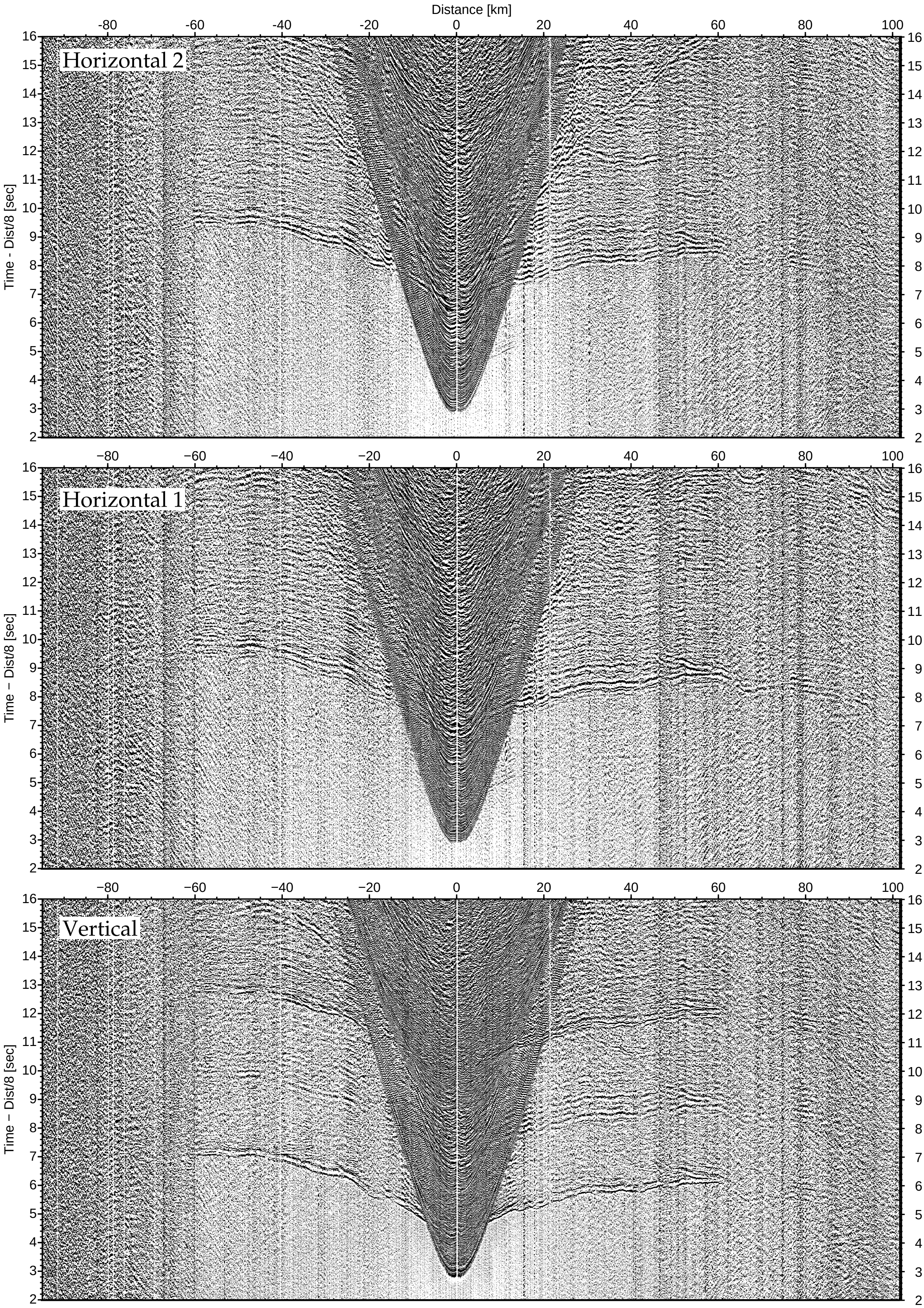


Figure 6.3.2.6: Record sections from obs 145 (HTI/Owen–4.5Hz Geophone), Profile 32.

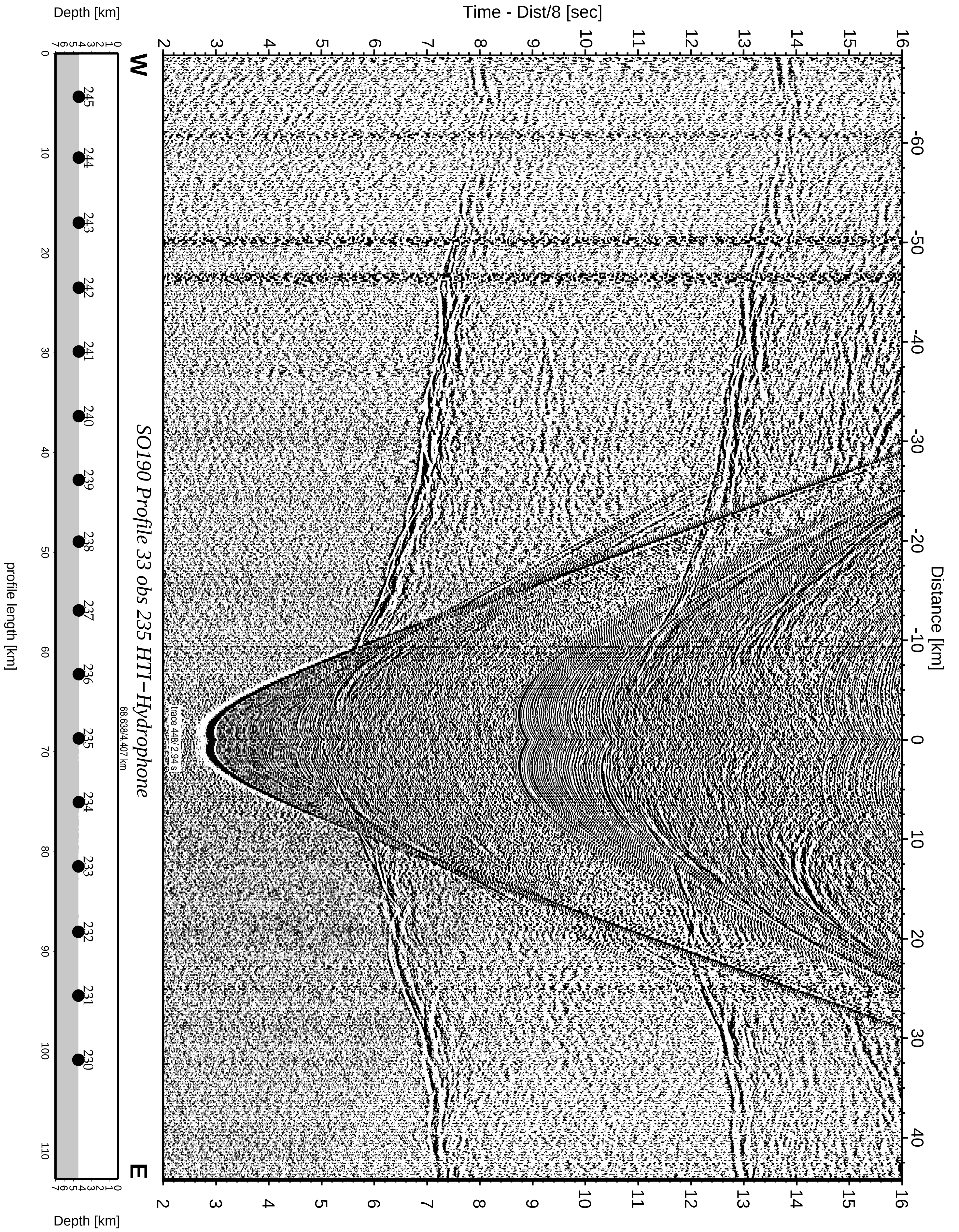


Figure 6.3.2.7: Record section from obs 235 HTI−Hydrophone, Profile 33.

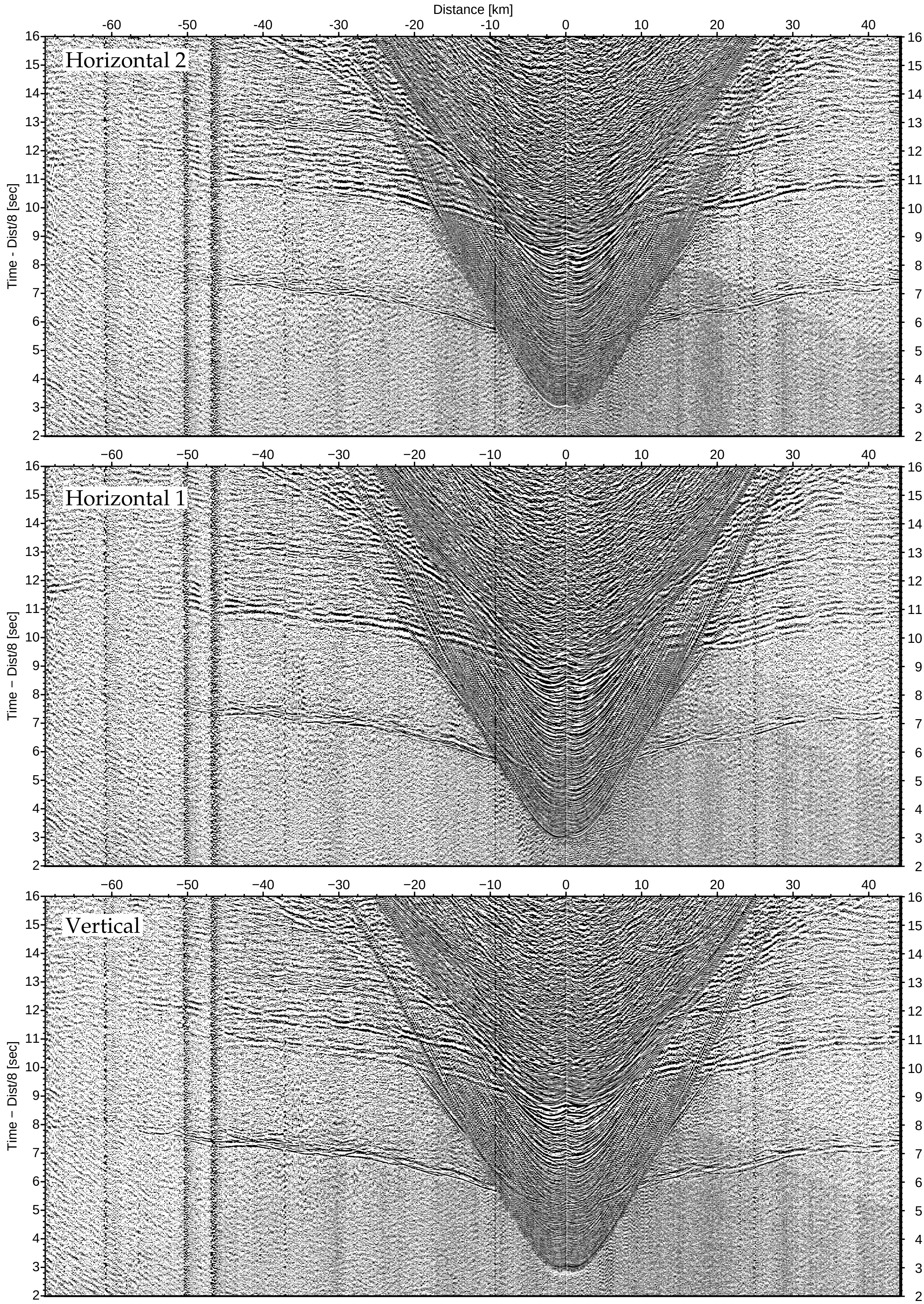


Figure 6.3.2.8: Record sections from obs 235 (HTI/Owen−4.5Hz Geophone), Profile 33.

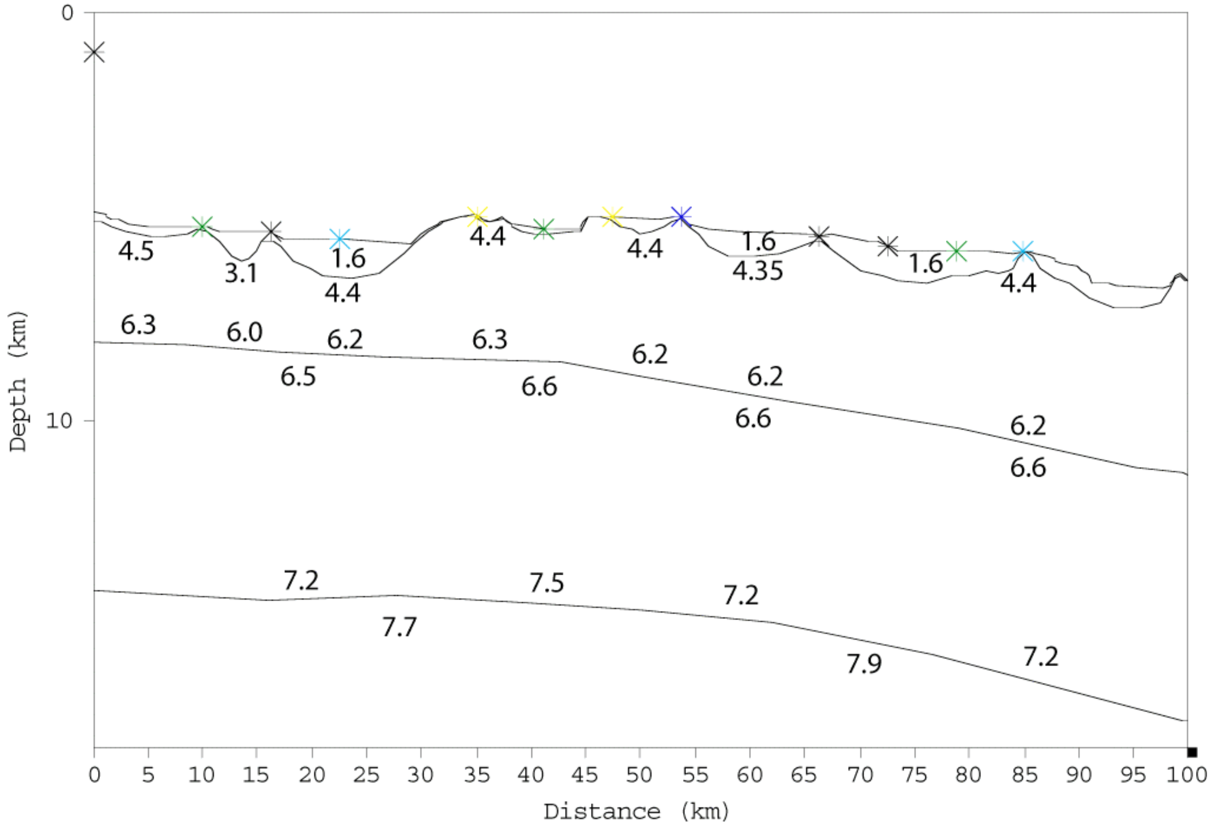


Figure 6.3.2.9: Preliminary model of the oceanic part of Profile 31, obtained using MacRay. Stars mark the locations of the OBH/S on the sea bottom.

The forearc high

Figure 6.3.2.10 shows a preliminary interpretation of the accretionary wedge of Profile 31 using travel time picks of stations 38, 39, 40, 41, 43, 45, 46, 47 and 48. The model is created with the ray tracing code MacRay. It is divided into five layers. The water column is assigned a velocity of 1.5 km/s. The thickness of a thin sediment layer at the seafloor is taken from the MCS-data of BGR06-313. For simplicity the velocity of the sediment is assumed to equal 1.6 km/s. The third layer comprises consolidated sediment, its velocity at the top is between 2.5 km/s in the south and 3.5 km/s in the north, the thickness varies between 1 km and 5 km. The velocity at the bottom of layer three increases to the north from 2.9 km/s to 5.7 km/s. The boundary between the third and fourth layer is only an artificial line to separate different gradients above and below. So the velocity of layer four is at the top between 3.5 km/s and 6.0 km/s and at the bottom between 3.6 km/s and 6.8 km/s. The thickness is about 1 km to 3 km. Below this there is the boundary between the continental crust and the landward dipping (ca. 6°) oceanic plate. Deeper structures were not interpreted onboard.

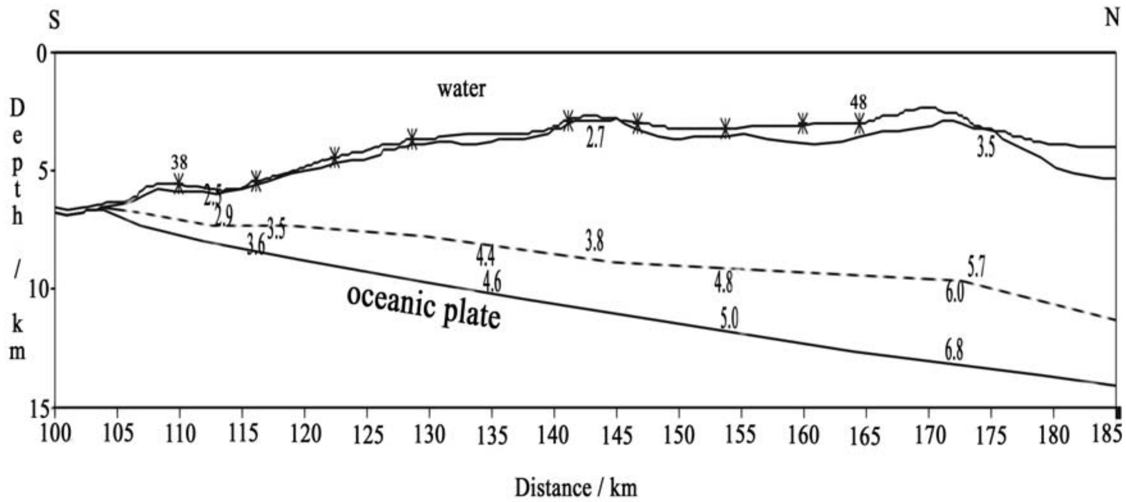


Figure 6.3.2.10: Preliminary model of the forearc high along Profile 31, obtained using MacRay. Stars mark the locations of the OBH/S on the sea bottom.

Preliminary modeling of P32 - Lombok Forearc Basin

A ray-tracing based approach to interpret the data was initiated onboard. For this model 21 OBS/OBH stations were used, marked by star-symbols. The average instrument spacing is 5.5 km. Travel times from all instruments were picked and the sedimentary thickness was taken from MCS data of BGR06-313.

In principle the model is divided into 4 layers (Fig. 6.3.2.11): Water, sediments, basement and mantle. The seismic velocities of the sedimentary infill reach from 1.7 km/s on top to 3.5 km/s at the bottom. Obviously the sediments reach thickness of 4 - 5 km in the southern part of Profile 32, which is the main deposition centre. Northward the sediment layer thins out. Seismic velocities from 5.8 km/s to 7.3 km/s can be found in the basement, which is typical for island arc crust. The exact geometry of the basement is not modeled in detail here. At a depth of about 17 km is an interface marked with a velocity contrast from 7.3 km/s to 7.9 km/s, which might be the boundary to the subducting oceanic crust or the crust - mantle boundary of the island arc crust. Evidence for a Moho are velocities of 7.9 –8.0 km/s which are modeled in P32 and P33. The dip of this interface is not well defined, because it is only seen from a few stations, such as OBS151, shown in Figure 6.3.2.12.

A first reasonable fit to the observed travel times can be achieved by a rather simple model, which is shown in Figure 6.3.2.13.

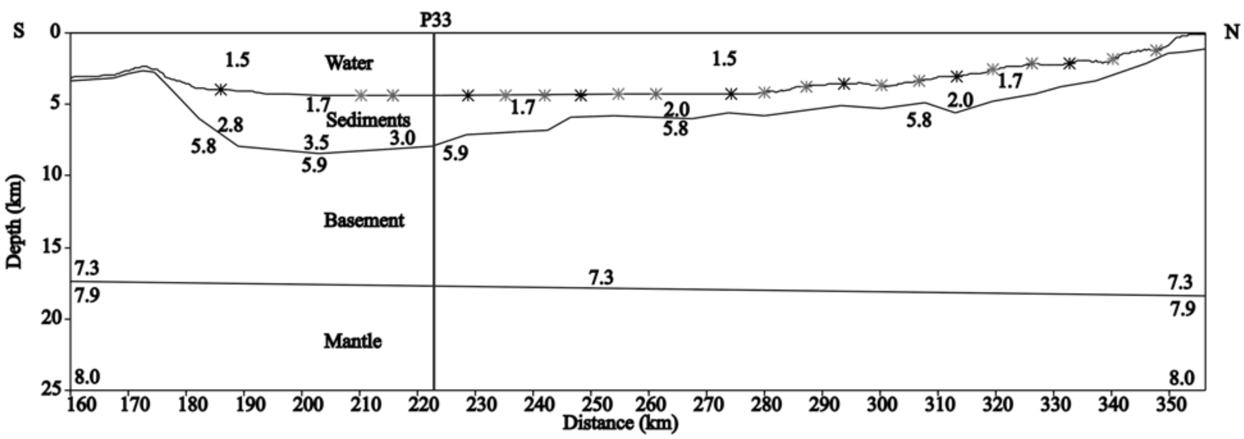


Figure 6.3.2.11: Model of profile P32: Lombok Forearc Basin. In principle the basin is divided into 4 layers: Water, sediments, basement and mantle.

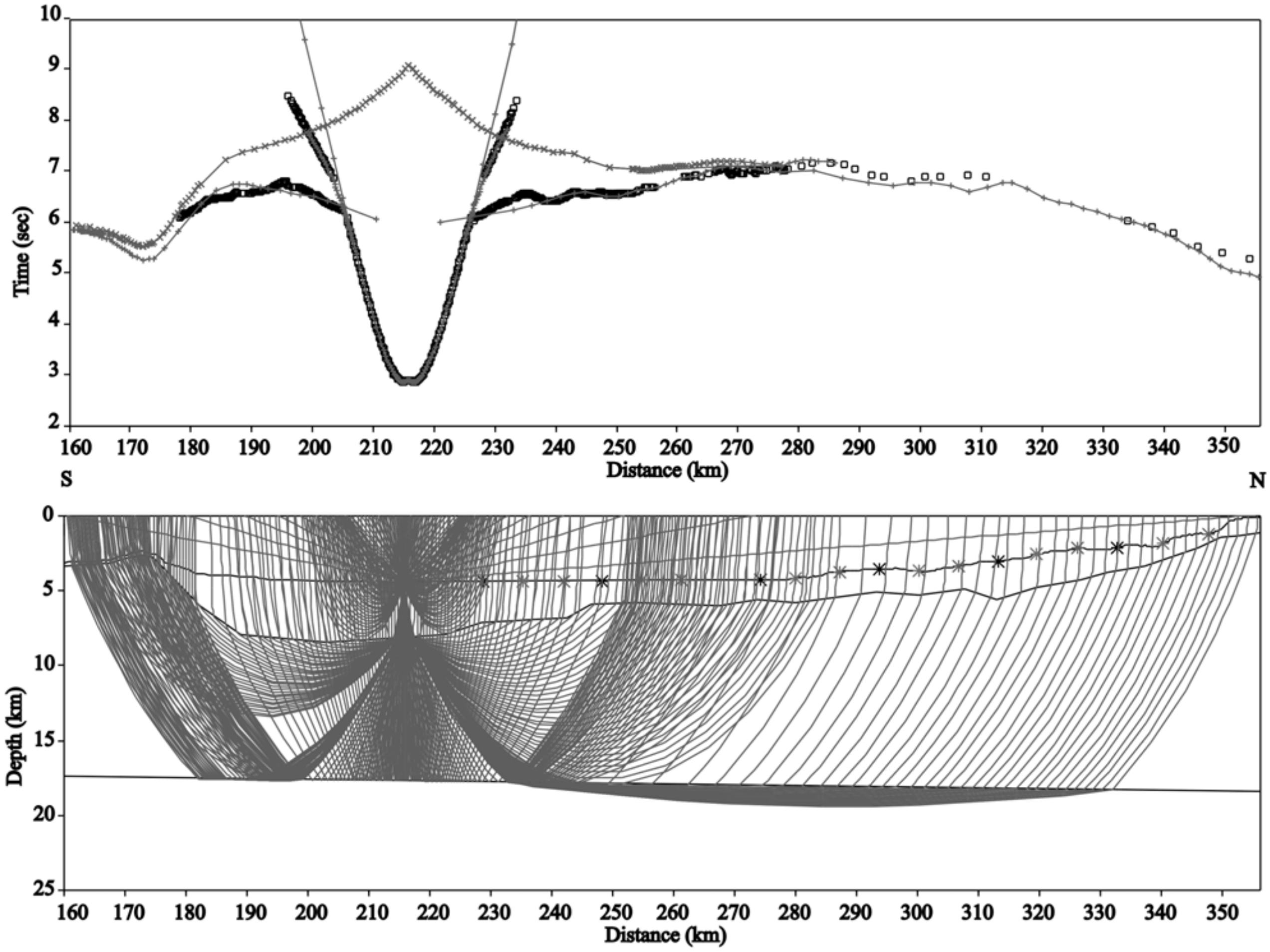


Figure 6.3.2.12: Upper part: Traveltime-offset diagram recorded from OBS151. The squares show the picked arrivals, the + -symbols are modeled arrivals. The reduction velocity is 8 km/s. Lower part: Cross section with ray paths.

Preliminary interpretation of Profile 33

South of the island Lombok a third profile, P33, perpendicular to P31 and P32 has been shot. For this short profile of 115 km 16 OBH/S have been deployed. Most of the instruments showed excellent data partly with mantle phases. The seafloor has almost no variations in topography along the profile in the west-east direction. The seismic sections of the different stations show very similar and symmetrical data. Therefore, a 1-D modeling approach is justified for a first interpretation with three stations shown in Fig. 6.3.2.13. The uppermost dashed line marks the ocean bottom. Beneath that an eastwards thinning sediment layer follows. On its western side the sediments show a thickness of approximately 3 km and have higher velocities than on the eastern part where the layer thickness is about 2 km. The velocities for the sediment layer range between 1.75 to 1.9 km/s and 2.0 to 2.3 km/s at the upper and lower boundary respectively. However the crustal thickness is rising from about 10 km in the west to approximately 11 km on the eastern side, while the velocities are slightly slower in the western part. The lower crustal boundary lies at a depth of about 17 km. The approx. velocities of the crust vary from 4.4 to 4.7 km/s at the upper boundary and 7.0 to 7.3 km/s at the lower end. Below the depth of 17 – 18 km velocities of 7.9 to 8.0 km/s have been

found, mainly based on critical distance of PmP reflection. This boundary marks the Moho of the island arc crust of the Indonesian Island Arc.
At the intersection of both lines, P32 and P33, the models show similar features which confirm the assumption that the boundary at 17 km depth is the crust-mantle boundary.

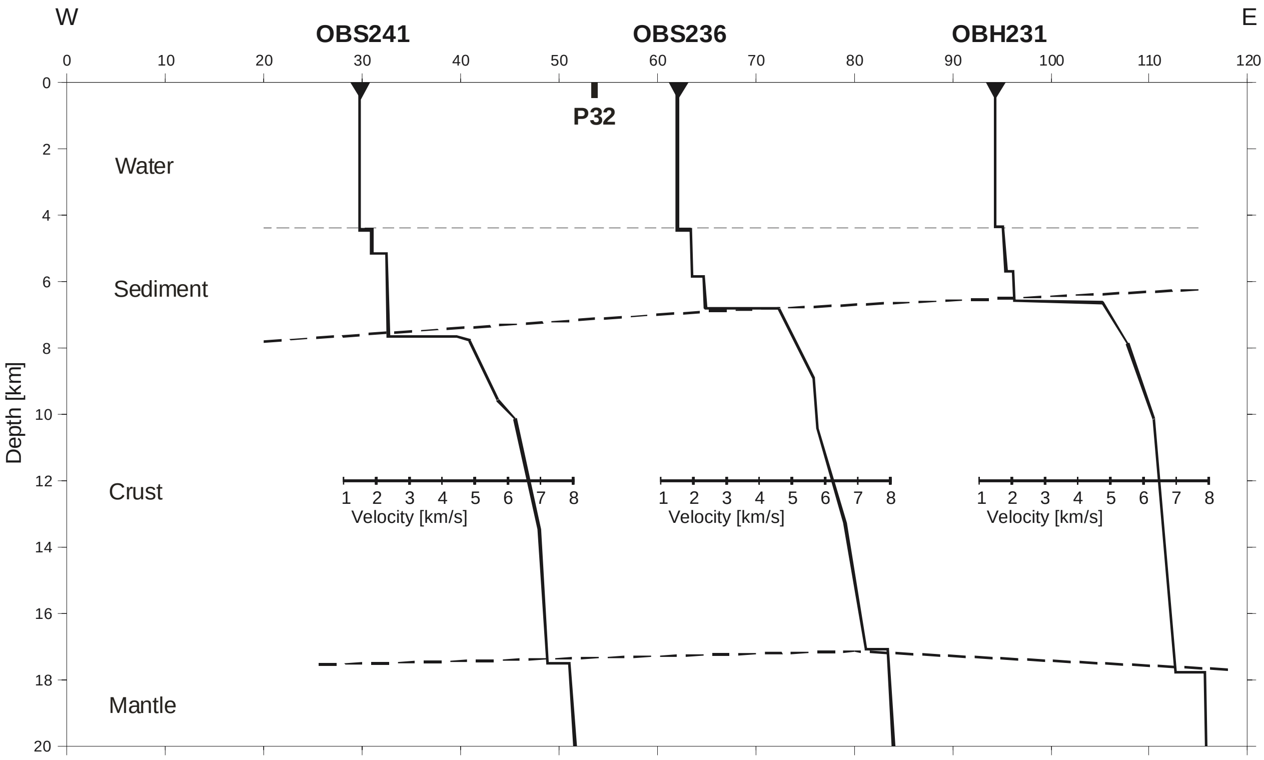


Figure 6.3.2.13: Preliminary model of P33 using three stations for 1-D modeling.

6.3.3 The 119°E Corridor

The work in this corridor started with Profile 21, which was collected between 14. and 16.11. Profile 21 is a strike line along the forarc high, 21 instruments were deployed and the shooting line extended for 75 nm, see Figure 6.3.3.1. Shooting was done with 5 kn and the trigger rate was set to 40 s. The profile is coincident with the line BGR06-315 (Fig. 6.3.3.2 from Müller et al (2006)) between CMP´s 35000 to 54000 (approx. km 160 to 270 referring to the distance scale in Figure 6.3.3.2). Two examples of the data are given in Figures 6.3.3.4 and 6.3.3.5. This profile was augmented by the wide angle line P22, a dip line coincident with MCS line BGR06-317 (Fig. 6.3.3.3). Along that profile 30 instruments were deployed. Near Sumba Island, the line was extended to about 3 nm off the island of Sumba, thus beyond the coverage of BGR06-317. Two data examples are given in Figures 6.3.3.6 and 6.3.3.7. During shooting a four channel streamer was also deployed, the corresponding section is shown in Figure 6.3.3.8. Details about airgun shots and seismic recorders can be found in Appendices 9.1 and 9.2.

SO190 Seismic Profiles 21 and 22

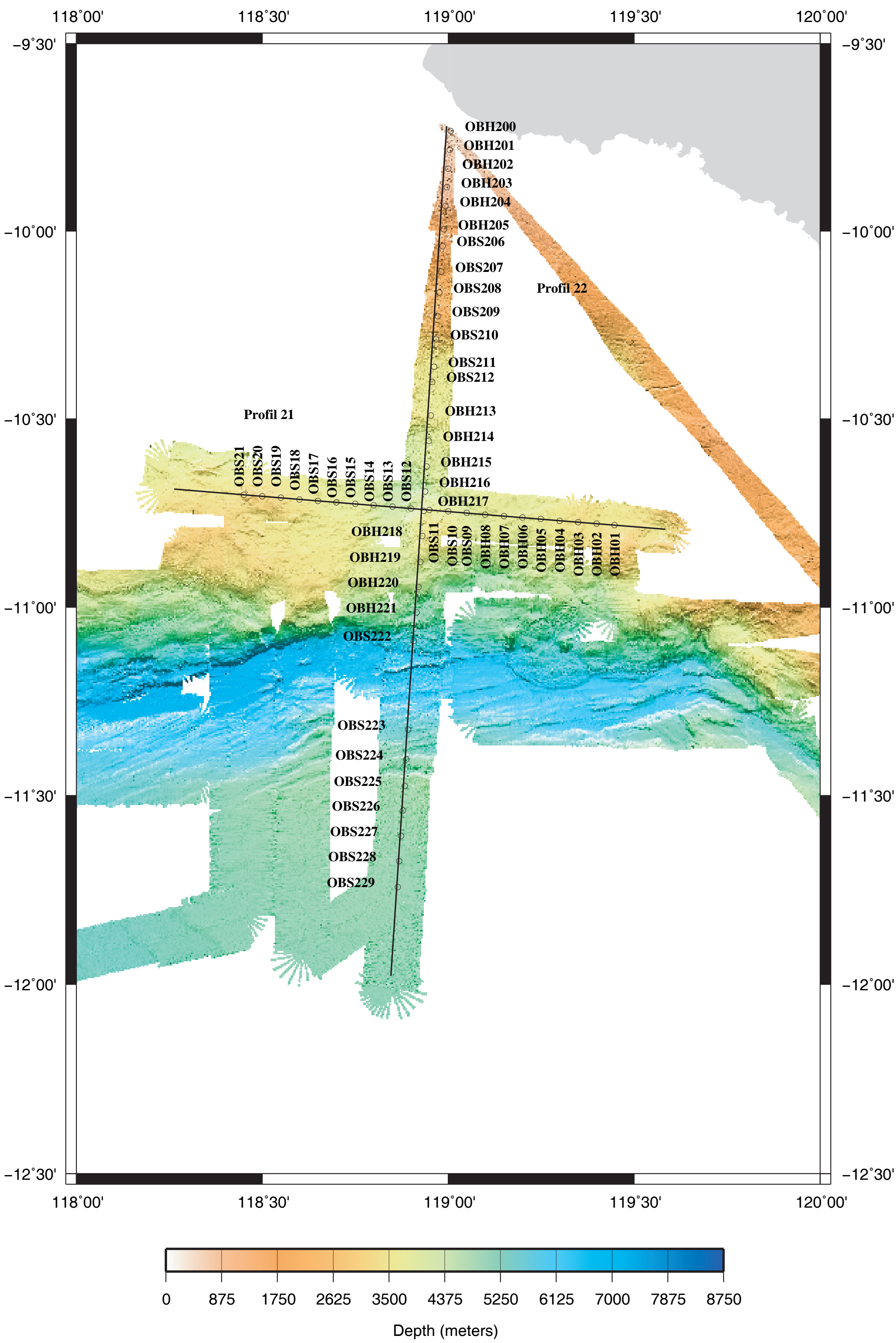


Figure 6.3.3.1: Overview of the refraction seismic profiles along corridor 119°E. Bathymetry is underlain and grey shade coded.

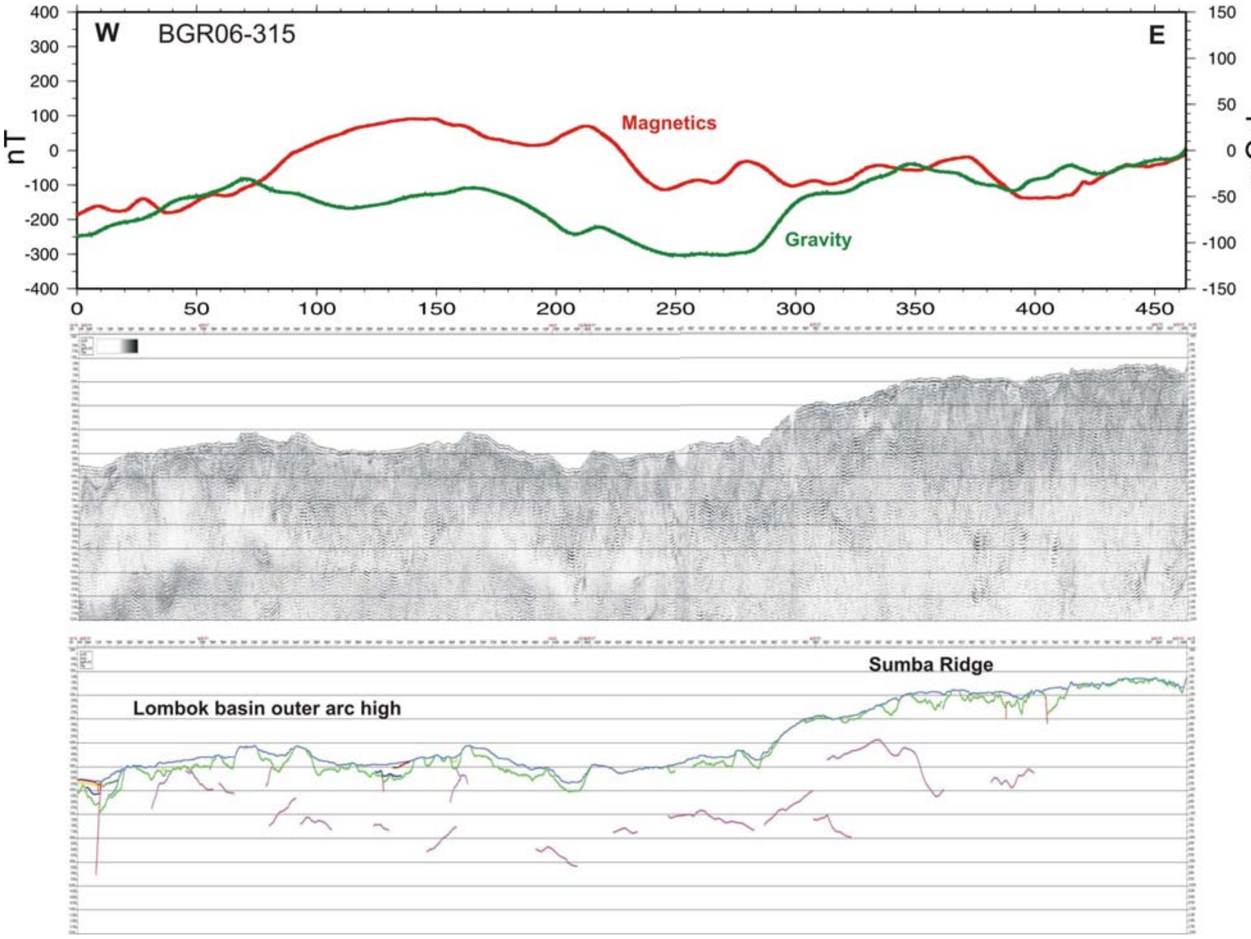


Figure 6.3.3.2: Magnetic and gravimetric data, top. MCS profile BGR06-315 and -315a, time section, middle. Interpretation of seismic data, bottom.

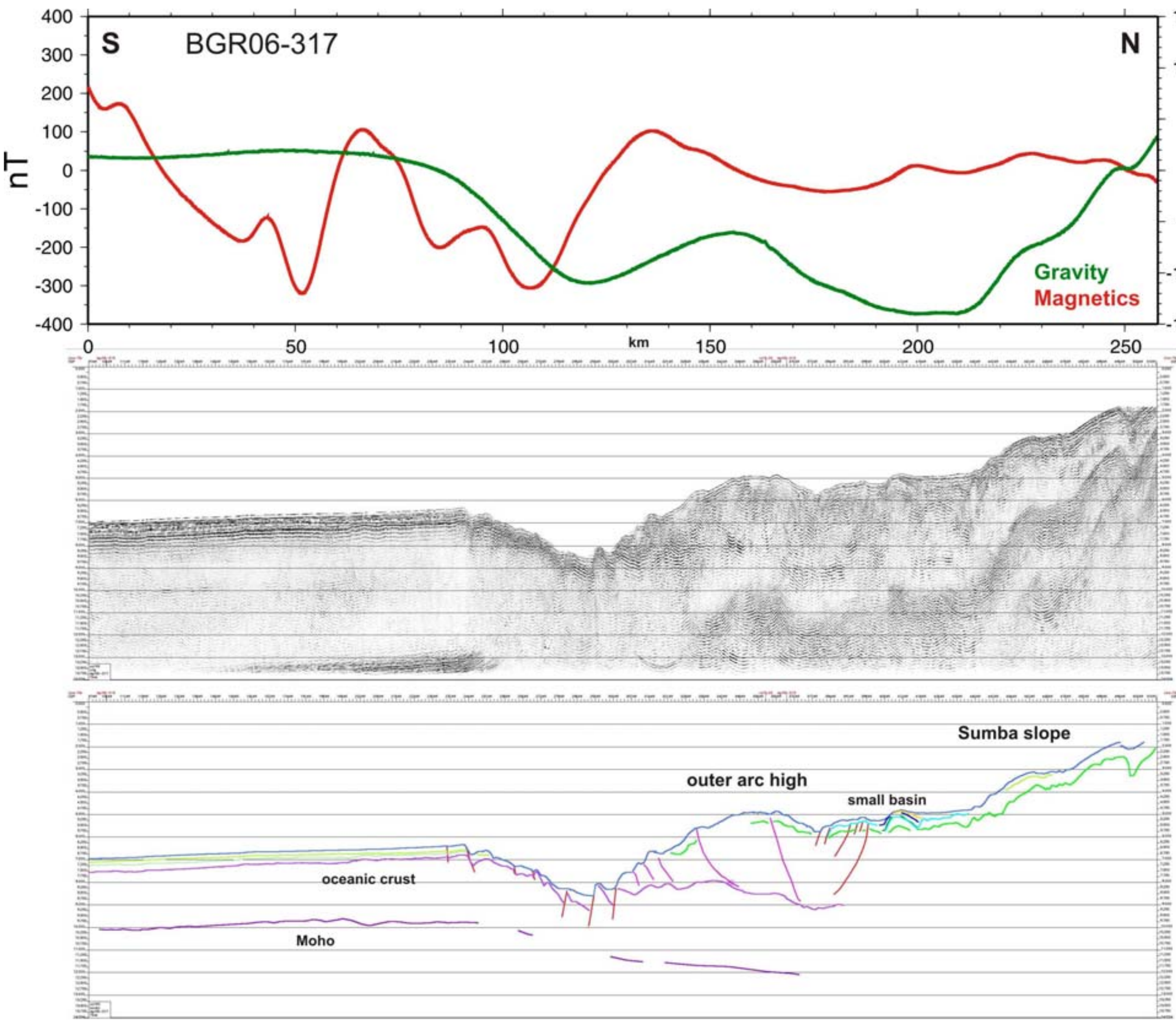


Figure 6.3.3.3: Magnetic and gravimetric data, top. MCS profile BGR06-317, migrated time section, middle. Interpretation of seismic data, bottom.

A preliminary onboard interpretation was attempted during the cruise. Two different modelling approaches have been used in order to constrain P velocity and structure models, suitable for the preliminary interpretation. 1) Ray tracing forward modelling approach, with use of MacRay software; 2) Tomographic traveltime inversion code after Korenaga (2000). The model obtained, using ray tracing code is shown in Figure 6.3.3.9. Modelling shows the presence of two interfaces at about 8 km and 15 km below sea level. The interface at 8 km shows some topography, gradually shallowing towards the middle of the profile to about 6 km. The second interface is gently dipping eastwards from around 13 km to 16 km. These interfaces divide the model into three layers. The top layer shows seismic velocity increasing from 2.15 km/s to 4.5 km/s. The intermediate layer, bounded by the marked interfaces, has average velocities of 4.5 km/s at the top and increasing to 5.4 km/s at the bottom. The bottom layer shows velocities of 6.7 km/s in the upper part increasing to 8 km/s at the deeper parts. The top layer is interpreted as a sedimentary layer, at least the larger upper section of this layer. The character of the second interface is not resolved, however based on the seismic velocity, it is interpreted as an interface between the highly metamorphed sediments of the accretionary complex and subducting oceanic crust.

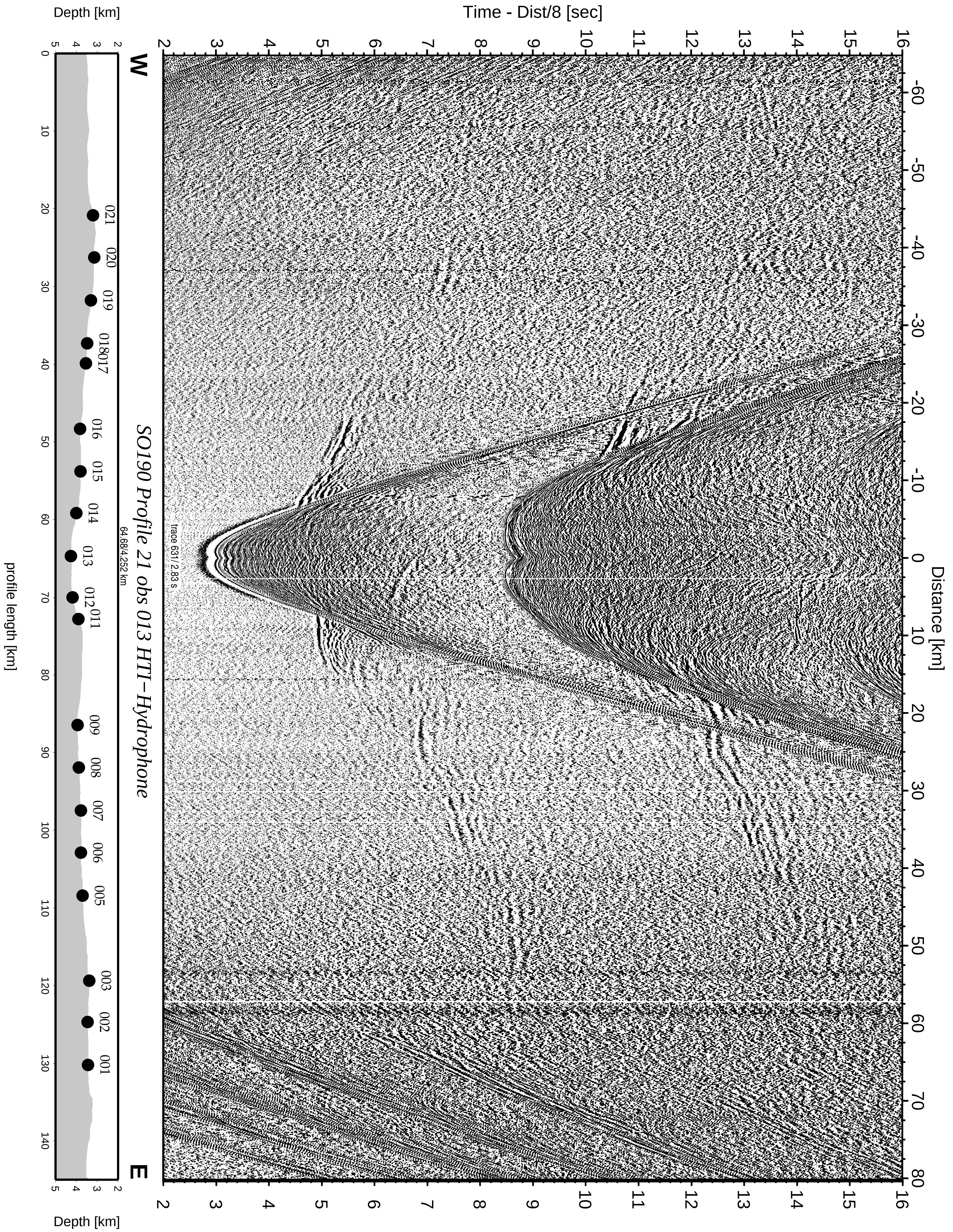


Figure 6.3.3.4: Record section from obs 013 HTI−Hydrophone, Profile 21.

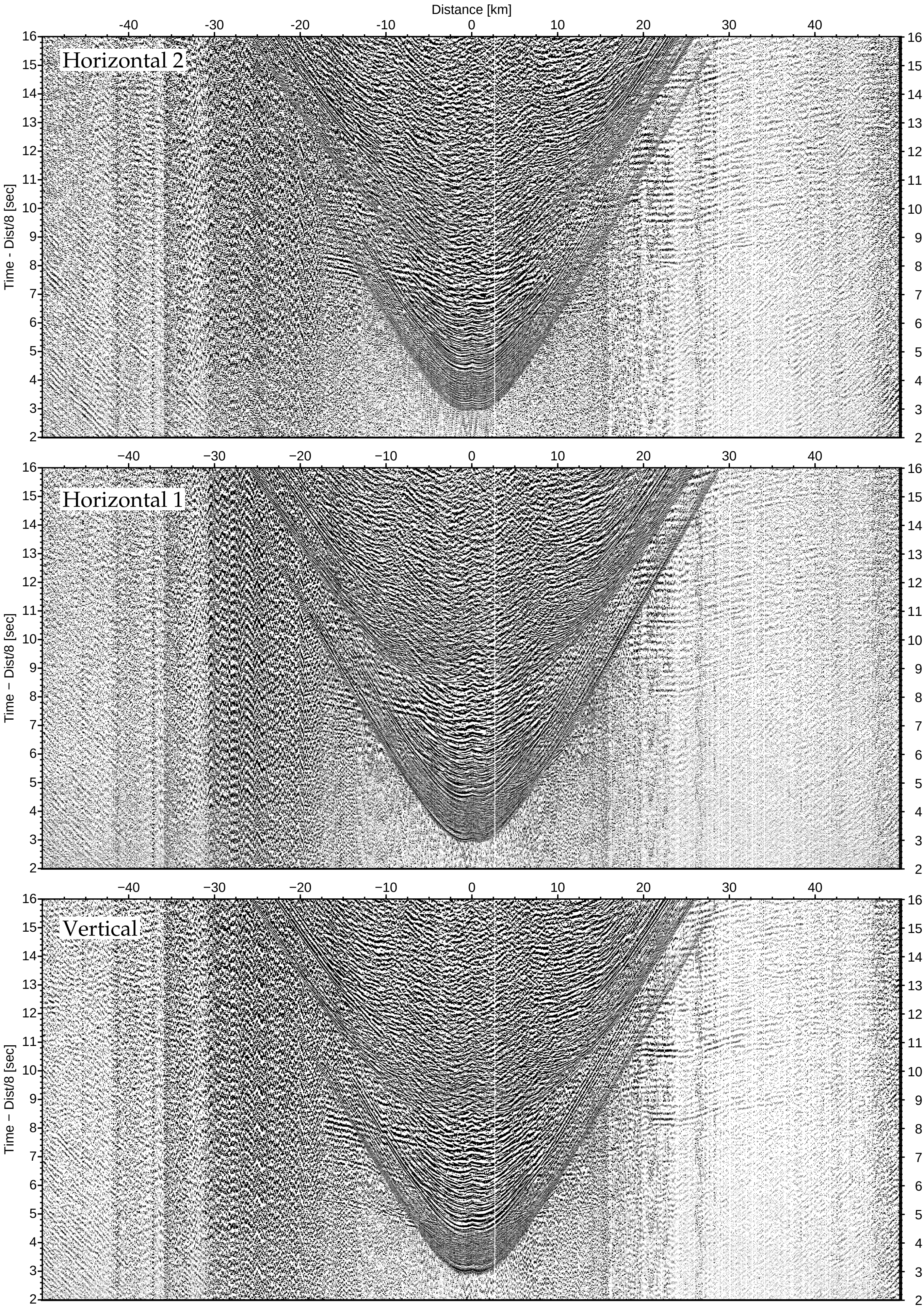


Figure 6.3.3.5: Record sections from obs 013, Profile 21.

