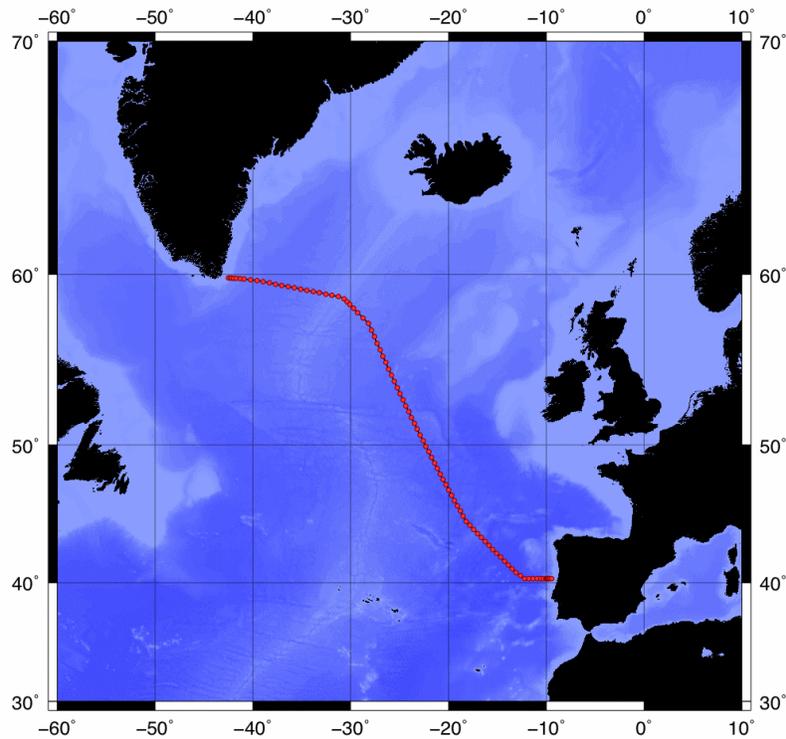


CRUISE REPORT: OVIDE02

(Updated FEB 2013)



Highlights

Cruise Summary Information

WOCE Section Designation	OVIDE02
Expedition designation (ExpoCodes)	35TH20020611
Chief Scientists	Dr. Herle Mercier / IFREMER
Dates	2002 JUN 10 - 2002 JUL 12
Ship	R/V THALASSA
Ports of call	Brest, France - Lisbon, Portugal
Geographic Boundaries	59°49.84'N 42°31.00'W 09°29.42'W 40°19.55'S
Stations	104
Floats and drifters deployed	18 ARGO floats deployed
Moorings deployed or recovered	0

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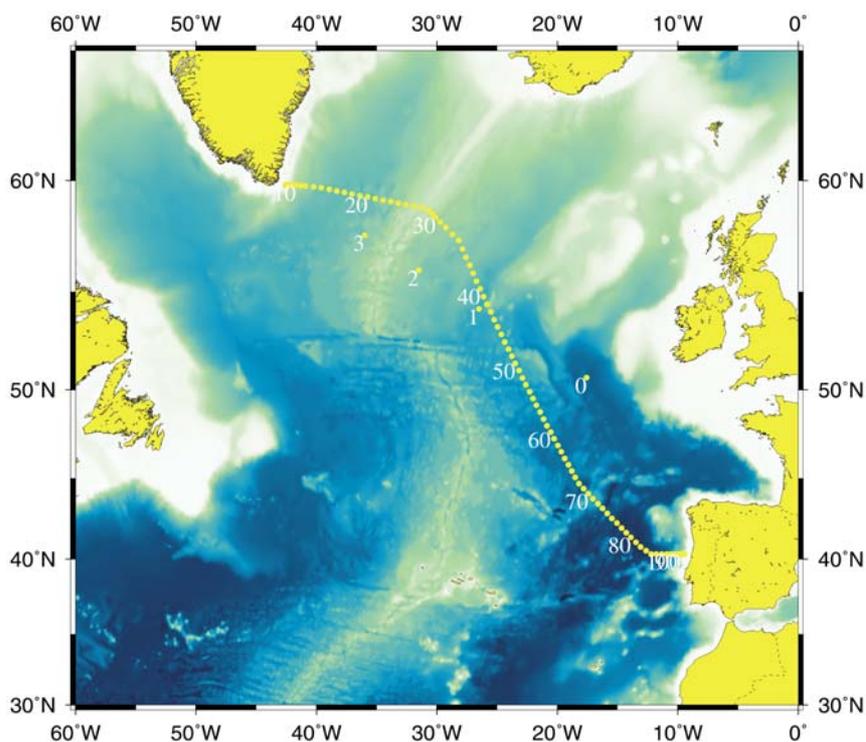
LINKS TO SELECT TOPICS