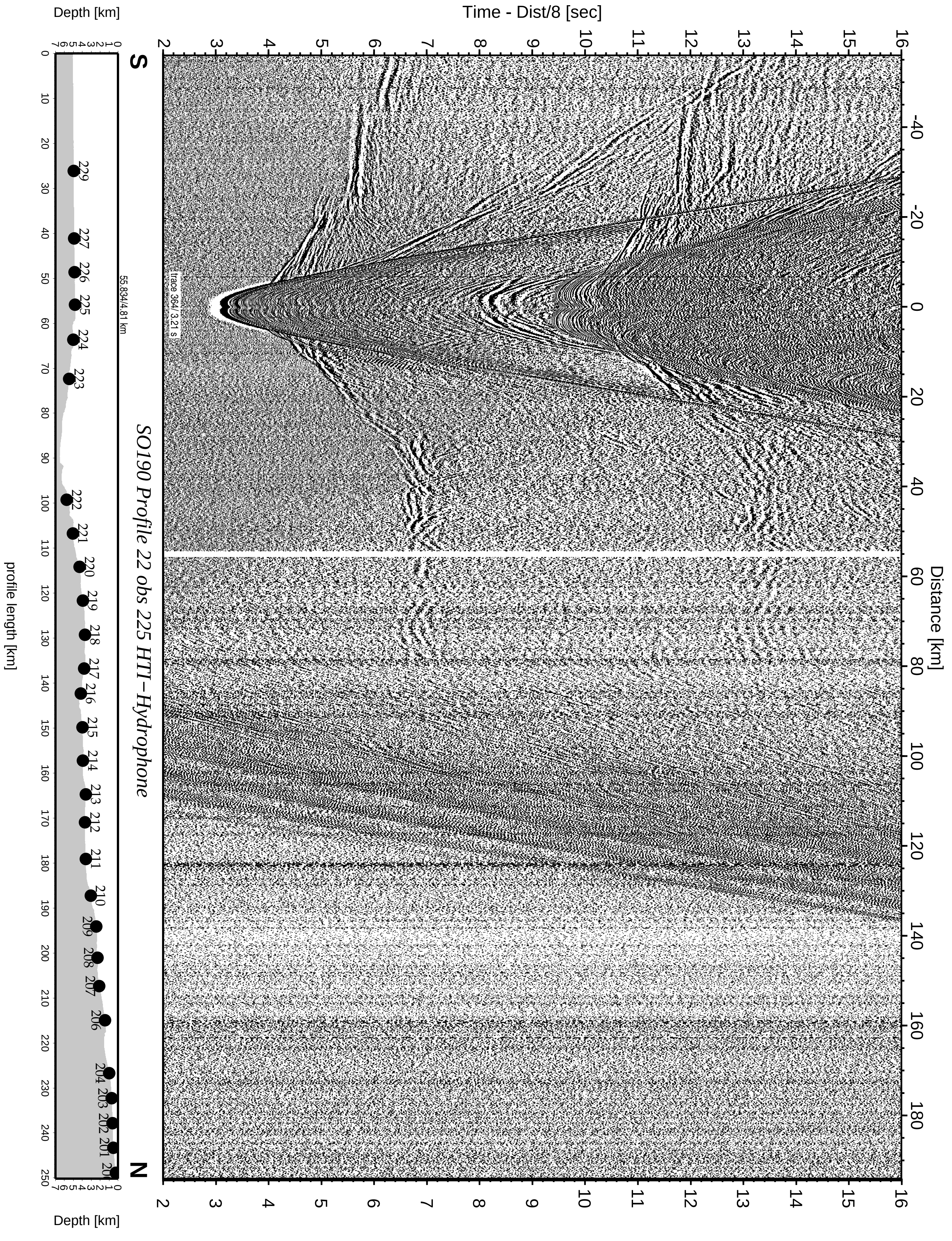


Figure 6.3.3.6: Record section from obs 225 HTI−Hydrophone, Profile 22.

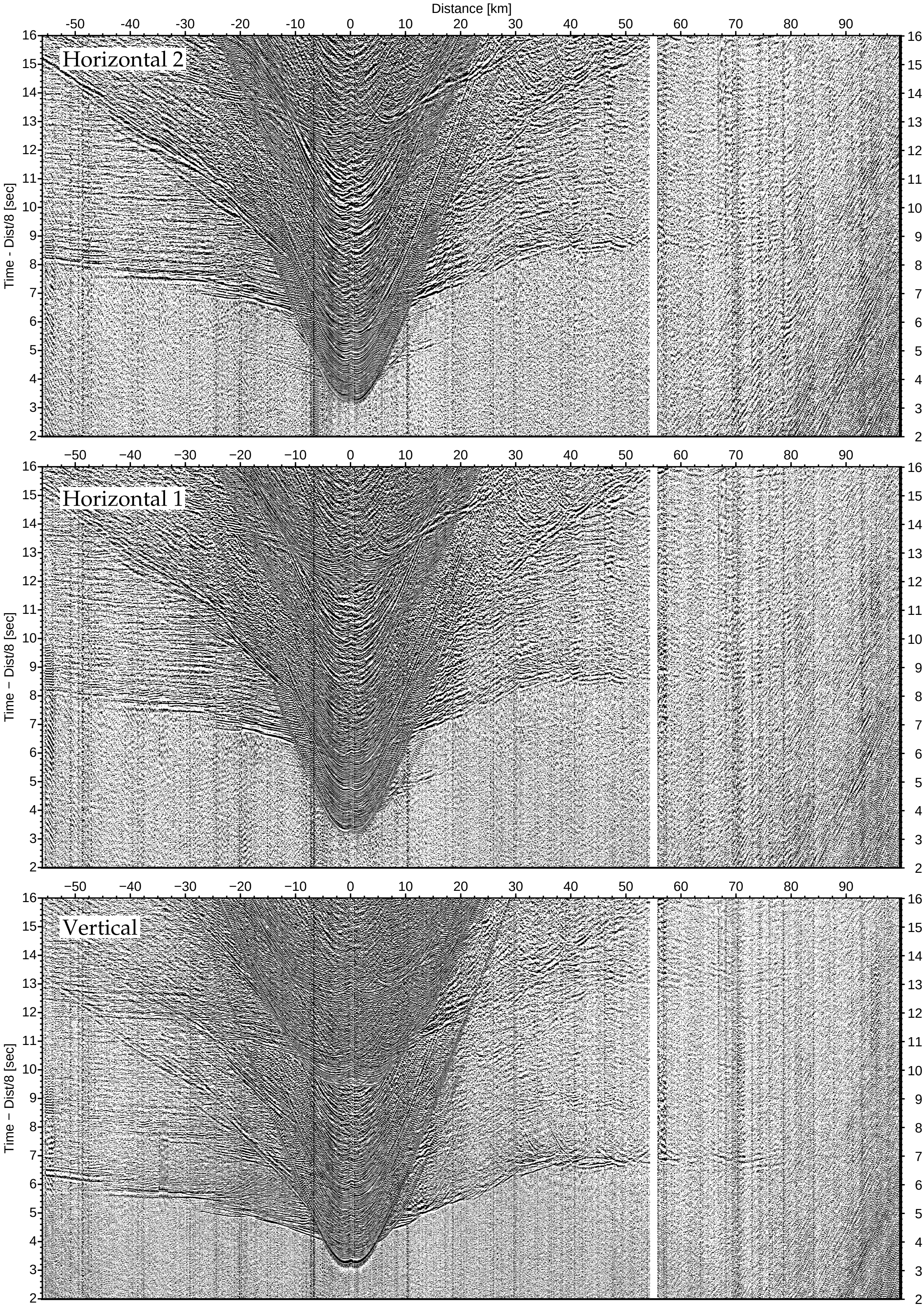


Figure 6.3.3.7: Record sections from obs 225 (HTI/Owen–4.5Hz Geophone), Profile 22.

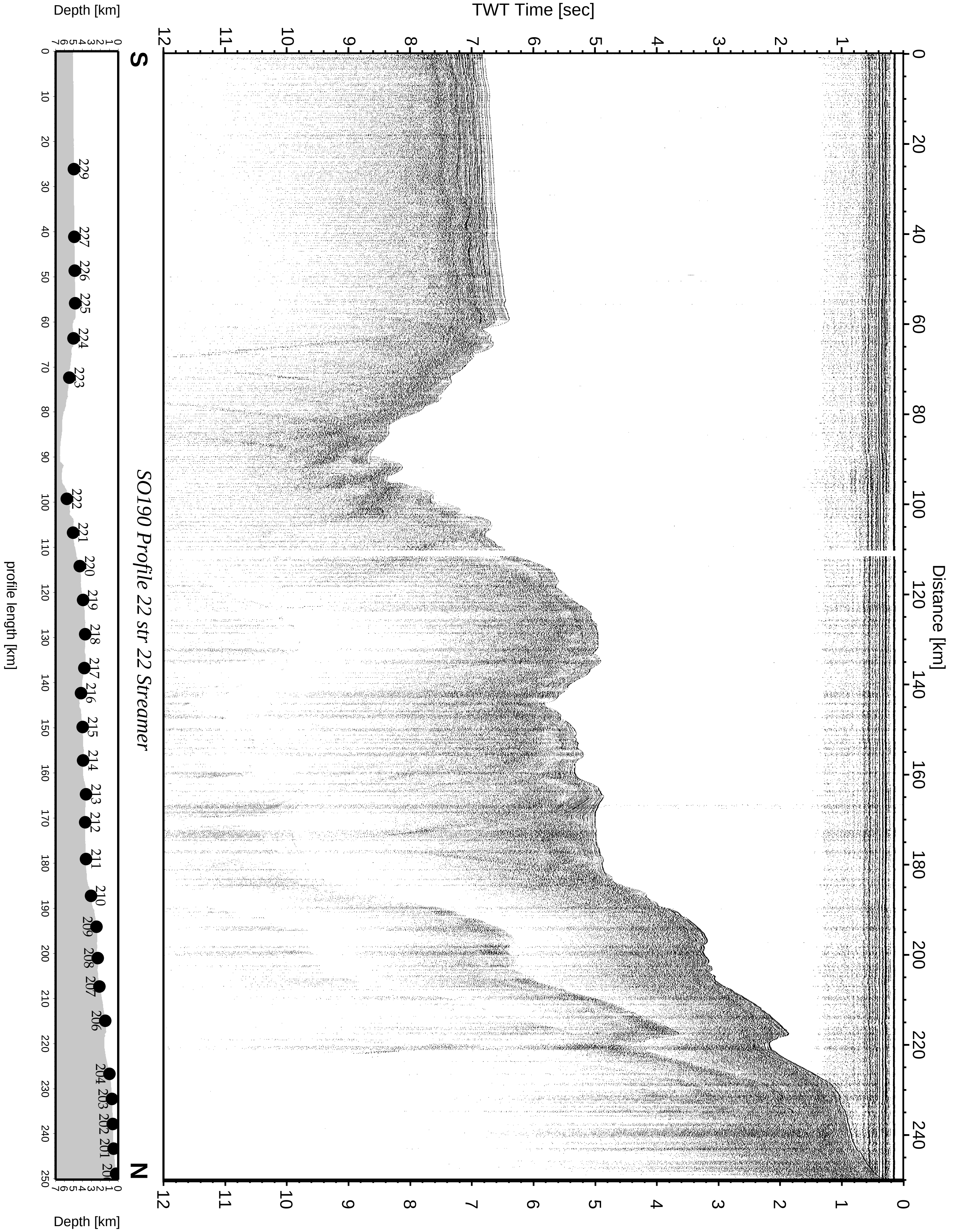


Figure 6.3.3.8: Record section from str 22 Streamer, Profile 22.

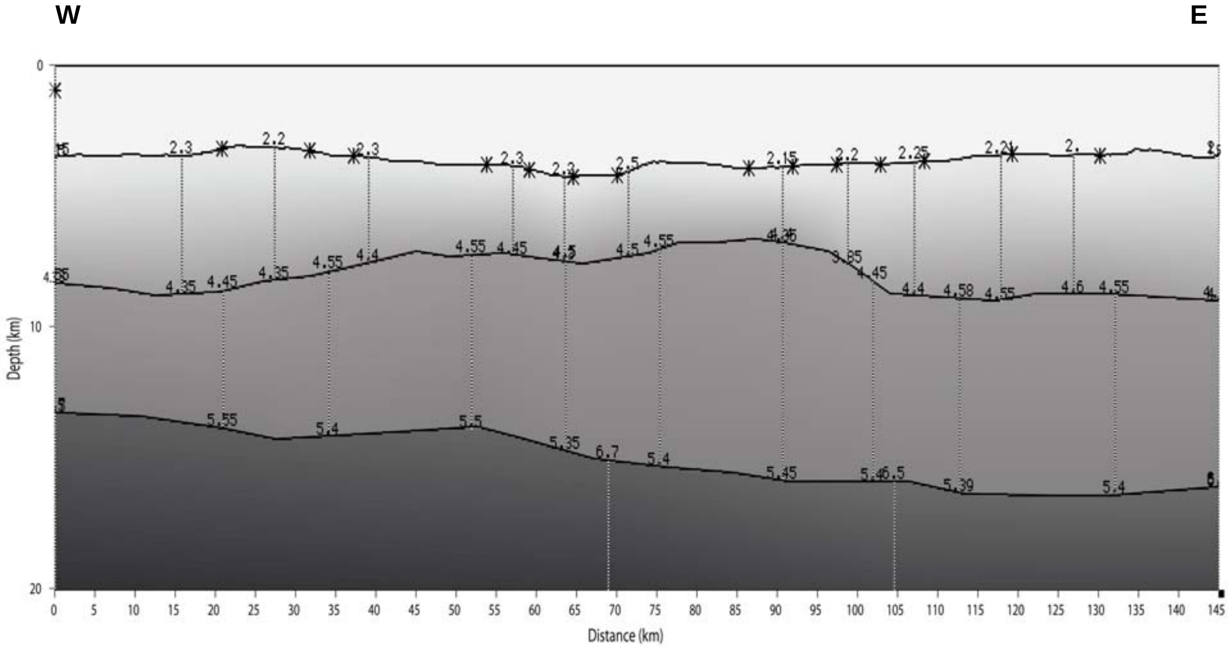


Figure 6.3.3.9: Preliminary model of Profile 21, obtained using MacRay. Stars mark the locations of the OBH/S on the sea bottom.

Tomographic traveltime inversion was also perfomed on the dataset from Profile 21. For the preliminary modeling only refracted phases were considered. Modeling was done on a regular grid of 145x20 km with a uniform spatial grid sampling of 250 m. The starting model was chosen to be a model with a gradient velocity distribution with depth. Velocity in the water was set to1.5 km/s. Figure 6.3.3.10. shows the starting model, preliminary model and ray path coverage in the model space. The preliminary model shows the presence of slow sediments just below the sea floor, which is consistent with the results obtained from ray tracing model. The locations of the high velocity anomalies at the depth of about 7 km are colocated with the aproximate depth of the interface from the ray trace modeling. Presumably the origin of those high velocity anomalies is the presence of a reflecting interface, which is not resolved correctly with the use of only refracted phases. The deeper section of the model shows a general thickening of the crust in the distance range in between 40 km and 130 km, however this could be also an effect of a non-uniform ray path coverage in the deeper parts of the model.

Joint interpretation of the two models, obtained with two different approaches suggests that the structure below Profile 21 upto the depth of 20 km shows crustal charachteristics with a presence of presumably reflecting interface at around 7 km depth. Data from the BGR06-315 profile provides additional evidence for the presence of this interface.

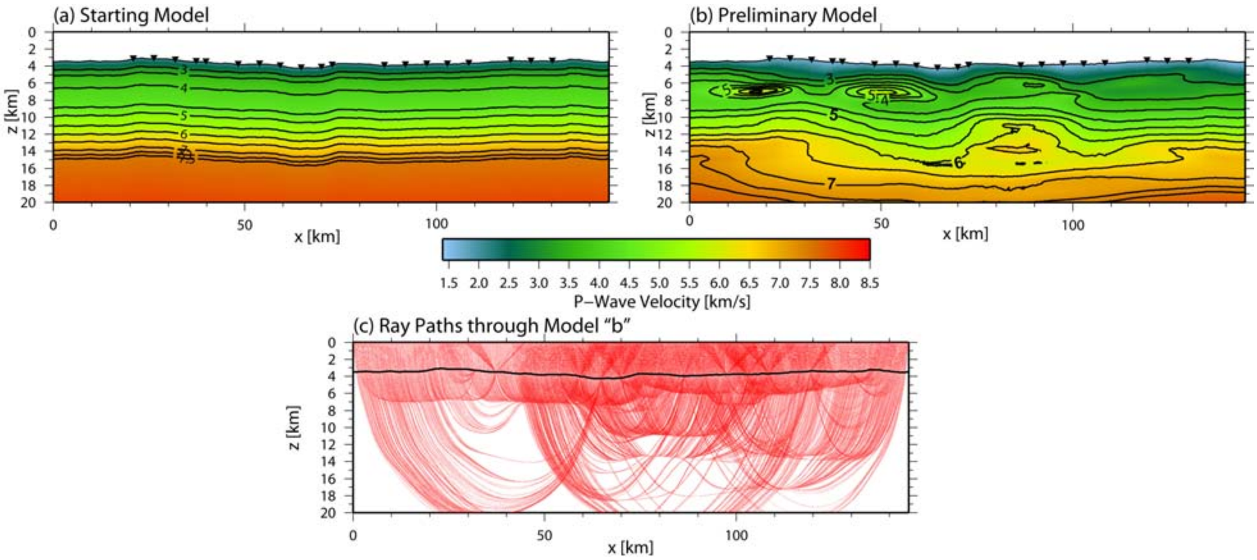


Figure 6.3.3.10: Preliminary model of Profile 21, obtained with tomographic traveltime inversion. a) Starting model used in the inversion. b) Preferred preliminary model. Figures a) and b) shows P-wave velocity distribution. c) Ray paths coverage in model (b). Small triangles show the positions of the OBH/S on the sea bottom. Thick black line in figure c) shows sea bottom bathymetry.

A preliminary interpretation of the oceanic crust part of Profile 22 was obtained by using the travel time picks of stations 224, 225, 226, 227 and 229. The resulting model, using the ray tracing code MacRay is shown in Figure 6.3.3.11. It is divided into five interfaces. The upper interface marks the sedimentary layer and for simplicity an average velocity of 1.6 km/s has been assumed. The thickness of this layer could be determined from the MCS-data of line BGR06-317. The second layer shows the northwards dipping upper part of the oceanic crust and has an average velocity gradient from about 4.4 to 4.6 km/s at the top to 6.4 km/s at the bottom of the layer. The velocities are regionally lower in the trench area from 60 to 100 km along the line with 4.0 km/s at the top and 6.3 to 6.0 km/s at the bottom of the layer. This might be related to the bend faulting near the trench. The third layer shows the northwards dipping lower part of the oceanic crust. The average velocity gradient reaches from about 6.5 km/s at the top of the layer to 7.0 km/s at the bottom of the layer. The upper mantle has not yet been modeled in great detail, the rather low velocities of 7.7 km/s below Moho are based on matching critical distances of PMP reflections. No diving waves through the mantle are seen in the data.

Oceanic crust is subducting with an angle of about 9° in the depth range of 10 to 20 km. Unfortunately below the depth of 20 km oceanic crust is poorly constrained from the preliminary modeling.

Travel time picks from stations starting from 200 up to 222 were used to build a preliminary model of the accretionary complex and its transition into island arc crust. The sedimentary layer north of the trench position was modeled using a constant velocity layer with a P velocity of 1.6 km/s at the distances in between 90 and 180 km. In the northernmost part of the profile (distances of 180 to 250 km) sediments were modeled with a layer with small velocity gradient: 1.6 km/s at the top and 2.3 km/s at the bottom. The average thickness of the sediments at this part of the profile is about 1 km. The accretionary complex and the crust were modeled with a single layer, however it shows great lateral velocity changes. Close to the trench, at the profile offsets in between 90 and 120 km velocities are 3.0 km/s at the top and 4.5 km/s at the bottom of this layer. The thickness in this section is increasing from 0 km to 5 km in northward direction. The rest of the crust was modeled with a layer of a thickness varying across the profile from 5 to 7 km. The velocities in this part of the layer are increasing from 4.5 km/s at the top to about 6.1 km/s at the bottom. The lower interface bounding this layer is interpreted as a transition from upper to lower crust. The model space in between this boundary and the interpolated position of the subducting oceanic crust was modeled with a velocity gradient changing from 6.9 km/s at the top to 7.1 km/s (7.5 km/s in the northern part).

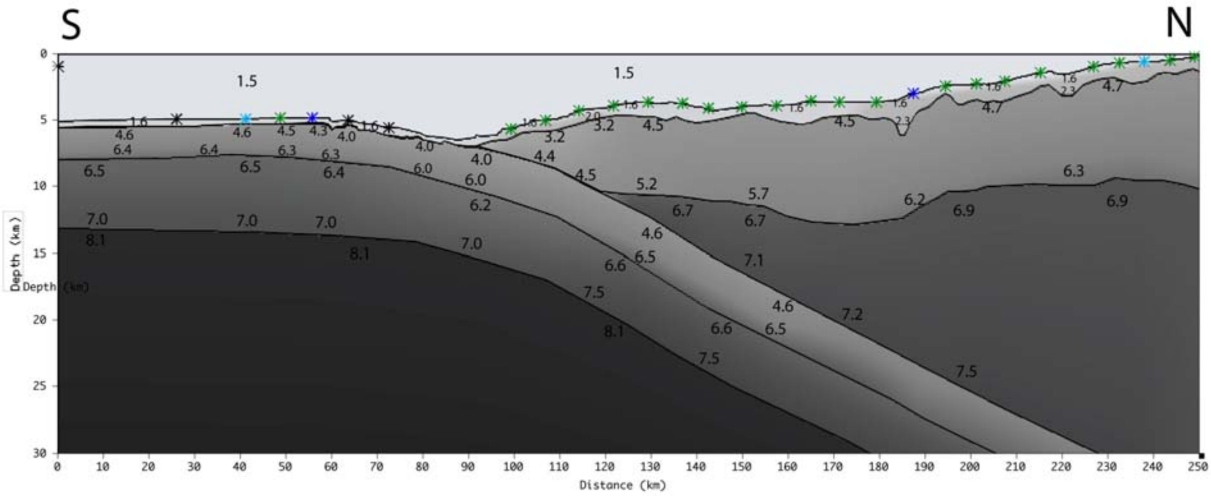


Figure 6.3.3.11: Preliminary model of Profile 22. Stars mark the location of OBH/S at the sea floor.

6.3.4 The 121°E Corridor

At 121°E a composite profile of two deployments and two stretches of airgun shots was collected. At first, 30 instruments (OBH 154 to OBS183) were deployed from south to north at an average spacing of 3.5 nm. Across this array airguns were fired starting about 10 km to the north and extending beyond the array for 20 km to the south, where the Australian EEZ limited the length of the profile (P11). Subsequently 16 instruments were recovered from the south and deployed to the north (OBH184 to OBS199). Starting another 30 km further north, P12 was shot to the south with about 5 nm overlap of P11. The composite section thus comprises 46 instruments and a total length of 350 km of airgun shots. A location map is shown in Figure 6.3.4.1. This profile was shot along MCS line BGR06-319, a line drawing of which is given in Figure 6.3.4.2. The average data quality along this line is less than in the other working areas, reflecting the rough topography and possibly a higher attenuation. Data examples are given in Figures 6.3.4.3 to 6.3.4.6. For the southern end of P11, where the profile extended further south than BGR06-319, the four channel streamer was deployed. The record section obtained by the streamer is shown in Figure 6.3.4.7.

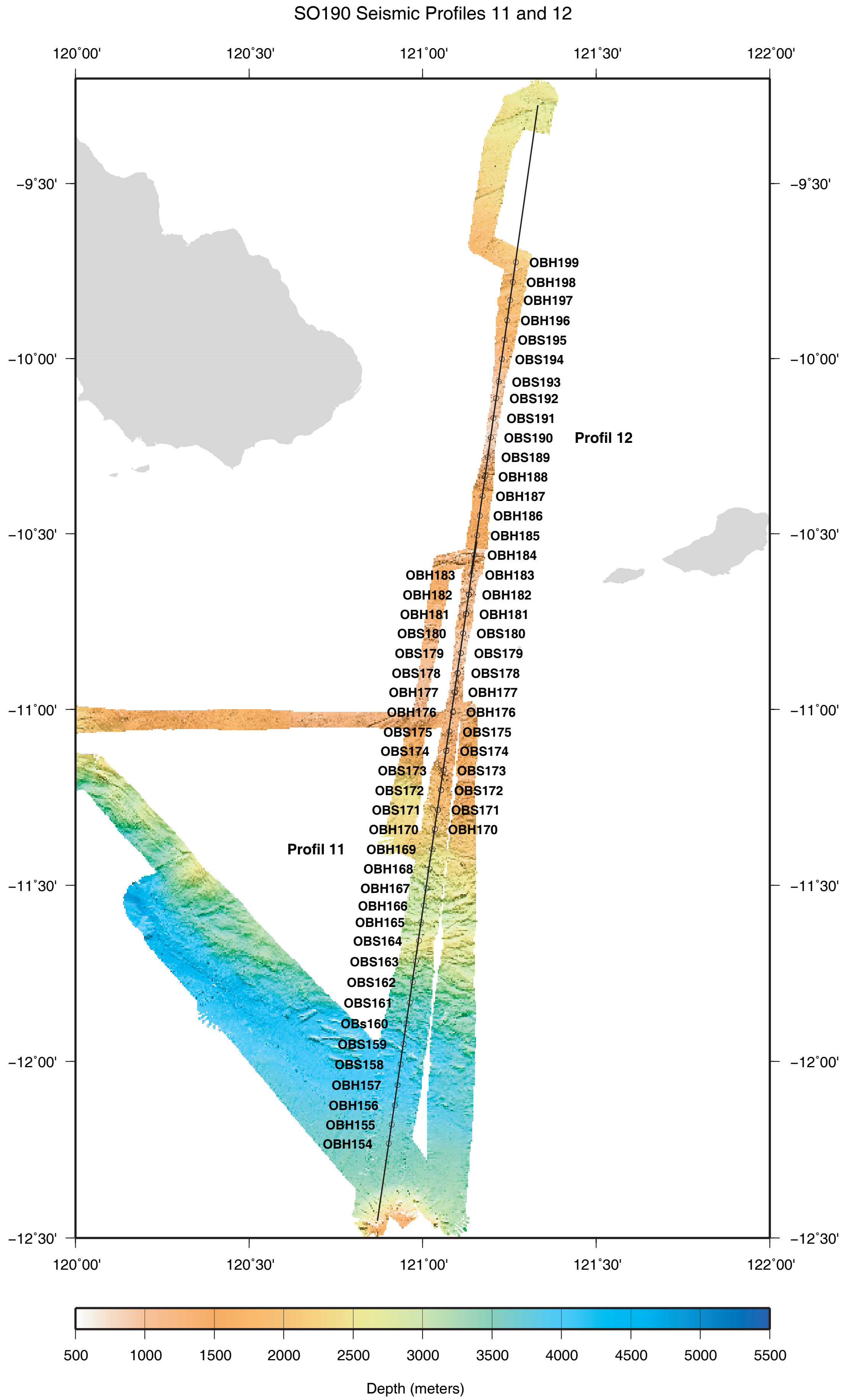


Figure 6.3.4.1: Overview of the refraction seismic profiles along corridor 121°E. Bathymetry is underlain and grey shade coded.

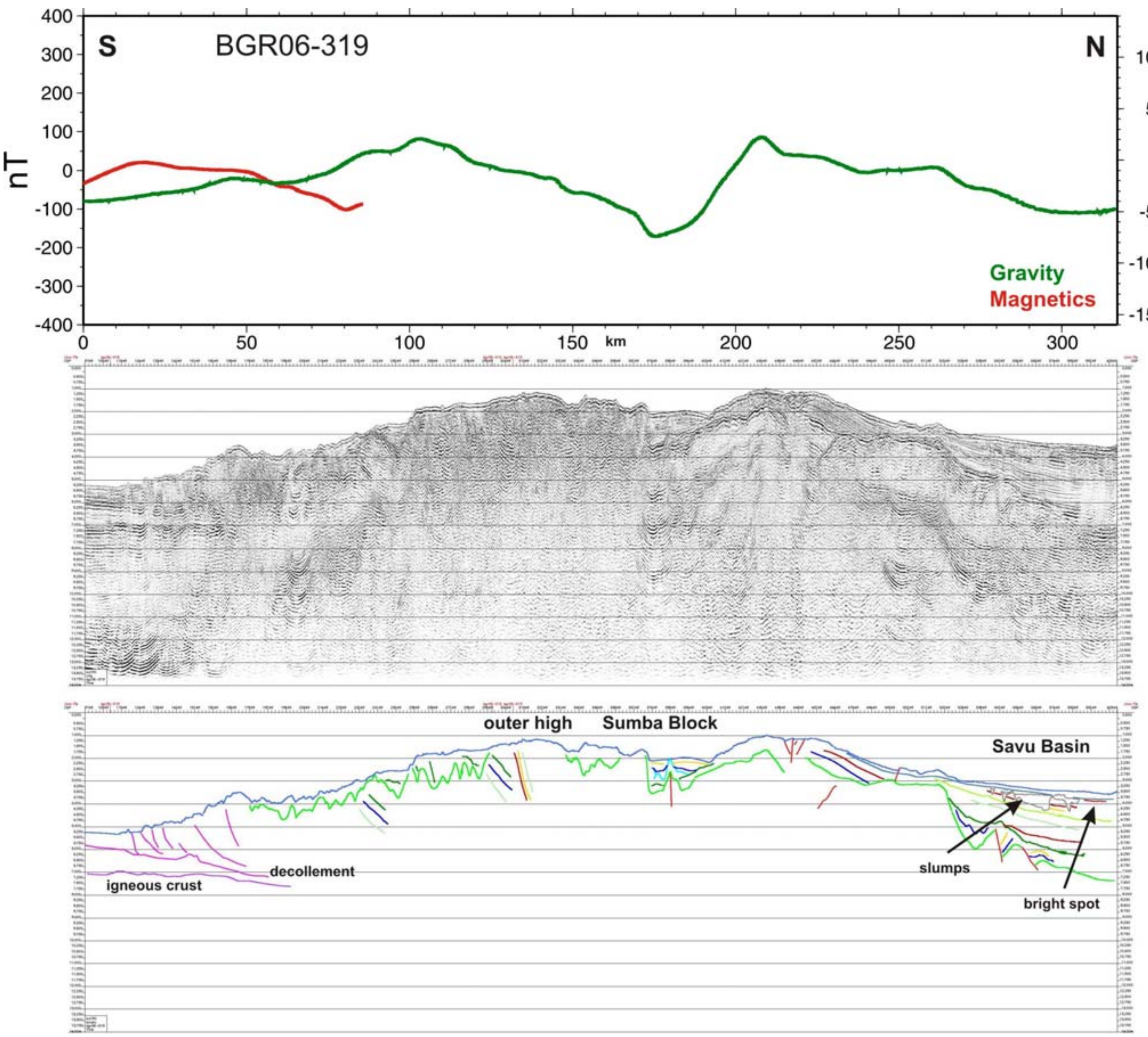


Figure 6.3.4.2: Magnetic and gravimetric data, top. MCS profile BGR06-319, migrated time section, middle. Interpretation of seismic data, bottom.

The preliminary model for Profiles 11 and 12 in Figure 6.3.4.8 was obtained by forward ray tracing (MacRay) and is based on the recordings of 11 (out of 45) ocean bottom stations. Since both profiles were shot close to the end of the cruise SO190-2, there was no time left to analyse the complete dataset. As a consequence, only stations comprising sufficient seismic information to model the deeper layers were chosen, resulting in two clusters covering the very north and south of the combined dataset. These clusters are directly related to the rather poor data quality for stations located between ~120 km and ~190 km profile distance, probably due to enhanced seismic attenuation in these areas.

In the southern part of the line, a 1-4 km thick portion of sediments with velocities of 2.0-2.7 km/s can be identified on top of the basement. Below, two crustal layers separated by a velocity jump of ~0.9 km/s show velocities of 3.8-5.2 km/s and 6.1-7.2 km/s, respectively. A reflector at about 20 km depth below sea level (bsl) might presumably mark the crust-mantle boundary (Moho), although no clear Pn phases could be identified. Hence, the continuation of the model below this reflector remains speculative.

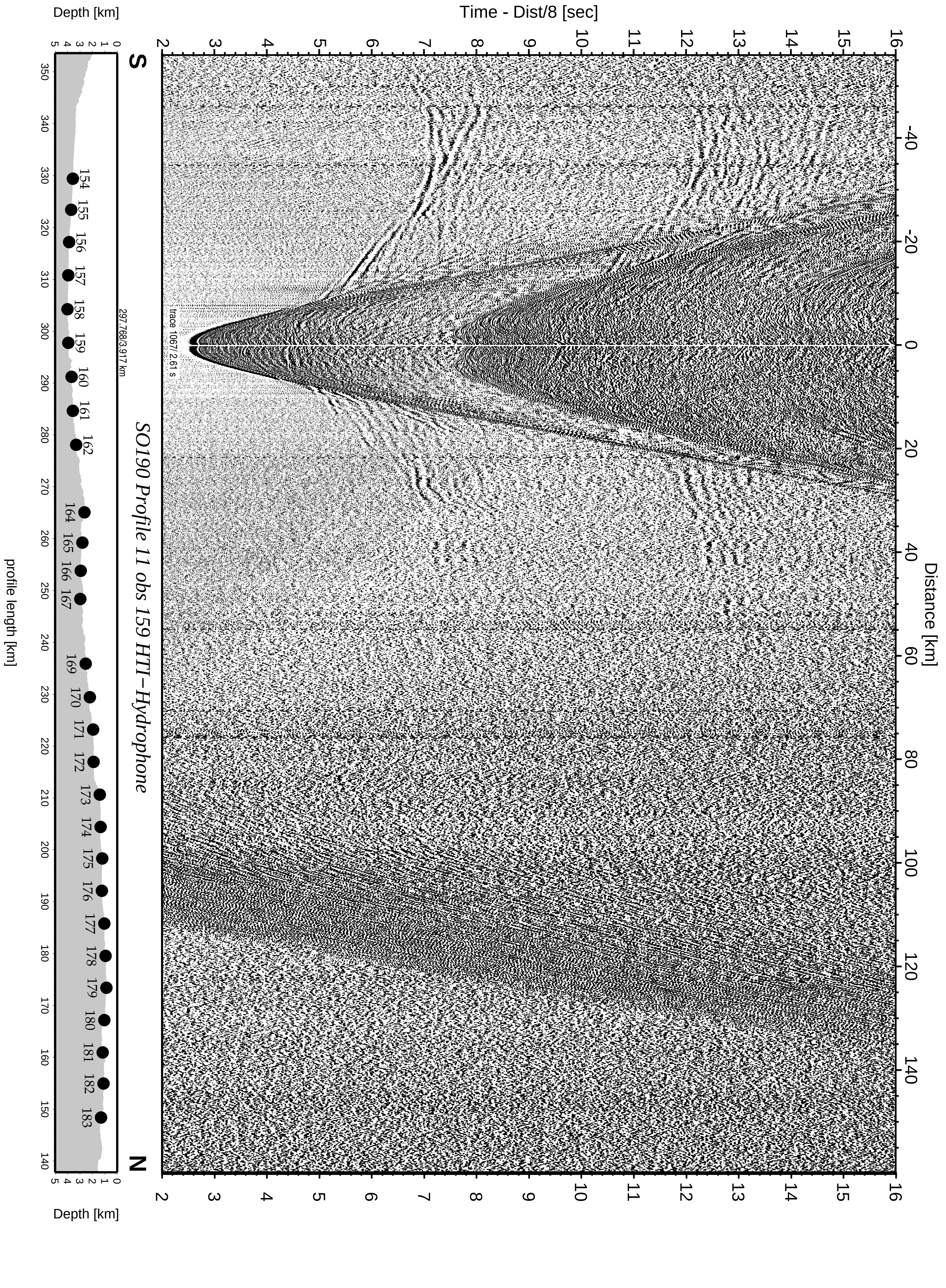


Figure 6.3.4.3: Record section from obs 159 HTI−Hydrophone, Profile 11.

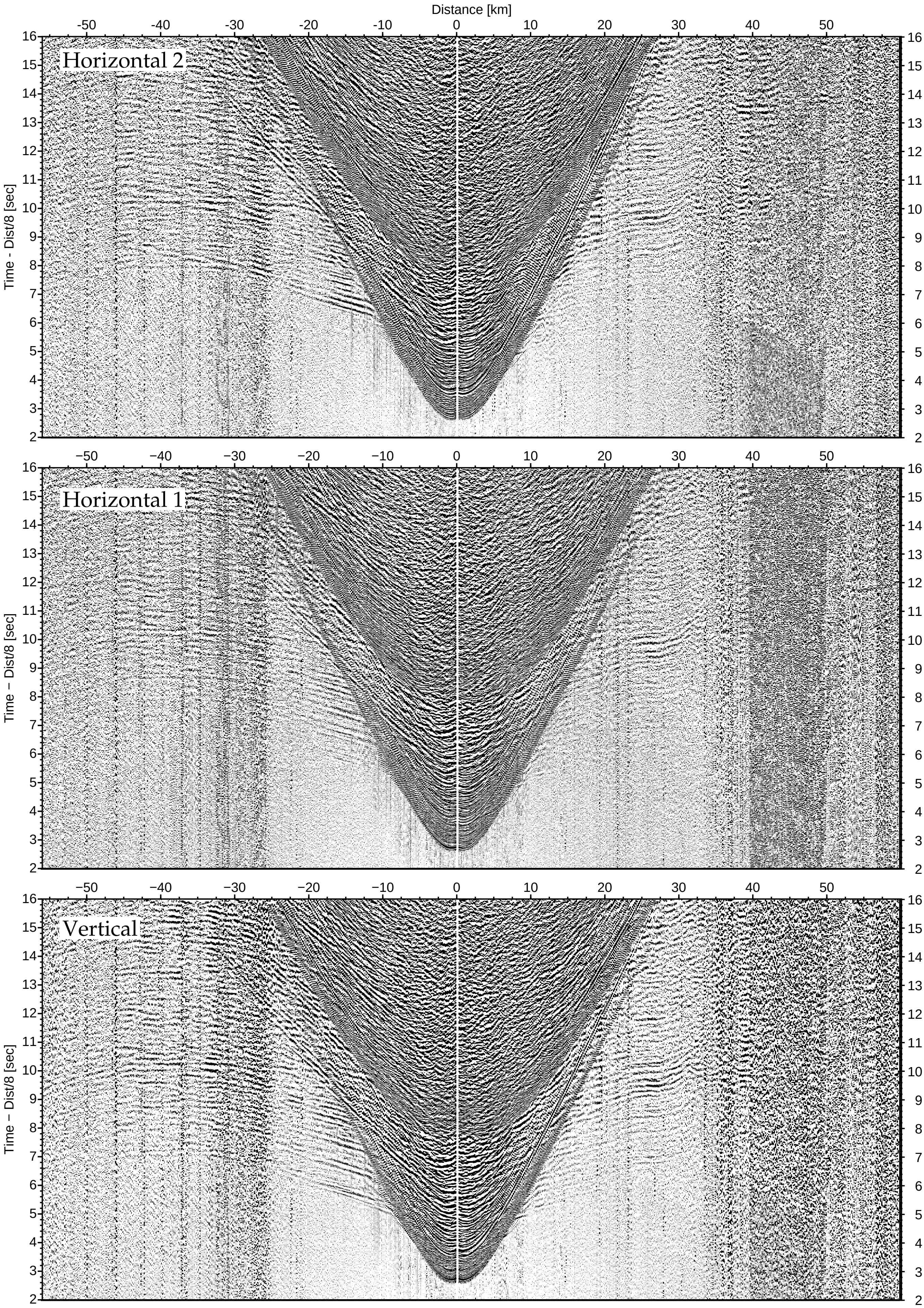


Figure 6.3.4.4: Record sections from obs 159 (HTI/Owen−4.5Hz Geophone), Profile 11.

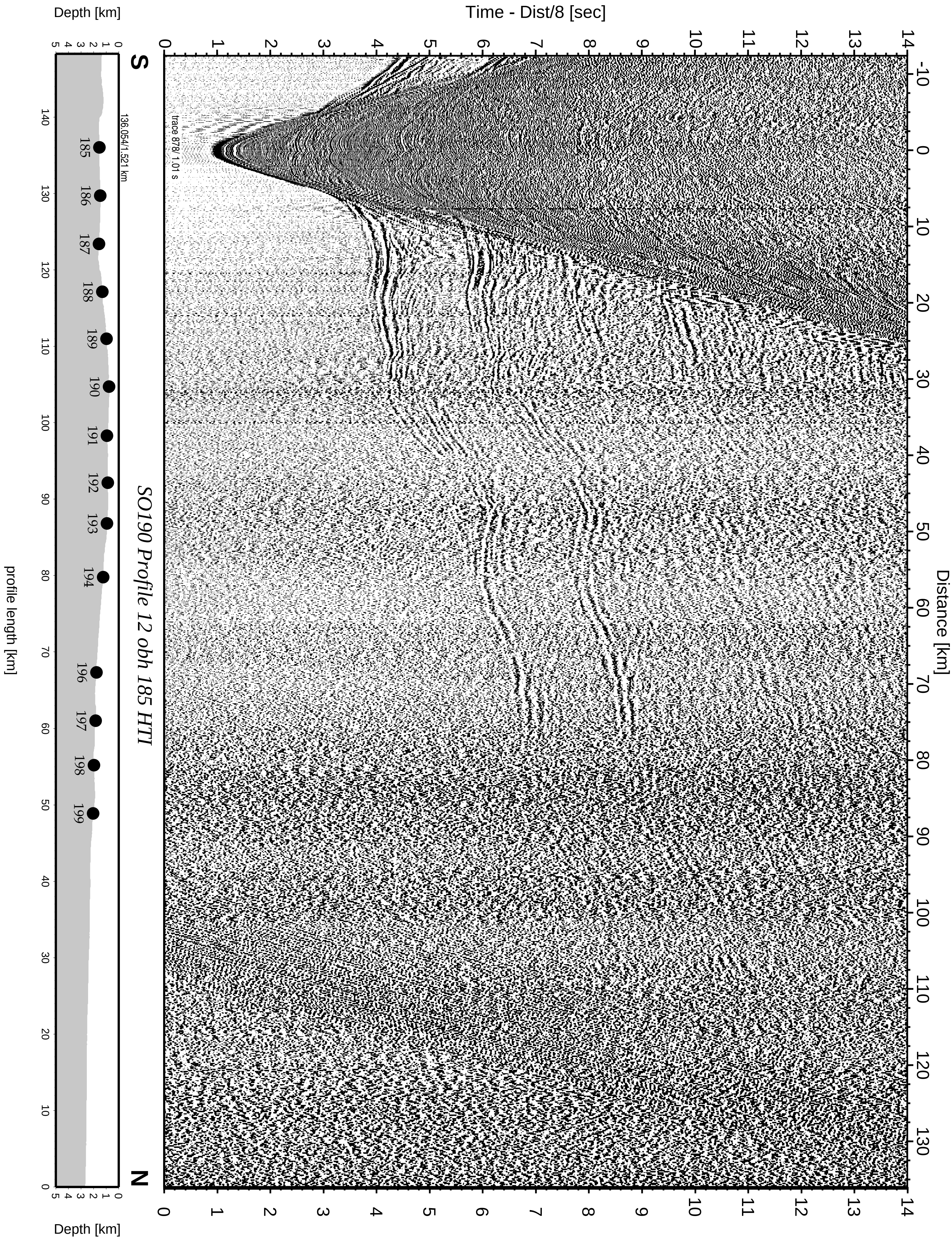


Figure 6.3.4.5: Record section from obh 185 HTI, Profile 12.

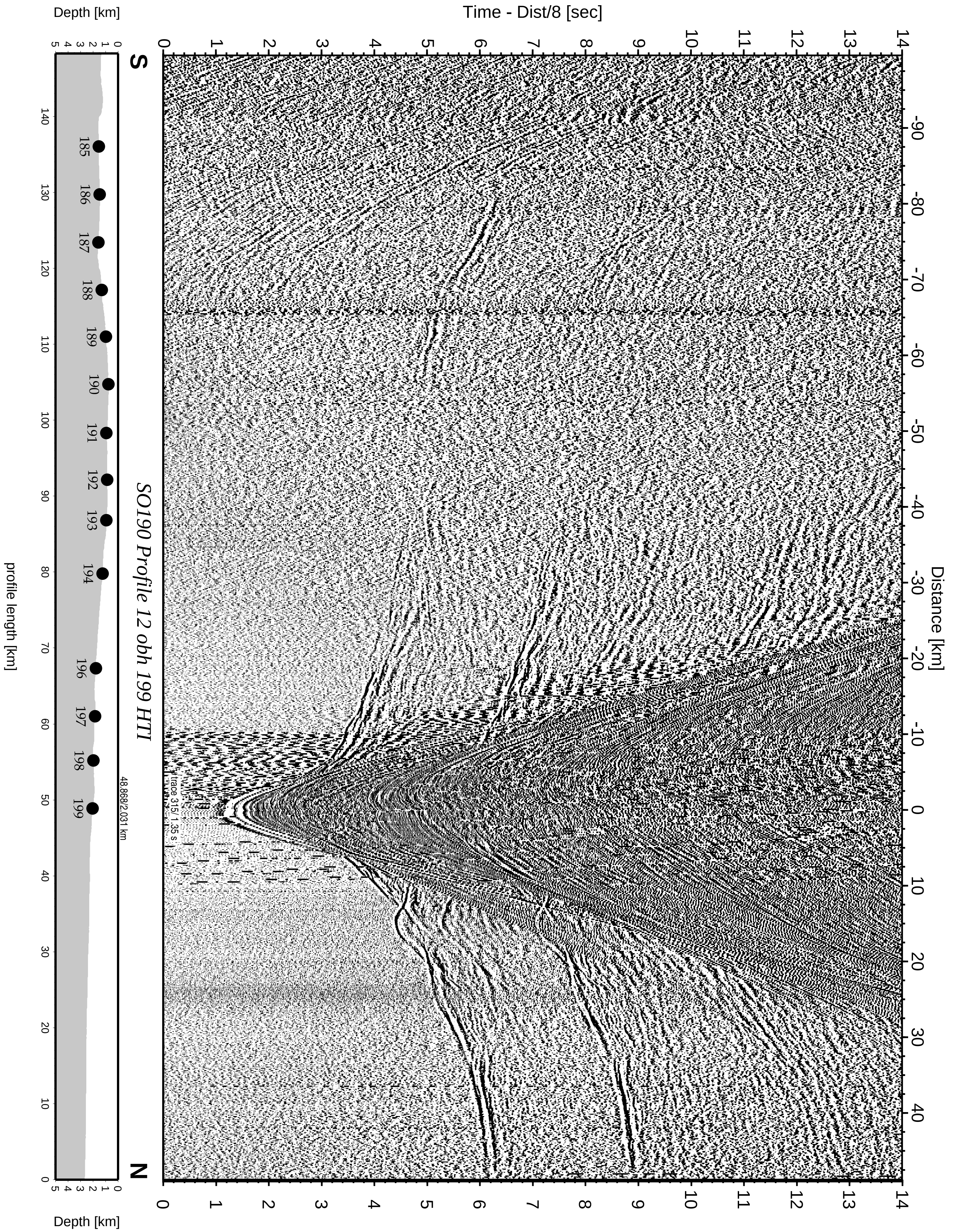


Figure 6.3.4.6: Record section from obh 199 HTI, Profile 12.

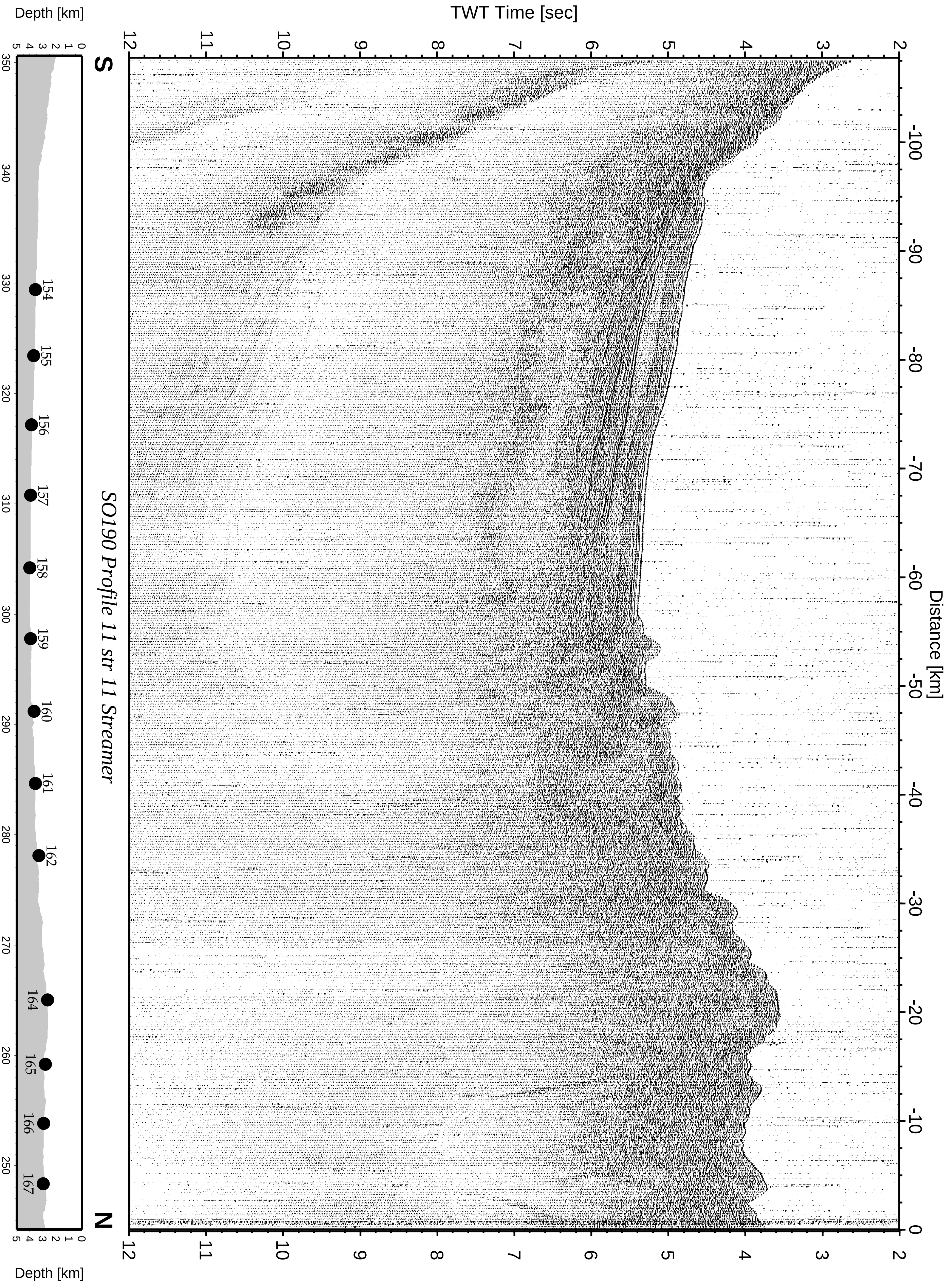


Figure 6.3.4.7: Record section from str 11 Streamer, Profile 11.

In the northern part of the model, a 1-2 km thick sedimentary section can be identified on top of the basement. Velocities (1.7-1.8 km/s) and thickness (1-2 km) for this layer were modeled using the delay times of the first refracted phase and on the basis of the BGR streamer data (cf. Fig. 6.3.4.2). The resulting basement shows considerable relief, probably related to a volcanic feature close to 250 km profile distance with adjacent depositional basins which can also be identified in the multichannel streamer data. Sub-basement velocities of 5.1-6.5 km/s are significantly higher than in the southern part of the model. There is no major velocity jump discernable to the lower part of the crust which exhibits velocities of 6.5-7.0 km/s. Similar to the southern part of the model, a reflector at about 20 km depth bsl might correspond to the Moho reflection; however, no clear Pn phases are available to constrain the continuation of the velocity model further below.
From the preliminary modeling we conclude a different velocity sequence for the northern and southern part of the model. Although the interconnection in the central part of the line remains poorly resolved, we speculate that these different sequences belong to different types of crust.

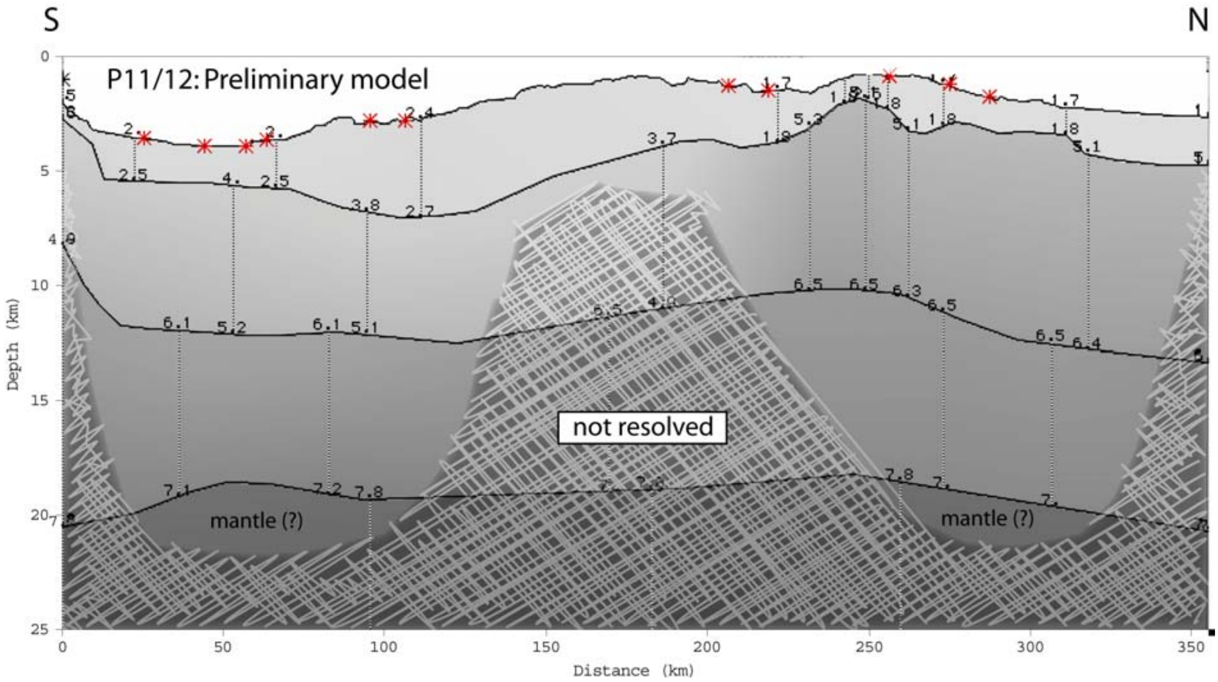


Figure 6.3.4.8: Preliminary velocity model for profiles P11 and P12 obtained from forward ray tracing. Seismic velocities are annotated; seismic sources are marked as stars. Note that only 11 out of 45 stations were used for the preliminary modeling.

6.4 Magnetotellurics

For one month from 17th Nov- 17th Dec, six ocean bottom MT instruments were deployed on profile 21 to test the newly designed equipment. Two stations, one with a nonmagnetic anchor made of concrete and aluminium (OBMT54) and the other one with a magnetic steel anchor (OBMT55) were deployed only 100m apart for extracting the effect which a magnetic anchor could have on the data.
Because of lack of time and source codes, at this point the recorded data can only be analysed under superficial issues.

6.4.1. Pitch and Roll (Stability of the station)
The MT-instruments were permanently recording tilts about x-and y-axes (pitch and roll). By investigation of these parameters one can conclude, that all stations suffer slight periodic movements, such as twice a day which is referred to tides. In Fig.6.4.1.1 an example of pitch and roll over time is shown, disregarding the times of the instrument sinking to and ascending from ocean bottom. The amplitudes of tilt variations due to tides measure about 0.05°, in case of the steel anchor even 0.15° implying that the steel anchor is far more unstable than the concrete one. Such tilts may affect the data producing an artificial signal and need to be edited carefully. Despite of tidal movements, the figure shows the instrument drifting within 25 days for 0.2°, maybe implying that the station is slowly sinking into the sediment. Furthermore, at all stations periodic movements of higher frequencies and smaller amplitudes superimpose the tidal movement as can be seen in Fig. 6.4.1.2. Here, a periodic movement twice an hour occurs, which may be due to other currents near the ocean bottom.

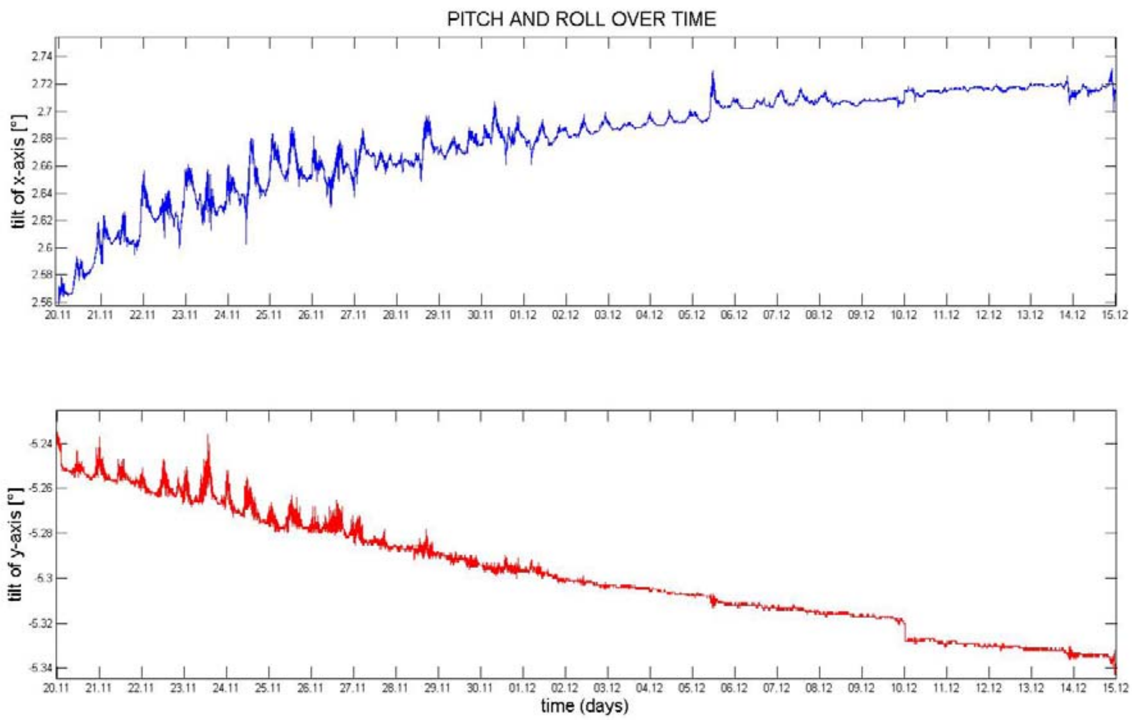


Fig. 6.4.1.1 Pitch and roll over time (25 days in total). Tidal movements are obvious (period length twice a day).

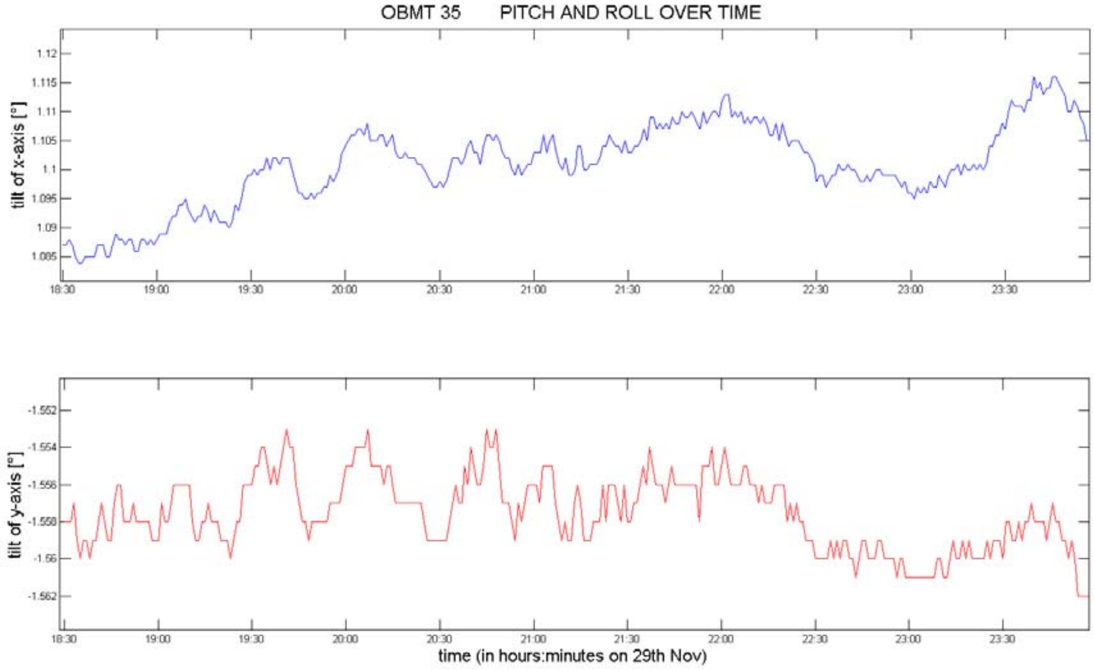


Fig.6.4.1.2 Pitch and roll viewed during five hours. Periodic movements every 30 min can be seen.

In addition to investigating periodic movements, pitch and roll can be used to track the sinking and ascending of the stations. In average, the stations ascend with 30m/s, faster at greater depths, slower at shallower depths. In Fig.6.4.1.3 pitch and roll show significant peaks just after the release command was send for the first time, marking the beginning of ascending.

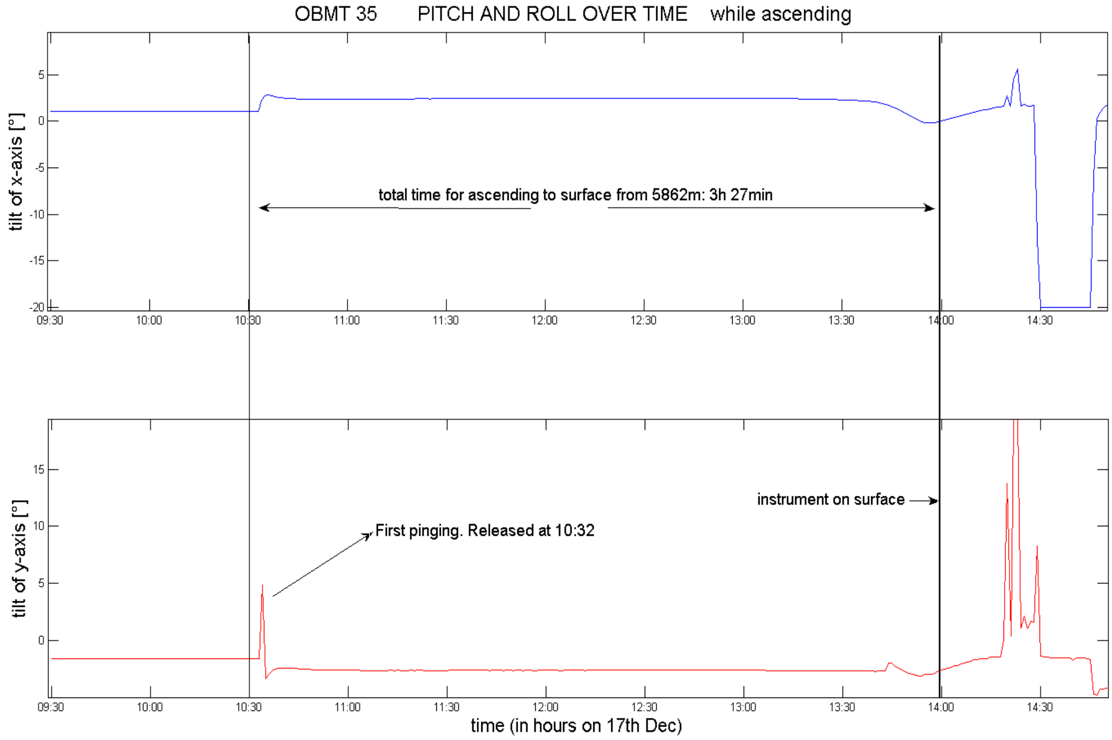


Fig.6.4.1.3 Pitch and roll tracking the release and ascending of the instrument to surface.

6.4.2 Time series

Five stations recorded time series of electric and magnetic fields, one station (OBMT 37) which stored the data in binary format cannot be checked yet. The time series show clearly natural magnetic variations such as the daily (sq) variations as shown in Fig.6.4.2.1. Due to the filtering effect of the well conducting ocean, high frequent signals are not visible when zooming in. From these time series transfer functions will have to be calculated for achieving the apparent resistivities.

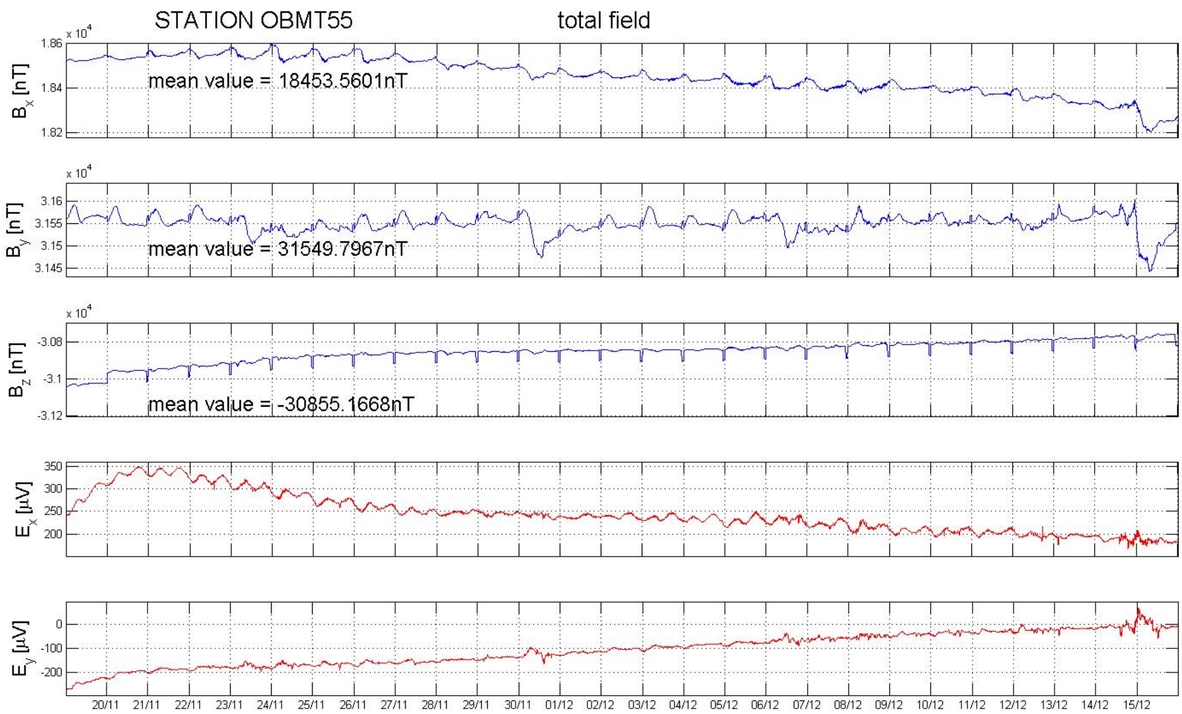


Fig.6.4.2.1 An example of recorded and corrected time series at station OBMT35. Time series prepared according to next section (6.4.3)

6.4.3 The effect of a magnetic anchor

In general, stations OBMT 54 and 55 should record the same time series as they were set right next to each other. Differences in the data can be tracked back to the influence of the magnetic anchor disturbing the varying electromagnetic fields by induction effects. In order to compare the data, the recorded fields were first adjusted to a fully output in fullrange mode, then they were rotated via 3D-rotation matrices using angles pitch and roll, respectively. Electric fields were rotated about -45° to align the filed vectors perpendicular/parallel to the magnetic field vectors (see Fig. 5.5.1 in chapter MT Instrumentation). Note, that no rotation about the z-axis was performed (to align magnetic field vector Bx to North direction). Afterwards the electromagnetic field fluctuations were normalized respectively to the mean value, the resulting plot can be seen in Fig.6.4.3.1. In this figure, one can see that there is a difference between the stations regarding signal strength. The time series section within the black box is zoomed out in Fig.6.4.3.2. In that figure one can clearly see: The steel anchor (dotted lines) seems to damp or filter out some of the electromagnetic energy, showing no signals under few hours wave length, whereas non magnetic anchor is showing signals having wave lengths in minutes range.

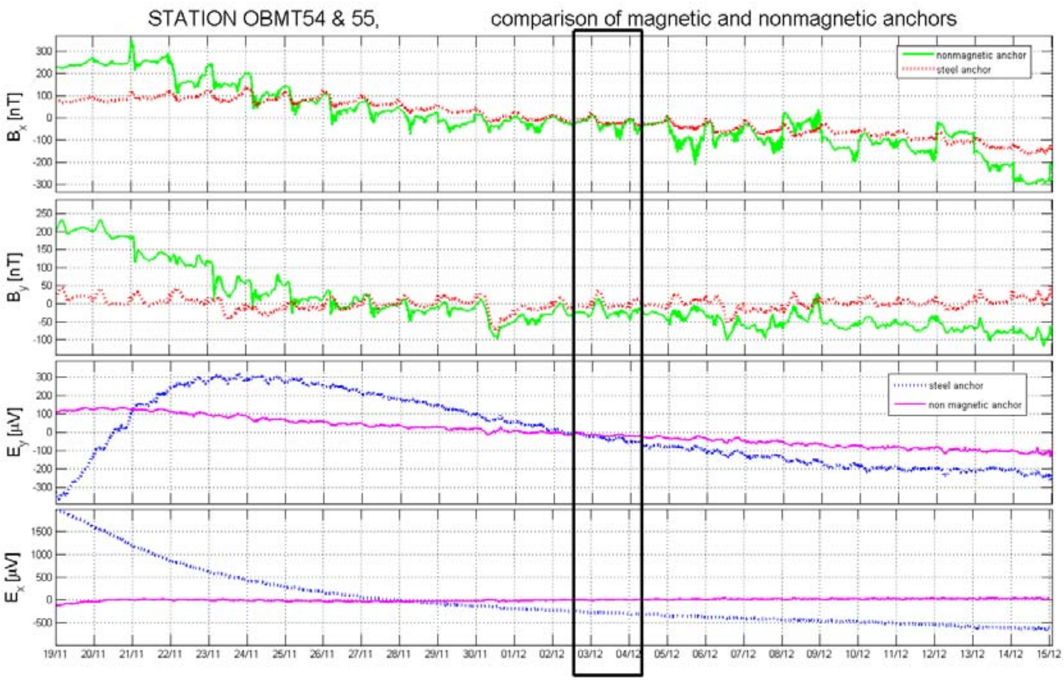


Fig.6.4.3.1 Electromagnetic fields of OBMT 54 and 55. Data of steel anchor are denoted with dotted lines, data of non magnetic anchor denoted with solid lines. Section within black box is zoomed out in next figure.

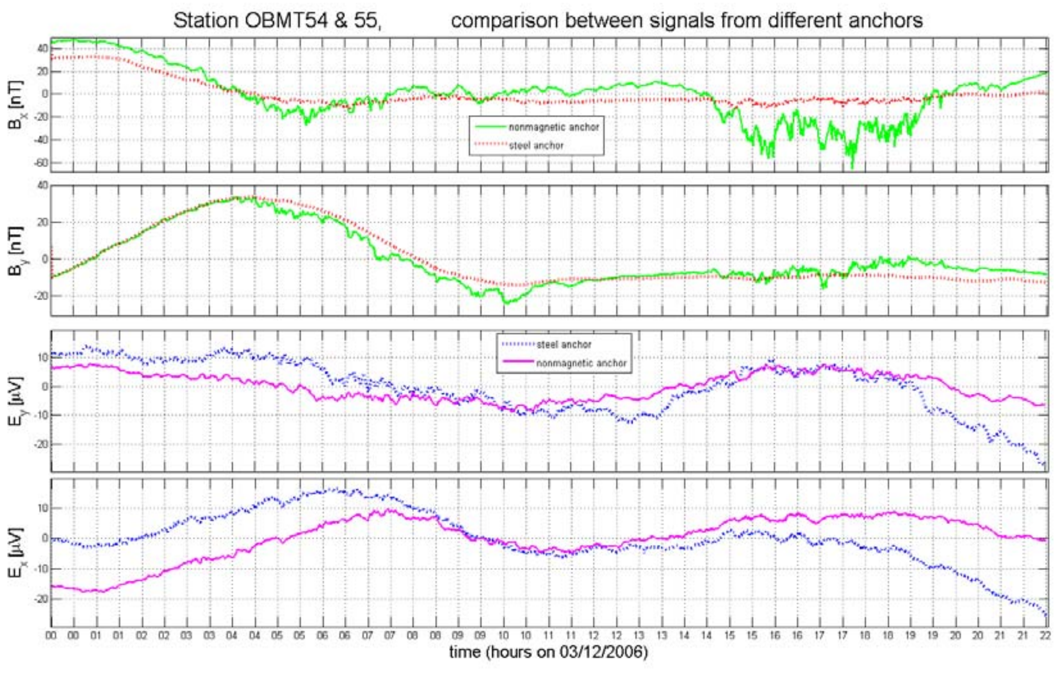


Fig.6.4.3.2 Time series within a few hours. Steel anchor (dotted lines) has damping effect on field fluctuations.

Summary and outlook

Periodic water movement affects the data by producing artificial signals which need to be removed. It is better to use non magnetic anchors, since the steel anchor had a damping effect on the data. Next steps are to process the data, achieve transfer functions, check the dimensionality of the data, and run an inversion.

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9.1 Appendix Ocean Bottom Seismic Recorders

PROFILE	INST.	LAT (N) D:M	LON (E) D:M	DIST. TO NEXT (nm)	DEPLOY. DATE	RECOV. DATE	DEPTH (m)	RELEASER CODE TIME RELEASE	REC. NO.	SKEW (ms)	SENSORS
SO190-2 Profil 11	OBH 154	12°14,008' S	120°54,199' E	3,3	07.12.06	09.12.06	3584	0398+0355 Mode B (19.12.06 / 00:00)	MLS 991249	-1	HTI 72
	OBH 155	12°10,790' S	120°54,661' E	3,3	07.12.06	09.12.06	3690	0397+0355 Mode B (18.12.06 / 09:00)	MLS 040101	-3	HTI 80
	OBH 156	12°07,436' S	120°55,179' E	3,4	07.12.06	09.12.06	3877	03BB+0355 Mode B (18.12.06 / 20:00)	MLS 040804	3	HTI 37
	OBH 157	12°04,019' S	120°55,695' E	3,5	07.12.06	09.12.06	3933	3614 Mode B (18.12.06 / 01:00)	MBS 020501	4	HTI 71
	OBS 158	12°00,471' S	120°56,196' E	3,5	07.12.06	09.12.06	3978	143320 (19.12.06 / 01:00)	MTS 050817	3	DPG 73 + Owen 64 (4,5Hz)
	OBS 159	11°57,031' S	120°56,743' E	3,5	07.12.06	09.12.06	3916	145147 (19.12.06 / 10:00)	MBS 000610	-5	HTI 70 + Owen 79 (4,5Hz)
	OBS 160	11°53,501' S	120°57,261' E	3,5	07.12.06	09.12.06	3660	432367 (18.12.06 / 13:00)	MBS 020509	7	HTI 28 + Owen 80 (4,5Hz)
	OBS 161	11°49,987' S	120°57,792' E	3,5	07.12.06	09.12.06	3567	143234 (18.12.06 / 23:00)	MBS 980907	-1	HTI 54 + Owen 55 (4,5Hz)
	OBS 162	11°46,484' S	120°58,290' E	3,5	07.12.06	09.12.06	3309	442144 (18.12.06 / 14:00)	MLS 020801	-2	DPG 63 + Owen 91 (4,5Hz)
	OBS 163	11°42,986' S	120°58,865' E	3,5	07.12.06	09.12.06	2893	427524 (19.12.06 / 04:00)	MBS 020505	not sync	HTI 23 + Owen 63 (4,5Hz)
	OBS 164	11°39,476' S	120°59,379' E	3,0	07.12.06	09.12.06	2634	435445 (19.12.06 / 09:00)	MBS 020508	11	HTI 81 + Owen 77 (4,5Hz)
	OBH 165	11°36,327' S	120°59,783' E	3,0	07.12.06	09.12.06	2782	C504 Mode B (18.12.06 / 10:00)	MBS 980904	2	HTI 27
	OBH 166	11°33,452' S	121°00,243' E	3,0	07.12.06	09.12.06	2939	B495 Mode A (18.12.06 / 05:00)	MBS 000614	-13	HTI 33
	OBH 167	11°30,512' S	121°00,682' E	3,4	07.12.06	09.12.06	2901	6969 Mode A (18.12.06 / 00:00)	MTS 050814	1	HTI 68
	OBH 168	11°27,203' S	121°01,201' E	3,4	07.12.06	09.12.06	2711	4A54 Mode B (19.12.06 / 08:00)	MBS 990712	-4	HTI 53
	OBH 169	11°23,813' S	121°01,671' E	3,4	07.12.06	09.12.06	2543	D654 Mode A (19.12.06 / 05:00)	MBS 980908	1	HTI 48
SO190-2 Profil 11	OBH 170	11°20,473' S	121°02,092' E	3,4	07.12.06	11.12.06	2201	C454 Mode A (18.12.06 / 02:00)	MBS 001005	17	HTI 40
	OBS 171	11°17,130' S	121°02,624' E	3,4	07.12.06	11.12.06	1945	3609 Mode B (18.12.06 / 15:00)	MBS 020504	24	HTI 76 + Owen 82 (4,5Hz)
	OBS 172	11°13,787' S	121°03,160' E	3,4	07.12.06	11.12.06	1899	03BC+0355 Mode B (18.12.06 / 19:00)	MBS 001003	16	HTI 65 + Owen 73 (4,5Hz)
	OBS 173	11°10,418' S	121°03,632' E	3,4	07.12.06	11.12.06	1407	3659 Mode B (18.12.06 / 07:00)	MBS 001006	-247	OAS 45 + Owen 71 (4,5Hz)
	OBS 174	11°07,061' S	121°04,141' E	3,3	07.12.06	11.12.06	1342	03B2+0355 Mode B (18.12.06 / 16:00)	MBS 990901	-7	HTI 41 + Owen 81 (4,5Hz)
	OBS 175	11°03,800' S	121°04,594' E	3,4	07.12.06	11.12.06	1202	03B6+0355 Mode B (19.12.06 / 07:00)	MTS 050805	0	DPG 69 + Owen 78 (4,5Hz)
	OBH 176	11°00,479' S	121°05,245' E	3,5	07.12.06	11.12.06	1219	6959 Mode A (18.12.06 / 04:00)	MBS 000616	-63	HTI 32
	OBH 177	10°57,080' S	121°05,601' E	3,4	07.12.06	11.12.06	1032	6354 Mode B (18.12.06 / 12:00)	MBS 980906	10	HTI 64
	OBS 178	10°53,754' S	121°06,071' E	3,4	07.12.06	10.12.06	934	0387+0355 Mode B (18.12.06 / 06:00)	MBS 010701	-155	OAS 36 + Owen 57 (4,5Hz)
	OBS 179	10°50,382' S	121°06,597' E	3,4	07.12.06	10.12.06	868	3624 Mode B (18.12.06 / 18:00)	MBS 991292	-252	HTI 88 + Owen 56 (4,5Hz)
	OBS 180	10°47,016' S	121°07,031' E	3,4	07.12.06	10.12.06	1046	435704 (18.12.06 / 03:00)	MBS 971202	-17	HTI 39
	OBH 181	10°43,723' S	121°07,494' E	3,4	07.12.06	10.12.06	1180	03B3+0355 Mode B (18.12.06 / 11:00)	MTS 050812	6	DPG 71
	OBH 182	10°40,372' S	121°07,964' E	3,4	07.12.06	10.12.06	1118	3619 Mode B (18.12.06 / 02:00)	MBS 980901	24	HTI 87
	OBH 183	10°37,002' S	121°08,465' E	3,4	07.12.06	10.12.06	1303	03B7+0355 Mode B (18.12.06 / 12:00)	MLS 991252	-6	HTI 69
SO190-2 Profil 12	OBH 184	10°33,634' S	121°08,900' E	3,5	09.12.06	10.12.06	1207	D654 Mode A (19.12.06 / 05:00)	MBS 980908	1	HTI 48
	OBH 185	10°30,267' S	121°09,437' E	3,5	09.12.06	10.12.06	1522	4A54 Mode B (19.12.06 / 08:00)	MBS 990712	-3	HTI 53
	OBH 186	10°26,911' S	121°09,918' E	3,4	09.12.06	10.12.06	1450	6969 Mode A (18.12.06 / 00:00)	MTS 050814	1	HTI 68
	OBH 187	10°23,574' S	121°10,295' E	3,4	09.12.06	10.12.06	1566	B495 Mode A (18.12.06 / 05:00)	MBS 000614	-9	HTI 33
	OBH 188	10°20,213' S	121°10,789' E	3,4	09.12.06	10.12.06	1313	C504 Mode B (18.12.06 / 10:00)	MBS 980904	1	HTI 27
	OBS 189	10°16,895' S	121°11,282' E	3,4	09.12.06	10.12.06	960	435445 (19.12.06 / 09:00)	MBS 020508	7	HTI 81 + Owen 77 (4,5Hz)
	OBS 190	10°13,553' S	121°11,775' E	3,4	09.12.06	10.12.06	776	427524 (19.12.06 / 04:00)	MBS 020505	1	HTI 23 + Owen 63 (4,5Hz)
	OBS 191	10°10,189' S	121°12,254' E	3,4	09.12.06	10.12.06	936	442144 (18.12.06 / 14:00)	MLS 020801	-1	DPG 63 + Owen 91 (4,5Hz)
	OBS 192	10°06,837' S	121°12,730' E	2,9	09.12.06	11.12.06	875	143234 (18.12.06 / 23:00)	MBS 980907	-2	HTI 54 + Owen 55 (4,5Hz)
	OBS 193	10°03,951' S	121°13,135' E	3,9	09.12.06	11.12.06	910	432367 (18.12.06 / 13:00)	MBS 020509	5	HTI 28 + Owen 80 (4,5Hz)
	OBS 194	10°00,130' S	121°13,708' E	3,4	09.12.06	11.12.06	1246	145147 (19.12.06 / 10:00)	MBS 000610	-4	HTI 70 + Owen 79 (4,5Hz)
	OBS 195	09°56,791' S	121°14,186' E	3,4	09.12.06	11.12.06	1532	143320 (19.12.06 / 01:00)	MTS 050817	2	DPG 73 + Owen 64 (4,5Hz)
	OBH 196	09°53,434' S	121°14,651' E	3,4	09.12.06	11.12.06	1779	3614 Mode B (18.12.06 / 01:00)	MBS 020501	3	HTI 71
	OBH 197	09°50,015' S	121°15,100' E	3,2	09.12.06	11.12.06	1830	03BB+0355 Mode B (18.12.06 / 20:00)	MLS 040804	2	HTI 37
	OBH 198	09°46,889' S	121°15,620' E	3,4	09.12.06	11.12.06	1956	0397+0355 Mode B (18.12.06 / 09:00)	MLS 040101	-2	HTI 80
	OBH 199	09°43,475' S	121°16,114' E		09.12.06	11.12.06	2036	0398+0355 Mode B (19.12.06 / 00:00)	MLS 991249	-1	HTI 72

9.1 Appendix Ocean Bottom Seismic Recorders

SO190-2 Profil 21

INST.	LAT (N) D:M	LON (E) D:M	DIST. TO NEXT (nm)	DEPLOY. DATE	RECOV. DATE	DEPTH (m)	RELEASER CODE TIME RELEASE	REC. NO.	SKEW (ms)	SENSORS
OBH 01	10°46,939' S	119°26,861' E	3,0	14.11.06	15.11.06	3451	0398+0355 Mode B (19.12.06 / 00:00)	MBS 000616	-20	HTI 32
OBH 02	10°46,710' S	119°23,936' E	3,0	14.11.06	15.11.06	3459	D654 Mode A (19.12.06 / 05:00)	MTS 050814	0	HTI 64
OBH 03	10°46,478' S	119°20,980' E	3,0	14.11.06	15.11.06	3375	C454 Mode A (18.12.06 / 02:00)	MBS 020504	8	HTI 40
OBH 04	10°46,530' S	119°17,977' E	3,0	14.11.06	15.11.06	3516	6959 Mode A (18.12.06 / 04:00)	MLS 991249	power fail.	HTI 48
OBH 05	10°45,975' S	119°15,007' E	3,0	14.11.06	15.11.06	3695	4A54 Mode B (19.12.06 / 08:00)	MLS 061102	-2	HTI 53
OBH 06	10°45,720' S	119°12,000' E	3,0	14.11.06	15.11.06	3778	6969 Mode A (18.12.06 / 00:00)	MBS 980906	4	HTI 68
OBH 07	10°45,481' S	119°09,002' E	3,0	14.11.06	15.11.06	3784	B495 Mode A (18.12.06 / 05:00)	MLS 040804	2	HTI 33
OBH 08	10°45,277' S	119°05,986' E	3,0	14.11.06	15.11.06	3876	C504 Mode B (18.12.06 / 10:00)	MLS 991252	-2	HTI 27
OBS 09	10°44,981' S	119°02,995' E	3,0	14.11.06	15.11.06	3938	143234 (18.12.06 / 23:00)	MBS 001001	-152	HTI 54 + Owen 61 (4,5Hz)
OBS 10	10°44,741' S	118°59,991' E	3,0	14.11.06	15.11.06	3760	143320 (19.12.06 / 01:00)	MTS 050817	3	DPG 73 + Owen 58 (4,5Hz)
OBS 11	10°44,497' S	118°56,989' E	3,0	14.11.06	15.11.06	3705	145147 (19.12.06 / 10:00)	MBS 020507	21	HTI 70 + Owen 56 (4,5Hz)
OBS 12	10°44,258' S	118°53,975' E	3,0	14.11.06	15.11.06	4199	435551 (18.12.06 / 08:00)	MBS 000610	-4	HTI 39 + Owen 79 (4,5Hz)
OBS 13	10°44,020' S	118°51,016' E	3,0	14.11.06	15.11.06	4251	145101 (18.12.06 / 21:00)	MBS 010701	-248	HTI 37 + Owen 55 (4,5Hz)
OBS 14	10°43,794' S	118°47,987' E	3,0	14.11.06	15.11.06	3977	442144 (18.12.06 / 14:00)	MTS 050805	+1	DPG 63 + Owen 19 (4,5Hz)
OBS 15	10°43,538' S	118°45,018' E	3,0	14.11.06	16.11.06	3788	430326 (19.12.06 / 03:00)	MBS 020508	8	HTI 73 + Owen 63 (4,5Hz)
OBS 16	10°43,309' S	118°42,002' E	3,0	14.11.06	16.11.06	3777	432367 (18.12.06 / 13:00)	MBS 000612	-8	HTI 28 + Owen 80(4.5 Hz)
OBS 17	10°43,079' S	118°38,995' E	3,0	14.11.06	16.11.06	3662	435517 (18.12.06 / 17:00)	MBS 990901	-4	HTI 41 + Owen 57 (4,5Hz)
OBS 18	10°42,851' S	118°36,001' E	3,0	14.11.06	16.11.06	3484	143272 (18.12.06 / 22:00)	MBS 020501	3	HTI 72 + Owen 81 (4,5Hz)
OBS 19	10°42,578' S	118°32,980' E	3,0	14.11.06	16.11.06	3268	430424 /19.12.06 / 06:00)	MTS 050812	3	DPG 71 + Owen 73 (4,5Hz)
OBS 20	10°42,319' S	118°29,979' E	3,0	14.11.06	16.11.06	3147	435445 (19.12.06 / 09:00)	MLS 020801	-2	DPG 69 + Owen 77 (4,5Hz)
OBS 21	10°42,093' S	118°26,989' E		14.11.06	16.11.06	3236	427524 (19.12.06 / 04:00)	MBS 001003	5	HTI 60 + Owen 71 (4,5 Hz)

9.1 Appendix Ocean Bottom Seismic Recorders

SO190-2 Profil 22

INST.	LAT (N) D:M	LON (E) D:M	DIST. TO NEXT (nm)	DEPLOY. DATE	RECOV. DATE	DEPTH (m)	RELEASER CODE TIME RELEASE	REC. NO.	SKEW (ms)	SENSORS
OBH 200	09°44,005' S	119°00,414' E	3,0	12.12.06	13.12.06	253	C454 Mode A (18.12.06 / 02:00)	MLS 991249	-2	HTI 40
OBH 201	09°47,031' S	119°00,237' E	3,0	12.12.06	13.12.06	499	C504 Mode B (18.12.06 / 10:00)	MLS 040101	-4	HTI 27
OBH 202	09°50,007' S	118°59,996' E	3,0	12.12.06	13.12.06	598	B495 Mode A (18.12.06 / 05:00)	MLS 040804	3	HTI 33
OBH 203	09°53,002' S	118°59,802' E	3,0	12.12.06	14.12.06	707	6969 Mode A (18.12.06 / 00:00)	MBS 020501	5	HTI 68
OBH 204	09°56,012' S	118°59,554' E	3,7	12.12.06	14.12.06	1000	4A54 Mode B (19.12.06 / 08:00)	MBS 000614	2	HTI 53
OBH 205	09°59,707' S	118°59,318' E	2,7	12.12.06	14.12.06	1558	D654 Mode A (19.12.06 / 05:00)	MBS 980904	2	HTI 48
OBS 206	10°02,388' S	118°59,110' E	4,1	12.12.06	14.12.06	1464	432367 (18.12.06 / 13:00)	MBS 020508	11	HTI 29 + Owen 80 (4,5Hz)
OBS 207	10°06,461' S	118°58,839' E	3,4	12.12.06	14.12.06	2081	145147 (19.12.06 / 10:00)	MBS 020505	3	HTI 70 + Owen 79 (4,5Hz)
OBS 208	10°09,852' S	118°58,579' E	3,7	12.12.06	14.12.06	2296	143320 (19.12.06 / 01:00)	MLS 020801	-2	DPG 73 + Owen 64 (4,5Hz)
OBS 209	10°13,562' S	118°58,306' E	3,7	12.12.06	14.12.06	2419	143234 (18.12.06 / 23:00)	MBS 980907	-2	HTI 54 + Owen 55 (4,5Hz)
OBS 210	10°17,304' S	118°58,095' E	4,4	12.12.06	14.12.06	3055	427524 (19.12.06 / 04:00)	MBS 020509	8	HTI 16 + Owen 63 (4,5Hz)
OBS 211	10°21,693' S	118°57,728' E	4,4	12.12.06	14.12.06	3593	442144 (18.12.06 / 14:00)	MTS 050817	3	DPG 63 + Owen 91 (4,5Hz)
OBS 212	10°24,052' S	118°57,402' E	3,4	12.12.06	14.12.06	3684	435445 (19.12.06 / 09:00)	MBS 000610	-6	HTI 81 + Owen 77 (4,5Hz)
OBH 213	10°29,438' S	118°57,165' E	4,1	12.12.06	14.12.06	3585	6959 Mode A (18.12.06 / 05:00)	MBS 000616	-37	HTI 32
OBH 214	10°33,510' S	118°56,869' E	4,1	12.12.06	14.12.06	3944	6354 Mode B (19.12.06 / 11:00)	MBS 980906	7	HTI 64
OBH 215	10°37,570' S	118°56,537' E	4,1	12.12.06	14.12.06	4057	03B3+0355 Mode B (18.12.06 / 11:00)	MBS 001005	9	HTI 39
OBH 216	10°41,594' S	118°56,301' E	3,1	12.12.06	14.12.06	4137	0398+0355 Mode B (19.12.06 / 00:00)	MBS 971202	-10	HTI 72
OBH 217	10°44,654' S	118°56,067' E	4,1	12.12.06	14.12.06	3771	0397+0355 Mode B (18.12.06 / 09:00)	MBS 980901	18	HTI 80
OBH 218	10°48,650' S	118°55,802' E	4,1	12.12.06	14.12.06	3681	03BB+0355 Mode B (18.12.06 / 20:00)	MLS 991252	-4	HTI 37
OBH 219	10°52,764' S	118°52,511' E	4,1	12.12.06	14.12.06	3941	3614 Mode B (18.12.06 / 01:00)	MBS 980908	2	HTI 71
OBH 220	10°56,801' S	118°55,206' E	4,1	12.12.06	14.12.06	4294	03B7+0355 Mode B (18.12.06 / 12:00)	MBS 990712	-153	HTI 69
OBH 221	11°00,842' S	118°54,939' E	4,1	12.12.06	14.12.06	5055	3619 Mode B (19.12.06 / 02:00)	MTS 050814	2	HTI 87
OBS 222	11°05,369' S	118°54,500' E	14,6	12.12.06	14.12.06	5728	03B6+0355 Mode B (19.12.06 / 07:00)	MTS 050805	1	DPG 69+Owen 78 (4,5Hz)
OBS 223	11°19,479' S	118°53,573' E	4,7	12.12.06	14.12.06	5481	3609 Mode B (18.12.06 / 15:00)	MBS 991292	-253	HTI 76 + Owen 82 (4,5Hz)
OBS 224	11°24,228' S	118°53,246' E	4,2	12.12.06	14.12.06	4985	3659 Mode B (18.12.06 / 07:00)	MBS 001006	-148	OAS 45 + Owen 71 (4,5Hz)
OBS 225	11°28,464' S	118°52,962' E	3,9	12.12.06	14.12.06	4808	03BC+0355 Mode B (18.12.06 / 19:00)	MBS 990901	-7	HTI 65 + Owen 73 (4,5Hz)
OBS 226	11°32,345' S	118°56,667' E	4,1	12.12.06	14.12.06	4842	03B2+0355 (18.12.06 / 16.00)	MBS 020504	14	HTI 41 + Owen 81 (4,5Hz)
OBS 227	11°36,403' S	118°52,394' E	4,1	12.12.06	14.12.06	4893	435704 (18.12.06 / 03:00)	MTS 050812	4	DPG 71 + Owen 58 (4,5Hz)
OBS 228	11°40,449' S	118°52,100' E	4,1	12.12.06	14.12.06	4925	0387+0355 Mode B (18.12.06 / 06:00)	MBS 010701	failure	OAS 36 + Owen 57 (4,5Hz)
OBS 229	11°44,540' S	118°51,821' E		12.12.06	14.12.06	4947	3624 Mode B (18.12.06 / 18:00)	MBS 001003	7	HTI 88 + Owen 56 (4,5Hz)

9.1 Appendix Ocean Bottom Seismic Recorders

	INST.	LAT (N) D:M	LON (E) D:M	DIST. TO NEXT (nm)	DEPLOY. DATE	RECOV. DATE	DEPTH (m)	RELEASER CODE TIME RELEASE	REC. NO.	SKEW (ms)	SENSORS
SO 190-2 Profil 31	OBS 22	12°03,636' S	115°56,692' E	3,5	17.11.06	19.11.06	5282	3659 Mode B (18.12.06 / 07:00)	MBS 000612	-13	OAS 45 + Owen 71 (4,5Hz)
	OBH 23	12°00,139' S	115°57,030' E	3,7	17.11.06	19.11.06	5451	03B2+0355 Mode B (18.12.06 / 16:00)	MBS 020508	13	HTI 41
	OBS 24	11°56,877' S	115°57,357' E	3,0	17.11.06	19.11.06	5583	432367 (18.12.06 / 13:00)	MBS 010701	-145	HTI 28 + Owen 80 (4,5Hz)
	OBS 25	11°53,475' S	115°57,732' E	2,7	17.11.06	19.11.06	5662	427524 (19.12.06 / 04:00)	MBS 000610	-8	HTI 23 + Owen 63 (4,5 Hz)
	OBH 27	11°50,108' S	115°58,075' E	4,1	17.11.06	19.11.06	4997	C504 Mode B (18.12.06 / 10:00)	MBS 000616	-46	HTI 27
	OBS 28	11°46,740' S	115°58,424' E	3,4	17.11.06	19.11.06	5316	0387+0355 Mode B (18.12.06 / 06:00)	MBS 020501	6	OAS 36 + Owen 57 (4,5Hz)
	OBH 29	11°43,379' S	115°58,754' E	3,4	17.11.06	19.11.06	5046	03BB+0355 Mode B (18.12.06 / 20:00)	MBS 020504	16	HTI 34
	OBH 30	11°40,000' S	115°59,102' E	3,4	17.11.06	19.11.06	4989	B495 Mode A (18.12.06 / 05:00)	MBS 980906	8	HTI 33
	OBS 31	11°36,612' S	115°59,485' E	3,4	17.11.06	19.11.06	5408	435704 (18.12.06 / 03:00)	MBS 020507	38	HTI 39 + Owen 46 (4,5Hz)
	OBH 32	11°33,203' S	115°59,849' E	3,4	17.11.06	19.11.06	5510	03B3+0355 Mode B (18.12.06 / 11:00)	MBS 001005	12	HTI 58
	OBH 33	11°29,828' S	116°00,190' E	3,4	17.11.06	1911.06	5739	D654 Mode A (19.12.06 / 05:00)	MBS 971202	-13	HTI 64
	OBS 34	11°26,455' S	116°00,480' E	3,4	17.11.06	19.11.06	5922	3609 Mode B (18.12.06 / 15:00)	MBS 001006	-153	HTI 22 + Owen 82 (4,5Hz)
	OBH 36	11°23,188' S	116°00,792' E	13,6	17.11.06	19.11.06	5860	0398+0355 Mode B (19.12.06 / 00:00)	MTS 050814	1	HTI 32
	OBS 38	11°09,661' S	116°02,163' E	3,4	17.11.06	20.11.06	5568	143234 (18.12.06 / 23:00)	MBS 001001	-148	HTI 54 + Owen 55 (4,5 Hz)
	OBH 39	11°06,284' S	116°02,502' E	3,4	17.11.06	20.11.06	5474	0397+0355 Mode B (18.12.06 / 09:00)	MLS 991249	-1	HTI 80
	OBH 40	10°59,550' S	116°02,870' E	3,4	17.11.06	20.11.06	4480	6969 Mode A (18.12.06 / 00:00)	MLS 040101	-5	HTI 68
	OBH 41	10°59,540' S	116°03,195' E	3,4	17.11.06	20.11.06	3715	4A54 Mode B (19.12.06 / 08:00)	MLS 040804	1724	HTI 53
	OBS 42	10°56,169' S	116°03,558' E	3,4	17.11.06	20.11.06	3484	145147 (19.12.06 / 10:00)	MBS 020509	12	HTI 70 + Owen 79 (4,5 Hz)
	OBH 43	10°49,840' S	116°03,920' E	3,0	17.11.06	20.11.06	2929	6959 Mode A (18.12.06 / 04:00)	MLS 991252	-5	HTI 48
	OBH 45	10°49,789' S	116°04,183' E	3,8	17.11.06	20.11.06	3022	C454 Mode A (18.12.06 / 02:00)	MBS 000614	-18	HTI 40
	OBH 46	10°46,038' S	116°04,584' E	3,4	17.11.06	20.11.06	3295	427476 (ohne TR)	MBS 980908	2	HTI 69
	OBS 47	10°42,680' S	116°04,940' E	2,3	17.11.06	20.11.06	3084	03B6+0355 Mode B (19.12.06 / 07:00)	MTS 050817	5	DPG 69 + Owen 58 (4,5 Hz)
	OBS 48	10°40,372' S	116°05,154' E	3,3	17.11.06	20.11.06	3005	442144 (18.12.06 / 14:00)	MTS 050805	1	DPG 63 + Owen 19 (4,5 Hz)
	OBH 49	10°37,138' S	116°05,491' E	3,3	17.11.06	20.11.06	2388	3619 Mode B (19.12.06 / 02:00)	MBS 980904	3	HTI 87
	OBH 50	10°33,910' S	116°05,820' E	3,4	17.11.06	20.11.06	3396	3624 Mode B (18.12.06 / 18:00)	MBS 990712	-6	HTI 72
	OBS 51	10°30,535' S	116°06,156' E	3,4	17.11.06	20.11.06	3973	435445 (19.12.06 / 09:00)	MTS 050812	-222690639	DPG 71 + Owen 77 (4,5 Hz)
	OBS 52	10°27,186' S	116°06,513' E	3,4	17.11.06	20.11.06	4133	3614 Mode B (18.12.06 / 01:00)	MBS 990901	-8	HTI 71 + Owen 78 (4,5Hz)
	OBS 53	10°23,754' S	116°06,871' E	3,4	17.11.06	20.11.06	4330	143320 (19.12.06 / 01:00)	MLS 020801	-2	DPG 73 + Owen 64 (4,5 Hz)
	OBS 56	10°20,422' S	116°07,204' E		17.11.06	20.11.06	4361	03BC+0355 Mode B (18.12.06 / 19:00)	MBS 020505	4	HTI 65 + Owen 73 (4,5Hz)