Shaded sections are not relevant to this cruise or were not available when this report was compiled.

Cruise Summary Information	Hydrographic Measurements
Description of Scientific Program	CTD Data:
Geographic Boundaries	Acquisition
Cruise Track (Figure): PI CCHDO	Processing
Description of Stations	Calibration
Description of Parameters Sampled	Temperature Pressure
Bottle Depth Distributions (Figure)	Salinities Oxygens
Floats and Drifters Deployed	Bottle Data
Moorings Deployed or Recovered	Salinity
Principal Investigators	Oxygen
Cruise Participants	Nutrients
Problems and Goals Not Achieved	Carbon System Parameters
Other Incidents of Note	CFCs
Other Incidents of Note	Helium / Tritium
Other Incidents of Note	Radiocarbon
Underway Data Information	References
Navigation Bathymetry	
Acoustic Doppler Current Profiler (ADCP)	
Thermosalinograph	
XBT and/or XCTD	
Meteorological Observations	Acknowledgments
Atmospheric Chemistry Data	
Data Processing Notes	

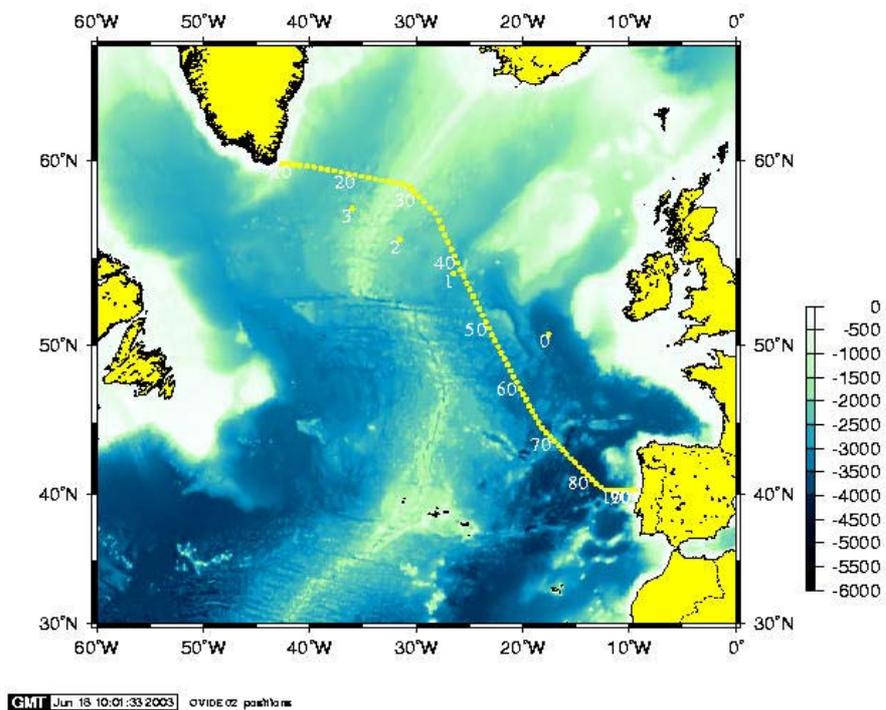
Campagne OVIDE 2002

Rapport de données CTD-O₂



Campagne OVIDE 2002

N/O THALASSA du 10/06/2002 au 12/07/2002



RESUME

La campagne OVIDE 2002 est la première d'une série de campagnes océanographiques dont le but est d'établir un observatoire de la variabilité climatique du tourbillon sub-polaire de l'océan Atlantique Nord. Des mesures d'hydrographie, géochimie et courant ont été réalisées en une centaine de stations entre la Péninsule Ibérique et l'extrémité sud du Groenland. La répétition de campagnes, le long de ce trajet tous les deux ans pendant une période de 10 ans, permettra de résoudre les fluctuations à basse fréquence de la cellule méridienne de circulation, du flux de chaleur vers l'Europe, du transport de traceurs et des caractéristiques des masses d'eau.