9.1 Appendix Ocean Bottom Seismic Recorders

SO190-2 Profil 32

INST.	LAT (N) D:M	LON (E) D:M	DIST. TO NEXT (nm)	DEPLOY. DATE	RECOV. DATE	DEPTH (m)	RELEASER CODE TIME RELEASE	REC. NO.	SKEW (ms)	SENSORS
OBH 130	08°59,885' S	116°15,560' E	4,0	03.12.06	05.12.06	199	6959 Mode A (18.12.06 / 04:00)	MLS 991252	-5	HTI 32
OBH 131	09°02,943' S	116°15,264' E	4,0	03.12.06	05.12.06	1256	C454 Mode A (18.12.06 / 02:00)	MLS 991249	-1	HTI 40
OBH 132	09°06,937' S	116°14,844' E	4,0	03.12.06	05.12.06	1921	D654 Mode A (19.12.06 / 05:00)	MLS 040101	-3	HTI 48
OBH 133	09°10,973' S	116°14,433' E	3,0	03.12.06	05.12.06	2181	4A54 Mode B (19.12.06 / 08:00)	MLS 040804	2	HTI 53
OBH 134	09°14,440' S	116°13,962' E	3,0	03.12.06	05.12.06	2220	6969 Mode A (18.12.06 / 00:00)	MBS 020501	4	HTI 68
OBH 135	09°18,041' S	116°13,568' E	3,0	04.12.06	05.12.06	2608	B495 Mode A (18.12.06 / 05:00)	MBS 980904	2	HTI 33
OBH 136	09°21,502' S	116°13,196' E	3,0	04.12.06	05.12.06	3053	C504 Mode B (18.12.06 / 10:00)	MBS 000614	-12	HTI 27
OBS 137	09°24,994' S	116°12,822' E	3,0	04.12.06	05.12.06	3375	435445 (19.12.06 / 09:00)	MLS 020801	-3	DPG 71 + Owen 77 (4,5Hz)
OBS 138	09°28,469' S	116°12,534' E	3,0	04.12.06	05.12.06	3704	427524 (19.12.06 / 04:00)	MBS 000610	-5	HTI 23 + Owen 63 (4,5Hz)
OBS 139	09°32,022' S	116°12,185' E	3,0	04.12.06	05.12.06	3566	143234 (18.12.06 / 23:00)	MBS 020509	7	HTI 54 + Owen 55 (4,5Hz)
OBS 140	09°35,476' S	116°11,784' E	3,0	04.12.06	05.12.06	3762	442144 (18.12.06 / 14:00)	MTS 050817	2	DPG 63 + Owen 91 (4,5Hz)
OBS 141	09°39,036' S	116°11,447' E	3,0	04.12.06	05.12.06	4133	432367 (18.12.06 / 13:00)	MBS 001003	7	HTI 28 + Owen 80 (4,5Hz)
OBS 142	09°42,525' S	116°11,062' E	3,5	04.12.06	05.12.06	4296	145147 (19.12.06 / 10:00)	MBS 020504	10	HTI 70 + Owen 79 (4,5Hz)
OBS 143	09°46,007' S	116°10,683' E	3,5	04.12.06	05.12.06	4306	143320 (19.12.06 / 01:00)	MTS 050805	not sync	DPG 73 + Owen 64 (4,5Hz)
OBS 144	09°49,540' S	116°10,326' E	3,5	04.12.06	05.12.06	4305	03BC+0355 Mode B (18.12.06 / 19:00)	MBS 020505	2	HTI 65 + Owen 73 (4,5Hz)
OBS 145	09°52,997' S	116°09,985' E	3,5	04.12.06	05.12.06	4389	3609 Mode B (18.12.06 / 15:00)	MBS 020508	10	HTI 76 + Owen 82 (4,5Hz)
OBS 146	09°56,503' S	116°09,608' E	3,5	04.12.06	05.12.06	4396	3624 Mode B (18.12.06 / 18:00)	MBS 990901	-154	HTI 88 + Owen 56 (4,5Hz)
OBS 147	09°59,906' S	116°09,276' E	3,5	04.12.06	05.12.06	4403	0387+0355 Mode B (18.12.06 / 06:00)	MBS 971202	-9	HTI 36 + Owen 57 (4,5Hz)
OBS 148	10°03,516' S	116°08,908' E	3,5	04.12.06	05.12.06	4404	3614 Mode B (18.12.06 / 01:00)	MBS 001006	-150	HTI 71 + Owen 61 (4,5Hz)
OBS 149	10°07,028' S	116°08,490' E	3,5	04.12.06	05.12.06	4400	03B2+0355 Mode B (18.12.06 / 16:00)	MBS 980907	-2	HTI 41 + Owen 81 (4,5Hz)
OBH 150	10°10,057' S	116°08,215' E	3,5	04.12.06	05.12.06	4400	03BB+0355 Mode B (18.12.06 / 20:00)	MBS 980906	not sync	HTI 37
OBH 151	10°13,992' S	116°07,856' E	3,5	04.12.06	05.12.06	4394	0398+0355 Mode B (19.12.06 / 00:00)	MBS 990712	-4	HTI 72
OBH 152	10°16,952' S	116°07,582' E	13,0	04.12.06	06.12.06	4383	0397+0355 Mode B (18.12.06 / 09:00)	MBS 980908	2	HTI 80
OBS 153	10°29,986' S	116°06,158' E		04.12.06	06.12.06	4020	3659 Mode B (18.12.06 / 07:00)	MBS 991292	-13	OAS 45 + Owen 71 (4,5Hz)

SO190-2 Profil 33

INST.	LAT (N) D:M	LON (E) D:M	DIST. TO NEXT (nm)	DEPLOY. DATE	RECOV. DATE	DEPTH (m)	RELEASER CODE TIME RELEASE	REC. NO.	SKEW (ms)	SENSORS
OBH 230	10°13,255' S	116°34,492' E	3,5	15.12.06	16.12.06	4419	0398+0355 Mode B (19.12.06 / 00:00)	MLS 991249	0	HTI 72
OBH 231	10°12,801' S	116°30,991' E	3,5	15.12.06	16.12.06	4417	0397+0355 Mode B (18.12.06 / 09:00)	MLS 040101	-2	HTI 80
OBS 232	10°12,332' S	116°27,491' E	3,5	15.12.06	16.12.06	4414	432367 (18.12.06 / 13:00)	MBS 020508	5	HTI 29 + Owen 80 (4,5Hz)
OBS 233	10°11,838' S	116°23,984' E	3,5	15.12.06	16.12.06	4416	145147 (19.12.06 / 10:00)	MBS 020505	1	HTI 70 + Owen 79 (4,5Hz)
OBS 234	10°11,422' S	116°20,490' E	3,5	15.12.06	16.12.06	4410	143320 (19.12.06 / 01:00)	MLS 020801	-1	DPG 73 + Owen 64 (4,5Hz)
OBS 235	10°10,954' S	116°16,990' E	3,5	15.12.06	16.12.06	4409	427524 (19.12.06 / 04:00)	MBS 980907	-1	HTI 16 + Owen 63 (4,5Hz)
OBS 236	10°10,493' S	116°13,500' E	3,5	15.12.06	16.12.06	4405	143234 (18.12.06 / 23:00)	MBS 020509	4	HTI 54 + Owen 55 (4,5Hz)
OBS 237	10°10,056' S	116°10,006' E	3,5	15.12.06	16.12.06	4401	442144 (18.12.06 / 14:00)	MTS 050817	2	DPG 63 + Owen 91 (4,5Hz)
OBS 238	10°09,548' S	116°06,490' E	3,5	15.12.06	16.12.06	4396	435445 (19.12.06 / 09:00)	MBS 000610	-254	HTI 81 + Owen 77 (4,5Hz)
OBS 239	10°09,069' S	116°02,987' E	3,5	15.12.06	16.12.06	4391	03BB+0355 Mode B (18.12.06 / 20:00)	MTS 050805	1	DPG 69 + Owen 78 (4,5Hz)
OBS 240	10°08,615' S	115°59,495' E	3,5	15.12.06	16.12.06	4386	3609 Mode B (18.12.06 / 15:00)	MBS 991292	-7	HTI 37 + Owen 82 (4,5Hz)
OBS 241	10°08,122' S	115°55,976' E	3,5	15.12.06	16.12.06	4385	3659 Mode B (18.12.06 / 07:00)	MBS 001006	-2	OAS 45 + Owen 71 (4,5Hz)
OBS 242	10°07,658' S	115°52,486' E	3,5	15.12.06	16.12.06	4381	03BC+0355 Mode B (18.12.06 / 19:00)	MBS 990901	-3	HTI 65 + Owen 73 (4,5Hz)
OBS 243	10°07,230' S	115°48,976' E	3,5	15.12.06	16.12.06	4378	03B2+0355 Mode B (18.12.06 / 16.00)	MBS 020504	6	HTI 41 + Owen 81 (4,5Hz)
OBH 244	10°06,712' S	115°45,540' E	3,5	15.12.06	16.12.06	4374	03B3+0355 Mode B (18.12.06 / 11:00)	MLS 991252	-2	HTI 39
OBH 245	10°06,285' S	115°42,039' E		15.12.06	16.12.06	4373	3619 Mode B (19.12.06 / 02:00)	MLS 050814	0	HTI 71

9.1 Appendix Ocean Bottom Seismic Recorders

	INST.	LAT (N) D:M	LON (E) D:M	DIST. TO NEXT (nm)	DEPLOY. DATE	RECOV. DATE	DEPTH (m)	RELEASER CODE TIME RELEASE	REC. NO.	SKEW (ms)	SENSORS
SO 190-2 Profil 41	OBS 57	10°04,574' S	113°37,002' E	3,1	23.11.06	24.11.06	2445	03BC+0355 Mode B (18.12.06 / 19:00)	MBS 020505	2	HTI 65 + Owen 73 (4,5 Hz)
	OBS 58	10°03,985' S	113°33,892' E	3,1	23.11.06	24.11.06	2319	03B6+0355 Mode B (19.12.06 / 07:00)	MTS 050817	2	DPG 69 + Owen 78 (4,5Hz)
	OBS 59	10°03,531' S	113°30,748' E	3,1	23.11.06	24.11.06	2100	3659 Mode B (18.12.06 / 07:00)	MBS 980901	10	HTI 45 + Owen 71 (4,5Hz)
	OBS 60	10°02,979' S	113°27,695' E	3,1	23.11.06	24.11.06	1780	03B2+0355 Mode B (18.12.06 / 16:00)	MBS 020508	8	HTI 41 + Owen 81 (4,5Hz)
	OBS 61	10°02,467' S	113°24,567' E	3,1	23.11.06	24.11.06	1478	3609 Mode B (18.12.06 / 15:00)	MBS 990901	-3	HTI 76 + Owen 82 (4,5 Hz)
	OBS 62	10°01,922' S	113°21,466' E	3,1	23.11.06	24.11.06	1406	435704 (18.12.06 / 03:00)	MBS 020501	3	HTI 39 + Owen 58 (4,5Hz)
	OBS 63	10°01,436' S	113°18,385' E	3,1	23.11.06	24.11.06	931	03B7+0355 Mode B (18.12.06 / 12:00)	MBS 991292	-8	HTI 88 + Owen 95 (4,5Hz)
	OBS 64	10°00,912' S	113°15,216' E	3,1	23.11.06	24.11.06	1076	3614 Mode B (18.12.06 / 01:00)	MBS 001006	-147	HTI 71+ Owen 61 (4,5Hz)
	OBS 65	10°00,397' S	113°12,164' E	3,1	23.11.06	24.11.06	834	143320 (19.12.06 / 01:00)	MLS 020801	-2	DPG 73 + Owen 64 (4,5 Hz)
	OBS/M 66	09°59,840' S	113°09,088' E	3,1	23.11.06	24.11.06	826	145147 (19.12.06 / 10:00)	MBS 020509 + A	4	HTI 70 + Owen 79 (4,5 Hz)+ METS T27
	OBS/M 67	09°59,313' S	113°06,972' E	3,1	23.11.06	24.11.06	1029	432367 (18.12.06 / 13:00)	MBS 010701 + B	-248	HTI 28 + Owen 80 (4,5 Hz)+ METS T29
	OBS/M 68	09°58,770' S	113°02,868' E	3,1	23.11.06	24.11.06	1186	435445 (19.12.06 / 09:00)	MTS 050812 + C	10	DPG 71 + Owen 77 (4,5 Hz)+ METS T28
	OBS/M 69	09°58,275' S	112°59,769' E	3,1	23.11.06	24.11.06	1334	442144 (18.12.06 / 14:00)	MTS 050805 + D	0	DPG 63 + Owen 19 (4,5 Hz)+ METS T30
	OBS/M 70	09°57,784' S	112°56,675' E	3,1	23.11.06	24.11.06	1604	143234 (18.12.06 / 23:00)	MBS 001001 + F	-149	HTI 54 + Owen 55 (4,5 Hz)+ METS T31
	OBS 71	09°57,265' S	112°53,570' E	3,1	23.11.06	24.11.06	1840	427524 (19.12.06 / 04:00)	MBS 000610	-4	HTI 23 + Owen 63 (4,5 Hz)
	OBH 72	09°56,797' S	112°50,477' E	3,1	23.11.06	24.11.06	2392	C454 Mode A (18.12.06 / 02:00)	MLS 991252	-3	HTI 40
	OBH 73	09°56,253' S	112°47,328' E	3,1	23.11.06	24.11.06	2558	D654 Mode A (19.12.06 / 05:00)	MLS 040804	2	HTI 48
	OBH 74	09°55,732' S	112°44,236' E	3,1	23.11.06	24.11.06	2870	4A54 Mode B (19.12.06 / 08:00)	MLS 040101	-2	HTI 53
	OBH 75	09°55,738' S	112°44,281' E	3,1	23.11.06	24.11.06	2855	6969 Mode A (18.12.06 / 00:00)	MLS 991249	-1	HTI 68
	OBH 76	09°54,731' S	112°38,027' E	3,1	23.11.06	24.11.06	2841	B495 Mode A (18.12.06 / 05:00)	MTS 050814	1	HTI 33
	OBH 77	09°54,332' S	112°34,940' E		23.11.06	25.11.06	2739	C504 Mode B (18.12.06 / 10:00)	MBS 990712	-3	HTI 27

9.1 Appendix Ocean Bottom Seismic Recorders

SO190-2 Profil 42

INST.	LAT (N) D:M	LON (E) D:M	DIST. TO NEXT (nm)	DEPLOY. DATE	RECOV. DATE	DEPTH (m)	RELEASER CODE TIME RELEASE	REC. NO.	SKEW (ms)	SENSORS
OBS/M 78	09°36,189' S	113°13,380' E	4,1	25.11.06	27.11.06	2879	435445 (19.12.06 / 09:00)	MTS 050812 + C	3	DPG 71 + Owen 77 (4,5 Hz) + METS T28
OBS 79	09°40,177' S	113°12,598' E	3,9	25.11.06	27.11.06	2665	3659 Mode B (18.12.06 / 07:00)	MBS 980901	18	OAS 45 + Owen 71 (4,5 Hz)
OBS/M 80	09°44,020' S	113°11,740' E	3,0	25.11.06	27.11.06	2340	143234 (18.12.06 / 23:00)	MBS 001001 + F	-151	HTI 54 + Owen 55 (4,5 Hz) + METS T31
OBS/M 81	09°46,960' S	113°11,130' E	3,0	25.11.06	27.11.06	2174	442144 (18.12.06 / 14:00)	MTS 050805 + D	1	DPG 63 + Owen 91 (4,5 Hz) + METS T30
OBS/M 82	09°49,880' S	113°10,510' E	4,5	25.11.06	27.11.06	1531	432367 (18.12.06 / 13:00)	MBS 010701 + B	-151	HTI 28 + Owen 80 (4,5 Hz) + METS T29
OBS/M 83	09°54,234' S	113°09,653' E	2,9	25.11.06	27.11.06	1462	145147 (19.12.06 / 10:00)	MBS 020509 + A	8	HTI 70 + Owen 79 (4,5 Hz) + METS T27
OBH 84	09°57,020' S	113°08,982' E	3,5	25.11.06	27.11.06	1145	C504 Mode B (18.12.06 / 10:00)	MLS 991252	-4	HTI 27
OBH 85	10°00,460' S	113°08,267' E	3,4	25.11.06	27.11.06	831	B495 Mode A (18.12.06 / 05:00)	MLS 040804	4	HTI 33
OBH 86	10°03,787' S	113°07,548' E	3,4	25.11.06	27.11.06	1329	6969 Mode A (18.12.06 / 00:00)	MLS 040101	-4	HTI 68
OBS 87	10°07,078' S	113°06,857' E	3,4	25.11.06	27.11.06	1435	143320 (19.12.06 / 01:00)	MLS 020801	-3	DPG 73 + Owen 64 (4,5 Hz)
OBS 88	10°10,368' S	113°06,147' E	4,7	25.11.06	27.11.06	1563	427524 (19.12.06 / 04:00)	MBS 000610	-7	HTI 23 + Owen 63 (4,5 Hz)
OBH 89	10°14,906' S	113°05,190' E	3,4	25.11.06	27.11.06	1696	4A54 Mode B (19.12.06 / 08:00)	MLS 991249	-1	HTI 53
OBS 90	10°18,227' S	113°04,503' E	3,4	25.11.06	27.11.06	2032	03BC+0355 Mode B (18.12.06 / 19:00)	MBS 020505	3	HTI 65 + Owen 73 (4,5 Hz)
OBH 91	10°21,563' S	113°03,760' E	3,4	25.11.06	27.11.06	2198	D654 Mode A (19.12.06 / 05:00)	MTS 050814	3	HTI 48
OBS 92	10°24,853' S	113°03,056' E	3,4	25.11.06	27.11.06	2384	03B6+0355 Mode B (19.12.06 / 07:00)	MTS 050817	3	DPG 69 + Owen 78 (4,5 Hz)
OBH 93	10°28,150' S	113°02,323' E	3,4	25.11.06	27.11.06	2970	C454 Mode A (18.12.06 / 02:00)	MBS 990712	-5	OAS 40
OBH 94	10°31,471' S	113°01,604' E	3,4	25.11.06	27.11.06	3829	6354 Mode B (19.12.2006 / 11:00)	MBS 000616	-38	HTI 64
OBH 95	10°34,796' S	113°00,914' E	3,4	25.11.06	28.11.06	4824	0398+0355 Mode B (19.12.06 / 00:00)	MBS 980906	error	HTI 32
OBH 96	10°38,205' S	113°00,275' E	11,4	25.11.06	28.11.06	5596	6959 Mode A (18.12.06 / 04:00)	MBS 020504	14	HTI 69
OBS 97	10°49,412' S	112°57,743' E	3,7	26.11.06	28.11.06	5728	03B7+0355 Mode B (18.12.06 / 12:00)	MBS 991292	-16	HTI 88 + Owen 56 (4,5 Hz)
OBS 98	10°52,971' S	112°56,966' E	3,4	26.11.06	28.11.06	5175	3614 Mode B (18.12.06 / 01:00)	MBS 980907	-153	HTI 71 + Owen 61 (4,5 Hz)
OBS 99	10°56,251' S	112°56,262' E	2,5	26.11.06	28.11.06	4997	435704 (18.12.06 / 03:00)	MBS 971202	-11	HTI 39 + Owen 58 (4,5 Hz)
OBS 100	10°58,736' S	112°55,757' E	3,0	26.11.06	28.11.06	5109	3609 Mode B (18.12.06 / 15:00)	MBS 990901	-7	HTI 76 + Owen 82 (4,5 Hz)
OBS 101	11°01,770' S	112°55,101' E	3,7	26.11.06	28.11.06	4947	03B2+0355 Mode B (18.12.06 / 16:00)	MBS 020508	13	HTI 41+ Owen 81 (4,5Hz)
OBS 102	11°05,401' S	112°54,358' E	3,4	26.11.06	28.11.06	4399	0387+0355 Mode B (18.12.06 / 06:00)	MBS 001003	8	OAS 36 + Owen 57 (4,5Hz)
OBH 103	11°08,691' S	112°53,633' E	2,8	26.11.06	28.11.06	4236	0397+0355 Mode B (18.12.06 / 09:00)	MBS 001005	11	HTI 80
OBH 104	11°11,438' S	112°53,038' E	3,1	26.11.06	28.11.06	3577	3619 Mode B (19.12.06 / 02:00)	MBS 980908	2	HTI 87
OBH 105	11°14,484' S	112°52,369' E	3,9	26.11.06	28.11.06	3772	03B3+0355 Mode B (18.12.06 / 11:00)	MBS 980904	2	HTI 58
OBH 106	11°18,287' S	112°51,545' E	3,7	26.11.06	28.11.06	3625	03BB+0355 Mode B (18.12.06 / 20:00)	MBS 000614	-15	HTI 37
OBH 107	11°21,935' S	112°50,762' E		26.11.06	28.11.06	3573	3624 Mode B (18.12.06 / 18:00)	MBS 020501	6	HTI 72

9.1 Appendix Ocean Bottom Seismic Recorders

Profile	INST.	LAT (N) D:M	LON (E) D:M	DIST. TO NEXT (nm)	DEPLOY. DATE	RECOV. DATE	DEPTH (m)	RELEASER CODE TIME RELEASE	REC. NO.	SKEW (ms)	SENSORS
SO190-2 Profil 43	OBH 108	08°33,514' S	113°27,001' E	2,6	29.11.06	30.11.06	815	03BB+0355 Mode B (18.12.06 / 20:00)	MLS 991252	-4	HTI 37
	OBH 109	08°36,001' S	113°26,385' E	3,1	29.11.06	30.11.06	1034	03B3+0355 Mode B (18.12.06 / 11:00)	MLS 040804	2	HTI 58
	OBH 110	08°39,016' S	113°25,751' E	3,1	29.11.06	30.11.06	1506	3619 Mode B (18.12.06 / 02:00)	MLS 040101	-3	HTI 87
	OBH 111	08°42,011' S	113°25,133' E	3,1	29.11.06	30.11.06	1459	0397+0355 Mode B (18.12.06 / 09:00)	MLS 991249	-5317	HTI 80
	OBH 112	08°45,012' S	113°24,453' E	3,1	29.11.06	30.11.06	1645	0398+0355 Mode B (19.12.06 / 00:00)	MTS 050814	1	HTI 72
	OBH 113	08°48,032' S	113°23,847' E	3,1	29.11.06	30.11.06	2062	6959 Mode A (18.12.06 / 04:00)	MBS 020501	4	HTI 69
	OBS 114	08°51,035' S	113°23,167' E	3,1	29.11.06	30.11.06	1847	145147 (19.12.06 / 10:00)	MBS 001003	5	HTI 70 + Owen 79 (4,5Hz)
	OBS 115	08°54,007' S	113°22,517' E	3,1	29.11.06	30.11.06	1769	432367 (18.12.06 / 13:00)	MBS 010701	-25	HTI 28 + Owen 80 (4,5 Hz)
	OBS 116	08°57,002' S	113°21,880' E	3,1	29.11.06	30.11.06	1950	442144 (18.12.06 / 14:00)	MTS 050805	1	DPG 63 + Owen 91 (4,5 Hz)
	OBS 117	09°00,011' S	113°21,262' E	3,1	29.11.06	30.11.06	2178	143234 (18.12.06 / 23:00)	MBS 020509	6	HTI 54 + Owen 55 (4,5Hz)
	OBS 118	09°03,024' S	113°20,571' E	3,1	29.11.06	30.11.06	2642	03B6+0355 Mode B (19.12.06 / 07:00)	MTS 050817	2	DPG 69 + Owen 78 (4,5 Hz)
	OBS 119	09°05,997' S	113°19,923' E	3,1	29.11.06	30.11.06	3079	427524 (19.12.06 / 04:00)	MBS 000610	-5	HTI 23 + Owen 63 (4,5 Hz)
	OBS 120	09°08,989' S	113°19,302' E	3,1	29.11.06	30.11.06	3195	143320 (19.12.06 / 01:00)	MLS 020801	-2	DPG 73 + Owen 64 (4,5 Hz)
	OBS 121	09°12,004' S	113°18,625' E	3,1	29.11.06	30.11.06	3219	03B2+0355 Mode B (18.12.06 / 16:00)	MBS 980901	14	HTI 41+ Owen 81 (4,5Hz)
	OBS 122	09°15,011' S	113°17,988' E	3,1	29.11.06	30.11.06	3227	3609 Mode B (18.12.06 / 15:00)	MBS 980907	-151	HTI 76 + Owen 82 (4,5 Hz)
	OBS 123	09°17,987' S	113°17,335' E	3,1	29.11.06	30.11.06	3219	435704 (18.12.06 / 03:00)	MBS 001006	-252	HTI 39 + Owen 58 (4,5 Hz)
	OBS 124	09°20,996' S	113°16,710' E	3,1	29.11.06	30.11.06	3072	3614 Mode B (18.12.06 / 01:00)	MBS 020505	3	HTI 71 + Owen 61 (4,5 Hz)
	OBS 125	09°24,041' S	113°16,052' E	3,1	29.11.06	30.11.06	3030	3624 Mode B (18.12.06 / 18:00)	MBS 020508	10	HTI 88 + Owen 56 (4,5 Hz)
	OBS 126	09°26,959' S	113°15,441' E	3,1	29.11.06	30.11.06	2993	3659 Mode B (18.12.06 / 07:00)	MBS 990901	-5	OAS 45 + Owen 71 (4,5 Hz)
	OBS 127	09°29,943' S	113°14,864' E	3,1	29.11.06	30.11.06	3061	03BC+0355 Mode B (18.12.06 / 19:00)	MBS 971202	-9	HTI 65 + Owen 73 (4,5 Hz)
	OBS 128	09°32,970' S	113°14,221' E	5,1	29.11.06	30.11.06	3009	0387+0355 Mode B (18.12.06 / 06:00)	MBS 991292	-153	OAS 36 + Owen 57 (4,5Hz)
	OBS 129	09°37,960' S	113°13,120' E		29.11.06	30.11.06	2775	435445 (19.12.06 / 09:00)	MBS 020504	10	HTI 81 + Owen 77 (4,5Hz)

Appendix 9.2 Airgun Shots

Profile	Date	Time [UTC]	Latitude	Longitude	Depth/m	Guns	Trigger Interval/sec	Shot Number	Profile Length/nm
SO190 p21	14.11.06	21:49:00	10°41,220' S	118°16,330' E	3480	8	40	1	0
course:94,8°	15.11.06	02:20:00	10°43,030' S	118°38,566' E	3624	7	40	408	21,92
	15.11.06	03:15:00	10°43,412' S	118°43,242' E	3807	6	40	490	26,51
	15.11.06	10:54:00	10°46,581' S	119°22,330' E	3416	4	40	1179	65,07
	15.11.06	10:59:00	10°46,611' S	119°22,779' E	3429	6	40	1186	65,51
	15.11.06	13:34:00	10°47,584' S	119°35,053' E	3392	3	40	1368	77,61
	15.11.06	13:52:00	10°47,717' S	119°35,614' E	3297	3	40	1446	78,71
SO190 p31	18.11.06	04:06:42	09°43,965' S	116°10,927' E	4298	6	60	1	0
course:185,7°	18.11.06	08:58:46	10°05,357' S	116°08,763' E	4400	4	60	293	21,5
	18.11.06	13:45:00	10°26,146' S	116°06,645' E	4242	7	60	580	42,39
	18.11.06	16:00:00	10°36,336' S	116°05,600' E	2566	8	60	715	52,63
	18.11.06	16:40:00	10°39,432' S	116°05,282' E	2840	7	60	755	55,74
	19.11.06	12:53:00	12°08,980' S	115°56,153' E	4944	7	60	2098	145,7
SO190 p41	23.11.06	22:31:24	09°53,235' S	112°28,473' E	3061	8	40	1	0
course:139,4°	24.11.06	02:58:00	09°56,911' S	112°50,528' E	2343	7	40	402	22,03
	24.11.06	13:00:03	10°05,022' S	113°40,111' E	2210	7	40	1305	71,53
SO190 p42	26.11.06	05:37:54	11°30,315' S	112°48,952' E	3534	8	60	1	0
course:11,9°	26.11.06	07:15:00	11°23,412' S	112°50,454' E	3516	7	60	98	7,058
	26.11.06	07:21:00	11°22,751' S	112°50,595' E	3526	0		104	7,734
	26.11.06	07:32:54	11°22,299' S	112°50,688' E	3555	7	60	105	8,195
	26.11.06	08:00:00	11°20,286' S	112°51,131' E	3571	8	60	133	10,25
	27.11.06	10:35:00	09°23,591' S	113°16,178' E	3042	7	60	1728	129,5
	27.11.06	11:34:00	09°18,498' S	113°17,274' E	3213	7	60	1787	134,7
SO190 p43	29.11.06	12:24:02	09°58,804' S	113°08,556' E	907	8	60	1	0
course:12,0°	30.11.06	08:53:00	08°33,530' S	113°26,976' E	819	8	60	1410	87,19
SO190 p32	04.12.06	12:25:03	10°44,222' S	116°04,810' E	3152	8	60	1	0
course:5,8°	05.12.06	00:57:00	09°41,552' S	116°11,272' E	4296	0		933	62,99
	05.12.06	01:01:00	09°41,252' S	116°11,304' E	4290	8	60	934	63,29
	05.12.06	09:49:00	08°57,947' S	116°15,767' E	126	8	60	1462	106,8
SO190 p11	07.12.06	22:09:35	10°31,331' S	121°09,274' E	1551	8	60	1	0
course:188,2°	08.12.06	10:02:00	11°29,098' S	121°00,791' E	2764	0		713	58,36
	08.12.06	10:04:00	11°29,289' S	121°00,763' E	2738	8	60	714	58,56
	08.12.06	15:06:00	11°53,210' S	120°57,235' E	3669	7	60	1016	82,73
	08.12.06	22:03:00	12°27,058' S	120°52,222' E	1965	7	60	1433	116,9

Profile	Date	Time [UTC]	Latitude	Longitude	Depth/m	Guns	Trigger Interval/sec	Shot Number	Profile Length/nm
SO190 p12	09.12.06	23:22:06	09°16,590' S	121°19,895' E	2655	8	60	1	0
course:188,0°	10.12.06	15:15:00	10°37,080' S	121°08,397' E	1373	8	60	954	81,28
SO190 p22	12.12.06	17:18:00	11°58,563' S	118°50,766' E	5058	8	60	1	0
course:3,7°	13.12.06	03:13:00	11°08,851' S	118°54,371' E	6097	7	60	596	49,84
	13.12.06	03:30:00	11°07,323' S	118°54,424' E	6282	8	60	613	51,37
	13.12.06	04:00:00	11°05,166' S	118°54,632' E	5692	7	60	643	53,53
	13.12.06	05:17:00	10°58,888' S	118°55,053' E	4809	0		720	59,82
	13.12.06	05:37:00	10°58,320' S	118°55,115' E	4702	7	60	721	60,39
	13.12.06	22:00:00	09°43,182' S	118°59,659' E	190	7	60	1704	135,6
SO190 p33	15.12.06	21:49:34	10°05,984' S	115°39,900' E	4368	8	60	1	0
course:97,7°	16.12.06	10:01:00	10°14,137' S	116°41,149' E	4417	8	60	733	60,54

Apendix 9.3.: Magnetic profiles

profile	beginn				end				length of profile
	latitude	longitude	date	time (UTC)	latitude	longitude	date	time	in nm
P 1	9° 55,63'	112° 34,55'	25.11.2006	00:23	11° 0.31'	112° 34,93'	25.11.2006	05:54	65
P 2	11° 0,31'	112° 34,93'	25.11.2006	05:54	10° 59,93'	112° 44,90'	25.11.2006	06:51	10
P 3	10° 59,93'	112° 44,90'	25.11.2006	06:51	10°26,06'	112° 57,94'	25.11.2006	10:35	37
P 4	10°26,06'	112° 57,94'	25.11.2006	10:35	9° 36,35'	113° 8,03'	25.11.2006	15:34	51
P 5	9° 36,35'	113° 8,03'	25.11.2006	15:34	9° 36,16'	113° 13,78'	25.11.2006	16:04	5
P 6	9° 37,70'	113° 12,28'	30.11.2006	23:24	9° 41,62'	113° 26,07'	01.12.2006	00:52	15
P 7	9° 41,62'	113° 26,07'	01.12.2006	00:52	10° 2,29'	113° 14.13'	01.12.2006	03:01	24
P 8	10° 2,29'	113° 14.13'	01.12.2006	03:01	10° 7,11'	113° 29,77'	01.12.2006	04:41	16
P 9	10° 7,11'	113° 29,77'	01.12.2006	04:41	11° 23,31'	113° 5,07'	01.12.2006	11:34	80
P 10	11° 23,31'	113° 5,07'	01.12.2006	11:34	11° 22,98'	113° 12,85'	01.12.2006	12:19	8
P 11	11° 22,98'	113° 12,85'	01.12.2006	12:19	10° 12,39'	113° 41,99'	01.12.2006	19:34	77
P 12	10° 12,39'	113° 41,99'	01.12.2006	19:34	10° 20,83'	113° 53,94'	01.12.2006	21:01	15
P 13	10° 20,83'	113° 53,94'	01.12.2006	21:01	11° 23,95'	113° 19,14'	02.12.2006	03:08	72
P 14	11° 23,95'	113° 19,14'	02.12.2006	03:08	11° 23,94'	113° 26,95'	02.12.2006	03:53	8
P 15	11° 23,94'	113° 26,95'	02.12.2006	03:53	10° 25,99'	113° 56,50'	02.12.2006	10:31	68
P 16	10° 43,01'	114° 33,98'	23.11.2006	03:39	10° 4,54'	113° 37,01'	23.11.2006	09:27	68
P 17	10° 59,93'	114° 36,50	23.11.2006	02:08	10° 43,01'	114° 33,98'	23.11.2006	03:39	17
P 18	11° 6,99'	115° 34,38'	22.11.2006	21:19	10° 59,93'	114° 36,50	23.11.2006	02:08	59
P 19	10° 36,96'	115° 34,59'	22.11.2006	18:34	11° 6,99'	115° 34,38'	22.11.2006	21:19	30
P 20	10° 33,43'	115° 39,66'	22.11.2006	18:03	10° 36,96'	115° 34,59'	22.11.2006	18:34	7
P 21	11° 43,98'	115° 39,62'	22.11.2006	12:05	10° 33,43'	115° 39,66'	22.11.2006	18:03	71
P 22	11° 42,84'	115° 49,52'	22.11.2006	11:13	11° 43,98'	115° 39,62'	22.11.2006	12:05	10
P 23	10° 33,58'	115° 50,42'	22.11.2006	04:43	11° 42,84'	115° 49,52'	22.11.2006	11:13	69
P 24	10° 37,10'	115° 45,01'	22.11.2006	04:00	10° 33,58'	115° 50,42'	22.11.2006	04:43	7
P 25	11° 3,91'	115° 45,28'	22.11.2006	01:44	10° 37,10'	115° 45,01'	22.11.2006	04:00	27
P 26	10° 59,94'	115° 56,05'	22.11.2006	00:45	11° 3,91'	115° 45,28'	22.11.2006	01:44	12
P 27	10° 37,00'	116° 2,14'	21.11.2006	22:32	10° 59,94'	115° 56,05'	22.11.2006	00:45	24
P 28	10° 37,16'	116° 9,99'	21.11.2006	21:50	10° 37,00'	116° 2,14'	21.11.2006	22:32	8
P 29	11° 0,90'	116° 8,03'	21.11.2006	19:47	10° 37,16'	116° 9,99'	21.11.2006	21:50	24
P 30	11° 4,75'	116° 16,70'	21.11.2006	19:00	11° 0,90'	116° 8,03'	21.11.2006	19:47	10
P 31	10° 36,07'	116° 17,25'	21.11.2006	16:18	11° 4,75'	116° 16,70'	21.11.2006	19:00	29
P 32	10° 37,03'	116° 24,96'	21.11.2006	15:39	10° 36,07'	116° 17,25'	21.11.2006	16:18	8
P 33	11° 8,02'	116° 26,59'	21.11.2006	13:00	10° 37,03'	116° 24,96'	21.11.2006	15:39	31

P 34	11° 8,10'	116° 32,70	21.11.2006	12:26	11° 8,02'	116° 26,59'	21.11.2006	13:00	6
P 35	10° 33,40'	116° 28,30'	21.11.2006	09:11	11° 8,10'	116° 32,70	21.11.2006	12:26	35
P 36	10° 30,23'	116° 20,03'	21.11.2006	08:18	10° 33,40'	116° 28,30'	21.11.2006	09:11	10
P 37	12° 9,98'	116° 14,98'	21.11.2006	00:00	10° 30,23'	116° 20,03'	21.11.2006	08:18	100
P 38	12° 12,36'	116° 5,03'	20.11.2006	23:04	12° 9,98'	116° 14,98'	21.11.2006	00:00	10
P 39	10° 24,08'	116° 13,97'	20.11.2006	12:56	12° 12,36'	116° 5,03'	20.11.2006	23:04	109
P 40	10° 20,63'	116° 6,56'	20.11.2006	12:09	10° 24,08'	116° 13,97'	20.11.2006	12:56	7
P 41	11° 48,30'	115° 50,08'	17.11.2006	05:22	11° 50,18'	115° 58,15'	17.11.2006	06:12	8
P 42	12° 24,87'	115° 47,59'	17.11.2006	02:17	11° 48,30'	115° 50,08'	17.11.2006	05:22	37
P 43	11° 48,82'	118° 27,00'	16.11.2006	11:53	12° 24,87'	115° 47,59'	17.11.2006	02:17	161
P 44	10° 41,44'	118° 26,96'	16.11.2006	05:41	11° 48,82'	118° 27,00'	16.11.2006	11:53	67
P 45	11° 49,93'	115° 58,71'	17.12.2006	20:09	11° 43,92'	116° 27,02'	17.12.2006	22:48	28
P 46	11° 43,92'	116° 27,02'	17.12.2006	22:48	11° 27,20'	116° 30,03'	18.12.2006	00:15	17
P 47	11° 27,20'	116° 30,03'	18.12.2006	00:15	11° 27,01'	118° 19,90'	18.12.2006	10:23	109
P 48	11° 27,01'	118° 19,90'	18.12.2006	10:23	11° 18,06'	118° 19,99'	18.12.2006	11:09	9
P 49	11° 18,06'	118° 19,99'	18.12.2006	11:09	11° 17,89'	116° 30,68'	18.12.2006	19:54	108
P 50	11° 17,89'	116° 30,68	18.12.2006	19:54	11° 3,04'	116° 49,97'	18.12.2006	22:04	25
P 51	11° 3,04'	116° 49,97'	18.12.2006	22:04	11° 3,00'	117° 14,45'	19.12.2006	00:18	25
P 52	11° 3,01'	117° 15,14'	15.12.2006	09:18	10° 56,71'	117° 9,89'	15.12.2006	10:00	8
P 53	11° 2,98'	118° 10,01'	15.12.2006	05:01	11° 3,01'	117° 15,14'	15.12.2006	09:18	54
P 54	10° 53,97'	118° 36,77'	15.12.2006	02:48	11° 2,98'	118° 10,01'	15.12.2006	05:01	28
P 55	11° 54,94'	118° 36,50'	14.12.2006	21:19	10° 53,97'	118° 36,77'	15.12.2006	02:48	61
P 56	11° 44,90'	118° 50,41'	14.12.2006	19:47	11° 54,94'	118° 36,50'	14.12.2006	21:19	18

Appendix 9.4 . Details of Magnetotelluric measurement

	Time and coordinates of deployment				Water-	Time & coordinates of recovery				Anchor-	Elektrodedistance (m)	
	UTC-Date	UTC-Zeit	Latitude	Longitude	Depth (m)	UTC-Date	UTC-Zeit	Latitude	Longitude	Sort	Ex	Ey
OBMT26	17.11.06	07:05	11° 50,146' S	115° 58,220' E	4971	17.12.06	19:41	11° 50,24' S	115° 57,94' E	Concrete	10.15	10.18
OBMT35	17.11.06	13:39	11° 23,051' S	116° 0,810' E	5862	17.12.06	14:22	11° 22,76' S	116° 00,30' E	Concrete	10.13	10.07
OBMT37	17.11.06	15:10	11° 9,564' S	116° 2,140' E	5578	17.12.06	13:00	11° 09,086' S	116° 0,506' E	Concrete	10.27	10.15
OBMT44	17.11.06	18:14	10° 49,964' S	116° 4,148' E	3022	17.12.06	05:45	10° 50,123' S	116° 3,469' E	Concrete	10.17	10.13
OBMT54	17.11.06	22:10	10° 20,603' S	116° 7,166' E	4362	17.12.06	02:05	10° 20,63' S	116° 06,93' E	Steel	10.10	10.15
OBMT55	17.11.06	22:41	10° 20,222' S	116° 7,244' E	4366	17.12.06	01:45	10° 30,31' S	116° 07,01' E	Concrete	10.09	10.13

Abkürzungen / Abbreviation		Eingesetzte Geräte	Einsätze
z.W	zu Wasser	Streamer	bei 7 Profile ausgebracht
a.D.	an Deck	Magnetometer	8 Profile
SL (max.)	(maximale)Seillänge	Airgunarray Stb	10 Profile
LT	Lottiefe nach Hydrosweep	Airgunarray Bb	10 Profile
W x	eingesetzte Winde	CTD	1 für SIMRAD
SM	Simrad - Multibeam - Lot	OBH / OBS	239 Auslagen + Aufnahmen
PS	Parasound	OBMT	6 Auslagen + Aufnahmen
rwk:	Rechtweisender Kurs	SIMRAD	19 Profile
d:	Distanz	SSBL	1 Test
v:	Geschwindigkeit in Knoten		
SL:	Seillänge		
KL:	Kabellänge		
SZ:	Seilzug		

Geräteverluste: Keine

Winde	D/M	Typ	RF-Nr	SO 190-2 Einsatz	Gesamt Einsatz	SO 190-2 S`länge	Gesamt S`länge	Zust.	SO 190-2 gefierte max. L	jemals gefierte max. Länge
W 1	18,2	LWL	812001	0 h	526 h	0 m	258522 m	3-4	0 m	8022 m
W 2	18,2	LWL	1,2E+08	0 h	0 h	0 m	0 m	1	0 m	0 m
W 4	11	NSW	818045	0 h	381 h	0 m	319504 m	3-4	0 m	8081 m
W 5	11	NSW	818237	0 h	109 h	0 m	104037 m	3	0 m	5861 m
W 6	18,2	Koax	815286	6 h	541 h	4600 m	598453 m	2	4100 m	6000 m

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/005-1	13.11.06	###	11° 50,04' S	20° 27,27' E	4303	WNW 4	256,1	0,4	CTD	CTD	Beginn Station	Releaser Test
SO190/005-1	13.11.06	###	11° 50,02' S	20° 27,26' E	4302	WNW 5	303,1	0,4	CTD	CTD	zu Wasser	W6; Bei SL=2150 SVP-Sonde
SO190/005-1	13.11.06	###	11° 49,81' S	20° 26,79' E	4309	NW 3	292,4	0,5	CTD	CTD	auf Tiefe	SL: 4100m
SO190/005-1	13.11.06	###	11° 49,86' S	20° 25,60' E	4256	W 3	244,2	0,6	CTD	CTD	an Deck	
SO190/005-1	13.11.06	###	11° 49,94' S	20° 25,48' E	4245	W 3	247,5	1	CTD	CTD	Ende Station	
SO190/006-1	13.11.06	###	11° 49,88' S	20° 25,35' E	4243	W 2	336,8	3,5	Profil	PR	Stationsbeginn	Streamertest
SO190/006-1	13.11.06	###	11° 49,41' S	20° 25,37' E	4234	WSW 3	19,5	3,2	Profil	PR	Streamer zu Wasser	SL: 200m
SO190/006-1	13.11.06	###	11° 46,48' S	20° 24,09' E	4248	WSW 2	328,3	2,1	Profil	PR	Streamer an Deck	
SO190/006-1	13.11.06	###	11° 46,48' S	20° 24,09' E	4248	WSW 2	328,3	2,1	Profil	PR	Stationsende	
SO190/007-1	13.11.06	###	11° 46,45' S	20° 24,07' E	4253	W 2	344,2	2,1	Magnetometer	MAGN	Beginn Station	
SO190/007-1	13.11.06	###	11° 46,31' S	20° 23,96' E	4245	SW 2	312,3	2,7	Magnetometer	MAGN	Magnetometer zu Wasser	
SO190/007-1	13.11.06	###	11° 46,03' S	20° 23,74' E	4336	WNW 2	320,4	5,2	Magnetometer	MAGN	Beginn Profil	rwk: 321°, d: 17 nm
SO190/007-1	13.11.06	###	11° 33,44' S	20° 13,36' E	4169	WSW 1	329,4	12	Magnetometer	MAGN	Kursänderung	rwk: 068°, d: 5 nm
SO190/007-1	13.11.06	###	11° 30,98' S	20° 17,24' E	3436	WSW 3	86,1	11	Magnetometer	MAGN	Kursänderung	rwk: 141°, d: 56 nm

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/007-1	13.11.06	###	12° 13,72' S	20° 53,99' E	3583	NE 1	137	11	Magnetometer	MAGN	Kursänderung	rwk: 143°, d: 16 nm
SO190/007-1	13.11.06	###	12° 25,88' S	121° 3,74' E	3030	NNE 2	91	11	Magnetometer	MAGN	Kursänderung	rwk: 003°, d: 77 nm
SO190/007-1	14.11.06	###	11° 9,63' S	121° 7,55' E	1700	E 3	354,3	4,8	Magnetometer	MAGN	Ende Profil	Fortführung als SIMRAD-Profil; d:10 n
SO190/007-2	14.11.06	###	11° 8,95' S	121° 7,56' E	1649	E 3	354,3	4,7	Vermessung	EM	Magnetometer an Deck	
SO190/007-2	14.11.06	###	11° 0,08' S	121° 8,02' E	1208	E 5	349,9	11	Vermessung	EM	Kursänderung	rwk: 253°, d: 5 nm
SO190/007-2	14.11.06	###	11° 1,50' S	121° 3,02' E	1317	E 3	350	12	Vermessung	EM	Kursänderung	rwK: 270°; d: 94 nm
SO190/007-2	14.11.06	###	11° 1,50' S	19° 27,03' E	4588	SSE 3	286,9	12	Vermessung	EM	Kursänderung	rwk: 360°, d: 15 nm
SO190/007-2	14.11.06	###	10° 47,31' S	19° 27,03' E	3401	SE 4	356,3	5,7	Vermessung	EM	Ende Profil	
SO190/008-1	14.11.06	###	10° 47,09' S	19° 27,03' E	3427	SE 4	1,5	3,6	OBS/OBH	OBS/OBH	Beginn Station	
SO190/008-1	14.11.06	###	10° 46,86' S	19° 26,94' E	3451	SSE 4	251,8	0,4	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 01
SO190/008-1	14.11.06	###	10° 46,71' S	19° 23,94' E	3459	SE 5	275,8	1,2	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 02
SO190/008-1	14.11.06	###	10° 46,48' S	19° 20,98' E	3375	S 4	276,6	1,5	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 03
SO190/008-1	14.11.06	###	10° 46,25' S	19° 17,99' E	3527	SSE 4	253,7	1,1	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 04
SO190/008-1	14.11.06	###	10° 45,97' S	19° 15,02' E	3697	S 4	261,8	1,4	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 05
SO190/008-1	14.11.06	###	10° 45,72' S	19° 12,00' E	3778	SSE 3	289,9	1,3	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 06
SO190/008-1	14.11.06	###	10° 45,48' S	119° 9,00' E	3778	SSE 5	285	1,5	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 07
SO190/008-1	14.11.06	###	10° 45,22' S	119° 5,98' E	3876	SSE 4	304,2	1,7	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 08
SO190/008-1	14.11.06	###	10° 44,98' S	119° 2,99' E	3934	SSE 4	284,7	1,7	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 09
SO190/008-1	14.11.06	###	10° 44,74' S	18° 59,99' E	3760	SE 3	284	1,6	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 10
SO190/008-1	14.11.06	###	10° 44,49' S	18° 56,99' E	3705	SSE 5	289	1,9	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 11
SO190/008-1	14.11.06	###	10° 44,25' S	18° 53,97' E	4197	SSE 4	335,1	0,8	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 12
SO190/008-1	14.11.06	###	10° 44,03' S	18° 51,03' E	4260	SSE 3	290,3	2,5	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 13
SO190/008-1	14.11.06	###	10° 43,79' S	18° 47,99' E	3988	S 3	298,7	0,7	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 14
SO190/008-1	14.11.06	###	10° 43,54' S	18° 45,02' E	3791	S 3	46,5	0,5	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 15
SO190/008-1	14.11.06	###	10° 43,31' S	18° 42,00' E	3777	SSE 2	332,1	1,1	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 16
SO190/008-1	14.11.06	###	10° 43,08' S	18° 38,99' E	3658	SSE 4	264,2	0,9	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 17
SO190/008-1	14.11.06	###	10° 42,85' S	18° 36,00' E	3481	SSE 3	195,8	0,4	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 18
SO190/008-1	14.11.06	###	10° 42,58' S	18° 33,00' E	3281	SE 4	281,5	3,1	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 19
SO190/008-1	14.11.06	###	10° 42,32' S	18° 29,98' E	3150	SSE 4	311,6	1,2	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 20
SO190/008-1	14.11.06	###	10° 42,09' S	18° 26,99' E	3227	SSE 4	155,1	0,4	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 21, KÄ: rwK: 360°, d: 3 sm
SO190/008-1	14.11.06	###	10° 42,09' S	18° 26,99' E	3227	SSE 4	155,1	0,4	OBS/OBH	OBS/OBH	Ende Station	
SO190/009-1	14.11.06	###	10° 41,05' S	18° 14,47' E	3573	E 7	129,2	5,1	Profil	PR	Stationsbeginn	
SO190/009-1	14.11.06	###	10° 41,13' S	18° 15,19' E	3563	ESE 6	77,9	2,2	Profil	PR	Bb-Airgunarray zu Wasser	

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/009-1	14.11.06	###	10° 41,13' S	18° 15,47' E	3575	SE 6	82,2	2,4	Profil	PR	Stb-Airgunarray zu Wasser	
SO190/009-1	14.11.06	###	10° 41,18' S	18° 15,93' E	3513	SE 5	94,2	3,9	Profil	PR	Beginn Profil	rwk: 095°, d: 78 nm
SO190/009-1	15.11.06	###	10° 42,13' S	18° 27,53' E	3124	SE 7	95,6	4,9	Profil	PR	Magnetometer zu Wasser	
SO190/009-1	15.11.06	###	10° 42,45' S	18° 31,20' E	3159	SE 6	98,8	5,2	Profil	PR	Magnetometer an Deck	
SO190/009-1	15.11.06	###	10° 46,27' S	19° 18,57' E	3499	SSE 7	98,8	5,3	Profil	PR	Streamer zu Wasser	Test
SO190/009-1	15.11.06	###	10° 46,65' S	19° 23,26' E	3418	SE 6	104,1	3	Profil	PR	Streamer an Deck	
SO190/009-1	15.11.06	###	10° 47,58' S	19° 35,05' E	3440	ESE 4	93,3	4,6	Profil	PR	Ende Profil	
SO190/009-1	15.11.06	###	10° 47,65' S	19° 35,40' E	3353	E 4	86,7	1	Profil	PR	Stb-Airgunarray an Deck	
SO190/009-1	15.11.06	###	10° 47,71' S	19° 35,61' E	3306	ESE 4	103,1	1,8	Profil	PR	Bb-Airgunarray an Deck	
SO190/009-1	15.11.06	###	10° 47,77' S	19° 35,75' E	3250	ESE 4	137,9	1,8	Profil	PR	Stationsende	
SO190/010-1	15.11.06	###	10° 47,22' N	19° 29,08' E	0	N 0	0	0	OBS/OBH	OBS/OBH	Beginn Station	
SO190/010-1	15.11.06	###	10° 47,22' N	19° 29,08' E	0	N 0	0	0	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 01
SO190/010-1	15.11.06	###	10° 47,05' S	19° 26,68' E	3428	ESE 3	327	4,1	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 01
SO190/010-1	15.11.06	###	10° 46,99' S	19° 26,67' E	3434	E 3	9	3	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 02
SO190/010-1	15.11.06	###	10° 47,07' S	19° 26,91' E	3425	E 2	181,3	1,5	OBS/OBH	OBS/OBH	OBH an Deck	OBH 01
SO190/010-1	15.11.06	###	10° 47,02' S	19° 24,91' E	3411	E 3	277,8	12	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 02
SO190/010-1	15.11.06	###	10° 46,98' S	19° 24,54' E	3419	ENE 2	283,9	9,6	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 03
SO190/010-1	15.11.06	###	10° 46,92' S	19° 23,76' E	3457	ENE 2	281,7	0,5	OBS/OBH	OBS/OBH	OBH an Deck	OBH 02
SO190/010-1	15.11.06	###	10° 46,32' S	19° 20,67' E	3425	ESE 2	6,7	2,3	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 04
SO190/010-1	15.11.06	###	10° 46,30' S	19° 20,68' E	3423	ESE 2	51,5	1,8	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 03
SO190/010-1	15.11.06	###	10° 46,71' S	19° 20,66' E	3393	SE 2	265,2	1,1	OBS/OBH	OBS/OBH	OBH an Deck	OBH 03
SO190/010-1	15.11.06	###	10° 46,37' S	19° 19,43' E	0	ENE 2	272	10	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 04
SO190/010-1	15.11.06	###	10° 46,35' S	19° 19,10' E	0	NNE 2	272,5	9,1	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 05
SO190/010-1	15.11.06	###	10° 46,52' S	19° 17,76' E	0	E 2	344	0,5	OBS/OBH	OBS/OBH	OBH an Deck	OBH 04
SO190/010-1	15.11.06	###	10° 46,36' S	19° 16,42' E	0	ENE 2	275,7	12	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 05
SO190/010-1	15.11.06	###	10° 46,30' S	19° 15,53' E	0	NNE 1	275	6,3	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 06
SO190/010-1	15.11.06	###	10° 46,18' S	19° 14,87' E	0	N 1	274,5	0,5	OBS/OBH	OBS/OBH	OBH an Deck	OBH 05
SO190/010-1	15.11.06	###	10° 45,95' S	19° 12,32' E	0	WNW 1	270,2	6,3	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 07
SO190/010-1	15.11.06	###	10° 45,96' S	19° 11,88' E	0	SW 1	182,1	0,4	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 06
SO190/010-1	15.11.06	###	10° 45,88' S	19° 11,96' E	0	SSE 1	193,4	0,4	OBS/OBH	OBS/OBH	OBH an Deck	OBH 06
SO190/010-1	15.11.06	###	10° 45,77' S	19° 10,57' E	0	ENE 1	273,6	12	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 07
SO190/010-1	15.11.06	###	10° 45,74' S	119° 9,91' E	0	SE 0	272,5	12	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 08
SO190/010-1	15.11.06	###	10° 45,59' S	119° 8,85' E	0	SW 1	258,3	0,6	OBS/OBH	OBS/OBH	OBH an Deck	OBH 07

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/010-1	15.11.06	###	10° 45,58' S	119° 7,58' E	0	SW 0	273,1	13	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 08
SO190/010-1	15.11.06	###	10° 45,56' S	119° 7,36' E	0	ESE 1	280,7	13	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 09
SO190/010-1	15.11.06	###	10° 45,20' S	119° 5,97' E	0	SSW 2	322,1	1,2	OBS/OBH	OBS/OBH	OBH an Deck	OBH 08
SO190/010-1	15.11.06	###	10° 45,05' S	119° 3,28' E	0	SSW 2	280	4,3	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 10
SO190/010-1	15.11.06	###	10° 44,91' S	119° 3,15' E	0	S 4	37,2	1	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 09
SO190/010-1	15.11.06	###	10° 44,94' S	119° 2,98' E	0	S 4	326,7	0,8	OBS/OBH	OBS/OBH	OBS an Deck	OBS 09
SO190/010-1	15.11.06	###	10° 44,78' S	119° 1,21' E	0	SSE 3	274,6	12	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 10
SO190/010-1	15.11.06	###	10° 44,77' S	119° 1,02' E	0	SSE 3	274,5	11	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 11
SO190/010-1	15.11.06	###	10° 44,68' S	119° 0,00' E	0	S 3	356,4	0,4	OBS/OBH	OBS/OBH	OBS an Deck	OBS 10
SO190/010-1	15.11.06	###	10° 44,52' S	18° 58,57' E	0	SSE 2	275,2	9,1	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 12
SO190/010-1	15.11.06	###	10° 44,40' S	18° 57,08' E	0	SSE 4	88,9	0,4	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 11
SO190/010-1	15.11.06	###	10° 44,42' S	18° 56,95' E	0	S 3	345,2	0,6	OBS/OBH	OBS/OBH	OBS an Deck	OBS 11
SO190/010-1	15.11.06	###	10° 44,31' S	18° 54,84' E	0	S 3	276,8	11	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 13
SO190/010-1	15.11.06	###	10° 44,25' S	18° 54,32' E	0	S 4	276,8	5,4	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 12
SO190/010-1	15.11.06	###	10° 44,20' S	18° 54,09' E	0	S 2	290	0,7	OBS/OBH	OBS/OBH	OBS an Deck	OBS 12
SO190/010-1	15.11.06	###	10° 44,14' S	18° 52,59' E	0	SSE 2	275,1	7,8	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 14
SO190/010-1	15.11.06	###	10° 43,94' S	18° 50,98' E	0	SE 3	216,9	1	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 13
SO190/010-1	15.11.06	###	10° 43,89' S	18° 51,07' E	0	S 3	291,6	1,2	OBS/OBH	OBS/OBH	OBS an Deck	OBS 13
SO190/010-1	15.11.06	###	10° 43,83' S	18° 49,99' E	0	SSE 2	270,4	13	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 14
SO190/010-1	15.11.06	###	10° 43,82' S	18° 49,77' E	0	SSE 2	271	13	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 15
SO190/010-1	15.11.06	###	10° 43,72' S	18° 47,93' E	0	SSE 3	324,8	1	OBS/OBH	OBS/OBH	OBS an Deck	OBS 14
SO190/010-1	15.11.06	###	10° 43,69' S	18° 47,12' E	0	SSE 4	277,1	7,8	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 16
SO190/010-1	16.11.06	###	10° 43,41' S	18° 43,34' E	0	ESE 2	275,7	13	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 16
SO190/010-1	16.11.06	###	10° 43,39' S	18° 43,12' E	0	SE 2	275,2	13	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 17
SO190/010-1	16.11.06	###	10° 43,30' S	18° 41,99' E	0	SE 4	316,9	0,4	OBS/OBH	OBS/OBH	OBS an Deck	OBS 16
SO190/010-1	16.11.06	###	10° 43,40' S	18° 44,12' E	0	SSE 3	95	12	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 15
SO190/010-1	16.11.06	###	10° 43,52' S	18° 45,08' E	0	SSE 3	171,5	0,4	OBS/OBH	OBS/OBH	OBS an Deck	OBS 15
SO190/010-1	16.11.06	###	10° 43,18' S	18° 40,72' E	0	ESE 2	275,3	13	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 18
SO190/010-1	16.11.06	###	10° 43,02' S	18° 39,07' E	0	SE 3	335,9	0,5	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 17
SO190/010-1	16.11.06	###	10° 43,19' S	18° 39,15' E	0	S 3	160,5	1,2	OBS/OBH	OBS/OBH	OBS an Deck	OBS 17
SO190/010-1	16.11.06	###	10° 43,24' S	18° 38,59' E	0	SE 3	274,8	12	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 19
SO190/010-1	16.11.06	###	10° 43,07' S	18° 37,32' E	0	S 3	280,7	13	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 18
SO190/010-1	16.11.06	###	10° 42,90' S	18° 35,95' E	0	S 4	290,1	1	OBS/OBH	OBS/OBH	OBS an Deck	OBS 18

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/010-1	16.11.06	###	10° 42,70' S	18° 34,73' E	0	SSE 2	275,5	13	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 20
SO190/010-1	16.11.06	###	10° 42,50' S	18° 33,06' E	0	SSE 3	258,1	2,7	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 19
SO190/010-1	16.11.06	###	10° 42,69' S	18° 33,15' E	0	SSW 3	150,3	1,1	OBS/OBH	OBS/OBH	OBS an Deck	OBS 19
SO190/010-1	16.11.06	###	10° 42,62' S	18° 31,63' E	0	SSE 2	278,7	13	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 21
SO190/010-1	16.11.06	###	10° 42,54' S	18° 29,81' E	0	SSE 3	181	4	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 20
SO190/010-1	16.11.06	###	10° 42,37' S	18° 30,16' E	0	S 2	97,4	0,6	OBS/OBH	OBS/OBH	OBS an Deck	OBS 20
SO190/010-1	16.11.06	###	10° 42,23' S	18° 27,59' E	0	SSW 3	277,9	6,7	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 21
SO190/010-1	16.11.06	###	10° 42,25' S	18° 27,13' E	0	S 4	330,2	1,1	OBS/OBH	OBS/OBH	OBS an Deck	OBS 21
SO190/010-1	16.11.06	###	10° 42,25' S	18° 27,12' E	0	S 3	213,4	0,8	OBS/OBH	OBS/OBH	Ende Station	
SO190/011-1	16.11.06	###	10° 40,91' S	18° 26,95' E	0	SSW 4	188,9	3,3	Magnetometer	MAGN	Beginn Station	
SO190/011-1	16.11.06	###	10° 41,38' S	18° 26,96' E	3321	SW 5	181,7	3,4	Magnetometer	MAGN	Magnetometer zu Wasse	SL: 200 m
SO190/011-1	16.11.06	###	10° 41,44' S	18° 26,96' E	3321	SW 4	180,8	3,4	Magnetometer	MAGN	Beginn Profil	rwK: 180°, d: 67 nm
SO190/011-1	16.11.06	###	11° 48,82' S	18° 27,00' E	5079	SSW 6	178,7	12	Magnetometer	MAGN	Kursänderung	rwk: 257°, d: 161 nm
SO190/011-1	17.11.06	###	12° 24,87' S	15° 47,59' E	5215	SW 4	257,5	10	Magnetometer	MAGN	Kursänderung	rwK: 005°; d: 37 nm
SO190/011-1	17.11.06	###	11° 48,30' S	15° 50,08' E	5420	S 3	34,8	11	Magnetometer	MAGN	Kursänderung	rwK: 105°, d: 8 nm
SO190/011-1	17.11.06	###	11° 50,18' S	15° 58,15' E	4997	SSE 4	85,9	5,8	Magnetometer	MAGN	Ende Profil	
SO190/011-1	17.11.06	###	11° 50,20' S	15° 59,07' E	5118	SSE 4	86,4	2,1	Magnetometer	MAGN	Magnetometer an Deck	
SO190/011-1	17.11.06	###	11° 50,20' S	15° 59,07' E	5118	SSE 4	86,4	2,1	Magnetometer	MAGN	Ende Station	
SO190/012-1	17.11.06	###	11° 50,16' S	15° 58,20' E	4971	SSE 3	354,4	1,4	OBS/OBH	OBS/OBH	Beginn Station	
SO190/012-1	17.11.06	###	11° 50,14' S	15° 58,22' E	4970	S 5	346,5	1,3	OBMT	OBMT	OBMT zu Wasser	OBMT26
SO190/012-1	17.11.06	###	11° 50,11' S	15° 58,08' E	4997	SSE 5	144,4	1,1	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH27
SO190/012-1	17.11.06	###	11° 53,47' S	15° 57,73' E	5667	SSE 66	183,8	2	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 25
SO190/012-1	17.11.06	###	11° 56,89' S	15° 57,35' E	5583	SSE 29	209,4	1	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 24
SO190/012-1	17.11.06	###	12° 0,14' S	15° 57,03' E	5469	SSE 19	178,1	1,4	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 23
SO190/012-1	17.11.06	###	12° 3,63' S	15° 56,69' E	5293	SSE 19	192,7	1,4	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 22; äK rw:006°
SO190/012-1	17.11.06	###	11° 46,77' S	15° 58,42' E	5316	SSE 2	356,6	2,2	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 28
SO190/012-1	17.11.06	###	11° 43,41' S	15° 58,75' E	5065	S 2	0,1	2,5	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 29
SO190/012-1	17.11.06	###	11° 40,05' S	15° 59,10' E	5026	E 38	357,6	3,1	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 30
SO190/012-1	17.11.06	###	11° 36,63' S	15° 59,45' E	5403	SE 10	19,7	2,2	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 31
SO190/012-1	17.11.06	###	11° 33,21' S	15° 59,85' E	5515	E 47	7,8	1,7	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 32
SO190/012-1	17.11.06	###	11° 29,83' S	116° 0,19' E	5733	NNE 9	3,7	2	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 33
SO190/012-1	17.11.06	###	11° 26,46' S	116° 0,48' E	5923	ESE 2	10,4	2,1	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 34
SO190/012-1	17.11.06	###	11° 23,02' S	116° 0,81' E	5869	SE 48	4,9	1,9	OBMT	OBMT	OBMT zu Wasser	OBMT 35

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/012-1	17.11.06	###	11° 23,18' S	116° 0,81' E	5866	SSW 20	234,5	1,3	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 36
SO190/012-1	17.11.06	###	11° 9,52' S	116° 2,13' E	5598	SSE 39	7,3	1,2	OBMT	OBMT	OBMT zu Wasser	OBMT 37
SO190/012-1	17.11.06	###	11° 9,66' S	116° 2,16' E	5568	SSE 1	254,6	0,5	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 38
SO190/012-1	17.11.06	###	11° 6,28' S	116° 2,51' E	5462	SSE 7	216,9	0,9	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 39
SO190/012-1	17.11.06	###	11° 2,91' S	116° 2,86' E	4480	NE 46	344,3	2,6	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 40
SO190/012-1	17.11.06	###	10° 59,54' S	116° 3,20' E	3718	ENE 38	7,8	1	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 41
SO190/012-1	17.11.06	###	10° 56,17' S	116° 3,56' E	3483	NE 11	353,6	1,9	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 42
SO190/012-1	17.11.06	###	10° 52,80' S	116° 3,90' E	2929	NNE 46	355,9	2,4	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 43
SO190/012-1	17.11.06	###	10° 49,96' S	116° 4,14' E	3021	SSE 14	306,5	0,9	OBMT	OBMT	OBMT zu Wasser	OBMT44
SO190/012-1	17.11.06	###	10° 49,79' S	116° 4,19' E	3025	ENE 39	287,7	1,3	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 45
SO190/012-1	17.11.06	###	10° 46,04' S	116° 4,58' E	3297	NE 38	348,9	1,5	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 46
SO190/012-1	17.11.06	###	10° 42,62' S	116° 4,92' E	3084	NNE 1	349,8	1,7	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 47
SO190/012-1	17.11.06	###	10° 40,37' S	116° 5,16' E	3006	NNE 47	353,8	2	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 48
SO190/012-1	17.11.06	###	10° 37,12' S	116° 5,49' E	2393	SSW 1	353,3	2	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 49
SO190/012-1	17.11.06	###	10° 33,90' S	116° 5,83' E	3382	ENE 39	3,1	2,2	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 50
SO190/012-1	17.11.06	###	10° 30,54' S	116° 6,16' E	3982	NNW 62	360	2,3	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 51
SO190/012-1	17.11.06	###	10° 27,17' S	116° 6,53' E	4135	NNW 38	355,8	1,7	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 52
SO190/012-1	17.11.06	###	10° 23,75' S	116° 6,87' E	4327	SSE 48	199,1	0,4	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 53
SO190/012-1	17.11.06	###	10° 20,60' S	116° 7,16' E	4363	S 57	236,5	0,6	OBMT	OBMT	OBMT zu Wasser	OBMT54
SO190/012-1	17.11.06	###	10° 20,42' S	116° 7,20' E	4366	SSW 35	214,2	0,6	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 56
SO190/012-1	17.11.06	###	10° 20,22' S	116° 7,23' E	4369	SW 0	243,1	0,8	OBMT	OBMT	OBMT zu Wasser	OBMT55
SO190/012-1	17.11.06	###	10° 20,22' S	116° 7,23' E	4369	SW 0	243,1	0,8	OBS/OBH	OBS/OBH	Ende Station	
SO190/013-1	17.11.06	###	10° 20,21' S	116° 7,22' E	4370	SSW 17	297,1	0,6	Vermessung	EM / PS	Beginn Profil	rwk: 090°, d: 7 nm
SO190/013-1	17.11.06	###	10° 20,46' S	16° 14,60' E	4381	E 23	83,6	12	Vermessung	EM / PS	Kursänderung	rwk: 005°, d: 41 nm
SO190/013-1	18.11.06	###	9° 39,97' S	16° 17,85' E	4149	NNW 62	280,4	9,6	Vermessung	EM / PS	Kursänderung	rwk: 266°, d: 7nm
SO190/013-1	18.11.06	###	9° 40,38' S	16° 11,59' E	4273	E 2	271,9	4,2	Vermessung	EM / PS	Ende Profil	
SO190/014-1	18.11.06	###	9° 40,44' S	16° 11,45' E	4273	ESE 48	228,8	2,5	Profil	PR	Stationsbeginn	Profil P31
SO190/014-1	18.11.06	###	9° 40,72' S	16° 11,28' E	4278	ENE 1	210,8	2	Profil	PR	Bb-Airgunarray zu Wasser	
SO190/014-1	18.11.06	###	9° 41,50' S	16° 11,16' E	4289	SE 47	202,4	2,4	Profil	PR	Stb-Airgunarray zu Wasser	
SO190/014-1	18.11.06	###	9° 42,78' S	16° 11,05' E	4295	SSE 17	181,6	4,9	Profil	PR	Beginn Profil	rwk: 186°, d: 147sm
SO190/014-1	18.11.06	###	10° 5,80' S	116° 8,70' E	4400	S 3	191,7	3,4	Profil	PR	Stb-Airgunarray an Deck	
SO190/014-1	18.11.06	###	10° 23,73' S	116° 6,88' E	4332	ESE 4	208,4	2	Profil	PR	Stb-Airgunarray zu Wasser	
SO190/014-1	19.11.06	###	12° 8,92' S	15° 56,16' E	4942	ESE 7	200,6	3,7	Profil	PR	Ende Profil	

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/014-1	19.11.06	###	12° 9,15' S	15° 56,09' E	4952	ESE 7	232,3	0,9	Profil	PR	Stb-Airgunarray an Deck	
SO190/014-1	19.11.06	###	12° 9,33' S	15° 55,97' E	4961	ESE 6	191,3	2,3	Profil	PR	Bb-Airgunarray an Deck	
SO190/014-1	19.11.06	###	12° 9,49' S	15° 55,94' E	4968	ESE 6	132,9	1,8	Profil	PR	Stationsende	
SO190/015-1	19.11.06	###	12° 8,37' S	15° 56,10' E	4924	SE 7	4,3	14	OBS/OBH	OBS/OBH	Beginn Station	
SO190/015-1	19.11.06	###	12° 8,14' S	15° 56,12' E	4987	SE 7	2,5	14	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 22
SO190/015-1	19.11.06	###	12° 4,11' S	15° 56,52' E	5279	ESE 7	1,9	6,8	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 23
SO190/015-1	19.11.06	###	12° 2,43' S	15° 56,16' E	0	SE 6	353,2	14	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 24
SO190/015-1	19.11.06	###	12° 3,04' S	15° 55,98' E	0	SE 6	167	9,8	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 22
SO190/015-1	19.11.06	###	12° 3,11' S	15° 56,73' E	0	SE 6	255,1	0,3	OBS/OBH	OBS/OBH	OBS an Deck	OBS 22
SO190/015-1	19.11.06	###	12° 2,25' S	15° 56,79' E	0	SE 7	4,6	14	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 23
SO190/015-1	19.11.06	###	12° 0,57' S	15° 56,92' E	0	SE 5	5,2	7,7	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 25
SO190/015-1	19.11.06	###	11° 59,28' S	15° 56,96' E	0	SE 3	348,2	2,5	OBS/OBH	OBS/OBH	OBS an Deck	OBS 23
SO190/015-1	19.11.06	###	11° 56,87' S	15° 57,18' E	0	ESE 5	358,1	4,8	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 24
SO190/015-1	19.11.06	###	11° 56,67' S	15° 57,26' E	0	SE 5	28,8	3	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 27
SO190/015-1	19.11.06	###	11° 56,34' S	15° 57,60' E	0	SE 6	0,4	2	OBS/OBH	OBS/OBH	OBS an Deck	OBS 24
SO190/015-1	19.11.06	###	11° 53,24' S	15° 57,52' E	0	SE 7	124,5	1,4	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 25
SO190/015-1	19.11.06	###	11° 52,40' S	15° 57,61' E	0	ESE 6	314	2,5	OBS/OBH	OBS/OBH	OBS an Deck	OBS 25
SO190/015-1	19.11.06	###	11° 51,69' S	15° 57,74' E	0	SE 6	13,6	11	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 28
SO190/015-1	19.11.06	###	11° 49,74' S	15° 57,84' E	0	ESE 5	284,4	0,9	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 27
SO190/015-1	19.11.06	###	11° 49,45' S	15° 57,92' E	0	ESE 7	312,6	2,1	OBS/OBH	OBS/OBH	OBH an Deck	OBH 27
SO190/015-1	19.11.06	###	11° 49,32' S	15° 57,76' E	0	SSE 8	335,1	6,5	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 29
SO190/015-1	19.11.06	###	11° 48,12' S	15° 57,75' E	0	SE 7	5,3	13	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 28
SO190/015-1	19.11.06	###	11° 45,81' S	15° 58,06' E	0	E 6	305,9	1,6	OBS/OBH	OBS/OBH	OBS an Deck	OBS 28
SO190/015-1	19.11.06	###	11° 45,80' S	15° 58,03' E	0	E 6	304,7	0,4	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 30
SO190/015-1	19.11.06	###	11° 45,41' S	15° 58,05' E	0	SE 6	2	8,5	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 29
SO190/015-1	19.11.06	###	11° 42,82' S	15° 58,57' E	0	E 7	310,6	1,1	OBS/OBH	OBS/OBH	OBH an Deck	OBH 29
SO190/015-1	19.11.06	###	11° 42,80' S	15° 58,54' E	0	E 6	270,9	1	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 31
SO190/015-1	19.11.06	###	11° 39,74' S	15° 58,59' E	0	ESE 7	214,8	1	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 30
SO190/015-1	19.11.06	###	11° 39,66' S	15° 58,99' E	0	E 7	295,2	1,6	OBS/OBH	OBS/OBH	OBH an Deck	OBH 30
SO190/015-1	19.11.06	###	11° 39,64' S	15° 58,96' E	0	ESE 5	291,4	1,9	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 32
SO190/015-1	19.11.06	###	11° 39,46' S	15° 58,97' E	0	ESE 7	8,7	6,8	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 31
SO190/015-1	19.11.06	###	11° 35,89' S	15° 59,14' E	0	E 8	251,1	0,8	OBS/OBH	OBS/OBH	OBS an Deck	OBS 31
SO190/015-1	19.11.06	###	11° 35,88' S	15° 59,12' E	0	E 8	288,1	1,3	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 33

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/015-1	19.11.06	###	11° 33,26' S	15° 59,42' E	0	ESE 7	3,9	9,7	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 32
SO190/015-1	19.11.06	###	11° 32,90' S	15° 59,83' E	0	E 9	318,3	0,6	OBS/OBH	OBS/OBH	OBH an Deck	OBH 32
SO190/015-1	19.11.06	###	11° 32,76' S	15° 59,70' E	0	SSE 7	357,4	5,6	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 34
SO190/015-1	19.11.06	###	11° 31,92' S	15° 59,78' E	0	SE 9	5,5	13	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 33
SO190/015-1	19.11.06	###	11° 29,48' S	116° 0,02' E	0	E 8	294,3	1,4	OBS/OBH	OBS/OBH	OBH an Deck	OBH 33
SO190/015-1	19.11.06	###	11° 29,48' S	15° 59,99' E	0	ENE 9	110,4	0,5	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 36
SO190/015-1	19.11.06	###	11° 26,28' S	116° 0,38' E	0	ESE 8	146,3	0,4	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 34
SO190/015-1	19.11.06	###	11° 26,29' S	116° 0,39' E	0	E 8	286,3	1,3	OBS/OBH	OBS/OBH	OBS an Deck	OBS 34
SO190/015-1	19.11.06	###	11° 24,48' S	116° 0,32' E	0	ESE 7	3,7	13	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 36
SO190/015-1	19.11.06	###	11° 22,85' S	116° 0,54' E	0	E 9	270,5	1,2	OBS/OBH	OBS/OBH	OBH an Deck	OBH 36
SO190/015-1	20.11.06	###	11° 15,39' S	116° 1,28' E	0	SE 8	5,6	13	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 38
SO190/015-1	20.11.06	###	11° 9,63' S	116° 1,90' E	0	ESE 8	250	0,6	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 39
SO190/015-1	20.11.06	###	11° 9,69' S	116° 1,90' E	0	ESE 7	310,5	0,7	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 38
SO190/015-1	20.11.06	###	11° 9,37' S	116° 2,01' E	0	ESE 7	246,2	0,9	OBS/OBH	OBS/OBH	OBS an Deck	OBS 38
SO190/015-1	20.11.06	###	11° 9,31' S	116° 2,03' E	0	ENE 6	353,9	5	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 40
SO190/015-1	20.11.06	###	11° 7,48' S	116° 2,09' E	0	SE 7	5,2	12	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 39
SO190/015-1	20.11.06	###	11° 5,74' S	116° 2,02' E	0	E 7	296	0,7	OBS/OBH	OBS/OBH	OBH an Deck	OBH 39
SO190/015-1	20.11.06	###	11° 5,74' S	116° 1,98' E	0	E 8	241,1	1,6	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 41
SO190/015-1	20.11.06	###	11° 2,64' S	116° 2,42' E	0	ESE 7	85,5	3,1	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 40
SO190/015-1	20.11.06	###	11° 2,37' S	116° 2,45' E	0	E 8	250	1,1	OBS/OBH	OBS/OBH	OBH an Deck	OBH 40
SO190/015-1	20.11.06	###	11° 0,93' S	116° 2,62' E	0	ESE 7	6	14	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 42
SO190/015-1	20.11.06	###	10° 59,55' S	116° 2,74' E	0	ESE 7	2,7	6,4	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 41
SO190/015-1	20.11.06	###	10° 58,91' S	116° 2,36' E	0	ESE 6	276,7	1,2	OBS/OBH	OBS/OBH	OBH an Deck	OBH 41
SO190/015-1	20.11.06	###	10° 55,83' S	116° 2,83' E	0	ESE 7	9,5	6,2	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 42
SO190/015-1	20.11.06	###	10° 55,55' S	116° 2,99' E	0	ESE 7	31,9	7,1	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 43
SO190/015-1	20.11.06	###	10° 55,86' S	116° 3,06' E	0	E 6	275,3	1,2	OBS/OBH	OBS/OBH	OBS an Deck	OBS 42
SO190/015-1	20.11.06	###	10° 52,91' S	116° 3,22' E	0	ESE 8	352,3	6,8	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 43
SO190/015-1	20.11.06	###	10° 52,71' S	116° 3,20' E	0	ESE 8	356,4	6,8	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 45
SO190/015-1	20.11.06	###	10° 52,52' S	116° 3,35' E	0	ESE 6	235,6	2,3	OBS/OBH	OBS/OBH	OBH an Deck	OBH 43
SO190/015-1	20.11.06	###	10° 49,72' S	116° 3,45' E	0	ESE 5	358,7	6,9	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 45
SO190/015-1	20.11.06	###	10° 49,48' S	116° 3,72' E	0	ESE 7	59,6	5,8	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 46
SO190/015-1	20.11.06	###	10° 49,58' S	116° 3,72' E	0	ESE 4	272,6	2	OBS/OBH	OBS/OBH	OBH an Deck	OBH 45
SO190/015-1	20.11.06	###	10° 47,67' S	116° 3,90' E	0	ESE 7	7,8	12	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 46

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/015-1	20.11.06	###	10° 46,88' S	116° 3,97' E	0	ESE 7	0,9	12	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 47
SO190/015-1	20.11.06	###	10° 45,77' S	116° 4,17' E	0	E 7	228,7	1,2	OBS/OBH	OBS/OBH	OBH an Deck	OBH 46
SO190/015-1	20.11.06	###	10° 42,28' S	116° 4,55' E	0	SE 7	103,6	1,6	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 47
SO190/015-1	20.11.06	###	10° 42,27' S	116° 4,64' E	0	E 7	72,6	3,7	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 48
SO190/015-1	20.11.06	###	10° 42,40' S	116° 4,79' E	0	E 6	226,4	1,3	OBS/OBH	OBS/OBH	OBS an Deck	OBS 47
SO190/015-1	20.11.06	###	10° 40,22' S	116° 4,72' E	0	ESE 7	58,1	0,6	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 48
SO190/015-1	20.11.06	###	10° 40,22' S	116° 4,72' E	0	ESE 6	173,1	0,5	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 49
SO190/015-1	20.11.06	###	10° 39,96' S	116° 4,98' E	0	E 5	271,7	0,7	OBS/OBH	OBS/OBH	OBS an Deck	OBS 48
SO190/015-1	20.11.06	###	10° 38,64' S	116° 4,91' E	0	ESE 7	1,5	9,9	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 49
SO190/015-1	20.11.06	###	10° 38,30' S	116° 4,91' E	0	ESE 6	355,4	11	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 50
SO190/015-1	20.11.06	###	10° 36,88' S	116° 5,05' E	0	ESE 6	259,2	0,8	OBS/OBH	OBS/OBH	OBH an Deck	OBH 49
SO190/015-1	20.11.06	###	10° 36,20' S	116° 5,02' E	0	ESE 7	351,5	11	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 51
SO190/015-1	20.11.06	###	10° 35,25' S	116° 5,02' E	0	ESE 6	2,3	12	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 50
SO190/015-1	20.11.06	###	10° 33,63' S	116° 5,42' E	0	E 5	294,4	0,7	OBS/OBH	OBS/OBH	OBH an Deck	OBH 50
SO190/015-1	20.11.06	###	10° 30,22' S	116° 5,54' E	0	SSE 6	96	0,4	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 52
SO190/015-1	20.11.06	###	10° 30,21' S	116° 5,64' E	0	ESE 6	123,2	1,1	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 51
SO190/015-1	20.11.06	###	10° 30,06' S	116° 5,89' E	0	ESE 7	275,4	1,6	OBS/OBH	OBS/OBH	OBS an Deck	OBS 51
SO190/015-1	20.11.06	###	10° 30,00' S	116° 5,67' E	0	SSE 8	314,2	3,8	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 53
SO190/015-1	20.11.06	###	10° 26,82' S	116° 6,04' E	0	SSE 5	61,8	3,8	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 52
SO190/015-1	20.11.06	###	10° 26,90' S	116° 6,11' E	0	E 6	283,1	1,6	OBS/OBH	OBS/OBH	OBS an Deck	OBS 52
SO190/015-1	20.11.06	###	10° 26,92' S	116° 6,04' E	0	ENE 6	48,8	0,5	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 56
SO190/015-1	20.11.06	###	10° 23,41' S	116° 6,51' E	0	SE 6	54	2,7	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 53
SO190/015-1	20.11.06	###	10° 23,34' S	116° 6,50' E	0	E 7	289,5	2	OBS/OBH	OBS/OBH	OBS an Deck	OBS 53
SO190/015-1	20.11.06	###	10° 22,65' S	116° 6,52' E	0	SE 9	3,2	12	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 56
SO190/015-1	20.11.06	###	10° 20,31' S	116° 6,34' E	0	ESE 7	271,9	1,4	OBS/OBH	OBS/OBH	OBS an Deck	OBS 56
SO190/015-1	20.11.06	###	10° 20,31' S	116° 6,34' E	0	ESE 7	271,9	1,4	OBS/OBH	OBS/OBH	Ende Station	
SO190/016-1	20.11.06	###	10° 20,31' S	116° 6,31' E	0	SE 7	262,9	1,7	Magnetometer	MAGN	Beginn Station	
SO190/016-1	20.11.06	###	10° 20,59' S	116° 6,49' E	4363	SE 8	111,4	4,4	Magnetometer	MAGN	Magnetometer zu Wasser	
SO190/016-1	20.11.06	###	10° 20,63' S	116° 6,56' E	4362	SE 8	114,3	4,6	Magnetometer	MAGN	Beginn Profil	rwk: 118°, d: 7 nm
SO190/016-1	20.11.06	###	10° 24,08' S	16° 13,97' E	4355	SSE 9	142	11	Magnetometer	MAGN	Kursänderung	rwk: 182°, d: 52 nm
SO190/016-1	20.11.06	###	11° 15,96' S	16° 12,00' E	6958	ESE 6	185,6	9,3	Magnetometer	MAGN	Kursänderung	rwk: 187°, d: 57 nm
SO190/016-1	20.11.06	###	12° 12,36' S	116° 5,03' E	5206	ESE 2	177,1	11	Magnetometer	MAGN	Kursänderung	rwk: 076°, d: 10 nm
SO190/016-1	21.11.06	###	12° 9,98' S	16° 14,98' E	0	N 0	0	0	Magnetometer	MAGN	Kursänderung	rwk: 007°, d: 59 nm

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/016-1	21.11.06	###	11° 10,94' S	16° 21,99' E	5830	ESE 4	358,4	12	Magnetometer	MAGN	Kursänderung	rwK: 357°, d: 41 nm
SO190/016-1	21.11.06	###	10° 30,23' S	16° 20,03' E	4249	SE 3	359,8	12	Magnetometer	MAGN	Kursänderung	rwK: 090°; d: 3 nm
SO190/016-1	21.11.06	###	10° 29,99' S	16° 22,34' E	4307	SE 3	88,5	11	Magnetometer	MAGN	Kursänderung	rwK: 120°; d: 7 nm
SO190/016-1	21.11.06	###	10° 33,40' S	16° 28,30' E	4183	SE 5	142,7	9,9	Magnetometer	MAGN	Kursänderung	rwK: 175°; d: 35 nm
SO190/016-1	21.11.06	###	11° 8,10' S	16° 32,70' E	5062	SSE 6	185,7	10	Magnetometer	MAGN	Kursänderung	rwk: 271°, d: 6 nm
SO190/016-1	21.11.06	###	11° 8,02' S	16° 26,59' E	5132	SE 8	293,8	11	Magnetometer	MAGN	Kursänderung	rwk: 357°, d: 31 nm
SO190/016-1	21.11.06	###	10° 37,03' S	16° 24,96' E	3329	ESE 6	326,6	11	Magnetometer	MAGN	Kursänderung	rwk: 277°, d: 8 nm
SO190/016-1	21.11.06	###	10° 36,07' S	16° 17,25' E	3659	ESE 6	257,3	12	Magnetometer	MAGN	Kursänderung	rwk: 180°, d: 29 nm
SO190/016-1	21.11.06	###	11° 4,75' S	16° 16,70' E	4373	SE 6	254,3	12	Magnetometer	MAGN	Kursänderung	rwk: 294°, d: 10 nm
SO190/016-1	21.11.06	###	11° 0,90' S	116° 8,03' E	3906	SE 5	331,2	12	Magnetometer	MAGN	Kursänderung	rwk: 005°, d: 24 nm
SO190/016-1	21.11.06	###	10° 37,16' S	116° 9,99' E	2665	SE 6	0,8	12	Magnetometer	MAGN	Kursänderung	rwk: 270°, d: 8 nm
SO190/016-1	21.11.06	###	10° 37,00' S	116° 2,14' E	2225	ESE 7	267,6	12	Magnetometer	MAGN	Kursänderung	rwk: 188°, d: 10 nm
SO190/016-1	21.11.06	###	10° 47,01' S	116° 0,53' E	3110	E 7	191,4	11	Magnetometer	MAGN	Kursänderung	rwk: 199°, d: 14 nm
SO190/016-1	22.11.06	###	10° 59,94' S	15° 56,05' E	4112	E 6	213,4	11	Magnetometer	MAGN	Kursänderung	rwk: 243°, d: 5 nm
SO190/016-1	22.11.06	###	11° 1,99' S	15° 52,02' E	4548	E 5	244,4	12	Magnetometer	MAGN	Kursänderung	rwk: 254°; d: 7 nm
SO190/016-1	22.11.06	###	11° 3,91' S	15° 45,28' E	5625	E 6	253,6	12	Magnetometer	MAGN	Kursänderung	rwk: 360°; d: 27 nm
SO190/016-1	22.11.06	###	10° 37,10' S	15° 45,01' E	3215	E 8	359,9	12	Magnetometer	MAGN	Kursänderung	rwk: 054°, d: 7 nm
SO190/016-1	22.11.06	###	10° 33,58' S	15° 50,42' E	3161	ESE 5	134,9	11	Magnetometer	MAGN	Kursänderung	rwk: 180°, d: 37 nm
SO190/016-1	22.11.06	###	11° 10,00' S	15° 50,48' E	5864	ENE 4	181,9	12	Magnetometer	MAGN	Kursänderung	rwk: 182°, d: 33 nm
SO190/016-1	22.11.06	###	11° 42,84' S	15° 49,52' E	5349	SE 4	181,4	11	Magnetometer	MAGN	Kursänderung	rwk: 264°, d: 10 nm
SO190/016-1	22.11.06	###	11° 43,98' S	15° 39,62' E	5388	ESE 4	283	11	Magnetometer	MAGN	Kursänderung	rwk: 001°, d: 39 nm
SO190/016-1	22.11.06	###	11° 05,05' S	15° 39,97' E	0	ESE 4	1	12	Magnetometer	MAGN	Kursänderung	rwk: 000°, d: 32 nm
SO190/016-1	22.11.06	###	10° 33,43' S	15° 39,66' E	3165	NE 5	281,5	12	Magnetometer	MAGN	Kursänderung	rwk: 234°, d: 7 nm
SO190/016-1	22.11.06	###	10° 36,96' S	15° 34,59' E	3457	E 5	224,1	12	Magnetometer	MAGN	Kursänderung	rwk: 180°, d: 30 nm
SO190/016-1	22.11.06	###	11° 6,99' S	15° 34,38' E	5906	SE 4	257,9	9,3	Magnetometer	MAGN	Kursänderung	rwk: 277°, d: 59 nm
SO190/016-1	23.11.06	###	10° 59,93' S	14° 36,50' E	5807	WNW 1	306,5	12	Magnetometer	MAGN	Kursänderung	rwk: 352°, d: 17 nm
SO190/016-1	23.11.06	###	10° 43,01' S	14° 33,98' E	2564	E 6	338,2	12	Magnetometer	MAGN	Kursänderung	rwk: 305°, d: 68 nm
SO190/016-1	23.11.06	###	10° 4,54' S	13° 37,01' E	2445	SSE 6	306,9	11	Magnetometer	MAGN	Ende Profil	
SO190/016-1	23.11.06	###	10° 5,67' S	13° 35,96' E	2480	SSE 3	191,6	5,1	Magnetometer	MAGN	Magnetometer an Deck	
SO190/016-1	23.11.06	###	10° 5,67' S	13° 35,96' E	2480	SSE 3	191,6	5,1	Magnetometer	MAGN	Ende Station	
SO190/017-1	23.11.06	###	10° 5,74' S	13° 35,93' E	2446	SSE 3	198,5	5,2	OBS/OBH	OBS/OBH	Beginn Station	
SO190/017-1	23.11.06	###	10° 4,54' S	13° 37,00' E	2446	SE 5	38,8	0,6	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 57
SO190/017-1	23.11.06	###	10° 3,98' S	13° 33,93' E	2324	SSE 6	254,3	3,4	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 58

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/017-1	23.11.06	###	10° 3,50' S	13° 30,79' E	2114	SE 8	234,2	2,4	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 59
SO190/017-1	23.11.06	###	10° 2,98' S	13° 27,69' E	1783	SSE 4	192,2	1,4	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 60
SO190/017-1	23.11.06	###	10° 2,46' S	13° 24,58' E	1486	SSE 6	230,3	2,4	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 61
SO190/017-1	23.11.06	###	10° 1,92' S	13° 21,48' E	1421	SSE 7	260,7	2,4	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 62
SO190/017-1	23.11.06	###	10° 1,43' S	13° 18,38' E	919	SE 6	166,6	1,2	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 63
SO190/017-1	23.11.06	###	10° 0,90' S	13° 15,24' E	1073	SSE 6	237,8	2,7	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 64
SO190/017-1	23.11.06	###	10° 0,40' S	13° 12,16' E	834	SE 6	230,6	2,1	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 65
SO190/017-1	23.11.06	###	9° 59,84' S	113° 9,08' E	825	SE 4	240,5	2,3	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 66
SO190/017-1	23.11.06	###	9° 59,31' S	113° 5,98' E	1035	SSE 4	241,3	2,5	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 67
SO190/017-1	23.11.06	###	9° 58,77' S	113° 2,87' E	1185	SSE 3	251	1,5	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 68
SO190/017-1	23.11.06	###	9° 58,27' S	12° 59,79' E	1330	SE 4	240,9	2,1	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 69
SO190/017-1	23.11.06	###	9° 57,78' S	12° 56,70' E	1604	SSE 2	265,1	0,9	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 70
SO190/017-1	23.11.06	###	9° 57,26' S	12° 53,59' E	1836	SE 2	270,4	1,4	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 71
SO190/017-1	23.11.06	###	9° 56,79' S	12° 50,48' E	2384	SE 2	268,7	0,9	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 72
SO190/017-1	23.11.06	###	9° 56,26' S	12° 47,32' E	2565	ESE 3	243,8	1,2	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 73
SO190/017-1	23.11.06	###	9° 55,73' S	12° 44,25' E	2892	SE 2	271,3	1,4	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 74
SO190/017-1	23.11.06	###	9° 55,21' S	12° 41,16' E	2837	ESE 3	264,2	2,7	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 75
SO190/017-1	23.11.06	###	9° 54,73' S	12° 38,04' E	2845	ESE 3	277,2	1,8	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 76
SO190/017-1	23.11.06	###	9° 54,33' S	12° 34,98' E	2732	ESE 3	274	1,9	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 77
SO190/017-1	23.11.06	###	9° 54,33' S	12° 34,95' E	2734	ESE 4	273,1	2,5	OBS/OBH	OBS/OBH	Ende Station	
SO190/018-1	23.11.06	###	9° 54,33' S	12° 34,95' E	2734	ESE 4	273,1	2,5	Vermessung	EM / PS	Beginn Profil	rwk: 010°, d: 6 nm
SO190/018-1	23.11.06	###	9° 48,64' S	12° 36,12' E	3093	SSE 6	92,3	9,8	Vermessung	EM / PS	Kursänderung	rwk: 105°, d: 4 nm
SO190/018-1	23.11.06	###	9° 49,54' S	12° 39,40' E	3074	SE 4	146,8	12	Vermessung	EM / PS	Kursänderung	rwk: 180°, d: 11 nm
SO190/018-1	23.11.06	###	10° 0,08' S	12° 39,42' E	2393	E 3	194,4	13	Vermessung	EM / PS	Kursänderung	rwk: 278°, d: 16 nm
SO190/018-1	23.11.06	###	9° 57,95' S	12° 23,06' E	2816	SE 6	340,7	9,1	Vermessung	EM / PS	Kursänderung	rwk: 038°, d: 6 nm
SO190/018-1	23.11.06	###	9° 53,07' S	12° 26,99' E	3041	SSE 5	87,9	4,1	Vermessung	EM / PS	Ende Profil	
SO190/019-1	23.11.06	###	9° 53,07' S	12° 26,99' E	3041	SSE 5	87,9	4,1	Profil	PR	Stationsbeginn	
SO190/019-1	23.11.06	###	9° 53,10' S	12° 27,47' E	3090	ESE 6	97,4	1,6	Profil	PR	Bb Airgun zu Wasser	
SO190/019-1	23.11.06	###	9° 53,12' S	12° 27,74' E	3089	ESE 6	108,8	1,9	Profil	PR	Stb Airgun zu Wasser	
SO190/019-1	23.11.06	###	9° 53,12' S	12° 27,74' E	3089	ESE 6	108,8	1,9	Profil	PR	Beginn Profil	rwk: 100°, d: 72 nm
SO190/019-1	24.11.06	###	10° 5,02' S	13° 40,08' E	2205	SE 6	112,7	2,7	Profil	PR	Ende Profil	
SO190/019-1	24.11.06	###	10° 5,14' S	13° 40,24' E	2209	SE 5	141,6	2,6	Profil	PR	Stb-Airgunarray an Deck	
SO190/019-1	24.11.06	###	10° 5,24' S	13° 40,35' E	2207	SE 5	132,1	1,8	Profil	PR	Bb-Airgunarray an Deck	

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/019-1	24.11.06	###	10° 5,33' S	13° 40,50' E	2214	SE 5	101,8	1,8	Profil	PR	Stationsende	
SO190/020-1	24.11.06	###	10° 5,16' S	13° 40,12' E	2214	SE 7	287,4	11	OBS/OBH	OBS/OBH	Beginn Station	
SO190/020-1	24.11.06	###	10° 5,09' S	13° 39,94' E	2210	SE 6	294,5	11	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 57
SO190/020-1	24.11.06	###	10° 4,74' S	13° 36,63' E	0	SE 5	343,5	0,2	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 57
SO190/020-1	24.11.06	###	10° 4,75' S	13° 36,73' E	0	SSE 5	204,8	2,7	OBS/OBH	OBS/OBH	OBS an Deck	OBS 57
SO190/020-1	24.11.06	###	10° 4,95' S	13° 36,55' E	0	SSE 5	250,6	5,4	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 58
SO190/020-1	24.11.06	###	10° 4,17' S	13° 33,65' E	0	ESE 4	45,6	1,7	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 58
SO190/020-1	24.11.06	###	10° 4,07' S	13° 33,70' E	0	SE 5	223,3	0,8	OBS/OBH	OBS/OBH	OBS an Deck	OBS 58
SO190/020-1	24.11.06	###	10° 4,04' S	13° 33,60' E	0	ENE 5	270,1	6,3	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 59
SO190/020-1	24.11.06	###	10° 3,72' S	13° 30,49' E	0	SE 4	50,8	2,6	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 59
SO190/020-1	24.11.06	###	10° 3,59' S	13° 30,59' E	0	SE 5	134,6	0,5	OBS/OBH	OBS/OBH	OBS an Deck	OBS 59
SO190/020-1	24.11.06	###	10° 3,54' S	13° 30,48' E	0	ENE 6	279,2	7,2	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 60
SO190/020-1	24.11.06	###	10° 3,27' S	13° 27,45' E	0	ESE 6	12,9	1,5	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 60
SO190/020-1	24.11.06	###	10° 3,15' S	13° 27,44' E	0	SE 4	237	0,6	OBS/OBH	OBS/OBH	OBS an Deck	OBS 60
SO190/020-1	24.11.06	###	10° 3,11' S	13° 27,36' E	0	ENE 5	272,5	5,6	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 61
SO190/020-1	24.11.06	###	10° 3,02' S	13° 24,62' E	0	ESE 4	267,1	6	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 61
SO190/020-1	24.11.06	###	10° 2,82' S	13° 24,21' E	0	ESE 3	267,1	1,5	OBS/OBH	OBS/OBH	OBS an Deck	OBS 61
SO190/020-1	24.11.06	###	10° 2,82' S	13° 24,21' E	0	ESE 3	267,1	1,5	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 62
SO190/020-1	24.11.06	###	10° 2,54' S	13° 22,03' E	0	ESE 5	282,5	13	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 62
SO190/020-1	24.11.06	###	10° 2,36' S	13° 20,95' E	0	ESE 4	242,3	3	OBS/OBH	OBS/OBH	OBS an Deck	OBS 62
SO190/020-1	24.11.06	###	10° 2,38' S	13° 20,80' E	0	ESE 4	269,3	5,2	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 63
SO190/020-1	24.11.06	###	10° 2,10' S	13° 18,95' E	0	ESE 5	277,9	13	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 63
SO190/020-1	24.11.06	###	10° 1,92' S	13° 17,93' E	0	ESE 4	245,8	1,1	OBS/OBH	OBS/OBH	OBS an Deck	OBS 63
SO190/020-1	24.11.06	###	10° 1,90' S	13° 17,73' E	0	E 5	280,3	6,6	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 64
SO190/020-1	24.11.06	###	10° 1,57' S	13° 16,09' E	0	ESE 5	280	11	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 64
SO190/020-1	24.11.06	###	10° 1,32' S	13° 14,87' E	0	SE 3	257,6	2,2	OBS/OBH	OBS/OBH	OBS an Deck	OBS 64
SO190/020-1	24.11.06	###	10° 1,32' S	13° 14,65' E	0	E 4	271,4	5,8	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 65
SO190/020-1	24.11.06	###	10° 0,90' S	13° 12,31' E	0	ESE 3	270,4	6,3	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 65
SO190/020-1	24.11.06	###	10° 0,79' S	13° 11,95' E	0	ESE 3	251,9	1,5	OBS/OBH	OBS/OBH	OBS an Deck	OBS 65
SO190/020-1	24.11.06	###	10° 0,80' S	13° 11,92' E	0	ESE 4	297,6	1,1	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 66
SO190/020-1	24.11.06	###	10° 0,28' S	113° 8,73' E	0	SE 3	74,1	1,4	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 66
SO190/020-1	24.11.06	###	10° 0,26' S	113° 8,88' E	0	SE 4	137,4	1,6	OBS/OBH	OBS/OBH	OBS an Deck	OBS 66
SO190/020-1	24.11.06	###	10° 0,26' S	113° 8,87' E	0	NE 4	278,6	2,9	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 67