En chaque station, des profils continus de température, salinité et oxygène dissous sont mesurés de la surface jusqu'au fond. Les analyses géochimiques effectuées sur des prélèvements d'eau ont permis de déterminer la teneur en sels nutritifs et en traceurs anthropiques (CFCs, CCL4, carbone anthropique) d'échantillons. Ces mesures sont complétées par des profils de courant effectués à l'aide de courantomètres acoustiques.

Le programme OVIDE s'appuie en outre sur l'analyse des données des profilers lagrangiens du projet ARGO, l'analyse des données d'altimétrie spatiale (JASON, TOPEX/POSEIDON, ERS, etc.), un programme de modélisation réaliste à haute résolution (supérieure à $1/6^\circ$) et l'assimilation de données dans un modèle à plus basse résolution. Ce projet fait partie du programme international CLIVAR et complète les travaux prévus dans cette région (principalement) par l'Allemagne, la Grande Bretagne et le Canada. Cette proposition s'insère dans le PNEDC.

ABSTRACT

The OVIDE 2002 cruise was the first of a series of oceanographic cruises whose goal is to maintain an observatory of the variability of the North Atlantic sub-polar gyre. The purpose of the cruise was to carry out hydrographic, geo-chemical and current measurements at stations between the southern tip of Greenland and Portugal. The measurements will be repeated every two other years during 10 years. This will allow us to resolve the low-frequency fluctuations of the meridional overturning cell, heat flux towards Europe, tracer transports and water mass characteristics.

At each station location, continuous profiles of temperature, salinity and dissolved oxygen were acquired from the surface to the sea floor. Geo-chemical analyses of water samples allowed us to determine nutrients, CFCs, CCL4 and anthropogenic carbon contents of water masses. Those measurements were complemented by vertical profiles of current obtained using acoustic Doppler current meters.

The OVIDE project relies also on the analysis of ARGO profiling float data, precise altimetry (JASON, TOPEX/POSEIDON, ERS), a realistic high-resolution numerical modelling programme (the DRAKKAR project) and data assimilation in a coarser resolution model. This project is a French contribution to CLIVAR.

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CO₂ parameters report.

I. Le programme OVIDE

Thème scientifique et objectifs précis de cette campagne

La campagne fait partie du programme OVIDE (Observatoire de la Variabilité Inter-Décadale du Gyre Subpolaire de l'Atlantique Nord) qui est une contribution au Programme National d'Etude de la Dynamique du Climat (PNEDC) ainsi qu'au programme international CLIVAR.

La campagne OVIDE 2002 était la première d'une série de campagnes océanographiques dont le but est d'établir un observatoire de la variabilité climatique du tourbillon sub-polaire de l'océan Atlantique Nord. Des mesures d'hydrographie, géochimie et courant ont été réalisées en une centaine de stations entre la Péninsule Ibérique et l'extrémité sud du Groenland. La répétition de campagnes le long de ce trajet tous les deux ans pendant une période de 10 ans permettra de résoudre les fluctuations à basse fréquence de la cellule méridienne de circulation, du flux de chaleur vers l'Europe, du transport de traceurs et des caractéristiques des masses d'eau.

La distance entre stations a été ajustée pour permettre de résoudre les tourbillons de moyenne échelle. En chaque station des profils continus de température, salinité et oxygène dissous ont été mesurés de la surface jusqu'au fond. Les analyses géochimiques effectuées sur des prélèvements d'eau ont permis de déterminer la teneur en sels nutritifs et en traceurs anthropiques (CFCs, CCL4, carbone anthropique) d'échantillons. Ces mesures ont été complétées par des profils de courant effectués à l'aide de courantomètres acoustiques.