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/020-1	24.11.06	###	9° 59,88' S	113° 6,45' E	0	E 3	285	8,8	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 67
SO190/020-1	24.11.06	###	9° 59,79' S	113° 5,69' E	0	ESE 2	213,6	1,2	OBS/OBH	OBS/OBH	OBS an Deck	OBS 67
SO190/020-1	24.11.06	###	9° 59,83' S	113° 5,64' E	0	E 3	280,4	1,4	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 68
SO190/020-1	24.11.06	###	9° 59,40' S	113° 2,93' E	0	ENE 3	277,1	5,8	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 68
SO190/020-1	24.11.06	###	9° 59,19' S	113° 2,49' E	0	ENE 2	259,6	1,5	OBS/OBH	OBS/OBH	OBS an Deck	OBS 68
SO190/020-1	24.11.06	###	9° 59,20' S	113° 2,36' E	0	NE 3	240,3	4	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 69
SO190/020-1	24.11.06	###	9° 58,82' S	113° 0,09' E	0	ENE 2	285,9	6,9	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 69
SO190/020-1	24.11.06	###	9° 58,74' S	12° 59,38' E	0	E 2	224,1	1	OBS/OBH	OBS/OBH	OBS an Deck	OBS 69
SO190/020-1	24.11.06	###	9° 58,76' S	12° 59,33' E	0	ENE 2	290	0,6	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 70
SO190/020-1	24.11.06	###	9° 58,16' S	12° 56,62' E	0	ENE 3	276,9	3,5	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 70
SO190/020-1	24.11.06	###	9° 58,07' S	12° 56,38' E	0	E 3	264,6	1	OBS/OBH	OBS/OBH	OBS an Deck	OBS 70
SO190/020-1	24.11.06	###	9° 58,08' S	12° 56,36' E	0	E 3	269,8	0,9	OBS/OBH	OBS/OBH	OBH ausgelöst	OBS 71
SO190/020-1	24.11.06	###	9° 57,63' S	12° 54,07' E	0	ENE 4	284,2	7,2	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 71
SO190/020-1	24.11.06	###	9° 57,63' S	12° 54,07' E	0	ENE 4	284,2	7,2	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 72
SO190/020-1	24.11.06	###	9° 57,39' S	12° 53,22' E	0	NE 3	270,5	1,3	OBS/OBH	OBS/OBH	OBS an Deck	OBS 71
SO190/020-1	24.11.06	###	9° 57,05' S	12° 51,41' E	0	ENE 5	280,1	12	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 72
SO190/020-1	24.11.06	###	9° 56,98' S	12° 51,04' E	0	ENE 5	287,7	9,7	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 73
SO190/020-1	24.11.06	###	9° 56,87' S	12° 50,08' E	0	ENE 3	280,8	1,5	OBS/OBH	OBS/OBH	OBH an Deck	OBH 72
SO190/020-1	24.11.06	###	9° 56,47' S	12° 47,66' E	0	E 4	281,1	8,7	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 73
SO190/020-1	24.11.06	###	9° 56,42' S	12° 47,33' E	0	E 4	284,3	6,3	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 74
SO190/020-1	24.11.06	###	9° 56,37' S	12° 46,88' E	0	ENE 3	261,1	2	OBS/OBH	OBS/OBH	OBH an Deck	OBH 73
SO190/020-1	24.11.06	###	9° 55,94' S	12° 44,13' E	0	E 4	278,8	3,6	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 75
SO190/020-1	24.11.06	###	9° 55,93' S	12° 44,05' E	0	E 3	288,6	2	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 74
SO190/020-1	24.11.06	###	9° 55,91' S	12° 43,89' E	0	E 4	219,1	1,4	OBS/OBH	OBS/OBH	OBH an Deck	OBH 74
SO190/020-1	24.11.06	###	9° 55,62' S	12° 42,36' E	0	E 5	279	12	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 76
SO190/020-1	24.11.06	###	9° 55,45' S	12° 41,48' E	0	E 3	280,4	6,8	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 75
SO190/020-1	24.11.06	###	9° 55,33' S	12° 40,80' E	0	E 4	269,1	0,8	OBS/OBH	OBS/OBH	OBH an Deck	OBH 75
SO190/020-1	24.11.06	###	9° 55,06' S	12° 39,38' E	0	E 5	282,7	13	OBS/OBH	OBS/OBH	OBH ausgelöst	OBS 77
SO190/020-1	24.11.06	###	9° 54,89' S	12° 38,41' E	0	E 4	284,9	8,5	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 76
SO190/020-1	24.11.06	###	9° 54,89' S	12° 37,67' E	0	E 3	227,8	1,3	OBS/OBH	OBS/OBH	OBH an Deck	OBH 76
SO190/020-1	24.11.06	###	9° 54,60' S	12° 35,91' E	0	E 5	278,1	13	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 77
SO190/020-1	25.11.06	###	9° 54,52' S	12° 34,61' E	2737	E 3	266,3	1,5	OBS/OBH	OBS/OBH	OBH an Deck	OBH 77
SO190/020-1	25.11.06	###	9° 54,52' S	12° 34,61' E	2737	E 3	266,3	1,5	OBS/OBH	OBS/OBH	Ende Station	

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/021-1	25.11.06	###	9° 54,52' S	12° 34,49' E	2770	ENE 3	251,3	1,7	Magnetometer	MAGN	Beginn Station	
SO190/021-1	25.11.06	###	9° 55,51' S	12° 34,53' E	2742	ENE 5	176,3	7,5	Magnetometer	MAGN	Magnetometer zu Wasser	
SO190/021-1	25.11.06	###	9° 55,63' S	12° 34,55' E	2713	ENE 5	171,9	7,2	Magnetometer	MAGN	Beginn Profil	rwk: 175°, d: 45 nm
SO190/021-1	25.11.06	###	10° 40,19' S	12° 38,95' E	5965	E 3	195,3	12	Magnetometer	MAGN	Kursänderung	rwk: 191°, d: 20 nm
SO190/021-1	25.11.06	###	11° 0,31' S	12° 34,93' E	4609	ESE 2	163,9	11	Magnetometer	MAGN	Kursänderung	rwk: 090°, d: 10 nm
SO190/021-1	25.11.06	###	10° 59,93' S	12° 44,90' E	4893	SE 4	53,3	9,8	Magnetometer	MAGN	Kursänderung	rwk: 011°, d: 20 nm
SO190/021-1	25.11.06	###	10° 40,01' S	12° 49,02' E	5574	SE 3	11,6	11	Magnetometer	MAGN	Kursänderung	rwk: 032°; d: 17 nm
SO190/021-1	25.11.06	###	10° 26,06' S	12° 57,94' E	1960	SE 3	35,2	9,2	Magnetometer	MAGN	Kursänderung	rwk: 016°, d: 28 nm
SO190/021-1	25.11.06	###	9° 59,10' S	13° 5,94' E	1078	ESE 4	15	9,8	Magnetometer	MAGN	Kursänderung	rwk: 005°, d: 23sm
SO190/021-1	25.11.06	###	9° 36,35' S	13° 8,03' E	2767	ESE 2	13,5	11	Magnetometer	MAGN	Kursänderung	rwk: 090°, d: 5sm
SO190/021-1	25.11.06	###	9° 36,16' S	13° 13,78' E	2881	ENE 2	97,7	7,3	Magnetometer	MAGN	Ende Profil	
SO190/021-1	25.11.06	###	9° 36,22' S	13° 14,51' E	2889	E 2	92,8	2,6	Magnetometer	MAGN	Magnetometer an Deck	
SO190/021-1	25.11.06	###	9° 36,23' S	13° 14,55' E	2891	E 2	94,6	2,8	Magnetometer	MAGN	Ende Station	
SO190/022-1	25.11.06	###	9° 36,16' S	13° 13,39' E	2882	ENE 1	193,2	2,8	OBS/OBH	OBS/OBH	Beginn Station	
SO190/022-1	25.11.06	###	9° 36,19' S	13° 13,38' E	2882	ESE 2	193,5	1,5	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 78
SO190/022-1	25.11.06	###	9° 40,16' S	13° 12,61' E	2663	E 3	221,2	1,8	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 79
SO190/022-1	25.11.06	###	9° 44,02' S	13° 11,75' E	2347	E 3	200,7	1,9	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 80
SO190/022-1	25.11.06	###	9° 46,93' S	13° 11,15' E	2177	ENE 3	215,7	2,6	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 81
SO190/022-1	25.11.06	###	9° 49,89' S	13° 10,51' E	1532	ENE 2	212,4	2,4	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 82
SO190/022-1	25.11.06	###	9° 54,23' S	13° 9,65' E	1461	NE 2	201,5	3,1	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 83
SO190/022-1	25.11.06	###	9° 57,00' S	13° 9,00' E	1144	NE 2	203	2,4	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 84
SO190/022-1	25.11.06	###	10° 0,46' S	13° 8,27' E	835	NE 2	205,5	2,1	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 85
SO190/022-1	25.11.06	###	10° 3,78' S	13° 7,55' E	1327	NE 2	200,3	2,7	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 86
SO190/022-1	25.11.06	###	10° 7,05' S	13° 6,88' E	1435	NE 2	200,6	1,6	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 87
SO190/022-1	25.11.06	###	10° 10,36' S	13° 6,15' E	1563	ENE 2	203,5	3,1	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 88
SO190/022-1	25.11.06	###	10° 14,89' S	13° 5,20' E	1691	NE 2	198,4	2,9	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 89
SO190/022-1	25.11.06	###	10° 18,24' S	13° 4,50' E	2032	NE 1	192,5	2,2	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 90
SO190/022-1	25.11.06	###	10° 21,51' S	13° 3,78' E	2187	NE 1	184,9	2,7	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 91
SO190/022-1	25.11.06	###	10° 24,86' S	13° 3,05' E	2384	ESE 3	195,8	2,7	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 92
SO190/022-1	25.11.06	###	10° 28,14' S	13° 2,33' E	2983	SE 3	192,5	2,9	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 93
SO190/022-1	25.11.06	###	10° 31,46' S	13° 1,61' E	3831	SSE 2	209	3,7	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 94
SO190/022-1	25.11.06	###	10° 34,78' S	13° 0,92' E	4828	SE 2	193,3	2,9	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 95
SO190/022-1	25.11.06	###	10° 38,21' S	13° 0,28' E	5587	SE 3	230,5	0,6	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 96

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/022-1	26.11.06	###	10° 49,41' S	12° 57,76' E	5732	ESE 4	248,3	2,1	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 97
SO190/022-1	26.11.06	###	10° 52,95' S	12° 56,97' E	5168	ESE 3	200,1	2,5	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 98
SO190/022-1	26.11.06	###	10° 56,26' S	12° 56,26' E	4994	SE 2	196,7	2	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 99
SO190/022-1	26.11.06	###	10° 58,72' S	12° 55,76' E	5109	SE 2	190,9	3,4	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 100
SO190/022-1	26.11.06	###	11° 1,78' S	12° 55,10' E	4947	ESE 3	202	2,1	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 101
SO190/022-1	26.11.06	###	11° 5,41' S	12° 54,36' E	4397	ESE 2	191,8	2,2	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 102
SO190/022-1	26.11.06	###	11° 8,69' S	12° 53,63' E	4236	SE 2	199,9	2,7	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 103
SO190/022-1	26.11.06	###	11° 11,42' S	12° 53,04' E	3571	ESE 2	194,9	4	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 104
SO190/022-1	26.11.06	###	11° 14,49' S	12° 52,37' E	3774	S 1	189,9	3,5	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 105
SO190/022-1	26.11.06	###	11° 18,28' S	12° 51,55' E	3627	S 1	195,9	2,9	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 106
SO190/022-1	26.11.06	###	11° 21,97' S	12° 50,76' E	3571	E 2	181,9	3	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 107
SO190/022-1	26.11.06	###	11° 22,02' S	12° 50,75' E	3573	E 2	199,8	3,4	OBS/OBH	OBS/OBH	Ende Station	
SO190/023-1	26.11.06	###	11° 31,09' S	12° 48,80' E	3485	N 1	7,6	2,3	Profil	PR	Stationsbeginn	
SO190/023-1	26.11.06	###	11° 30,91' S	12° 48,85' E	3481	WSW 0	310,1	1,1	Profil	PR	Bb-Airgunarray zu Wasser	
SO190/023-1	26.11.06	###	11° 30,76' S	12° 48,85' E	3534	NW 0	344	0,9	Profil	PR	Stb-Airgunarray zu Wasser	
SO190/023-1	26.11.06	###	11° 30,57' S	12° 48,89' E	3534	NNW 1	9,9	3,2	Profil	PR	Beginn Profil	rwK: 012°; d: 134 nm
SO190/023-1	26.11.06	###	11° 22,71' S	12° 50,60' E	3526	S 2	9,8	4,4	Profil	PR	Airgun abgeschaltet	Stb; Vorhieven zur Kontrolle
SO190/023-1	26.11.06	###	11° 22,39' S	12° 50,66' E	3549	SSE 1	0,7	1,7	Profil	PR	Airgun eingeschaltet	Stb wieder ausgesteckt
SO190/023-1	27.11.06	###	9° 18,57' S	13° 17,26' E	3214	SSW 3	7,8	4,7	Profil	PR	Ende Profil	
SO190/023-1	27.11.06	###	9° 18,20' S	13° 17,34' E	3219	S 3	4,5	2,3	Profil	PR	Stb Airgun an Deck	
SO190/023-1	27.11.06	###	9° 17,96' S	13° 17,36' E	3216	S 2	12,4	2	Profil	PR	Bb airgun an Deck	
SO190/023-1	27.11.06	###	9° 17,96' S	13° 17,36' E	3216	S 2	12,4	2	Profil	PR	Stationsende	
SO190/024-1	27.11.06	###	9° 17,96' S	13° 17,36' E	3216	S 2	12,4	2	Vermessung	EM / PS	Beginn Profil	rwk: 269°, d: 7 nm
SO190/024-1	27.11.06	###	9° 17,95' S	13° 10,11' E	2716	S 3	257,1	12	Vermessung	EM / PS	Kursänderung	rwk: 187°, d: 16sm
SO190/024-1	27.11.06	###	9° 33,95' S	113° 8,51' E	2915	W 1	190,8	13	Vermessung	EM / PS	Kursänderung	rwk: 112°, d: 1sm
SO190/024-1	27.11.06	###	9° 34,31' S	113° 8,76' E	2887	SSW 2	134,3	11	Vermessung	EM / PS	Ende Profil	
SO190/025-1	27.11.06	###	9° 34,31' S	113° 8,76' E	2887	SSW 2	134,3	11	OBS/OBH	OBS/OBH	Beginn Station	
SO190/025-1	27.11.06	###	9° 34,39' S	113° 8,92' E	2889	SW 1	120,4	11	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 78
SO190/025-1	27.11.06	###	9° 35,74' S	13° 12,31' E	0	SSW 2	105	7,9	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 79
SO190/025-1	27.11.06	###	9° 36,23' S	13° 13,21' E	0	WSW 2	226,8	1,2	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 78
SO190/025-1	27.11.06	###	9° 36,09' S	13° 12,94' E	0	SW 2	277	2	OBS/OBH	OBS/OBH	OBS an Deck	OBS 78
SO190/025-1	27.11.06	###	9° 37,20' S	13° 12,46' E	0	W 2	190,9	12	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 79
SO190/025-1	27.11.06	###	9° 39,72' S	13° 11,85' E	0	W 3	210,8	5,2	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 80

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/025-1	27.11.06	###	9° 40,08' S	13° 11,56' E	0	WNW 2	235,2	2,6	OBS/OBH	OBS/OBH	OBS an Deck	OBS 79
SO190/025-1	27.11.06	###	9° 43,27' S	13° 10,76' E	0	WSW 3	202,2	7,3	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 80
SO190/025-1	27.11.06	###	9° 43,37' S	13° 10,75' E	0	SSW 3	143,7	4,2	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 81
SO190/025-1	27.11.06	###	9° 44,00' S	13° 11,19' E	0	SSW 2	174,4	1,5	OBS/OBH	OBS/OBH	OBS an Deck	OBS 80
SO190/025-1	27.11.06	###	9° 45,99' S	13° 10,60' E	0	SW 2	193,1	12	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 81
SO190/025-1	27.11.06	###	9° 47,05' S	13° 10,15' E	0	W 1	257,5	2,5	OBS/OBH	OBS/OBH	OBS an Deck	OBS 81
SO190/025-1	27.11.06	###	9° 47,06' S	13° 10,06' E	0	SSW 2	280,6	2,4	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 82
SO190/025-1	27.11.06	###	9° 49,40' S	113° 9,65' E	0	SW 3	161,9	5,1	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 82
SO190/025-1	27.11.06	###	9° 50,11' S	113° 9,70' E	0	NW 3	239,5	2,7	OBS/OBH	OBS/OBH	OBS an Deck	OBS 82
SO190/025-1	27.11.06	###	9° 51,27' S	113° 9,13' E	0	WSW 3	187,1	11	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 83
SO190/025-1	27.11.06	###	9° 53,96' S	113° 8,77' E	0	WSW 3	157,6	1,8	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 83
SO190/025-1	27.11.06	###	9° 54,52' S	113° 8,99' E	0	WSW 3	233,9	2	OBS/OBH	OBS/OBH	OBS an Deck	OBS 83
SO190/025-1	27.11.06	###	9° 54,59' S	113° 8,93' E	0	WNW 3	218,1	3,6	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 84
SO190/025-1	27.11.06	###	9° 56,05' S	113° 8,41' E	0	W 4	187	9,9	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 84
SO190/025-1	27.11.06	###	9° 57,41' S	113° 8,21' E	0	WNW 3	246,7	2,5	OBS/OBH	OBS/OBH	OBH an Deck	OBH 84
SO190/025-1	27.11.06	###	9° 57,47' S	113° 8,10' E	0	WNW 2	226,2	3	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 85
SO190/025-1	27.11.06	###	10° 0,47' S	113° 7,28' E	0	WSW 3	184,2	3	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 85
SO190/025-1	27.11.06	###	10° 0,91' S	113° 7,74' E	0	WNW 3	215,3	1,8	OBS/OBH	OBS/OBH	OBH an Deck	OBH 85
SO190/025-1	27.11.06	###	10° 0,93' S	113° 7,72' E	0	WNW 3	223,9	2,5	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 86
SO190/025-1	27.11.06	###	10° 2,90' S	113° 7,13' E	0	WNW 5	195,3	9,3	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 86
SO190/025-1	27.11.06	###	10° 4,25' S	113° 6,95' E	0	NNW 2	223,3	2,3	OBS/OBH	OBS/OBH	OBH an Deck	OBH 86
SO190/025-1	27.11.06	###	10° 4,32' S	113° 6,87' E	0	NNW 2	217,3	3,9	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 87
SO190/025-1	27.11.06	###	10° 6,84' S	113° 6,24' E	0	WNW 3	201,9	5,4	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 87
SO190/025-1	27.11.06	###	10° 7,97' S	113° 5,83' E	0	WSW 4	276,9	1,1	OBS/OBH	OBS/OBH	OBS an Deck	OBS 87
SO190/025-1	27.11.06	###	10° 7,97' S	113° 5,83' E	0	WSW 4	276,9	1,1	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 88
SO190/025-1	27.11.06	###	10° 10,68' S	113° 5,57' E	0	SSW 5	160,1	2,7	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 88
SO190/025-1	27.11.06	###	10° 10,83' S	113° 5,65' E	0	SW 4	211,6	1,9	OBS/OBH	OBS/OBH	OBS an Deck	OBS 88
SO190/025-1	27.11.06	###	10° 10,88' S	113° 5,63' E	0	WSW 5	196,9	3,3	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 89
SO190/025-1	27.11.06	###	10° 15,04' S	113° 4,95' E	0	SW 4	183,8	1,3	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 90
SO190/025-1	27.11.06	###	10° 15,13' S	113° 4,92' E	0	W 4	212,2	2	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 89
SO190/025-1	27.11.06	###	10° 15,24' S	113° 4,82' E	0	SW 3	223,7	2,2	OBS/OBH	OBS/OBH	OBH an Deck	OBH 89
SO190/025-1	27.11.06	###	10° 16,88' S	113° 4,54' E	0	W 4	181,9	13	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 90
SO190/025-1	27.11.06	###	10° 18,57' S	113° 4,10' E	0	WSW 3	218,9	3,3	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 91

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/025-1	27.11.06	###	10° 18,75' S	113° 3,97' E	0	W 3	230	1,5	OBS/OBH	OBS/OBH	OBS an Deck	OBS 90
SO190/025-1	27.11.06	###	10° 21,19' S	113° 3,57' E	0	WSW 5	185,2	7,5	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 91
SO190/025-1	27.11.06	###	10° 21,84' S	113° 3,30' E	0	WSW 3	221	3,1	OBS/OBH	OBS/OBH	OBH an Deck	OBH 91
SO190/025-1	27.11.06	###	10° 21,84' S	113° 3,30' E	0	WSW 3	221	3,1	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 92
SO190/025-1	27.11.06	###	10° 24,96' S	113° 2,84' E	0	WSW 4	207,7	0,8	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 92
SO190/025-1	27.11.06	###	10° 24,96' S	113° 2,84' E	0	WSW 4	207,7	0,8	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 93
SO190/025-1	27.11.06	###	10° 25,09' S	113° 2,57' E	0	WSW 4	225,8	0,8	OBS/OBH	OBS/OBH	OBS an Deck	OBS 92
SO190/025-1	27.11.06	###	10° 26,33' S	113° 2,55' E	0	W 5	181,8	14	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 94
SO190/025-1	27.11.06	###	10° 28,24' S	113° 2,15' E	0	W 4	232,2	1,2	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 93
SO190/025-1	27.11.06	###	10° 28,33' S	113° 1,86' E	0	SSW 5	288,6	0,7	OBS/OBH	OBS/OBH	OBH an Deck	OBH 93
SO190/025-1	27.11.06	###	10° 29,51' S	113° 1,73' E	0	WSW 6	184,9	13	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 95
SO190/025-1	27.11.06	###	10° 30,59' S	113° 1,65' E	0	W 7	186	13	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 93
SO190/025-1	27.11.06	###	10° 31,96' S	113° 0,81' E	0	WSW 7	228,7	2,2	OBS/OBH	OBS/OBH	OBH an Deck	OBH 94
SO190/025-1	27.11.06	###	10° 32,21' S	113° 0,66' E	0	WSW 4	192,6	5,9	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 96
SO190/025-1	28.11.06	###	10° 34,29' S	113° 0,60' E	0	SW 5	184,2	7,3	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 95
SO190/025-1	28.11.06	###	10° 35,01' S	113° 0,47' E	0	SW 5	198,2	2,4	OBS/OBH	OBS/OBH	OBH an Deck	OBH 95
SO190/025-1	28.11.06	###	10° 38,34' S	12° 59,66' E	0	S 4	138,3	1,4	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 96
SO190/025-1	28.11.06	###	10° 38,44' S	12° 59,95' E	0	S 4	84,9	0,7	OBS/OBH	OBS/OBH	OBH an Deck	OBH 96
SO190/025-1	28.11.06	###	10° 43,50' S	12° 58,86' E	0	WSW 5	191,9	14	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 97
SO190/025-1	28.11.06	###	10° 48,49' S	12° 57,63' E	0	W 4	205	9,1	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 98
SO190/025-1	28.11.06	###	10° 49,93' S	12° 56,99' E	0	SSW 2	245,6	1,4	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 97
SO190/025-1	28.11.06	###	10° 49,95' S	12° 56,98' E	0	SSW 3	187,5	1,2	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 99
SO190/025-1	28.11.06	###	10° 49,81' S	12° 57,19' E	0	S 2	250,1	1	OBS/OBH	OBS/OBH	OBS an Deck	OBS 97
SO190/025-1	28.11.06	###	10° 53,07' S	12° 56,43' E	0	SSW 3	195	8	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 98
SO190/025-1	28.11.06	###	10° 53,32' S	12° 56,35' E	0	S 3	202,3	8,3	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 100
SO190/025-1	28.11.06	###	10° 54,09' S	12° 55,98' E	0	S 3	204,5	2,5	OBS/OBH	OBS/OBH	OBS an Deck	OBS 98
SO190/025-1	28.11.06	###	10° 56,62' S	12° 55,72' E	0	S 4	99,1	1,4	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 99
SO190/025-1	28.11.06	###	10° 56,61' S	12° 55,76' E	0	S 4	63,1	1,9	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 101
SO190/025-1	28.11.06	###	10° 56,49' S	12° 55,95' E	0	S 3	168,7	1,1	OBS/OBH	OBS/OBH	OBS an Deck	OBS 99
SO190/025-1	28.11.06	###	10° 58,88' S	12° 55,14' E	0	SW 4	167,5	4,7	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 100
SO190/025-1	28.11.06	###	10° 58,96' S	12° 55,16' E	0	WSW 4	182,3	4,1	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 101
SO190/025-1	28.11.06	###	10° 58,96' S	12° 55,16' E	0	WSW 4	182,3	4,1	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 102
SO190/025-1	28.11.06	###	10° 59,33' S	12° 55,19' E	0	WSW 5	222,2	2,6	OBS/OBH	OBS/OBH	OBS an Deck	OBS 100

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/025-1	28.11.06	###	11° 1,32' S	12° 55,15' E	0	SW 5	155,6	7,9	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 101
SO190/025-1	28.11.06	###	11° 2,01' S	12° 55,05' E	0	WSW 4	252,2	5,7	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 103
SO190/025-1	28.11.06	###	11° 2,07' S	12° 54,81' E	0	SW 5	249,8	0,8	OBS/OBH	OBS/OBH	OBS an Deck	OBS 101
SO190/025-1	28.11.06	###	11° 5,31' S	12° 54,40' E	0	SW 4	183,8	7,9	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 102
SO190/025-1	28.11.06	###	11° 5,50' S	12° 54,32' E	0	W 5	232,2	3,5	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 104
SO190/025-1	28.11.06	###	11° 5,58' S	12° 54,11' E	0	SSW 4	229,2	1,5	OBS/OBH	OBS/OBH	OBS an Deck	OBS 102
SO190/025-1	28.11.06	###	11° 8,62' S	12° 53,54' E	0	SW 5	188,6	5,7	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 103
SO190/025-1	28.11.06	###	11° 9,41' S	12° 53,16' E	0	SW 5	259,3	1	OBS/OBH	OBS/OBH	OBH an Deck	OBH 103
SO190/025-1	28.11.06	###	11° 9,41' S	12° 53,16' E	0	SW 5	259,3	1	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 105
SO190/025-1	28.11.06	###	11° 11,50' S	12° 52,87' E	0	SW 5	190,4	10	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 104
SO190/025-1	28.11.06	###	11° 12,06' S	12° 52,62' E	0	SSW 5	217,3	5,2	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 106
SO190/025-1	28.11.06	###	11° 12,14' S	12° 52,54' E	0	SW 5	214,1	2,8	OBS/OBH	OBS/OBH	OBH an Deck	OBH 104
SO190/025-1	28.11.06	###	11° 14,57' S	12° 52,29' E	0	SW 5	183,2	7,2	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 105
SO190/025-1	28.11.06	###	11° 14,71' S	12° 52,36' E	0	SE 4	313,7	2,9	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 107
SO190/025-1	28.11.06	###	11° 14,66' S	12° 52,17' E	0	SW 5	243,6	1,6	OBS/OBH	OBS/OBH	OBH an Deck	OBH 105
SO190/025-1	28.11.06	###	11° 17,66' S	12° 51,95' E	0	SW 5	181,1	9	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 106
SO190/025-1	28.11.06	###	11° 19,13' S	12° 51,13' E	0	SSW 4	220,9	1,4	OBS/OBH	OBS/OBH	OBH an Deck	OBH 106
SO190/025-1	28.11.06	###	11° 22,51' S	12° 50,46' E	3530	S 6	226,6	3,6	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 107
SO190/025-1	28.11.06	###	11° 23,41' S	12° 50,09' E	3498	S 5	197,9	2,5	OBS/OBH	OBS/OBH	OBH an Deck	OBH 107
SO190/025-1	28.11.06	###	11° 23,41' S	12° 50,09' E	3498	S 5	197,9	2,5	OBS/OBH	OBS/OBH	Ende Station	
SO190/026-1	28.11.06	###	11° 23,41' S	12° 50,09' E	3498	S 5	197,9	2,5	Vermessung	EM / PS	Beginn Profil	rwk: 110°; d: 7 nm
SO190/026-1	28.11.06	###	11° 26,06' S	12° 56,72' E	3533	SSW 6	104,4	12	Vermessung	EM / PS	Kursänderung	rwk: 016°; d: 43 nm
SO190/026-1	28.11.06	###	10° 44,01' S	113° 8,99' E	5681	S 6	17,1	11	Vermessung	EM / PS	Kursänderung	rwk: 354°, d: 17 nm
SO190/026-1	28.11.06	###	10° 27,00' S	113° 7,20' E	2249	S 6	359	12	Vermessung	EM / PS	Kursänderung	rwk: 006°, d: 27 nm
SO190/026-1	28.11.06	###	10° 0,16' S	13° 10,00' E	878	SE 2	6,3	12	Vermessung	EM / PS	Kursänderung	rwk: 020°, d: 24 nm
SO190/026-1	28.11.06	###	9° 37,00' S	13° 18,48' E	2955	E 2	19,5	12	Vermessung	EM / PS	Kursänderung	rwk: 011°, d: 56 nm
SO190/026-1	28.11.06	###	8° 41,43' S	13° 29,70' E	1311	NNE 2	10,3	12	Vermessung	EM / PS	Kursänderung	rwk: 360°, d: 10 nm
SO190/026-1	28.11.06	###	8° 31,64' S	13° 29,71' E	791	NNE 1	3,3	13	Vermessung	EM / PS	Ende Profil	
SO190/027-1	29.11.06	###	8° 33,50' S	13° 27,01' E	812	NNW 2	235,4	1,8	OBS/OBH	OBS/OBH	Beginn Station	
SO190/027-1	29.11.06	###	8° 33,50' S	13° 27,01' E	812	NNW 2	235,4	1,8	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 108
SO190/027-1	29.11.06	###	8° 36,00' S	13° 26,38' E	1037	W 0	216,6	1,6	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 109
SO190/027-1	29.11.06	###	8° 39,01' S	13° 25,76' E	1483	W 0	197,1	1,5	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 110
SO190/027-1	29.11.06	###	8° 42,01' S	13° 25,13' E	1463	WSW 1	183,4	1,3	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 111

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/027-1	29.11.06	###	8° 45,01' S	13° 24,45' E	1652	SW 1	219,5	1,5	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 112
SO190/027-1	29.11.06	###	8° 48,02' S	13° 23,85' E	2059	N 1	196,8	1,6	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 113
SO190/027-1	29.11.06	###	8° 51,03' S	13° 23,17' E	1838	NNW 1	185,8	0,6	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 114
SO190/027-1	29.11.06	###	8° 53,99' S	13° 22,52' E	1765	NNW 1	184,5	1,6	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 115
SO190/027-1	29.11.06	###	8° 57,00' S	13° 21,88' E	1952	N 1	199,9	1,5	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 116
SO190/027-1	29.11.06	###	9° 0,01' S	13° 21,26' E	2178	SE 0	197,1	1,5	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 117
SO190/027-1	29.11.06	###	9° 3,03' S	13° 20,57' E	2642	E 1	172,9	0,7	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 118
SO190/027-1	29.11.06	###	9° 6,00' S	13° 19,92' E	3181	NE 0	234,5	1,3	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 119
SO190/027-1	29.11.06	###	9° 8,99' S	13° 19,30' E	3196	ENE 2	211,3	1,6	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 120
SO190/027-1	29.11.06	###	9° 12,00' S	13° 18,63' E	3220	SE 1	226,6	1,3	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 121
SO190/027-1	29.11.06	###	9° 15,02' S	13° 17,98' E	3228	E 0	203,6	1,4	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 122
SO190/027-1	29.11.06	###	9° 17,99' S	13° 17,34' E	3218	ENE 1	234,1	2,5	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 123
SO190/027-1	29.11.06	###	9° 21,01' S	13° 16,69' E	3070	SE 2	241,7	2,9	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 124
SO190/027-1	29.11.06	###	9° 24,04' S	13° 16,05' E	3028	SE 3	168,9	0,7	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 125
SO190/027-1	29.11.06	###	9° 26,96' S	13° 15,43' E	2999	SSE 2	230,3	1,8	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 126
SO190/027-1	29.11.06	###	9° 29,94' S	13° 14,87' E	3061	SE 3	229,9	2,2	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 127
SO190/027-1	29.11.06	###	9° 32,97' S	13° 14,22' E	3009	SE 4	230,6	1,2	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 128
SO190/027-1	29.11.06	###	9° 37,98' S	13° 13,10' E	2769	SSE 4	229,8	2,1	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 129
SO190/027-1	29.11.06	###	9° 37,98' S	13° 13,10' E	2769	SSE 4	229,8	2,1	OBS/OBH	OBS/OBH	Ende Station	
SO190/028-1	29.11.06	###	9° 37,98' S	13° 13,10' E	2769	SSE 4	229,8	2,1	Vermessung	EM / PS	Beginn Profil	rwk: 090°; d: 9 nm
SO190/028-1	29.11.06	###	9° 38,00' S	13° 22,43' E	3036	SE 4	112,4	9,3	Vermessung	EM / PS	Kursänderung	rwk: 205°, d: 26 nm
SO190/028-1	29.11.06	###	10° 0,77' S	13° 12,13' E	858	S 6	253,6	13	Vermessung	EM / PS	Kursänderung	rwk: 282°, d: 4 nm
SO190/028-1	29.11.06	###	10° 0,08' S	113° 8,62' E	784	SSE 8	286,3	6,9	Vermessung	EM / PS	Ende Profil	
SO190/029-1	29.11.06	###	10° 0,08' S	113° 8,62' E	784	SSE 8	286,3	6,9	Profil	PR	Stationsbeginn	
SO190/029-1	29.11.06	###	9° 59,78' S	113° 8,35' E	825	SSE 6	338,2	1,9	Profil	PR	Bb Airgun zu Wasser	
SO190/029-1	29.11.06	###	9° 59,52' S	113° 8,31' E	835	SSE 6	350,1	2,2	Profil	PR	Stb Airgun zu Wasser	
SO190/029-1	29.11.06	###	9° 59,04' S	113° 8,45' E	870	SSE 6	26	4,8	Profil	PR	Beginn Profil	rwk: 012°, d: 88 nm
SO190/029-1	29.11.06	###	9° 15,54' S	13° 17,95' E	3224	SSE 2	13,7	3,9	Profil	PR	Streamer zu Wasser	über Bb.-Magnetikausleger
SO190/029-1	30.11.06	###	8° 33,53' S	13° 26,98' E	819	SSE 3	14,9	3,7	Profil	PR	Ende Profil	
SO190/029-1	30.11.06	###	8° 33,13' S	13° 27,13' E	952	SSE 3	25,3	2	Profil	PR	Streamer an Deck	
SO190/029-1	30.11.06	###	8° 32,89' S	13° 27,32' E	934	SSE 3	38,9	2,4	Profil	PR	Stb Airgun an Deck	
SO190/029-1	30.11.06	###	8° 32,76' S	13° 27,43' E	910	SSE 3	41,9	2,1	Profil	PR	Bb airgun an Deck	
SO190/029-1	30.11.06	###	8° 32,76' S	13° 27,43' E	910	SSE 3	41,9	2,1	Profil	PR	Stationsende	

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/030-1	30.11.06	###	8° 32,76' S	13° 27,43' E	910	SSE 3	41,9	2,1	OBS/OBH	OBS/OBH	Beginn Station	
SO190/030-1	30.11.06	###	8° 33,37' S	13° 27,19' E	1009	S 4	110,7	0,6	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 108
SO190/030-1	30.11.06	###	8° 33,36' S	13° 27,20' E	1004	SSE 3	159	0,6	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 108
SO190/030-1	30.11.06	###	8° 33,48' S	13° 26,97' E	0	SE 3	182,3	0,5	OBS/OBH	OBS/OBH	OBH an Deck	OBH 108
SO190/030-1	30.11.06	###	8° 35,44' S	13° 26,23' E	0	ESE 3	160,8	4,8	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 109
SO190/030-1	30.11.06	###	8° 35,78' S	13° 26,39' E	0	SSE 4	152,2	0,9	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 109
SO190/030-1	30.11.06	###	8° 35,91' S	13° 26,40' E	0	ESE 5	58,8	0,5	OBS/OBH	OBS/OBH	OBH an Deck	OBH 109
SO190/030-1	30.11.06	###	8° 37,84' S	13° 26,00' E	0	SSE 3	181,9	11	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 110
SO190/030-1	30.11.06	###	8° 38,82' S	13° 25,66' E	0	SE 3	143,9	2,2	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 110
SO190/030-1	30.11.06	###	8° 38,98' S	13° 25,73' E	0	S 4	127,6	0,7	OBS/OBH	OBS/OBH	OBH an Deck	OBH 110
SO190/030-1	30.11.06	###	8° 40,27' S	13° 25,05' E	0	SE 3	208,9	12	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 111
SO190/030-1	30.11.06	###	8° 41,89' S	13° 25,05' E	0	SSE 3	161,1	1,6	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 111
SO190/030-1	30.11.06	###	8° 41,91' S	13° 25,12' E	0	SSE 3	53	0,1	OBS/OBH	OBS/OBH	OBH an Deck	OBH 111
SO190/030-1	30.11.06	###	8° 42,48' S	13° 25,03' E	0	SSE 2	191,8	11	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 112
SO190/030-1	30.11.06	###	8° 44,78' S	13° 24,53' E	0	SSE 3	196,1	3,1	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 112
SO190/030-1	30.11.06	###	8° 44,98' S	13° 24,38' E	0	SE 3	199,9	2,3	OBS/OBH	OBS/OBH	OBH an Deck	OBH 112
SO190/030-1	30.11.06	###	8° 45,32' S	13° 24,31' E	0	SE 2	190	8,8	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 113
SO190/030-1	30.11.06	###	8° 47,69' S	13° 23,84' E	0	SSE 3	198,5	2,5	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 113
SO190/030-1	30.11.06	###	8° 47,91' S	13° 23,82' E	0	SSE 3	229,7	0,2	OBS/OBH	OBS/OBH	OBH an Deck	OBH 113
SO190/030-1	30.11.06	###	8° 47,95' S	13° 23,80' E	0	ESE 2	201,3	2	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 114
SO190/030-1	30.11.06	###	8° 50,90' S	13° 23,17' E	0	SE 3	213,1	2	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 114
SO190/030-1	30.11.06	###	8° 50,92' S	13° 23,06' E	0	SSE 3	321,9	0,5	OBS/OBH	OBS/OBH	OBS an Deck	OBS 114
SO190/030-1	30.11.06	###	8° 50,93' S	13° 23,01' E	0	ESE 4	222,1	2,1	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 115
SO190/030-1	30.11.06	###	8° 53,89' S	13° 22,55' E	0	SSE 4	208,8	1,7	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 115
SO190/030-1	30.11.06	###	8° 53,90' S	13° 22,54' E	0	SSE 5	182	0,4	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 116
SO190/030-1	30.11.06	###	8° 53,62' S	13° 22,34' E	0	SE 4	292,7	1,5	OBS/OBH	OBS/OBH	OBS an Deck	OBS 115
SO190/030-1	30.11.06	###	8° 55,75' S	13° 21,87' E	0	SSE 4	192	10	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 116
SO190/030-1	30.11.06	###	8° 56,69' S	13° 21,61' E	0	SSE 5	213,9	1	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 117
SO190/030-1	30.11.06	###	8° 56,70' S	13° 21,61' E	0	SE 3	193,1	0,9	OBS/OBH	OBS/OBH	OBS an Deck	OBS 116
SO190/030-1	30.11.06	###	8° 59,90' S	13° 21,00' E	0	SSE 4	180,5	1,7	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 117
SO190/030-1	30.11.06	###	8° 59,86' S	13° 21,11' E	0	SSE 4	38	3	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 118
SO190/030-1	30.11.06	###	8° 59,81' S	13° 21,13' E	0	SE 3	30,1	2,3	OBS/OBH	OBS/OBH	OBS an Deck	OBS 117
SO190/030-1	30.11.06	###	9° 2,20' S	13° 20,68' E	0	S 4	191,5	9,8	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 119

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/030-1	30.11.06	###	9° 2,81' S	13° 20,51' E	0	SSE 2	330,6	0,5	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 118
SO190/030-1	30.11.06	###	9° 2,93' S	13° 20,47' E	0	S 4	228,6	0,8	OBS/OBH	OBS/OBH	OBS an Deck	OBS 118
SO190/030-1	30.11.06	###	9° 4,41' S	13° 20,15' E	0	S 4	191,5	12	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 120
SO190/030-1	30.11.06	###	9° 5,15' S	13° 19,99' E	0	S 4	188,8	10	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 119
SO190/030-1	30.11.06	###	9° 5,75' S	13° 19,81' E	0	SSE 3	359	0,7	OBS/OBH	OBS/OBH	OBS an Deck	OBS 119
SO190/030-1	30.11.06	###	9° 7,14' S	13° 19,52' E	0	S 3	194,9	9,8	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 121
SO190/030-1	30.11.06	###	9° 8,91' S	13° 19,08' E	0	SSE 3	150,5	3,9	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 120 erneut ausgelöst
SO190/030-1	30.11.06	###	9° 11,20' S	13° 18,59' E	0	S 5	195,3	7,7	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 121
SO190/030-1	30.11.06	###	9° 11,76' S	13° 18,45' E	0	S 5	267	0,7	OBS/OBH	OBS/OBH	OBS an Deck	OBS 121
SO190/030-1	30.11.06	###	9° 10,20' S	13° 18,66' E	0	SSE 5	12,6	11	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 120
SO190/030-1	30.11.06	###	9° 8,36' S	13° 18,92' E	0	SSW 3	355,1	1,5	OBS/OBH	OBS/OBH	OBS an Deck	OBS 120
SO190/030-1	30.11.06	###	9° 8,29' S	13° 18,92' E	0	SSE 3	10,2	1,2	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 122
SO190/030-1	30.11.06	###	9° 12,71' S	13° 17,86' E	0	S 4	196,2	12	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 123
SO190/030-1	30.11.06	###	9° 13,09' S	13° 17,76' E	0	SSE 4	193,4	12	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 122
SO190/030-1	30.11.06	###	9° 14,61' S	13° 17,49' E	0	S 3	323,6	2,1	OBS/OBH	OBS/OBH	OBS an Deck	OBS 122
SO190/030-1	30.11.06	###	9° 15,88' S	13° 17,09' E	0	SSE 4	194,5	9,2	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 123
SO190/030-1	30.11.06	###	9° 17,44' S	13° 16,93' E	0	SSE 4	21,1	1,6	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 124
SO190/030-1	30.11.06	###	9° 17,69' S	13° 16,82' E	0	SSE 4	289	1,6	OBS/OBH	OBS/OBH	OBS an Deck	OBS 123
SO190/030-1	30.11.06	###	9° 20,20' S	13° 16,33' E	0	SSE 5	180,5	9,1	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 124
SO190/030-1	30.11.06	###	9° 20,20' S	13° 16,33' E	0	SSE 5	180,5	9,1	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 125
SO190/030-1	30.11.06	###	9° 20,67' S	13° 16,21' E	0	SE 3	271	1,4	OBS/OBH	OBS/OBH	OBS an Deck	OBS 124
SO190/030-1	30.11.06	###	9° 23,44' S	13° 15,85' E	0	SSE 4	172	3,4	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 126
SO190/030-1	30.11.06	###	9° 23,64' S	13° 15,81' E	0	SSE 3	237,5	0,6	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 125
SO190/030-1	30.11.06	###	9° 23,85' S	13° 15,74' E	0	SSE 4	261,9	1,6	OBS/OBH	OBS/OBH	OBS an Deck	OBS 125
SO190/030-1	30.11.06	###	9° 25,67' S	13° 15,45' E	0	SSE 3	182,7	13	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 127
SO190/030-1	30.11.06	###	9° 26,05' S	13° 15,42' E	0	SSE 4	189	11	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 126
SO190/030-1	30.11.06	###	9° 26,64' S	13° 15,01' E	0	SSE 3	258,1	2,5	OBS/OBH	OBS/OBH	OBS an Deck	OBS 126
SO190/030-1	30.11.06	###	9° 28,56' S	13° 14,71' E	0	SSE 3	182,1	13	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 128
SO190/030-1	30.11.06	###	9° 29,28' S	13° 14,65' E	0	SSE 3	198,3	4,5	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 127
SO190/030-1	30.11.06	###	9° 29,78' S	13° 14,53' E	0	SSE 3	249,9	1,2	OBS/OBH	OBS/OBH	OBS an Deck	OBS 127
SO190/030-1	30.11.06	###	9° 32,44' S	13° 14,05' E	0	SSE 3	203,4	3,5	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 129
SO190/030-1	30.11.06	###	9° 32,75' S	13° 13,84' E	0	SSE 3	57,4	1	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 128
SO190/030-1	30.11.06	###	9° 32,72' S	13° 13,75' E	0	SSE 4	296,1	2,9	OBS/OBH	OBS/OBH	OBS an Deck	OBS 128

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/030-1	30.11.06	###	9° 36,57' S	13° 12,98' E	0	SSE 4	197,6	12	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 129
SO190/030-1	30.11.06	###	9° 37,58' S	13° 12,33' E	2776	SSE 4	265,3	1,9	OBS/OBH	OBS/OBH	OBS an Deck	OBS 129
SO190/030-1	30.11.06	###	9° 37,58' S	13° 12,33' E	2776	SSE 4	265,3	1,9	OBS/OBH	OBS/OBH	Ende Station	
SO190/031-1	30.11.06	###	9° 37,58' S	13° 12,33' E	2776	SSE 4	265,3	1,9	Magnetometer	MAGN	Beginn Station	
SO190/031-1	30.11.06	###	9° 37,70' S	13° 12,38' E	2766	SSE 5	136,6	2,1	Magnetometer	MAGN	Magnetometer zu Wasse	220 m
SO190/031-1	30.11.06	###	9° 37,70' S	13° 12,38' E	2766	SSE 5	136,6	2,1	Magnetometer	MAGN	Beginn Profil	rwk: 105°, d: 15 nm
SO190/031-1	01.12.06	###	9° 41,62' S	13° 26,07' E	3095	S 3	148,1	10	Magnetometer	MAGN	Kursänderung	rwk: 191°, d: 6 nm
SO190/031-1	01.12.06	###	9° 47,73' S	13° 25,02' E	2877	S 3	196,1	10	Magnetometer	MAGN	Kursänderung	rwk: 216°, d: 10 nm
SO190/031-1	01.12.06	###	9° 55,99' S	13° 19,04' E	1750	S 3	214,1	12	Magnetometer	MAGN	Kursänderung	rwk: 218°, d: 8 nm
SO190/031-1	01.12.06	###	10° 2,29' S	13° 14,13' E	950	SSE 2	197,9	11	Magnetometer	MAGN	Kursänderung	rwk: 097°, d: 5 nm
SO190/031-1	01.12.06	###	10° 3,07' S	13° 19,23' E	613	S 5	99,8	9,6	Magnetometer	MAGN	Kursänderung	rwk: 109°, d: 6 nm
SO190/031-1	01.12.06	###	10° 5,02' S	13° 24,97' E	1123	S 6	106,8	9,4	Magnetometer	MAGN	Kursänderung	rwk: 112°, d: 5 nm
SO190/031-1	01.12.06	###	10° 7,11' S	13° 29,77' E	1834	SSW 4	159,3	11	Magnetometer	MAGN	Kursänderung	rwk: 198°, d: 80 nm
SO190/031-1	01.12.06	###	11° 23,31' S	13° 5,07' E	3988	SSE 6	146,7	9,9	Magnetometer	MAGN	Kursänderung	rwk: 088°, d: 8 nm
SO190/031-1	01.12.06	###	11° 22,98' S	13° 12,85' E	4412	SSE 6	66,1	10	Magnetometer	MAGN	Kursänderung	rwk: 022°, d: 77 nm
SO190/031-1	01.12.06	###	10° 12,39' S	13° 41,99' E	2355	SSW 4	72,8	8,4	Magnetometer	MAGN	Kursänderung	rwk: 127°, d: 15 nm
SO190/031-1	01.12.06	###	10° 20,83' S	13° 53,94' E	2600	SSW 3	175	10	Magnetometer	MAGN	Kursänderung	rwk: 209°, d: 72 nm
SO190/031-1	02.12.06	###	11° 23,95' S	13° 19,14' E	4473	S 3	170	12	Magnetometer	MAGN	Kursänderung	rwk: 090°, d: 8 nm
SO190/031-1	02.12.06	###	11° 23,94' S	13° 26,95' E	4515	SE 3	51,6	9,9	Magnetometer	MAGN	Kursänderung	rwk: 034°, d: 43 nm
SO190/031-1	02.12.06	###	10° 50,03' S	13° 49,98' E	5087	SSW 4	33,2	10	Magnetometer	MAGN	Kursänderung	rwk: 015°, d: 25 nm
SO190/031-1	02.12.06	###	10° 25,99' S	13° 56,50' E	2664	SSW 3	10,5	11	Magnetometer	MAGN	Kursänderung	rwk: 009°, d: 3 nm
SO190/031-1	02.12.06	###	10° 23,06' S	13° 56,97' E	2764	S 2	335,6	8,5	Magnetometer	MAGN	Kursänderung	rwk: 276°, d: 9 nm
SO190/031-1	02.12.06	###	10° 22,86' S	13° 55,97' E	2707	SE 3	274,1	3,8	Magnetometer	MAGN	Magnetometer an Deck	Setzen als EM-Profil fort
SO190/031-2	02.12.06	###	10° 22,01' S	13° 48,07' E	2388	S 4	269	15	Vermessung	EM / PS	Kursänderung	rwk: 209°, d: 20 nm
SO190/031-2	02.12.06	###	10° 39,57' S	13° 38,08' E	3230	S 2	207,6	13	Vermessung	EM / PS	Kursänderung	rwk: 270°, d: 2 nm
SO190/031-2	02.12.06	###	10° 39,70' S	13° 36,12' E	2844	SSE 3	268,7	14	Vermessung	EM / PS	Kursänderung	rwk: 020°, d: 21 nm
SO190/031-2	02.12.06	###	10° 19,79' S	13° 43,24' E	2365	SSE 4	357,5	12	Vermessung	EM / PS	Kursänderung	rwk: 325°, d: 9 nm
SO190/031-2	02.12.06	###	10° 12,18' S	13° 37,90' E	1901	SSE 4	327,7	14	Vermessung	EM / PS	Kursänderung	rwk: 199°, d: 15 nm
SO190/031-2	02.12.06	###	10° 26,05' S	13° 32,98' E	1375	SE 2	202,4	13	Vermessung	EM / PS	Kursänderung	rwk: 209°, d: 13 nm
SO190/031-2	02.12.06	###	10° 37,00' S	13° 26,35' E	3351	S 1	276,8	13	Vermessung	EM / PS	Kursänderung	rwk: 270°, d: 2 nm
SO190/031-2	02.12.06	###	10° 36,87' S	13° 25,01' E	3853	SSW 2	330,5	12	Vermessung	EM / PS	Kursänderung	rwk: 019°, d: 29 nm
SO190/031-2	02.12.06	###	10° 9,95' S	13° 34,46' E	1660	SE 2	328,9	12	Vermessung	EM / PS	Kursänderung	rwk: 282°, d: 11 nm
SO190/031-2	02.12.06	###	10° 7,84' S	13° 23,80' E	982	SE 1	282,9	15	Vermessung	EM / PS	Kursänderung	rwk: 199°, d: 26 nm