Le programme OVIDE s'appuie en outre sur l'analyse des données des profileurs lagrangiens du projet ARGO, l'analyse des données d'altimétrie spatiale (JASON, TOPEX/POSEIDON, ERS, etc.), un programme de modélisation réaliste à haute résolution (supérieure à $1/6^\circ$) et l'assimilation de données dans un modèle à plus basse résolution. Ce projet fait partie du programme international CLIVAR et complète les travaux prévus dans cette région (principalement) par l'Allemagne, la Grande Bretagne et le Canada. Cette proposition s'insère dans le PNEDC (Programme National d'Etude de la Dynamique du Climat).

La qualité des données a été surveillée de manière constante à bord et leur qualité est aussi bonne ou meilleure que celle requise par les normes internationales émises lors de l'expérience WOCE.

La section hydrographique a permis d'échantillonner une grande variété de masses d'eau trouvant leur origine en mer du Groenland et de Norvège, Labrador, mer Méditerranée et même autour de la péninsule antarctique et d'en mesurer la variabilité. A titre d'illustration, les premières analyses faites à bord ont montré des masses d'eau profondes en mer d'Irvinger plus chaudes et salées qu'au début des années 1990.

Cette campagne a aussi été une opportunité pour déployer des profileurs lagrangiens des projets CORIOLIS et GYROSCOPE ainsi que pour relever trois mouillages « pièges à particules » mis à l'eau dans le cadre du projet POMME.

Résultats escomptés

1. Documenter les propriétés des masses d'eau, la circulation associée et leur variabilité

Notre section hydrographique répétée donnera accès aux caractéristiques physiques et géochimiques de la variabilité des principales masses d'eau par comparaison des sections entre elles et confrontation aux données historiques. Nous nous focaliserons sur l'étude de la SubPolar Mode Water (SPMW), de l'eau de la mer du Labrador (LSW), de l'eau méditerranéenne (MOW), et de l'eau issue des seuils du Danemark et Islande-Ecosse (OW). La circulation des masses d'eau sera estimée par les analyses menées à partir des modèles inverses et par assimilation de données. Les données de la radiale hydrographique complèteront, par la variété des traceurs mesurés et la résolution spatiale des données, les observations des flotteurs profileurs dans la couche 0-2000 m.

2. Documenter la variabilité de l'amplitude de la circulation thermohaline, des transports de chaleur, de carbone, de CFCs et de nutritifs.

Seule une radiale d'hydrographie et géochimie peut permettre d'estimer précisément ces paramètres. Dans l'Atlantique, l'amplitude de la circulation thermohaline est directement reliée au transport de chaleur vers le Nord. L'analyse de la radiale hydrographique OVIDE permettra de documenter les variations de l'amplitude de la cellule méridienne de circulation à échelle de temps inter-annuelle et des propriétés associées (en particulier transport de chaleur, nutritifs, fréons, carbone anthropique) et de déterminer leur origine. La répétition de la radiale OVIDE permettra de résoudre la variabilité inter-annuelle de l'amplitude de la cellule méridienne de circulation et du transport de chaleur associé. Nous utiliserons les simulations numériques contraintes par les données pour estimer les fluctuations à plus hautes fréquences. La variabilité des transports méridiens de traceurs sera estimée. Les flux de carbone seront l'objet d'une attention particulière, l'Atlantique Nord étant une région de puits pour ce paramètre.

II. La campagne OVIDE 2002

La campagne s'est déroulée à bord du N/O Thalassa, du 10 juin au 12 juillet 2002, de Brest à Lisbonne. Les opérations suivantes ont été réalisées (pour plus de détails on consultera le rapport de campagne) :

- Cent quatre stations bathysonde, qui sont l'objet de ce rapport de données
- Déploiement de profileurs lagrangiens PROVOR (12) et APEX (6)
- Déploiement de bouées météo SVP (3)
- Relevage de trois mouillages « pièges à particules » POMME
- Mesures en route : ADCP de coque, thermosalinomètre