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/031-2	02.12.06	###	10° 31,97' S	13° 15,00' E	2539	SSE 1	227,4	13	Vermessung	EM / PS	Kursänderung	rwk: 270°, d: 4 nm
SO190/031-2	02.12.06	###	10° 31,99' S	13° 11,03' E	2333	SSE 2	298	12	Vermessung	EM / PS	Kursänderung	rwk: 011°, d: 27 nm
SO190/031-2	03.12.06	###	10° 5,75' S	13° 15,99' E	582	SSE 2	13,7	13	Vermessung	EM / PS	Kursänderung	rwk: 033^, d: 7 nm
SO190/031-2	03.12.06	###	9° 59,79' S	13° 19,95' E	1459	SSW 1	37,1	11	Vermessung	EM / PS	Kursänderung	rwk: 090^, d: 19 nm
SO190/031-2	03.12.06	###	9° 59,82' S	13° 39,08' E	2852	S 2	115,9	11	Vermessung	EM / PS	Kursänderung	rwk: 133°, d: 11 nm
SO190/031-2	03.12.06	###	10° 7,02' S	13° 47,03' E	2704	SSE 2	129,7	11	Vermessung	EM / PS	Kursänderung	rwk: 120°, d: 15 nm
SO190/031-3	03.12.06	###	10° 7,40' S	13° 47,45' E	2810	ENE 0	293	2	SSBL-Test	SSBL	Beginn Station	Test SSBL-System
SO190/031-3	03.12.06	###	10° 7,38' S	13° 47,38' E	2799	E 0	275,1	2,3	SSBL-Test	SSBL	Zu wasser	W6; Dummy
SO190/031-3	03.12.06	###	10° 7,38' S	13° 47,34' E	2799	ENE 0	266,8	2,3	SSBL-Test	SSBL	Zu wasser	Mobil Transponder, SL: 30 m
SO190/031-3	03.12.06	###	10° 7,36' S	13° 46,76' E	2747	SSE 3	241,6	1	SSBL-Test	SSBL	Auf Tiefe	SL: 500 m
SO190/031-3	03.12.06	###	10° 7,62' S	13° 46,29' E	2739	S 3	264,1	2,6	SSBL-Test	SSBL	Beginn hieven	
SO190/031-3	03.12.06	###	10° 7,86' S	13° 45,64' E	2697	SSW 3	251,9	2	SSBL-Test	SSBL	An deck	
SO190/031-3	03.12.06	###	10° 7,88' S	13° 45,50' E	2690	SSW 4	255,6	2,9	SSBL-Test	SSBL	Ende Station	
SO190/031-2	03.12.06	###	10° 7,88' S	13° 45,50' E	2690	SSW 4	255,6	2,9	Vermessung	EM / PS	Fortsetzung Profil	
SO190/031-2	03.12.06	###	10° 14,38' S	13° 59,96' E	2232	S 4	122,4	11	Vermessung	EM / PS	Kursänderung	rwk: 108°, d: 4 nm
SO190/031-2	03.12.06	###	10° 15,47' S	14° 3,42' E	2417	S 6	112,2	11	Vermessung	EM / PS	Kursänderung	rwk: 060°, d: 151 nm
SO190/031-2	03.12.06	###	8° 59,44' S	16° 14,81' E	331	NW 1	60,4	11	Vermessung	EM / PS	Ende Profil	
SO190/032-1	03.12.06	###	8° 59,44' S	16° 14,81' E	331	NW 1	60,4	11	OBS/OBH	OBS/OBH	Beginn Station	
SO190/032-1	03.12.06	###	8° 59,90' S	16° 15,55' E	202	WSW 0	271	1,1	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 130
SO190/032-1	03.12.06	###	9° 2,94' S	16° 15,27' E	1259	SSW 0	228,5	1,2	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 131
SO190/032-1	03.12.06	###	9° 6,94' S	16° 14,84' E	1935	ESE 3	239,1	1,1	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 132
SO190/032-1	03.12.06	###	9° 10,97' S	16° 14,43' E	2163	SSE 2	274,7	0,3	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 133
SO190/032-1	03.12.06	###	9° 14,44' S	16° 13,96' E	2222	S 1	237,8	0,3	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 134
SO190/032-1	04.12.06	###	9° 18,05' S	16° 13,57' E	2608	SE 0	188,4	0,7	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 135
SO190/032-1	04.12.06	###	9° 21,50' S	16° 13,20' E	3053	ESE 1	161,1	0,6	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 136
SO190/032-1	04.12.06	###	9° 24,99' S	16° 12,82' E	3378	ESE 2	174,4	1,4	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 137
SO190/032-1	04.12.06	###	9° 28,47' S	16° 12,53' E	3704	SE 1	190,2	1,5	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 138
SO190/032-1	04.12.06	###	9° 32,00' S	16° 12,18' E	3565	ESE 0	178,1	2,7	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 139
SO190/032-1	04.12.06	###	9° 35,45' S	16° 11,79' E	3773	S 0	187,4	2,5	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 140
SO190/032-1	04.12.06	###	9° 39,04' S	16° 11,45' E	4121	SSE 1	194,6	1,7	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 141
SO190/032-1	04.12.06	###	9° 42,51' S	16° 11,06' E	4297	SSE 2	182,1	2,1	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 142
SO190/032-1	04.12.06	###	9° 46,01' S	16° 10,68' E	4306	E 1	161,5	1,5	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 143
SO190/032-1	04.12.06	###	9° 49,53' S	16° 10,33' E	4302	SSE 2	195,3	2,1	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 144

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/032-1	04.12.06	###	9° 53,00' S	116° 9,99' E	4389	SE 2	182,4	0,9	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 145
SO190/032-1	04.12.06	###	9° 56,50' S	116° 9,62' E	4397	ESE 2	189,5	2,6	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 146
SO190/032-1	04.12.06	###	10° 0,01' S	116° 9,27' E	4403	E 3	203,4	1,8	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 147
SO190/032-1	04.12.06	###	10° 3,48' S	116° 8,93' E	4404	E 5	207,9	2	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 148
SO190/032-1	04.12.06	###	10° 7,03' S	116° 8,44' E	4402	ENE 3	275,2	1,2	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 149
SO190/032-1	04.12.06	###	10° 10,05' S	116° 8,22' E	4399	E 3	190,8	2,5	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 150
SO190/032-1	04.12.06	###	10° 13,98' S	116° 7,86' E	4391	E 3	206,2	1,9	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 151
SO190/032-1	04.12.06	###	10° 16,96' S	116° 7,58' E	4383	E 3	217,6	1,4	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 152
SO190/032-1	04.12.06	###	10° 30,01' S	116° 6,14' E	4010	SSW 2	241,2	1,4	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 153
SO190/032-1	04.12.06	###	10° 30,01' S	116° 6,14' E	4010	SSW 2	241,2	1,4	OBS/OBH	OBS/OBH	Ende Station	
SO190/033-1	04.12.06	###	10° 30,01' S	116° 6,14' E	4010	SSW 2	241,2	1,4	Vermessung	EM / PS	Beginn Profil	rwk: 267°, d: 9 nm
SO190/033-1	04.12.06	###	10° 30,48' S	15° 57,18' E	3682	SE 1	265,5	14	Vermessung	EM / PS	Kursänderung	rwk: 187°, d: 23 nm
SO190/033-1	04.12.06	###	10° 53,43' S	15° 54,03' E	3377	SE 0	164,4	12	Vermessung	EM / PS	Kursänderung	rwk: 054°, d: 13 nm
SO190/033-1	04.12.06	###	10° 45,46' S	116° 4,33' E	3262	E 4	35,5	7,2	Vermessung	EM / PS	Ende Profil	
SO190/034-1	04.12.06	###	10° 45,46' S	116° 4,33' E	3262	E 4	35,5	7,2	Profil	PR	Stationsbeginn	
SO190/034-1	04.12.06	###	10° 44,87' S	116° 4,62' E	3179	E 3	8,2	2	Profil	PR	Bb-Airgunarray zu Wasser	
SO190/034-1	04.12.06	###	10° 44,67' S	116° 4,67' E	3171	ESE 3	17,6	2,1	Profil	PR	Stb-Airgunarray zu Wasser	
SO190/034-1	04.12.06	###	10° 44,34' S	116° 4,78' E	3152	ESE 3	10,1	4,7	Profil	PR	Beginn Profil	rwk: 006°, d: 107 nm
SO190/034-1	05.12.06	###	9° 41,15' S	16° 11,31' E	4291	ESE 3	3,2	5,3	Profil	PR	Streamer zu Wasser	SL: 200 m
SO190/034-1	05.12.06	###	8° 58,05' S	16° 15,77' E	125	S 2	7,8	4,4	Profil	PR	Ende Profil	
SO190/034-1	05.12.06	###	8° 57,82' S	16° 15,50' E	125	SE 2	250	2,7	Profil	PR	Streamer an Deck	
SO190/034-1	05.12.06	###	8° 58,01' S	16° 15,29' E	139	S 1	211,8	2	Profil	PR	Stb Airgun an Deck	
SO190/034-1	05.12.06	###	8° 58,16' S	16° 15,18' E	0	S 2	218	2	Profil	PR	Bb airgun an Deck	
SO190/034-1	05.12.06	###	8° 58,16' S	16° 15,18' E	0	S 2	218	2	Profil	PR	Stationsende	
SO190/035-1	05.12.06	###	8° 58,16' S	16° 15,18' E	0	S 2	218	2	OBS/OBH	OBS/OBH	Beginn Station	
SO190/035-1	05.12.06	###	8° 59,04' S	16° 15,32' E	0	S 1	166,6	8	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 130
SO190/035-1	05.12.06	###	8° 59,30' S	16° 15,39' E	0	S 1	167,1	7,8	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 130
SO190/035-1	05.12.06	###	8° 59,76' S	16° 15,44' E	0	SSW 1	220,1	0,5	OBS/OBH	OBS/OBH	OBH an Deck	OBH 130
SO190/035-1	05.12.06	###	9° 0,07' S	16° 15,38' E	0	SSW 1	186,7	7,8	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 131
SO190/035-1	05.12.06	###	9° 2,55' S	16° 15,21' E	0	SSW 2	191,2	4,5	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 131
SO190/035-1	05.12.06	###	9° 2,84' S	16° 15,18' E	0	SSW 2	201,4	1,7	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 132
SO190/035-1	05.12.06	###	9° 2,86' S	16° 15,17' E	0	S 2	286,4	0,4	OBS/OBH	OBS/OBH	OBH an Deck	OBH 131
SO190/035-1	05.12.06	###	9° 5,79' S	16° 14,88' E	0	SSW 1	184	12	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 132

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/035-1	05.12.06	###	9° 6,62' S	16° 14,73' E	0	SSE 2	294,5	0,8	OBS/OBH	OBS/OBH	OBH an Deck	OBH 132
SO190/035-1	05.12.06	###	9° 6,59' S	16° 14,70' E	0	ESE 2	300,1	1	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 133
SO190/035-1	05.12.06	###	9° 10,62' S	16° 14,35' E	0	SE 3	195,6	1,5	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 133
SO190/035-1	05.12.06	###	9° 10,65' S	16° 14,35' E	0	ESE 3	165,8	0,9	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 134
SO190/035-1	05.12.06	###	9° 10,78' S	16° 14,46' E	0	SE 4	143,8	0,2	OBS/OBH	OBS/OBH	OBH an Deck	OBH 133
SO190/035-1	05.12.06	###	9° 13,51' S	16° 13,98' E	0	SSE 3	185,9	9,8	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 134
SO190/035-1	05.12.06	###	9° 13,65' S	16° 13,96' E	0	SSE 4	184,3	7,5	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 135
SO190/035-1	05.12.06	###	9° 14,21' S	16° 13,92' E	0	SSE 3	204,5	0,7	OBS/OBH	OBS/OBH	OBH an Deck	OBH 134
SO190/035-1	05.12.06	###	9° 14,63' S	16° 13,84' E	0	ESE 3	190	8,8	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 136
SO190/035-1	05.12.06	###	9° 16,32' S	16° 13,65' E	0	SE 3	184	12	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 135
SO190/035-1	05.12.06	###	9° 17,84' S	16° 13,58' E	0	SE 4	208	1,4	OBS/OBH	OBS/OBH	OBH an Deck	OBH 135
SO190/035-1	05.12.06	###	9° 17,94' S	16° 13,55' E	0	E 3	186,3	5,2	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 137
SO190/035-1	05.12.06	###	9° 21,16' S	16° 13,20' E	0	ESE 4	174,8	1,9	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 136
SO190/035-1	05.12.06	###	9° 21,32' S	16° 13,30' E	0	ESE 4	51,2	0,4	OBS/OBH	OBS/OBH	OBH an Deck	OBH 136
SO190/035-1	05.12.06	###	9° 21,35' S	16° 13,31' E	0	ESE 4	174,6	2,6	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 138
SO190/035-1	05.12.06	###	9° 22,64' S	16° 13,15' E	0	ESE 5	186,9	11	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 137
SO190/035-1	05.12.06	###	9° 24,69' S	16° 12,94' E	0	SE 5	185,5	0,5	OBS/OBH	OBS/OBH	OBS an Deck	OBS 137
SO190/035-1	05.12.06	###	9° 24,71' S	16° 12,94' E	0	ESE 4	200,9	2	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 139
SO190/035-1	05.12.06	###	9° 28,11' S	16° 12,61' E	0	ESE 4	185	3,6	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 140
SO190/035-1	05.12.06	###	9° 28,22' S	16° 12,55' E	0	ESE 4	189,8	0,8	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 138
SO190/035-1	05.12.06	###	9° 28,28' S	16° 12,65' E	0	ESE 3	128	2	OBS/OBH	OBS/OBH	OBS an Deck	OBS 138
SO190/035-1	05.12.06	###	9° 30,38' S	16° 12,41' E	0	SE 3	185,1	12	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 141
SO190/035-1	05.12.06	###	9° 31,29' S	16° 12,33' E	0	ESE 4	178,3	8,3	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 139
SO190/035-1	05.12.06	###	9° 31,86' S	16° 12,42' E	0	SE 3	122,7	0,9	OBS/OBH	OBS/OBH	OBS an Deck	OBS 139
SO190/035-1	05.12.06	###	9° 34,49' S	16° 11,99' E	0	ESE 4	190,2	11	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 142
SO190/035-1	05.12.06	###	9° 35,43' S	16° 11,89' E	0	ESE 4	62	1,1	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 140
SO190/035-1	05.12.06	###	9° 35,06' S	16° 11,92' E	0	SE 3	16,2	1,8	OBS/OBH	OBS/OBH	OBS an Deck	OBS 140
SO190/035-1	05.12.06	###	9° 38,11' S	16° 11,59' E	0	ESE 3	187,7	9,1	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 143
SO190/035-1	05.12.06	###	9° 38,73' S	16° 11,51' E	0	E 2	7,7	0,8	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 141
SO190/035-1	05.12.06	###	9° 38,83' S	16° 11,43' E	0	SE 3	342,5	0,8	OBS/OBH	OBS/OBH	OBS an Deck	OBS 141
SO190/035-1	05.12.06	###	9° 39,00' S	16° 11,37' E	0	E 2	175,5	5,8	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 144
SO190/035-1	05.12.06	###	9° 42,08' S	16° 11,12' E	0	ESE 2	196,5	2,4	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 142
SO190/035-1	05.12.06	###	9° 42,48' S	16° 10,91' E	0	SSE 3	321,3	0,8	OBS/OBH	OBS/OBH	OBS an Deck	OBS 142

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/035-1	05.12.06	###	9° 42,81' S	16° 10,85' E	0	E 3	182,6	7,3	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 145
SO190/035-1	05.12.06	###	9° 45,99' S	16° 10,64' E	0	E 3	187,6	1,2	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 143
SO190/035-1	05.12.06	###	9° 45,90' S	16° 10,57' E	0	SE 2	322,4	0,5	OBS/OBH	OBS/OBH	OBS an Deck	OBS 143
SO190/035-1	05.12.06	###	9° 45,85' S	16° 10,53' E	0	ENE 2	277	2	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 144
SO190/035-1	05.12.06	###	9° 49,63' S	16° 9,94' E	0	SE 3	218,4	0,8	OBS/OBH	OBS/OBH	OBS an Deck	OBS 144
SO190/035-1	05.12.06	###	9° 49,64' S	16° 9,91' E	0	ESE 3	269,9	1,3	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 146
SO190/035-1	05.12.06	###	9° 50,05' S	16° 9,84' E	0	NE 3	179	8,5	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 145
SO190/035-1	05.12.06	###	9° 53,29' S	16° 9,50' E	0	S 3	239,3	0,9	OBS/OBH	OBS/OBH	OBS an Deck	OBS 145
SO190/035-1	05.12.06	###	9° 53,31' S	16° 9,44' E	0	SE 4	251	2,1	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 147
SO190/035-1	05.12.06	###	9° 54,09' S	16° 9,49' E	0	SSE 2	176,1	12	OBS/OBH	OBS/OBH	OBH gesichtet	OBS 146
SO190/035-1	05.12.06	###	9° 56,58' S	16° 9,22' E	0	SE 2	203,6	2,8	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 148
SO190/035-1	05.12.06	###	9° 56,68' S	16° 9,17' E	0	SSE 2	184,7	1	OBS/OBH	OBS/OBH	OBH an Deck	OBS 146
SO190/035-1	05.12.06	###	9° 59,95' S	16° 9,10' E	0	SE 3	207,3	1,5	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 149
SO190/035-1	05.12.06	###	10° 0,23' S	16° 9,11' E	0	ESE 2	40,3	1,1	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 147
SO190/035-1	05.12.06	###	10° 0,15' S	16° 8,98' E	0	SE 3	219,4	1,3	OBS/OBH	OBS/OBH	OBS an Deck	OBS 147
SO190/035-1	05.12.06	###	10° 1,53' S	16° 9,00' E	0	SSE 2	174,9	13	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 150
SO190/035-1	05.12.06	###	10° 3,21' S	16° 8,93' E	0	S 1	191,8	4,5	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 148
SO190/035-1	05.12.06	###	10° 4,54' S	16° 7,90' E	0	SE 2	200,3	1,8	OBS/OBH	OBS/OBH	OBS an Deck	OBS 148
SO190/035-1	05.12.06	###	10° 6,85' S	16° 7,93' E	0	SSE 2	213	12	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 149
SO190/035-1	05.12.06	###	10° 7,59' S	16° 7,39' E	0	SSE 3	213	7,8	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 151
SO190/035-1	05.12.06	###	10° 8,19' S	16° 7,11' E	0	SE 3	201,2	2,4	OBS/OBH	OBS/OBH	OBS an Deck	OBS 149
SO190/035-1	05.12.06	###	10° 10,36' S	16° 7,00' E	0	ESE 4	116,5	5,3	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 152
SO190/035-1	05.12.06	###	10° 10,36' S	16° 7,00' E	0	ESE 4	116,5	5,3	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 150
SO190/035-1	05.12.06	###	10° 10,72' S	16° 7,15' E	0	ESE 3	230,9	1,6	OBS/OBH	OBS/OBH	OBH an Deck	OBH 150
SO190/035-1	05.12.06	###	10° 12,92' S	16° 7,29' E	0	ESE 1	163,5	12	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 151
SO190/035-1	05.12.06	###	10° 13,89' S	16° 7,56' E	0	SE 2	218,4	1	OBS/OBH	OBS/OBH	OBH an Deck	OBH 151
SO190/035-1	05.12.06	###	10° 15,93' S	16° 7,42' E	0	SSE 1	182,4	13	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 152
SO190/035-1	06.12.06	###	10° 16,90' S	16° 7,36' E	0	SE 3	190	1	OBS/OBH	OBS/OBH	OBH an Deck	OBH 152
SO190/035-1	06.12.06	###	10° 22,72' S	16° 6,74' E	0	SSE 3	184,9	12	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 153
SO190/035-1	06.12.06	###	10° 30,00' S	16° 5,88' E	4004	SE 3	299,8	1,2	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 153
SO190/035-1	06.12.06	###	10° 29,97' S	16° 5,86' E	3998	SE 4	307	0,3	OBS/OBH	OBS/OBH	OBS an Deck	OBS 153
SO190/035-1	06.12.06	###	10° 29,97' S	16° 5,86' E	3998	SE 4	307	0,3	OBS/OBH	OBS/OBH	Ende Station	
SO190/036-1	06.12.06	###	10° 29,97' S	16° 5,86' E	3998	SE 4	307	0,3	Vermessung	EM / PS	Beginn Profil	rwk: 103°, d: 18 nm

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/036-1	06.12.06	###	10° 33,97' S	16° 23,88' E	4079	SSE 6	103,6	12	Vermessung	EM / PS	Kursänderung	rwk: 180°, d: 3 nm
SO190/036-1	06.12.06	###	10° 37,06' S	16° 23,95' E	3356	SE 4	151,5	12	Vermessung	EM / PS	Kursänderung	rwk: 148°, d: 39 nm
SO190/036-1	06.12.06	###	11° 10,01' S	16° 45,11' E	5433	SE 3	87,3	11	Vermessung	EM / PS	Kursänderung	rwk: 090°, d: 90 nm
SO190/036-1	06.12.06	###	11° 9,87' S	18° 17,01' E	6527	ESE 7	2,7	10	Vermessung	EM / PS	Kursänderung	rwk: 000°, d: 20 nm
SO190/036-1	06.12.06	###	10° 50,17' S	18° 17,00' E	3134	SSE 6	359	13	Vermessung	EM / PS	Kursänderung	rwk: 090°, d: 28 nm
SO190/036-1	06.12.06	###	10° 50,09' S	18° 45,86' E	3709	SSW 7	146,7	11	Vermessung	EM / PS	Kursänderung	rwk: 180°, d: 20 nm
SO190/036-1	06.12.06	###	11° 9,95' S	18° 46,13' E	6536	SSE 6	107,7	10	Vermessung	EM / PS	Kursänderung	rwk: 090°, d: 76 nm
SO190/036-1	07.12.06	###	11° 9,99' S	120° 2,87' E	2831	SSW 4	89,3	12	Vermessung	EM / PS	Kursänderung	rwk: 138°, d: 73 nm
SO190/036-1	07.12.06	###	12° 3,92' S	20° 52,95' E	3944	SW 7	144,3	9,6	Vermessung	EM / PS	Kursänderung	rwk: 173° , d: 10 nm
SO190/036-1	07.12.06	###	12° 14,01' S	20° 54,18' E	3574	SSE 7	104	2	Vermessung	EM / PS	Ende Profil	
SO190/037-1	07.12.06	###	12° 14,01' S	20° 54,18' E	3574	SSE 7	104	2	OBS/OBH	OBS/OBH	Beginn Station	
SO190/037-1	07.12.06	###	12° 14,01' S	20° 54,20' E	3570	S 8	107,8	1,9	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 154
SO190/037-1	07.12.06	###	12° 10,78' S	20° 54,66' E	3691	SW 4	16,3	1,4	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 155
SO190/037-1	07.12.06	###	12° 7,43' S	20° 55,18' E	3877	SW 4	357,8	1,6	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 156
SO190/037-1	07.12.06	###	12° 4,01' S	20° 55,70' E	3933	WSW 8	355,3	1,7	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 157
SO190/037-1	07.12.06	###	12° 0,47' S	20° 56,20' E	3982	SW 9	338,8	0,9	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 158
SO190/037-1	07.12.06	###	11° 57,01' S	20° 56,74' E	3916	SW 9	359,2	1,6	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 159
SO190/037-1	07.12.06	###	11° 53,48' S	20° 57,26' E	3660	WSW 9	347,1	1,5	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 160
SO190/037-1	07.12.06	###	11° 49,99' S	20° 57,79' E	3569	SW 7	350,4	2,2	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 161
SO190/037-1	07.12.06	###	11° 46,48' S	20° 58,29' E	3306	SW 6	352,9	2,4	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 162
SO190/037-1	07.12.06	###	11° 42,99' S	20° 58,87' E	2895	SW 7	347,9	2,7	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 163
SO190/037-1	07.12.06	###	11° 39,45' S	20° 59,38' E	2634	WSW 7	349,2	2,4	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 164
SO190/037-1	07.12.06	###	11° 36,48' S	20° 59,81' E	2866	SW 8	354,7	2,5	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 165
SO190/037-1	07.12.06	###	11° 33,45' S	121° 0,24' E	2946	SW 7	354,7	2,5	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 166
SO190/037-1	07.12.06	###	11° 30,49' S	121° 0,67' E	2901	SW 8	336,6	2,5	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 167
SO190/037-1	07.12.06	###	11° 27,19' S	121° 1,20' E	2708	SW 7	353,6	1,9	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 168
SO190/037-1	07.12.06	###	11° 23,85' S	121° 1,68' E	2546	SW 7	352,5	3,1	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 169
SO190/037-1	07.12.06	###	11° 20,46' S	121° 2,09' E	2195	WSW 8	334,9	1,9	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 170
SO190/037-1	07.12.06	###	11° 17,15' S	121° 2,63' E	1944	WSW 8	339,1	2,1	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 171
SO190/037-1	07.12.06	###	11° 13,81' S	121° 3,17' E	1899	SW 7	338,4	3	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 172
SO190/037-1	07.12.06	###	11° 10,42' S	121° 3,63' E	1406	SW 5	340,4	1,5	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 173
SO190/037-1	07.12.06	###	11° 7,06' S	121° 4,14' E	1342	SW 6	12,1	1	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 174
SO190/037-1	07.12.06	###	11° 3,83' S	121° 4,59' E	1199	SW 5	359,4	2,5	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 175

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/037-1	07.12.06	###	11° 0,53' S	121° 5,12' E	1218	WSW 5	39,2	1,7	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 176
SO190/037-1	07.12.06	###	11° 0,48' S	121° 5,19' E	1219	SW 7	72,2	0,7	OBS/OBH	OBS/OBH	OBH an Deck	OBH 176
SO190/037-1	07.12.06	###	11° 0,48' S	121° 5,25' E	1219	SW 6	84,2	1,4	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 176 (2. Versuch)
SO190/037-1	07.12.06	###	10° 57,08' S	121° 5,60' E	1033	SW 6	62,1	1,4	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 177
SO190/037-1	07.12.06	###	10° 53,76' S	121° 6,07' E	934	SW 6	52,3	0,9	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 178
SO190/037-1	07.12.06	###	10° 50,39' S	121° 6,59' E	866	SW 7	44,1	1,1	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 179
SO190/037-1	07.12.06	###	10° 47,03' S	121° 7,03' E	1047	WSW 7	6,9	2,1	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 180
SO190/037-1	07.12.06	###	10° 43,73' S	121° 7,50' E	1178	SW 8	341,1	0,9	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 181
SO190/037-1	07.12.06	###	10° 40,37' S	121° 7,96' E	1117	SW 8	325	1,3	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 182
SO190/037-1	07.12.06	###	10° 37,00' S	121° 8,47' E	1304	SW 7	3,5	0,6	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 183
SO190/037-1	07.12.06	###	10° 37,00' S	121° 8,47' E	1304	SW 7	3,5	0,6	OBS/OBH	OBS/OBH	Ende Station	
SO190/038-1	07.12.06	###	10° 30,25' S	121° 9,47' E	1520	S 6	221,4	2,7	Profil	PR	Stationsbeginn	
SO190/038-1	07.12.06	###	10° 30,53' S	121° 9,39' E	1522	WSW 6	174,6	2,2	Profil	PR	Bb Airgun zu Wasser	
SO190/038-1	07.12.06	###	10° 30,73' S	121° 9,35' E	1528	WSW 5	196,8	2	Profil	PR	Stb Airgun zu Wasser	
SO190/038-1	07.12.06	###	10° 30,73' S	121° 9,35' E	1528	WSW 5	196,8	2	Profil	PR	Beginn Profil	rwk: 188°, d: 117 nm
SO190/038-1	08.12.06	###	11° 29,30' S	121° 0,76' E	2734	SSW 7	189,9	4,8	Profil	PR	Streamer zu Wasser	SL: 200 m
SO190/038-1	08.12.06	###	12° 26,99' S	20° 52,23' E	1993	SW 7	179	5,9	Profil	PR	Ende Profil	
SO190/038-1	08.12.06	###	12° 27,39' S	20° 52,14' E	1848	SSW 6	194,8	1,4	Profil	PR	Streamer an Deck	
SO190/038-1	08.12.06	###	12° 27,52' S	20° 52,09' E	1819	SW 6	180,1	1,7	Profil	PR	Stb Airgun an Deck	
SO190/038-1	08.12.06	###	12° 27,64' S	20° 52,03' E	1689	SW 6	214,3	1	Profil	PR	Bb airgun an Deck	
SO190/038-1	08.12.06	###	12° 27,64' S	20° 52,03' E	1689	SW 6	214,3	1	Profil	PR	Stationsende	
SO190/039-1	08.12.06	###	12° 19,30' S	20° 52,37' E	3425	SSW 6	8,4	13	OBS/OBH	OBS/OBH	Beginn Station	
SO190/039-1	08.12.06	###	12° 17,78' S	20° 52,77' E	0	SSW 5	10,6	9,5	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 154
SO190/039-1	08.12.06	###	12° 14,53' S	20° 53,91' E	0	SSW 4	20,1	4,8	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 155
SO190/039-1	08.12.06	###	12° 14,37' S	20° 53,95' E	0	SSW 4	341,2	0,6	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 154
SO190/039-1	09.12.06	###	12° 14,05' S	20° 54,06' E	0	SSW 4	35,5	2,2	OBS/OBH	OBS/OBH	OBH an Deck	OBH 154
SO190/039-1	09.12.06	###	12° 11,80' S	20° 54,46' E	0	SSW 6	11,7	11	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 156
SO190/039-1	09.12.06	###	12° 10,82' S	20° 54,60' E	0	SSW 4	3,4	2,2	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 155
SO190/039-1	09.12.06	###	12° 10,73' S	20° 54,45' E	0	S 6	287,3	1,5	OBS/OBH	OBS/OBH	OBH an Deck	OBH 155
SO190/039-1	09.12.06	###	12° 8,86' S	20° 54,87' E	0	S 5	14,1	12	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 156
SO190/039-1	09.12.06	###	12° 8,67' S	20° 54,92' E	0	S 5	10,6	12	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 157
SO190/039-1	09.12.06	###	12° 7,35' S	20° 54,99' E	0	SSW 6	299,9	2,1	OBS/OBH	OBS/OBH	OBH an Deck	OBH 156
SO190/039-1	09.12.06	###	12° 7,23' S	20° 54,94' E	0	SW 7	6,1	3,6	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 158

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/039-1	09.12.06	###	12° 4,60' S	20° 55,61' E	0	SSW 6	6,5	5	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 157
SO190/039-1	09.12.06	###	12° 4,03' S	20° 55,65' E	0	SSW 6	292,6	0,9	OBS/OBH	OBS/OBH	OBH an Deck	OBH 157
SO190/039-1	09.12.06	###	12° 4,02' S	20° 55,64' E	0	SSW 7	301,5	1,2	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 159
SO190/039-1	09.12.06	###	12° 1,19' S	20° 56,17' E	0	SW 7	8,1	9,2	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 158
SO190/039-1	09.12.06	###	12° 1,04' S	20° 56,19' E	0	SW 7	9	8,6	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 160
SO190/039-1	09.12.06	###	12° 0,62' S	20° 56,05' E	0	SSW 6	248,2	1,5	OBS/OBH	OBS/OBH	OBS an Deck	OBS 158
SO190/039-1	09.12.06	###	11° 58,43' S	20° 56,47' E	0	SW 7	11,4	12	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 159
SO190/039-1	09.12.06	###	11° 57,05' S	20° 56,51' E	0	S 7	329,6	1,1	OBS/OBH	OBS/OBH	OBS an Deck	OBS 159
SO190/039-1	09.12.06	###	11° 55,37' S	20° 56,95' E	0	SSW 7	12,8	12	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 161
SO190/039-1	09.12.06	###	11° 54,24' S	20° 57,33' E	0	SW 6	17,4	9	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 160
SO190/039-1	09.12.06	###	11° 53,42' S	20° 56,89' E	0	SW 9	291,7	1,1	OBS/OBH	OBS/OBH	OBS an Deck	OBS 160
SO190/039-1	09.12.06	###	11° 52,09' S	20° 57,24' E	0	SW 8	22	13	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 162
SO190/039-1	09.12.06	###	11° 49,84' S	20° 57,63' E	0	W 8	10,1	3,1	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 161
SO190/039-1	09.12.06	###	11° 49,84' S	20° 57,57' E	0	WNW 5	284,9	1,2	OBS/OBH	OBS/OBH	OBS an Deck	OBS 161
SO190/039-1	09.12.06	###	11° 49,83' S	20° 57,56' E	0	WSW 7	9,5	1,2	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 163
SO190/039-1	09.12.06	###	11° 47,99' S	20° 57,84' E	0	SW 6	13,9	11	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 162
SO190/039-1	09.12.06	###	11° 46,08' S	20° 58,05' E	0	WSW 5	319,4	1	OBS/OBH	OBS/OBH	OBS an Deck	OBS 162
SO190/039-1	09.12.06	###	11° 45,17' S	20° 58,25' E	0	SW 6	24,6	10	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 164
SO190/039-1	09.12.06	###	11° 42,96' S	20° 58,89' E	0	SSW 8	331,9	2,8	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 163
SO190/039-1	09.12.06	###	11° 42,90' S	20° 58,84' E	0	W 4	182,3	1	OBS/OBH	OBS/OBH	OBS an Deck	OBS 163
SO190/039-1	09.12.06	###	11° 42,28' S	20° 58,94' E	0	SW 6	13,7	9,4	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 165
SO190/039-1	09.12.06	###	11° 40,86' S	20° 59,20' E	0	SW 7	4,9	12	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 164
SO190/039-1	09.12.06	###	11° 39,31' S	20° 59,05' E	0	SW 6	319,7	2,8	OBS/OBH	OBS/OBH	OBS an Deck	OBS 164
SO190/039-1	09.12.06	###	11° 38,51' S	20° 59,17' E	0	SW 7	19,2	9,9	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 166
SO190/039-1	09.12.06	###	11° 36,95' S	20° 59,73' E	0	WSW 5	12,8	6,2	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 165
SO190/039-1	09.12.06	###	11° 36,35' S	20° 59,66' E	0	WSW 5	346,6	2,3	OBS/OBH	OBS/OBH	OBH an Deck	OBH 165
SO190/039-1	09.12.06	###	11° 35,07' S	20° 59,99' E	0	SW 6	15,6	9,4	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 166
SO190/039-1	09.12.06	###	11° 33,27' S	20° 59,84' E	0	S 6	304,8	2,8	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 167
SO190/039-1	09.12.06	###	11° 33,25' S	20° 59,80' E	0	SSW 5	295,2	1,8	OBS/OBH	OBS/OBH	OBH an Deck	OBH 166
SO190/039-1	09.12.06	###	11° 31,06' S	121° 0,64' E	0	SW 5	22,2	9,8	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 168
SO190/039-1	09.12.06	###	11° 30,41' S	121° 0,41' E	0	SSE 4	261,1	2	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 167
SO190/039-1	09.12.06	###	11° 30,28' S	121° 0,52' E	0	SW 4	353	1,6	OBS/OBH	OBS/OBH	OBH an Deck	OBH 167
SO190/039-1	09.12.06	###	11° 28,66' S	121° 1,10' E	0	SSW 5	21,4	12	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 168

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/039-1	09.12.06	###	11° 27,67' S	121° 1,17' E	0	SW 5	353,5	7,1	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 169
SO190/039-1	09.12.06	###	11° 26,73' S	121° 0,70' E	0	S 4	296,3	2,2	OBS/OBH	OBS/OBH	OBH an Deck	OBH 168
SO190/039-1	09.12.06	###	11° 24,93' S	121° 1,56' E	0	SSW 5	27,9	9	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 169
SO190/039-1	09.12.06	###	11° 23,54' S	121° 1,50' E	2523	SSW 5	312,7	1,5	OBS/OBH	OBS/OBH	OBH an Deck	OBH 169
SO190/039-1	09.12.06	###	11° 23,54' S	121° 1,50' E	2523	SSW 5	312,7	1,5	OBS/OBH	OBS/OBH	Ende Station	
SO190/040-1	09.12.06	###	11° 23,54' S	121° 1,50' E	2523	SSW 5	312,7	1,5	Vermessung	EM / PS	Beginn Profil	rwk: 291°, d: 6 nm
SO190/040-1	09.12.06	###	11° 21,72' S	120° 56,14' E	2375	SSW 4	293,7	13	Vermessung	EM / PS	Kursänderung	rwk: 009°, d: 47 nm
SO190/040-1	09.12.06	###	10° 35,11' S	121° 3,45' E	1490	SW 6	10,8	12	Vermessung	EM / PS	Kursänderung	rwk: 076°, d: 6sm
SO190/040-1	09.12.06	###	10° 33,64' S	121° 8,86' E	1194	SSW 5	72,7	2,8	Vermessung	EM / PS	Ende Profil	
SO190/041-1	09.12.06	###	10° 33,64' S	121° 8,86' E	1194	SSW 5	72,7	2,8	OBS/OBH	OBS/OBH	Beginn Station	
SO190/041-1	09.12.06	###	10° 33,64' S	121° 8,91' E	1205	SW 5	145,1	0,7	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 184
SO190/041-1	09.12.06	###	10° 30,27' S	121° 9,44' E	1522	SW 7	3,2	1,4	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 185
SO190/041-1	09.12.06	###	10° 26,90' S	121° 9,92' E	1451	SW 7	12,8	1,5	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 186
SO190/041-1	09.12.06	###	10° 23,57' S	21° 10,29' E	1566	SW 7	331	2	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 187
SO190/041-1	09.12.06	###	10° 20,21' S	21° 10,79' E	1308	SW 6	340	1,5	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 188
SO190/041-1	09.12.06	###	10° 16,90' S	21° 11,28' E	962	SW 7	337,5	2,5	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 189
SO190/041-1	09.12.06	###	10° 13,55' S	21° 11,78' E	776	SSW 4	331,6	1,6	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 190
SO190/041-1	09.12.06	###	10° 10,18' S	21° 12,25' E	940	SSW 4	343,7	1,7	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 191
SO190/041-1	09.12.06	###	10° 6,83' S	21° 12,73' E	878	SW 3	325	1,3	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 192
SO190/041-1	09.12.06	###	10° 3,96' S	21° 13,14' E	910	SW 5	354,4	2,4	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 193
SO190/041-1	09.12.06	###	10° 0,14' S	21° 13,71' E	1244	SSW 3	346	2,4	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 194
SO190/041-1	09.12.06	###	9° 56,80' S	21° 14,19' E	1532	S 4	22,6	1,9	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 195
SO190/041-1	09.12.06	###	9° 53,42' S	21° 14,65' E	1773	S 5	341,3	2,4	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 196
SO190/041-1	09.12.06	###	9° 50,02' S	21° 15,10' E	1830	S 3	314,4	2	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 197
SO190/041-1	09.12.06	###	9° 46,88' S	21° 15,62' E	1950	SSW 4	20,5	2	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 198
SO190/041-1	09.12.06	###	9° 43,49' S	21° 16,11' E	2031	SSW 3	2,4	1,3	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 199
SO190/041-1	09.12.06	###	9° 43,49' S	21° 16,11' E	2031	SSW 3	2,4	1,3	OBS/OBH	OBS/OBH	Ende Station	
SO190/042-1	09.12.06	###	9° 43,49' S	21° 16,11' E	2031	SSW 3	2,4	1,3	Vermessung	EM / PS	Beginn Profil	rwk: 301^, d: 7 nm
SO190/042-1	09.12.06	###	9° 39,94' S	21° 10,01' E	1831	SSW 6	343,9	12	Vermessung	EM / PS	Kursänderung	rwk: 010°, d: 17 nm
SO190/042-1	09.12.06	###	9° 23,46' S	21° 13,02' E	2430	S 5	11	13	Vermessung	EM / PS	Kursänderung	rwk: 027°, d: 7 nm
SO190/042-1	09.12.06	###	9° 16,90' S	21° 16,35' E	2461	S 4	42,6	12	Vermessung	EM / PS	Kursänderung	rwk: 066°, d: 4 nm
SO190/042-1	09.12.06	###	9° 15,26' S	21° 20,04' E	2573	S 6	102,4	4,2	Vermessung	EM / PS	Ende Profil	
SO190/043-1	09.12.06	###	9° 15,26' S	21° 20,04' E	2573	S 6	102,4	4,2	Profil	PR	Stationsbeginn	

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/043-1	09.12.06	###	9° 15,55' S	21° 20,10' E	2588	S 4	200,2	1,5	Profil	PR	Bb Airgun zu Wasser	
SO190/043-1	09.12.06	###	9° 15,67' S	21° 20,10' E	2593	SSE 4	156,4	1	Profil	PR	Stb Airgun zu Wasser	
SO190/043-1	09.12.06	###	9° 15,67' S	21° 20,10' E	2593	SSE 4	156,4	1	Profil	PR	Beginn Profil	rwk: 188°, d: 82 nm
SO190/043-1	10.12.06	###	10° 37,04' S	121° 8,40' E	1292	E 2	189,6	5,2	Profil	PR	Ende Profil	
SO190/043-1	10.12.06	###	10° 37,40' S	121° 8,28' E	1279	ESE 2	195,3	2,4	Profil	PR	Stb-Airgunarray an Deck	
SO190/043-1	10.12.06	###	10° 37,65' S	121° 8,13' E	1208	E 2	211,3	2,1	Profil	PR	Bb-Airgunarray an Deck	
SO190/043-1	10.12.06	###	10° 37,69' S	121° 8,10' E	1212	ESE 2	209,9	2,6	Profil	PR	Stationsende	
SO190/044-1	10.12.06	###	10° 37,69' S	121° 8,10' E	1212	ESE 2	209,9	2,6	OBS/OBH	OBS/OBH	Beginn Station	
SO190/044-1	10.12.06	###	10° 37,73' S	121° 8,08' E	1204	ESE 2	204,7	2	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 182
SO190/044-1	10.12.06	###	10° 38,66' S	121° 7,89' E	0	SE 5	185,7	8,8	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 182
SO190/044-1	10.12.06	###	10° 40,45' S	121° 7,08' E	0	SSW 3	263,2	2,5	OBS/OBH	OBS/OBH	OBH an Deck	OBH 182
SO190/044-1	10.12.06	###	10° 39,81' S	121° 7,03' E	0	SW 4	20,9	9,6	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 183
SO190/044-1	10.12.06	###	10° 37,78' S	121° 7,92' E	0	WSW 4	26,1	12	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 183
SO190/044-1	10.12.06	###	10° 37,00' S	121° 8,08' E	0	W 3	311,1	0,9	OBS/OBH	OBS/OBH	OBH an Deck	OBH 183
SO190/044-1	10.12.06	###	10° 36,97' S	121° 8,06' E	0	WSW 5	41,5	0,7	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 184
SO190/044-1	10.12.06	###	10° 35,24' S	121° 8,52' E	0	WSW 4	13,8	10	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 184
SO190/044-1	10.12.06	###	10° 33,59' S	121° 8,53' E	0	WSW 4	347,4	1	OBS/OBH	OBS/OBH	OBS an Deck	OBH 184
SO190/044-1	10.12.06	###	10° 33,57' S	121° 8,53' E	0	WSW 5	350,5	1,3	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 185
SO190/044-1	10.12.06	###	10° 31,58' S	121° 9,13' E	0	SW 5	18,1	10	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 185
SO190/044-1	10.12.06	###	10° 30,22' S	121° 9,07' E	0	WSW 5	353,4	1	OBS/OBH	OBS/OBH	OBH an Deck	OBH 185
SO190/044-1	10.12.06	###	10° 30,20' S	121° 9,07' E	0	SW 3	5,2	1,8	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 186
SO190/044-1	10.12.06	###	10° 28,36' S	121° 9,49' E	0	SSW 4	18,5	10	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 186
SO190/044-1	10.12.06	###	10° 26,64' S	121° 9,34' E	0	WSW 5	292,8	1,3	OBS/OBH	OBS/OBH	OBH an Deck	OBH 186
SO190/044-1	10.12.06	###	10° 26,60' S	121° 9,31' E	0	SW 5	329	2,3	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 187
SO190/044-1	10.12.06	###	10° 24,66' S	121° 9,87' E	0	SW 5	8,9	9,9	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 187
SO190/044-1	10.12.06	###	10° 23,45' S	21° 10,02' E	0	SW 6	346,6	1,7	OBS/OBH	OBS/OBH	OBH an Deck	OBH 187
SO190/044-1	10.12.06	###	10° 23,43' S	21° 10,02' E	0	WSW 5	4,4	1,1	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 188
SO190/044-1	10.12.06	###	10° 21,72' S	21° 10,35' E	0	SW 5	17,1	11	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 188
SO190/044-1	10.12.06	###	10° 20,02' S	21° 10,45' E	0	SW 5	331,9	1,8	OBS/OBH	OBS/OBH	OBH an Deck	OBH 188
SO190/044-1	10.12.06	###	10° 19,97' S	21° 10,42' E	0	WSW 5	332,5	1,5	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 189
SO190/044-1	10.12.06	###	10° 17,86' S	21° 10,99' E	0	SW 4	7,8	9,8	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 189
SO190/044-1	10.12.06	###	10° 16,70' S	21° 10,86' E	0	W 5	317,5	1,9	OBS/OBH	OBS/OBH	OBS an Deck	OBS 189
SO190/044-1	10.12.06	###	10° 16,67' S	21° 10,84' E	0	WSW 4	341,5	1,4	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 190

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/044-1	10.12.06	###	10° 13,90' S	21° 11,61' E	0	WSW 4	21,9	6,8	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 190
SO190/044-1	10.12.06	###	10° 13,39' S	21° 11,53' E	0	WSW 4	331,1	1,9	OBS/OBH	OBS/OBH	OBS an Deck	OBS 190
SO190/044-1	10.12.06	###	10° 10,26' S	21° 12,09' E	0	WNW 3	357,7	3,5	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 191
SO190/044-1	10.12.06	###	10° 10,21' S	21° 12,13' E	0	SSW 2	69,1	1,6	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 191
SO190/044-1	10.12.06	###	10° 9,88' S	21° 12,04' E	0	WSW 3	335,2	1,2	OBS/OBH	OBS/OBH	OBS an Deck	OBS 191
SO190/044-1	10.12.06	###	10° 7,80' S	21° 12,49' E	0	WNW 3	15,4	10	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 192
SO190/044-1	10.12.06	###	10° 6,98' S	21° 12,66' E	0	WSW 3	6,5	2,9	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 192
SO190/044-1	10.12.06	###	10° 6,68' S	21° 12,54' E	0	W 2	333,1	1,2	OBS/OBH	OBS/OBH	OBS an Deck	OBS 192
SO190/044-1	10.12.06	###	10° 6,68' S	21° 12,54' E	0	W 2	333,1	1,2	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 193
SO190/044-1	10.12.06	###	10° 4,41' S	21° 12,92' E	0	WNW 2	6,4	7,1	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 193
SO190/044-1	10.12.06	###	10° 3,80' S	21° 12,96' E	0	WSW 2	0,4	0,8	OBS/OBH	OBS/OBH	OBS an Deck	OBS 193
SO190/044-1	10.12.06	###	10° 3,78' S	21° 12,95' E	0	W 2	334,4	0,9	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 194
SO190/044-1	10.12.06	###	10° 0,21' S	21° 13,54' E	0	WSW 2	323,8	0,1	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 195
SO190/044-1	10.12.06	###	10° 0,20' S	21° 13,54' E	0	W 2	255,2	0,2	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 194
SO190/044-1	10.12.06	###	10° 0,24' S	21° 13,63' E	0	W 1	217,6	0,3	OBS/OBH	OBS/OBH	OBS an Deck	OBS 194
SO190/044-1	10.12.06	###	9° 57,33' S	21° 14,04' E	0	NW 3	9,5	7	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 195
SO190/044-1	10.12.06	###	9° 57,14' S	21° 14,07' E	0	WNW 2	2,6	4,7	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 196
SO190/044-1	10.12.06	###	9° 56,93' S	21° 14,06' E	0	WNW 2	266	0,7	OBS/OBH	OBS/OBH	OBS an Deck	OBS 195
SO190/044-1	11.12.06	###	9° 54,12' S	21° 14,44' E	0	WNW 2	6,9	8,6	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 196
SO190/044-1	11.12.06	###	9° 53,63' S	21° 14,41' E	0	WSW 2	308,5	1,1	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 197
SO190/044-1	11.12.06	###	9° 53,62' S	21° 14,39' E	0	WSW 2	297,5	1,3	OBS/OBH	OBS/OBH	OBH an Deck	OBH 196
SO190/044-1	11.12.06	###	9° 51,42' S	21° 14,67' E	0	SSW 3	15,4	11	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 197
SO190/044-1	11.12.06	###	9° 50,13' S	21° 14,98' E	0	SSW 2	335,5	0,7	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 198
SO190/044-1	11.12.06	###	9° 50,12' S	21° 14,98' E	0	SSW 1	344,3	1,3	OBS/OBH	OBS/OBH	OBH an Deck	OBH 197
SO190/044-1	11.12.06	###	9° 47,55' S	21° 15,47' E	0	SW 1	8,7	6,7	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 198
SO190/044-1	11.12.06	###	9° 47,05' S	21° 15,58' E	0	SSW 2	11,6	2,4	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 199
SO190/044-1	11.12.06	###	9° 47,02' S	21° 15,58' E	0	SSW 2	347,2	1	OBS/OBH	OBS/OBH	OBH an Deck	OBH 198
SO190/044-1	11.12.06	###	9° 44,36' S	21° 16,01' E	0	SW 3	4,2	8,9	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 199
SO190/044-1	11.12.06	###	9° 43,60' S	21° 16,04' E	0	SW 2	313,3	0,9	OBS/OBH	OBS/OBH	OBH an Deck	OBH 199
SO190/044-2	11.12.06	###	9° 44,41' S	21° 15,31' E	1898	WSW 0	205,1	1	Vermessung	EM / PS	Beginn Profil	rwk: 245°, d: 3sm
SO190/044-2	11.12.06	###	9° 45,15' S	21° 12,96' E	1786	NNW 1	210,5	12	Vermessung	EM / PS	Kursänderung	rwk: 189°, d: 57sm
SO190/044-2	11.12.06	###	10° 41,00' S	121° 4,56' E	1439	NNW 0	185,1	13	Vermessung	EM / PS	Kursänderung	rwk: 128°, d: 1 nm
SO190/044-2	11.12.06	###	10° 41,65' S	121° 4,81' E	1356	WNW 1	122,7	13	Vermessung	EM / PS	Ende Profil	

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/044-3	11.12.06	###	10° 41,65' S	121° 4,81' E	1356	WNW 1	122,7	13	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 181; Fortsetzung Aufnahme
SO190/044-3	11.12.06	###	10° 43,23' S	121° 6,89' E	0	NE 0	131,6	11	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 181
SO190/044-3	11.12.06	###	10° 43,96' S	121° 7,50' E	0	E 1	153,9	1,6	OBS/OBH	OBS/OBH	OBH an Deck	OBH 181
SO190/044-3	11.12.06	###	10° 44,33' S	121° 7,48' E	0	NNE 1	190,7	7,8	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 180
SO190/044-3	11.12.06	###	10° 46,00' S	121° 7,13' E	0	WNW 2	190,8	12	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 180
SO190/044-3	11.12.06	###	10° 47,26' S	121° 6,85' E	0	WNW 0	229,8	0,9	OBS/OBH	OBS/OBH	OBS an Deck	OBS 180
SO190/044-3	11.12.06	###	10° 47,36' S	121° 6,81' E	0	N 1	195,4	4,7	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 179
SO190/044-3	11.12.06	###	10° 50,28' S	121° 6,45' E	0	SSW 1	191,8	5	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 179
SO190/044-3	11.12.06	###	10° 50,46' S	121° 6,49' E	0	SE 1	219,6	0,6	OBS/OBH	OBS/OBH	OBS an Deck	OBS 179
SO190/044-3	11.12.06	###	10° 50,46' S	121° 6,49' E	0	SE 1	219,6	0,6	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 178
SO190/044-3	11.12.06	###	10° 53,68' S	121° 5,93' E	0	ESE 3	215,2	1,7	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 178
SO190/044-3	11.12.06	###	10° 53,92' S	121° 5,87' E	0	ESE 2	227,1	1,2	OBS/OBH	OBS/OBH	OBS an Deck	OBS 178
SO190/044-3	11.12.06	###	10° 53,95' S	121° 5,85' E	0	E 2	198,9	1,4	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 177
SO190/044-3	11.12.06	###	10° 56,14' S	121° 5,56' E	0	SE 2	186,6	9,1	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 177
SO190/044-3	11.12.06	###	10° 57,25' S	121° 5,30' E	0	E 4	208,9	1,9	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 176
SO190/044-3	11.12.06	###	10° 57,33' S	121° 5,21' E	0	E 4	233	1,7	OBS/OBH	OBS/OBH	OBH an Deck	OBH 177
SO190/044-3	11.12.06	###	10° 58,16' S	121° 5,10' E	0	ENE 4	181,6	13	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 176
SO190/044-3	11.12.06	###	11° 0,94' S	121° 4,80' E	0	ENE 5	216,2	1,8	OBS/OBH	OBS/OBH	OBH an Deck	OBH 176
SO190/044-3	11.12.06	###	11° 0,99' S	121° 4,77' E	0	NE 5	198,1	2,4	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 175
SO190/044-3	11.12.06	###	11° 3,70' S	121° 4,60' E	0	ENE 6	194,2	5,7	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 175
SO190/044-3	11.12.06	###	11° 4,09' S	121° 4,32' E	0	ENE 4	226,2	1,6	OBS/OBH	OBS/OBH	OBS an Deck	OBS 175
SO190/044-3	11.12.06	###	11° 4,11' S	121° 4,30' E	0	ENE 6	211,2	1,6	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 174
SO190/044-3	11.12.06	###	11° 6,70' S	121° 4,08' E	0	ESE 8	180,1	7	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 174
SO190/044-3	11.12.06	###	11° 7,28' S	121° 4,06' E	0	ENE 6	181	0,9	OBS/OBH	OBS/OBH	OBS an Deck	OBS 174
SO190/044-3	11.12.06	###	11° 7,30' S	121° 4,05' E	0	NE 7	219,4	1,6	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 173
SO190/044-3	11.12.06	###	11° 10,05' S	121° 3,72' E	0	E 7	182	7,4	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 173
SO190/044-3	11.12.06	###	11° 10,32' S	121° 3,67' E	0	E 5	197,2	4,4	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 172
SO190/044-3	11.12.06	###	11° 10,66' S	121° 3,56' E	0	NE 7	186,9	2,5	OBS/OBH	OBS/OBH	OBS an Deck	OBS 173
SO190/044-3	11.12.06	###	11° 12,33' S	121° 3,33' E	0	ENE 8	187,5	14	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 172
SO190/044-3	11.12.06	###	11° 13,00' S	121° 3,24' E	0	ENE 8	187,5	12	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 171
SO190/044-3	11.12.06	###	11° 14,02' S	121° 3,19' E	0	NE 4	167,7	1,8	OBS/OBH	OBS/OBH	OBS an Deck	OBS 172
SO190/044-3	11.12.06	###	11° 15,12' S	121° 3,06' E	0	ENE 7	188,8	13	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 171
SO190/044-3	11.12.06	###	11° 16,43' S	121° 2,83' E	0	ENE 7	189,7	13	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 170

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/044-3	11.12.06	###	11° 17,39' S	121° 2,71' E	0	ENE 5	163,5	1,6	OBS/OBH	OBS/OBH	OBS an Deck	OBS 171
SO190/044-3	11.12.06	###	11° 19,92' S	121° 2,32' E	0	E 7	190,1	8,5	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 170
SO190/044-3	11.12.06	###	11° 20,75' S	121° 2,10' E	2199	ENE 4	179	3,2	OBS/OBH	OBS/OBH	OBS an Deck	OBS 170
SO190/044-3	11.12.06	###	11° 20,81' S	121° 2,09' E	2216	ENE 5	201,3	4,1	OBS/OBH	OBS/OBH	Ende Station	
SO190/045-1	11.12.06	###	11° 20,81' S	121° 2,09' E	2216	ENE 5	201,3	4,1	Vermessung	PROFIL	Beginn Profil	rwk: 274°, d: 40 nm
SO190/045-1	11.12.06	###	11° 17,80' S	20° 20,80'	2632	ESE 5	330,1	13	Vermessung	PROFIL	Kursänderung	rwk: 320°, d: 123 nm
SO190/045-1	12.12.06	###	9° 44,02' S	119° 0,45' E	255	SW 2	302,2	2,7	Vermessung	PROFIL	Ende Profil	
SO190/046-1	12.12.06	###	9° 44,02' S	119° 0,45' E	255	SW 2	302,2	2,7	OBS/OBH	OBS/OBH	Beginn Station	
SO190/046-1	12.12.06	###	9° 44,01' S	119° 0,42' E	253	WSW 3	284,8	1,4	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 200
SO190/046-1	12.12.06	###	9° 47,00' S	119° 0,23' E	497	SSW 2	162,2	3,5	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 201
SO190/046-1	12.12.06	###	9° 50,00' S	119° 0,00' E	598	SSW 2	180,4	1,6	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 202
SO190/046-1	12.12.06	###	9° 52,98' S	18° 59,80'	706	WSW 2	182,5	1,9	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 203
SO190/046-1	12.12.06	###	9° 56,00' S	18° 59,56'	999	SW 2	184	1,6	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 204
SO190/046-1	12.12.06	###	9° 59,69' S	18° 59,32'	1559	SSW 3	198,4	1,2	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 205
SO190/046-1	12.12.06	###	10° 2,39' S	18° 59,11'	1466	S 2	167,9	0,8	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 206
SO190/046-1	12.12.06	###	10° 6,45' S	18° 58,84'	2076	SSE 2	168,2	2,2	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 207
SO190/046-1	12.12.06	###	10° 9,85' S	18° 58,58'	2294	SE 2	176,2	1,9	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 208
SO190/046-1	12.12.06	###	10° 13,56' S	18° 58,31'	2423	SSE 2	185,9	1,3	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 209
SO190/046-1	12.12.06	###	10° 17,29' S	18° 58,09'	3056	ESE 3	165,9	2,6	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 210
SO190/046-1	12.12.06	###	10° 21,66' S	18° 57,73'	3606	E 4	196,5	3,5	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 211
SO190/046-1	12.12.06	###	10° 26,06' S	18° 57,40'	3684	SE 3	188,6	2,4	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 212
SO190/046-1	12.12.06	###	10° 29,46' S	18° 57,16'	3585	E 5	190	1,6	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 213
SO190/046-1	12.12.06	###	10° 33,52' S	18° 56,87'	3944	E 4	203,5	2,3	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 214
SO190/046-1	12.12.06	###	10° 37,58' S	18° 56,53'	3966	E 4	181,7	2,4	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 215
SO190/046-1	12.12.06	###	10° 41,60' S	18° 56,30'	4137	E 4	171,3	1,4	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 216
SO190/046-1	12.12.06	###	10° 44,63' S	18° 56,08'	3778	E 5	188,8	3	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 217
SO190/046-1	12.12.06	###	10° 48,68' S	18° 55,79'	3683	E 3	189,7	2,8	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 218
SO190/046-1	12.12.06	###	10° 52,77' S	18° 55,51'	3941	E 3	218,6	2,9	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 219
SO190/046-1	12.12.06	###	10° 56,80' S	18° 55,21'	4294	E 3	220,4	1,3	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 220
SO190/046-1	12.12.06	###	11° 0,84' S	18° 54,94'	5053	ENE 3	182,1	2	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 221
SO190/046-1	12.12.06	###	11° 4,94' S	18° 54,62'	5727	E 2	211,6	1,8	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 222
SO190/046-1	12.12.06	###	11° 19,51' S	18° 53,56'	5478	E 3	201,9	2	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 223
SO190/046-1	12.12.06	###	11° 24,22' S	18° 53,25'	4986	ESE 2	207,2	2,2	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 224

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/046-1	12.12.06	###	11° 28,46' S	18° 52,97' E	4811	E 2	192,6	2,3	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 225
SO190/046-1	12.12.06	###	11° 32,37' S	18° 52,66' E	4842	ESE 2	180,4	1,6	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 226
SO190/046-1	12.12.06	###	11° 36,43' S	18° 52,38' E	4893	ESE 2	214	2,2	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 227
SO190/046-1	12.12.06	###	11° 40,44' S	18° 52,11' E	4923	ESE 2	196,7	2,8	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 228
SO190/046-1	12.12.06	###	11° 44,53' S	18° 51,82' E	4947	E 2	185,1	3,4	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 229
SO190/046-1	12.12.06	###	11° 44,53' S	18° 51,82' E	4947	E 2	185,1	3,4	OBS/OBH	OBS/OBH	Ende Station	
SO190/047-1	12.12.06	###	12° 0,14' S	18° 50,65' E	5088	E 2	6	2,3	Profil	PR	Stationsbeginn	
SO190/047-1	12.12.06	###	11° 59,95' S	18° 50,67' E	5068	ESE 1	354,7	2,2	Profil	PR	Streamer zu Wasser	SL: 200 m
SO190/047-1	12.12.06	###	11° 59,58' S	18° 50,71' E	5066	E 2	359,2	2,5	Profil	PR	Bb-Airgunarray zu Wasser	
SO190/047-1	12.12.06	###	11° 59,40' S	18° 50,71' E	5067	ESE 2	19,9	2,2	Profil	PR	Stb-Airgunarray zu Wasser	
SO190/047-1	12.12.06	###	11° 58,63' S	18° 50,76' E	5074	SE 2	4,2	4,5	Profil	PR	Beginn Profil	rwk: 004°, d: 136 nm
SO190/047-1	13.12.06	###	10° 58,68' S	18° 55,05' E	4770	E 2	356	1,5	Profil	PR	Bb-Airgunarray an Deck	2 Auftriebskörper neu
SO190/047-1	13.12.06	###	10° 58,43' S	18° 55,09' E	4728	E 3	15	1,7	Profil	PR	Bb-Airgunarray zu Wasser	
SO190/047-1	13.12.06	###	9° 43,21' S	18° 59,69' E	190	NE 2	307	4,1	Profil	PR	Ende Profil	
SO190/047-1	13.12.06	###	9° 43,01' S	18° 59,39' E	182	E 0	316	2,4	Profil	PR	Stb-Airgunarray an Deck	
SO190/047-1	13.12.06	###	9° 42,90' S	18° 59,19' E	168	N 0	285	2,3	Profil	PR	Bb-Airgunarray an Deck	
SO190/047-1	13.12.06	###	9° 42,82' S	18° 58,82' E	158	NNE 1	269	2,5	Profil	PR	Streamer an Deck	
SO190/047-1	13.12.06	###	9° 42,82' S	18° 58,82' E	158	NNE 1	269	2,5	Profil	PR	Stationsende	
SO190/048-1	13.12.06	###	9° 42,82' S	18° 58,82' E	158	NNE 1	269	2,5	OBS/OBH	OBS/OBH	Beginn Station	
SO190/048-1	13.12.06	###	9° 43,46' S	18° 59,52' E	226	S 0	127	8,9	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 200
SO190/048-1	13.12.06	###	9° 43,73' S	18° 59,91' E	238	ESE 2	128	5,3	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 200
SO190/048-1	13.12.06	###	9° 44,02' S	119° 0,35' E	0	ENE 2	229	1	OBS/OBH	OBS/OBH	OBH an Deck	OBH 200
SO190/048-1	13.12.06	###	9° 45,35' S	119° 0,33' E	0	ENE 2	184	12	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 201
SO190/048-1	13.12.06	###	9° 46,52' S	119° 0,24' E	0	SE 1	184	8,5	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 201
SO190/048-1	13.12.06	###	9° 47,09' S	119° 0,15' E	0	ENE 2	228	0,8	OBS/OBH	OBS/OBH	OBH an Deck	OBH 201
SO190/048-1	13.12.06	###	9° 48,32' S	119° 0,09' E	0	NE 1	185	13	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 202
SO190/048-1	13.12.06	###	9° 49,40' S	119° 0,03' E	0	NE 1	185	11	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 202
SO190/048-1	13.12.06	###	9° 50,11' S	18° 59,95' E	0	E 0	217	0,4	OBS/OBH	OBS/OBH	OBH an Deck	OBH 202
SO190/048-1	13.12.06	###	9° 51,14' S	18° 59,93' E	0	NNE 1	177	13	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 203
SO190/048-1	14.12.06	###	9° 52,62' S	18° 59,94' E	0	ESE 1	175	6,5	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 203
SO190/048-1	14.12.06	###	9° 53,06' S	18° 59,95' E	0	ESE 0	126	1,5	OBS/OBH	OBS/OBH	OBH an Deck	OBH 203
SO190/048-1	14.12.06	###	9° 53,59' S	119° 0,04' E	0	NNE 2	181	11	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 204
SO190/048-1	14.12.06	###	9° 55,75' S	18° 59,82' E	0	ESE 1	185	5,5	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 204

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/048-1	14.12.06	###	9° 56,06' S	18° 59,66' E	0	SSE 0	175	1,1	OBS/OBH	OBS/OBH	OBH an Deck	OBH 204
SO190/048-1	14.12.06	###	9° 56,29' S	18° 59,64' E	0	NNE 2	187	7,3	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 205
SO190/048-1	14.12.06	###	9° 59,64' S	18° 59,44' E	0	ESE 0	66	2,1	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 205, 2. Versuch
SO190/048-1	14.12.06	###	9° 59,49' S	18° 59,80' E	0	ESE 1	107	0,8	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 205
SO190/048-1	14.12.06	###	9° 59,69' S	18° 59,43' E	0	SSE 1	186	0,6	OBS/OBH	OBS/OBH	OBH an Deck	OBH 205
SO190/048-1	14.12.06	###	9° 59,70' S	18° 59,43' E	0	S 1	294	0,5	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 206
SO190/048-1	14.12.06	###	10° 2,04' S	18° 59,16' E	0	E 1	182	3,3	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 206
SO190/048-1	14.12.06	###	10° 2,15' S	18° 59,16' E	0	ESE 1	180	2,8	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 207
SO190/048-1	14.12.06	###	10° 2,42' S	18° 59,17' E	0	SE 1	153	1,1	OBS/OBH	OBS/OBH	OBS an Deck	OBS 206
SO190/048-1	14.12.06	###	10° 5,28' S	18° 58,93' E	0	WNW 1	183	12	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 207
SO190/048-1	14.12.06	###	10° 6,55' S	18° 58,93' E	0	SSE 0	164	1,6	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 208
SO190/048-1	14.12.06	###	10° 6,55' S	18° 58,93' E	0	SSE 0	164	1,6	OBS/OBH	OBS/OBH	OBS an Deck	OBS 207
SO190/048-1	14.12.06	###	10° 9,74' S	18° 58,58' E	0	WSW 1	192	3,2	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 209
SO190/048-1	14.12.06	###	10° 9,79' S	18° 58,58' E	0	WSW 0	106	0,2	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 208
SO190/048-1	14.12.06	###	10° 9,94' S	18° 58,60' E	0	S 0	193	1,4	OBS/OBH	OBS/OBH	OBS an Deck	OBS 208
SO190/048-1	14.12.06	###	10° 11,93' S	18° 58,42' E	0	WSW 0	184	13	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 210
SO190/048-1	14.12.06	###	10° 12,57' S	18° 58,37' E	0	SSW 1	185	12	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 209
SO190/048-1	14.12.06	###	10° 13,70' S	18° 58,26' E	0	S 2	186	0,9	OBS/OBH	OBS/OBH	OBS an Deck	OBS 209
SO190/048-1	14.12.06	###	10° 15,51' S	18° 58,11' E	0	WSW 2	181	13	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 211
SO190/048-1	14.12.06	###	10° 17,32' S	18° 58,03' E	0	SE 1	79	2,3	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 210
SO190/048-1	14.12.06	###	10° 17,43' S	18° 58,11' E	0	WSW 2	35	0,6	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 212
SO190/048-1	14.12.06	###	10° 17,42' S	18° 58,12' E	0	WSW 1	45	1	OBS/OBH	OBS/OBH	OBS an Deck	OBS 210
SO190/048-1	14.12.06	###	10° 20,03' S	18° 57,88' E	0	SSW 1	187	12	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 211
SO190/048-1	14.12.06	###	10° 21,75' S	18° 57,75' E	0	S 2	184	2,5	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 213
SO190/048-1	14.12.06	###	10° 21,76' S	18° 57,72' E	0	WSW 2	37	1	OBS/OBH	OBS/OBH	OBS an Deck	OBS 211
SO190/048-1	14.12.06	###	10° 26,05' S	18° 57,44' E	0	SSW 2	187	2,6	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 214
SO190/048-1	14.12.06	###	10° 26,07' S	18° 57,44' E	0	SSW 3	203	0,7	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 212
SO190/048-1	14.12.06	###	10° 26,24' S	18° 57,35' E	0	SW 2	236	1,5	OBS/OBH	OBS/OBH	OBS an Deck	OBS 212
SO190/048-1	14.12.06	###	10° 28,41' S	18° 57,18' E	0	SW 2	185	12	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 213
SO190/048-1	14.12.06	###	10° 29,54' S	18° 56,61' E	0	SW 1	233	3,3	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 215
SO190/048-1	14.12.06	###	10° 29,58' S	18° 56,49' E	0	WSW 3	245	1,5	OBS/OBH	OBS/OBH	OBH an Deck	OBH 213
SO190/048-1	14.12.06	###	10° 32,91' S	18° 56,73' E	0	SW 3	178	8,9	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 214
SO190/048-1	14.12.06	###	10° 33,23' S	18° 56,72' E	0	SW 3	214	5,1	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 216

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/048-1	14.12.06	###	10° 33,62' S	18° 56,17' E	0	W 3	252	1,5	OBS/OBH	OBS/OBH	OBH an Deck	OBH 214
SO190/048-1	14.12.06	###	10° 35,71' S	18° 56,24' E	0	WSW 5	172	13	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 215
SO190/048-1	14.12.06	###	10° 37,57' S	18° 56,01' E	0	WSW 2	284	1,3	OBS/OBH	OBS/OBH	OBH an Deck	OBH 215
SO190/048-1	14.12.06	###	10° 38,32' S	18° 55,92' E	0	SW 3	177	12	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 217
SO190/048-1	14.12.06	###	10° 41,30' S	18° 56,12' E	0	SSW 3	195	5	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 216
SO190/048-1	14.12.06	###	10° 41,83' S	18° 55,07' E	0	SSE 3	265	1,7	OBS/OBH	OBS/OBH	OBH an Deck	OBH 216
SO190/048-1	14.12.06	###	10° 42,63' S	18° 55,11' E	0	S 2	162	11	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 218
SO190/048-1	14.12.06	###	10° 44,24' S	18° 55,43' E	0	SSE 11	182	7	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 217
SO190/048-1	14.12.06	###	10° 44,67' S	18° 55,39' E	0	SSE 10	276	2,1	OBS/OBH	OBS/OBH	OBH an Deck	OBH 217
SO190/048-1	14.12.06	###	10° 45,90' S	18° 55,18' E	0	SSE 8	183	12	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 219
SO190/048-1	14.12.06	###	10° 48,36' S	18° 55,38' E	0	S 4	197	3,8	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 218
SO190/048-1	14.12.06	###	10° 48,77' S	18° 55,36' E	0	S 3	237	1,7	OBS/OBH	OBS/OBH	OBH an Deck	OBH 218
SO190/048-1	14.12.06	###	10° 49,10' S	18° 55,22' E	0	SSE 2	188	8,5	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 220
SO190/048-1	14.12.06	###	10° 51,52' S	18° 55,05' E	0	SE 2	177	13	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 219
SO190/048-1	14.12.06	###	10° 52,94' S	18° 54,94' E	0	SSE 1	231	1,4	OBS/OBH	OBS/OBH	OBH an Deck	OBH 219
SO190/048-1	14.12.06	###	10° 53,29' S	18° 54,87' E	0	ENE 3	181	9,1	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 221
SO190/048-1	14.12.06	###	10° 55,13' S	18° 54,91' E	0	E 2	177	12	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 220
SO190/048-1	14.12.06	###	10° 56,90' S	18° 54,35' E	0	ENE 2	278	2	OBS/OBH	OBS/OBH	OBH an Deck	OBH 220
SO190/048-1	14.12.06	###	10° 56,91' S	18° 54,27' E	0	NE 1	241	3	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 222
SO190/048-1	14.12.06	###	11° 0,55' S	18° 54,66' E	0	WNW 2	178	5,6	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 221
SO190/048-1	14.12.06	###	11° 0,97' S	18° 54,61' E	0	NW 2	236	1,4	OBS/OBH	OBS/OBH	OBH an Deck	OBH 221
SO190/048-1	14.12.06	###	11° 4,92' S	18° 54,22' E	0	WNW 4	248	1,1	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 222
SO190/048-1	14.12.06	###	11° 5,07' S	18° 54,17' E	0	NW 3	223	1,3	OBS/OBH	OBS/OBH	OBS an Deck	OBS 222
SO190/048-1	14.12.06	###	11° 12,52' S	18° 53,74' E	0	SW 1	182	13	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 223
SO190/048-1	14.12.06	###	11° 17,38' S	18° 53,53' E	0	ESE 6	184	12	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 224
SO190/048-1	14.12.06	###	11° 19,55' S	18° 53,31' E	0	SE 4	79	0,9	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 223
SO190/048-1	14.12.06	###	11° 20,41' S	18° 53,28' E	0	SE 2	196	6,4	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 224
SO190/048-1	14.12.06	###	11° 19,30' S	18° 52,83' E	0	S 2	324	1,4	OBS/OBH	OBS/OBH	OBS an Deck	OBS 223
SO190/048-1	14.12.06	###	11° 19,66' S	18° 52,82' E	0	WSW 1	187	12	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 225
SO190/048-1	14.12.06	###	11° 24,00' S	18° 51,73' E	0	SSW 3	253	2,1	OBS/OBH	OBS/OBH	OBS an Deck	OBS 224
SO190/048-1	14.12.06	###	11° 25,79' S	18° 51,86' E	0	WSW 8	170	13	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 226
SO190/048-1	14.12.06	###	11° 27,31' S	18° 52,10' E	0	SSW 8	174	4,7	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 225
SO190/048-1	14.12.06	###	11° 28,35' S	18° 52,62' E	0	SW 7	209	0,9	OBS/OBH	OBS/OBH	OBS an Deck	OBS 225

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/048-1	14.12.06	###	11° 30,53' S	18° 52,66' E	0	WSW 10	177	13	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 227
SO190/048-1	14.12.06	###	11° 32,50' S	18° 52,46' E	0	WSW 4	123	5,6	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 226
SO190/048-1	14.12.06	###	11° 32,17' S	18° 52,25' E	0	WSW 6	316	1,2	OBS/OBH	OBS/OBH	OBS an Deck	OBS 226
SO190/048-1	14.12.06	###	11° 33,51' S	18° 52,26' E	0	WSW 7	174	9,8	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 227
SO190/048-1	14.12.06	###	11° 34,22' S	18° 52,24' E	0	WSW 6	180	12	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 228
SO190/048-1	14.12.06	###	11° 36,25' S	18° 51,87' E	0	WSW 3	341	0,6	OBS/OBH	OBS/OBH	OBS an Deck	OBS 227
SO190/048-1	14.12.06	###	11° 36,25' S	18° 51,86' E	0	SSW 4	234	0,5	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 229
SO190/048-1	14.12.06	###	11° 40,27' S	18° 51,38' E	0	SSE 3	115	0,8	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 228
SO190/048-1	14.12.06	###	11° 40,35' S	18° 51,69' E	4923	S 3	281	0,4	OBS/OBH	OBS/OBH	OBS an Deck	OBS 228
SO190/048-1	14.12.06	###	11° 40,35' S	18° 51,67' E	4925	SSE 3	273	0,8	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 229
SO190/048-1	14.12.06	###	11° 44,57' S	18° 50,73' E	4944	S 2	267	1,7	OBS/OBH	OBS/OBH	OBS an Deck	OBS 229
SO190/048-1	14.12.06	###	11° 44,54' S	18° 50,62' E	4942	SSE 2	308	1,7	OBS/OBH	OBS/OBH	Ende Station	
SO190/049-1	14.12.06	###	11° 44,54' S	18° 50,64' E	4944	WSW 3	198	2,5	Magnetometer	MAGN	Beginn Station	
SO190/049-1	14.12.06	###	11° 44,90' S	18° 50,41' E	4944	SE 2	206	4,7	Magnetometer	MAGN	Magnetometer zu Wasse	SL: 200 m
SO190/049-1	14.12.06	###	11° 44,90' S	18° 50,41' E	4944	SE 2	206	4,7	Magnetometer	MAGN	Beginn Profil	rwk: 235°, d: 18 nm
SO190/049-1	14.12.06	###	11° 54,94' S	18° 36,50' E	5063	ESE 4	272	11	Magnetometer	MAGN	Kursänderung	rwk: 001°, d: 61 nm
SO190/049-1	15.12.06	###	10° 53,97' S	18° 36,77' E	3419	S 2	296	12	Magnetometer	MAGN	Kursänderung	rwk: 251°, d: 28 nm
SO190/049-1	15.12.06	###	11° 2,98' S	18° 10,01' E	5082	SSW 2	260	13	Magnetometer	MAGN	Kursänderung	rwk: 270°, d: 54 nm
SO190/049-1	15.12.06	###	11° 3,01' S	17° 15,14' E	4362	SSE 4	270	13	Magnetometer	MAGN	Kursänderung	rwk: 321°, d: 8 nm
SO190/049-1	15.12.06	###	10° 56,71' S	117° 9,89' E	3691	SE 3	317	5,4	Magnetometer	MAGN	Ende Profil	
SO190/049-1	15.12.06	###	10° 56,22' S	117° 9,49' E	3734	SE 3	318	3,3	Magnetometer	MAGN	Magnetometer an Deck	
SO190/049-1	15.12.06	###	10° 56,22' S	117° 9,49' E	3734	SE 3	318	3,3	Magnetometer	MAGN	Ende Station	
SO190/050-1	15.12.06	###	10° 13,25' S	16° 34,49' E	4418	S 5	322	2,5	OBS/OBH	OBS/OBH	Beginn Station	
SO190/050-1	15.12.06	###	10° 13,21' S	16° 34,47' E	4419	S 7	338	2,1	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 230
SO190/050-1	15.12.06	###	10° 12,80' S	16° 30,97' E	4419	SSE 5	282	1,9	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 231
SO190/050-1	15.12.06	###	10° 12,33' S	16° 27,50' E	4414	SE 5	266	2,5	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 232
SO190/050-1	15.12.06	###	10° 11,86' S	16° 23,95' E	4413	SSE 5	262	2,1	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 233
SO190/050-1	15.12.06	###	10° 11,42' S	16° 20,49' E	4410	SSE 4	260	2	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 234
SO190/050-1	15.12.06	###	10° 10,95' S	16° 17,02' E	4409	SSE 5	266	2,5	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 235
SO190/050-1	15.12.06	###	10° 10,48' S	16° 13,52' E	4406	SSE 4	248	2,4	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 236
SO190/050-1	15.12.06	###	10° 10,06' S	16° 10,00' E	4399	SE 5	208	1	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 237
SO190/050-1	15.12.06	###	10° 9,54' S	116° 6,49' E	4397	SE 7	260	1,5	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 238
SO190/050-1	15.12.06	###	10° 9,12' S	116° 3,61' E	4392	SSE 6	279	8,9	OBS/OBH	OBS/OBH	OBS zu Wasser	OBH 239

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/050-1	15.12.06	###	10° 9,12' S	16° 3,61' E	4392	SSE 6	279	8,9	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 240
SO190/050-1	15.12.06	###	10° 8,12' S	15° 55,98' E	4385	SSE 5	277	1,5	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 241
SO190/050-1	15.12.06	###	10° 7,65' S	15° 52,49' E	4381	SE 5	275	1,4	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 242
SO190/050-1	15.12.06	###	10° 7,23' S	15° 48,96' E	4377	ESE 4	240	1,7	OBS/OBH	OBS/OBH	OBS zu Wasser	OBS 243
SO190/050-1	15.12.06	###	10° 6,71' S	15° 45,52' E	4373	SE 6	255	1,1	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 244
SO190/050-1	15.12.06	###	10° 6,29' S	15° 42,04' E	4373	SE 4	218	1,4	OBS/OBH	OBS/OBH	OBH zu Wasser	OBH 245
SO190/050-1	15.12.06	###	10° 6,29' S	15° 42,04' E	4373	SE 4	218	1,4	OBS/OBH	OBS/OBH	Ende Station	
SO190/051-1	15.12.06	###	10° 5,86' S	15° 38,40' E	4367	S 2	99	1,7	Profil	PR	Stationsbeginn	
SO190/051-1	15.12.06	###	10° 5,89' S	15° 38,56' E	4368	SSE 3	86	1,3	Profil	PR	Streamer zu Wasser	Bb.-Ausleger
SO190/051-1	15.12.06	###	10° 5,93' S	15° 38,80' E	4370	SSE 3	101	1,6	Profil	PR	Bb-Airgunarray zu Wasser	
SO190/051-1	15.12.06	###	10° 5,95' S	15° 38,93' E	4368	SSE 3	107	1,3	Profil	PR	Stb-Airgunarray zu Wasser	
SO190/051-1	15.12.06	###	10° 5,95' S	15° 38,93' E	4368	SSE 3	107	1,3	Profil	PR	Beginn Profil	rwk: 098°, d: 62 nm
SO190/051-1	16.12.06	###	10° 14,13' S	16° 41,04' E	4416	SE 4	101	5,1	Profil	PR	Ende Profil	
SO190/051-1	16.12.06	###	10° 14,16' S	16° 41,38' E	4415	SE 4	88	2,4	Profil	PR	Stb-Airgunarray an Deck	
SO190/051-1	16.12.06	###	10° 14,18' S	16° 41,60' E	4417	SE 4	93	2	Profil	PR	Bb-Airgunarray an Deck	
SO190/051-1	16.12.06	###	10° 14,20' S	16° 42,00' E	4416	SE 4	102	1,9	Profil	PR	Streamer an Deck	
SO190/051-1	16.12.06	###	10° 14,20' S	16° 42,00' E	4416	SE 4	102	1,9	Profil	PR	Stationsende	
SO190/052-1	16.12.06	###	10° 14,20' S	16° 42,00' E	4416	SE 4	102	1,9	OBS/OBH	OBS/OBH	Beginn Station	
SO190/052-1	16.12.06	###	10° 14,10' S	16° 42,02' E	4414	E 3	288	3,9	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 230
SO190/052-1	16.12.06	###	10° 13,41' S	16° 36,22' E	0	SE 6	276	13	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 231
SO190/052-1	16.12.06	###	10° 13,28' S	16° 34,78' E	0	SE 4	262	3,2	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 230
SO190/052-1	16.12.06	###	10° 13,10' S	16° 34,61' E	0	SE 3	330	1,1	OBS/OBH	OBS/OBH	OBH an Deck	OBH 230
SO190/052-1	16.12.06	###	10° 12,93' S	16° 33,37' E	0	SE 5	278	12	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 232
SO190/052-1	16.12.06	###	10° 12,75' S	16° 31,18' E	0	SE 5	274	3	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 231
SO190/052-1	16.12.06	###	10° 12,63' S	16° 31,13' E	0	SE 3	330	0,8	OBS/OBH	OBS/OBH	OBH an Deck	OBH 231
SO190/052-1	16.12.06	###	10° 12,53' S	16° 30,41' E	0	SE 7	273	12	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 233
SO190/052-1	16.12.06	###	10° 12,12' S	16° 27,60' E	0	ESE 4	328	0,4	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 232
SO190/052-1	16.12.06	###	10° 12,24' S	16° 27,69' E	0	SSE 5	108	0,5	OBS/OBH	OBS/OBH	OBS an Deck	OBS 232
SO190/052-1	16.12.06	###	10° 12,31' S	16° 27,64' E	0	S 3	269	4,6	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 234
SO190/052-1	16.12.06	###	10° 12,00' S	16° 24,83' E	0	SE 3	281	9,5	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 233
SO190/052-1	16.12.06	###	10° 11,79' S	16° 24,03' E	0	SSE 2	289	1,4	OBS/OBH	OBS/OBH	OBS an Deck	OBS 233
SO190/052-1	16.12.06	###	10° 11,78' S	16° 23,94' E	0	SE 4	269	4,7	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 235
SO190/052-1	16.12.06	###	10° 11,44' S	16° 20,61' E	0	SE 3	138	0,1	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 234

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/052-1	16.12.06	###	10° 11,45' S	16° 20,53' E	0	SE 3	241	1,1	OBS/OBH	OBS/OBH	OBS an Deck	OBS 234
SO190/052-1	16.12.06	###	10° 11,41' S	16° 20,01' E	0	SE 4	280	10	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 236
SO190/052-1	16.12.06	###	10° 10,94' S	16° 17,24' E	0	SE 3	277	3,4	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 235
SO190/052-1	16.12.06	###	10° 10,94' S	16° 16,99' E	0	SE 4	270	2,5	OBS/OBH	OBS/OBH	OBS an Deck	OBS 235
SO190/052-1	16.12.06	###	10° 10,94' S	16° 16,93' E	0	SE 4	275	5,1	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 237
SO190/052-1	16.12.06	###	10° 10,48' S	16° 13,59' E	0	ESE 3	159	1	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 236
SO190/052-1	16.12.06	###	10° 10,47' S	16° 13,43' E	0	SE 2	323	2,1	OBS/OBH	OBS/OBH	OBS an Deck	OBS 236
SO190/052-1	16.12.06	###	10° 10,42' S	16° 13,30' E	0	E 3	279	6	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 238
SO190/052-1	16.12.06	###	10° 10,25' S	16° 11,89' E	0	ESE 3	275	12	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 237
SO190/052-1	16.12.06	###	10° 10,17' S	16° 10,03' E	0	SE 3	242	2,2	OBS/OBH	OBS/OBH	OBS an Deck	OBS 237
SO190/052-1	16.12.06	###	10° 10,18' S	116° 9,81' E	0	ESE 6	275	7,1	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 239
SO190/052-1	16.12.06	###	10° 9,54' S	116° 6,75' E	0	SSE 7	69	1	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 238
SO190/052-1	16.12.06	###	10° 9,52' S	116° 6,60' E	0	SSE 5	269	3,5	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 240
SO190/052-1	16.12.06	###	10° 9,50' S	116° 6,41' E	0	S 4	23	0,9	OBS/OBH	OBS/OBH	OBH an Deck	OBS 238
SO190/052-1	16.12.06	###	10° 9,40' S	116° 5,24' E	0	SSE 6	275	9,2	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 239
SO190/052-1	16.12.06	###	10° 9,15' S	116° 3,63' E	0	S 5	53	0,7	OBS/OBH	OBS/OBH	OBS an Deck	OBS 239
SO190/052-1	16.12.06	###	10° 9,03' S	116° 2,63' E	0	SSE 5	280	9,9	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 240
SO190/052-1	16.12.06	###	10° 9,02' S	116° 2,46' E	0	SE 5	278	10	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 241
SO190/052-1	16.12.06	###	10° 8,64' S	116° 0,00' E	0	SSE 5	7	1,2	OBS/OBH	OBS/OBH	OBS an Deck	OBS 240
SO190/052-1	16.12.06	###	10° 8,51' S	15° 58,53' E	0	SSE 6	278	9,9	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 242
SO190/052-1	16.12.06	###	10° 8,31' S	15° 56,77' E	0	SSW 5	44	2	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 241
SO190/052-1	16.12.06	###	10° 8,23' S	15° 56,31' E	0	SSE 3	76	0,9	OBS/OBH	OBS/OBH	OBS an Deck	OBS 241
SO190/052-1	16.12.06	###	10° 8,08' S	15° 55,46' E	0	SE 5	284	9,7	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 242
SO190/052-1	16.12.06	###	10° 8,01' S	15° 55,13' E	0	SSE 5	282	10	OBS/OBH	OBS/OBH	OBS ausgelöst	OBS 243
SO190/052-1	16.12.06	###	10° 7,84' S	15° 52,98' E	0	S 3	87	0,9	OBS/OBH	OBS/OBH	OBS an Deck	OBS 242
SO190/052-1	16.12.06	###	10° 7,49' S	15° 51,33' E	0	SSW 2	282	11	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 244
SO190/052-1	16.12.06	###	10° 7,42' S	15° 49,63' E	0	SSW 3	281	1,3	OBS/OBH	OBS/OBH	OBS gesichtet	OBS 243
SO190/052-1	16.12.06	###	10° 7,37' S	15° 49,23' E	0	SW 3	111	0,2	OBS/OBH	OBS/OBH	OBS an Deck	OBS 243
SO190/052-1	16.12.06	###	10° 7,27' S	15° 48,82' E	0	S 3	282	7,3	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 244
SO190/052-1	16.12.06	###	10° 7,18' S	15° 48,35' E	0	SSE 2	281	11	OBS/OBH	OBS/OBH	OBH ausgelöst	OBH 245
SO190/052-1	16.12.06	###	10° 7,04' S	15° 45,86' E	0	SE 1	167	1,1	OBS/OBH	OBS/OBH	OBH an Deck	OBH 244
SO190/052-1	16.12.06	###	10° 6,84' S	15° 44,58' E	0	SE 4	283	11	OBS/OBH	OBS/OBH	OBH gesichtet	OBH 245
SO190/052-1	16.12.06	###	10° 6,63' S	15° 42,31' E	4372	ENE 2	195	1,5	OBS/OBH	OBS/OBH	OBH an Deck	OBH 245

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/052-1	16.12.06	###	10° 18,25' S	116° 3,51' E	4371	SSE 4	117	13	OBMT	OBMT	OBMT ausgelöst	OBMT 55+54
SO190/052-1	17.12.06	###	10° 20,34' S	116° 7,07' E	0	SE 3	1	0,1	OBMT	OBMT	OBMT gesichtet	OBMT 55
SO190/052-1	17.12.06	###	10° 20,25' S	116° 7,05' E	0	SSE 3	208	1,5	OBMT	OBMT	OBMT gesichtet	OBMT 54
SO190/052-1	17.12.06	###	10° 20,31' S	116° 7,01' E	0	S 1	229	1	OBMT	OBMT	OBMT an Deck	OBMT 55
SO190/052-1	17.12.06	###	10° 20,63' S	116° 6,93' E	0	SE 1	226	0,6	OBMT	OBMT	OBMT an Deck	OBMT 54
SO190/052-2	17.12.06	###	10° 20,65' S	116° 6,87' E	0	ESE 1	193	0,7	Vermessung	EM / PS	Beginn Profil	rwk: 205°, d: 21 nm
SO190/052-2	17.12.06	###	10° 40,01' S	15° 58,00' E	3043	ENE 2	182	13	Vermessung	EM / PS	Kursänderung	rwk: 149°, d: 12 nm
SO190/052-2	17.12.06	###	10° 44,12' S	116° 0,52' E	3137	E 2	146	13	OBMT	OBMT	OBMT ausgelöst	OBMT 44
SO190/052-2	17.12.06	###	10° 46,95' S	116° 2,32' E	0	E 3	149	12	Vermessung	EM / PS	Ende Profil	
SO190/052-3	17.12.06	###	10° 49,98' S	116° 4,03' E	0	ESE 1	246	1	OBMT	OBMT	OBMT gesichtet	OBMT 44
SO190/052-3	17.12.06	###	10° 50,12' S	116° 3,48' E	0	ESE 4	285	0,8	OBMT	OBMT	OBMT an Deck	OBMT 44
SO190/052-3	17.12.06	###	11° 2,02' S	116° 2,91' E	0	SE 2	185	13	OBMT	OBMT	OBMT ausgelöst	OBMT 37
SO190/052-4	17.12.06	###	11° 9,52' S	116° 1,62' E	0	S 3	94	0,6	Vermessung	EM / PS	Beginn Profil	rwk: 266°, d: 7 nm
SO190/052-4	17.12.06	###	11° 9,98' S	15° 55,29' E	5805	SSE 4	266	14	Vermessung	EM / PS	Kursänderung	rwk: 180°, d: 12 nm
SO190/052-4	17.12.06	###	11° 21,80' S	15° 54,99' E	6411	ESE 5	178	12	Vermessung	EM / PS	Kursänderung	rwk: 100°, d: 5 nm
SO190/052-4	17.12.06	###	11° 22,39' S	15° 57,17' E	6191	SE 4	100	12	OBMT	OBMT	OBMT ausgelöst	OBMT 35
SO190/052-4	17.12.06	###	11° 22,86' S	15° 59,84' E	5903	SSE 4	102	11	Vermessung	EM / PS	Ende Profil	
SO190/052-5	17.12.06	###	11° 22,59' S	116° 0,99' E	5891	S 5	37	9,9	Vermessung	EM / PS	Beginn Profil	rwk: 004°, d: 14 nm
SO190/052-5	17.12.06	###	11° 15,70' S	116° 3,50' E	6735	SSE 7	0	13	OBMT	OBMT	OBMT gesichtet	OBMT 37
SO190/052-5	17.12.06	###	11° 9,47' S	116° 3,17' E	5529	SE 5	306	11	Vermessung	EM / PS	Ende Profil	
SO190/052-6	17.12.06	###	11° 9,08' S	116° 0,46' E	5847	ESE 7	280	1,4	OBMT	OBMT	OBMT an Deck	OBMT 37
SO190/052-6	17.12.06	###	11° 19,79' S	116° 0,89' E	6661	SSE 5	187	12	OBMT	OBMT	OBMT gesichtet	OBMT 35
SO190/052-6	17.12.06	###	11° 22,76' S	116° 0,30' E	5883	ESE 6	265	1	OBMT	OBMT	OBMT an Deck	OBMT 35
SO190/052-7	17.12.06	###	11° 22,76' S	116° 0,30' E	5883	ESE 6	265	1	Vermessung	EM / PS	Beginn Profil	rwk: 131°, d: 7sm
SO190/052-7	17.12.06	###	11° 27,23' S	116° 5,36' E	5773	SE 4	135	12	Vermessung	EM / PS	Kursänderung	rwk: 190°, d: 20sm
SO190/052-7	17.12.06	###	11° 46,08' S	116° 2,05' E	4980	ENE 4	184	13	OBMT	OBMT	OBMT ausgelöst	OBMT 26
SO190/052-7	17.12.06	###	11° 46,94' S	116° 2,00' E	5031	ENE 4	191	13	Vermessung	EM / PS	Ende Profil	
SO190/052-8	17.12.06	###	11° 49,72' S	15° 58,44' E	0	SE 6	296	5,3	Vermessung	EM / PS	Beginn Profil	rwk: 313°, d: 11 nm
SO190/052-8	17.12.06	###	11° 42,07' S	15° 50,08' E	5390	E 5	309	13	Vermessung	EM / PS	Kursänderung	rwk:133°, d: 6 nm
SO190/052-8	17.12.06	###	11° 46,80' S	15° 54,55' E	0	E 3	132	12	Vermessung	EM / PS	Ende Profil	
SO190/052-9	17.12.06	###	11° 49,89' S	15° 57,83' E	0	NNE 3	242	0,6	OBMT	OBMT	OBMT gesichtet	OBMT 26
SO190/052-9	17.12.06	###	11° 50,24' S	15° 57,94' E	4987	ENE 2	188	1	OBMT	OBMT	OBMT an Deck	OBMT 26
SO190/052-9	17.12.06	###	11° 50,27' S	15° 57,92' E	4988	ENE 2	197	0,7	OBMT	OBMT	Ende Station	

Station	Datum	UTC	PositionLat	PositionLon	Tiefe [m]	Windstärke [m/s]	Kurs [°]	v [kn]	Gerät	Gerätekürzel	Aktion	Bemerkung
SO190/053-1	17.12.06	###	11° 49,98' S	15° 58,51' E	5075	ENE 2	75	1,1	Magnetometer	MAGN	Beginn Station	
SO190/053-1	17.12.06	###	11° 49,93' S	15° 58,71' E	5132	ENE 2	73	1,9	Magnetometer	MAGN	Magnetometer zu Wasse	SL: 220 m
SO190/053-1	17.12.06	###	11° 49,93' S	15° 58,71' E	5132	ENE 2	73	1,9	Magnetometer	MAGN	Beginn Profil	rwk: 078°, d: 28 nm
SO190/053-1	17.12.06	###	11° 43,92' S	16° 27,02' E	5440	NE 1	35	11	Magnetometer	MAGN	Kursänderung	rwk: 010°, d: 17 nm
SO190/053-1	18.12.06	###	11° 27,20' S	16° 30,03' E	6071	ENE 2	34	12	Magnetometer	MAGN	Kursänderung	rwk: 090°, d: 109 nm
SO190/053-1	18.12.06	###	11° 27,01' S	18° 19,90' E	5383	SSE 2	79	11	Magnetometer	MAGN	Kursänderung	rwk: 360°, d: 9 nm
SO190/053-1	18.12.06	###	11° 18,06' S	18° 19,99' E	6689	ESE 2	344	12	Magnetometer	MAGN	Kursänderung	rwk: 270°, d: 108 nm
SO190/053-1	18.12.06	###	11° 17,89' S	16° 30,68' E	6399	S 3	315	12	Magnetometer	MAGN	Kursänderung	rwk: 053°, d: 25 nm
SO190/053-1	18.12.06	###	11° 3,04' S	16° 49,97' E	4126	SE 3	65	11	Magnetometer	MAGN	Kursänderung	rwk: 090°, d: 25 nm
SO190/053-1	19.12.06	###	11° 3,00' S	17° 14,45' E	4346	ESE 2	89	11	Magnetometer	MAGN	Ende Profil	
SO190/053-1	19.12.06	###	11° 2,28' S	17° 14,97' E	4332	ESE 3	352	3,2	Magnetometer	MAGN	Magnetometer an Deck	
SO190/053-1	19.12.06	###	11° 2,23' S	17° 14,96' E	4325	ESE 2	350	3,1	Magnetometer	MAGN	Ende Station	
SO190/054-1	19.12.06	###	11° 2,23' S	17° 14,96' E	4325	ESE 2	350	3,1	Vermessung	EM / PS	Beginn Profil	rwk: 360°, d: 5 nm
SO190/054-1	19.12.06	###	10° 57,01' S	17° 15,06' E	3829	ESE 3	40	12	Vermessung	EM / PS	Kursänderung	rwk: 090°, d: 59 nm
SO190/054-1	19.12.06	###	10° 56,98' S	18° 15,03' E	4234	ESE 5	81	12	Vermessung	EM / PS	Kursänderung	rwk: 074°, d: 7 nm
SO190/054-1	19.12.06	###	10° 55,00' S	18° 22,02' E	3494	ESE 1	81	12	Vermessung	EM / PS	Kursänderung	rwk: 087°, d: 41 nm
SO190/054-1	19.12.06	###	10° 53,01' S	19° 4,03' E	4423	SSE 4	88	12	Vermessung	EM / PS	Kursänderung	rwk: 094°, d: 16 nm
SO190/054-1	19.12.06	###	10° 54,04' S	19° 19,79' E	3949	SE 5	95	12	Vermessung	EM / PS	Kursänderung	rwk: 180°, d: 8 nm
SO190/054-1	19.12.06	###	11° 1,95' S	19° 19,99' E	5099	E 5	210	13	Vermessung	EM / PS	Kursänderung	rwk: 270°, d: 15 nm
SO190/054-1	19.12.06	###	11° 1,95' S	19° 4,83' E	5018	ESE 3	269	13	Vermessung	EM / PS	Kursänderung	rwk: 180°, d: 16 nm
SO190/054-1	19.12.06	###	11° 17,82' S	19° 4,94' E	5749	E 3	177	12	Vermessung	EM / PS	Kursänderung	rwk: 090°, d: 49 nm
SO190/054-1	19.12.06	###	11° 18,11' S	19° 54,93' E	4893	SSE 8	138	11	Vermessung	EM / PS	Kursänderung	rwk: 180°, d: 4 nm
SO190/054-1	19.12.06	###	11° 22,11' S	19° 55,09' E	5432	ESE 2	153	12	Vermessung	EM / PS	Kursänderung	rwk: 141°, d: 87 nm
SO190/054-1	20.12.06	###	12° 28,90' S	20° 51,11' E	1836	ENE 8	140	12	Vermessung	EM / PS	Ende Profil	

Rücken (nur bei umfangreicheren Dokumenten)

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