Liste des participants

	H/F	Nom	Institut	Fonction
1	H	Mercier Herlé	LPO	Chef de mission
2	F	Alvarez Marta	IIMV	Analyses pH, alcalinité, pO ₂ , pCO ₂
3	H	Billant André	LPO	Analyses S et O ₂ + mouillages
4	F	Bournot Claudie	INSU Brest	Mouillages + quart CTD
5	H	Branellec Pierre	LPO	Quart CTD
6	H	Cariou Thierry	LCM	Analyses nutritifs
7	H	Cocquempot Boris	LCM	Analyses Fréons
8	H	Fernández Pérez Fiz	IIMV	Analyses pH, alcalinité, pO ₂ , pCO ₂
9	H	Ferron Bruno	LPO	Quart CTD
10	H	Forget Gaël	LPO	Quart CTD
11	F	Forner Sandra	LCM	Analyses Fréons
12	H	Gouillou Jean-Pierre	LPO	Acquisition VM-ADCP
13	H	Huck Thierry	LPO	Quart CTD
14	F	Leblond Nathalie	INSU Villefranche	Pièges + quart CTD
15	H	Le Bot Philippe	LPO	Quart CTD
16	H	Le Grand Pascal	LPO	Analyses O ₂
17	H	Leizour Stéphane	LPO	Mouillages + quart CTD
18	F	Lherminier Pascale	LPO	Traitement données ADCP
19	H	Macé Eric	LCM	Analyses nutritifs
20	H	Morin Pascal	LCM	Analyses Fréons + nutritifs
21	F	Nieto Cid Mar	IIMV	Analyses POC, DOC, PON, DON
22	H	Peden Olivier	LPO	Mouillages + quart CTD
23	F	Roa Lucie	LCM	Analyses Fréons
24	F	Salvetat Florence	TMSI	Analyses S

IIMV : Instituto de Investigacions Marinas de Vigo (Espagne)
 INSU : Institut National des Sciences de l'Univers
 LCM : Laboratoire de Chimie Marine, Roscoff et IUEM
 LPO : Laboratoire de Physique des Océans , UMR 6523 (CNRS, Ifremer, UBO) Brest
 TMSI : Ifremer, Direction Technologie Marine et Systèmes d'Information

III. CALIBRATION DES MESURES CTD-O₂

André Billant et Pierre Branellec
Laboratoire de Physique des Océans

III.1. Acquisition des données CTD-O₂

III.1.1. Déroulement de la campagne

104 stations ont été réalisées au cours de la campagne OVIDE 2002 avec une sonde de type Neil-Brown Mark III B (numéro de série : #2782) à bord du N/O THALASSA.

La campagne a commencé à Brest le 10 juin et s'est terminée à Lisbonne le 12 juillet 2002. Les cinq premiers jours de la campagne ont été consacrés au transit vers la pointe Sud du Groenland et au déploiement des profileurs ARGO (12 PROVOR et 6 APEX) ainsi que trois bouées météo SVP. Quatre stations bathysonde ont été effectuées à proximité de quelques points de lâcher des flotteurs sur le transit vers le Groenland.

Entre la pointe du Groenland et la côte portugaise, les stations CTD-O₂ ont été réalisées de manière quasi-continue, avec simplement une interruption de trois jours pour relever les 3 mouillages de pièges à particules et récupérer un PROVOR T du SHOM. Cette interruption se situe entre les stations 72 et 73 qui ont été effectuées à la même position géographique avant et après les opérations de récupération.

Les profils ont été réalisés de la surface jusqu'à une distance de 15 mètres du fond. A chaque station, le câble électroporteur est déroulé puis enroulé à une vitesse de 1 mètre par seconde (0.5 m/s pour les 100 mètres de surface). Au cours de la remontée le treuil est stoppé aux niveaux de fermeture des 28 bouteilles de prélèvement. L'approche du fond est contrôlée à l'aide d'un pinger embarqué dans le châssis de la sonde et d'un contacteur de fond qui déclenche un signal sonore.

Outre ces instruments deux ADCP (Acoustic Doppler Currentmeter Profiler) sont embarqués dans le châssis pour obtenir des profils verticaux de vitesse du courant.

La [figure III-1](#) présente la position géographique des stations de la campagne OVIDE 2002.

Campagne OVIDE 2002

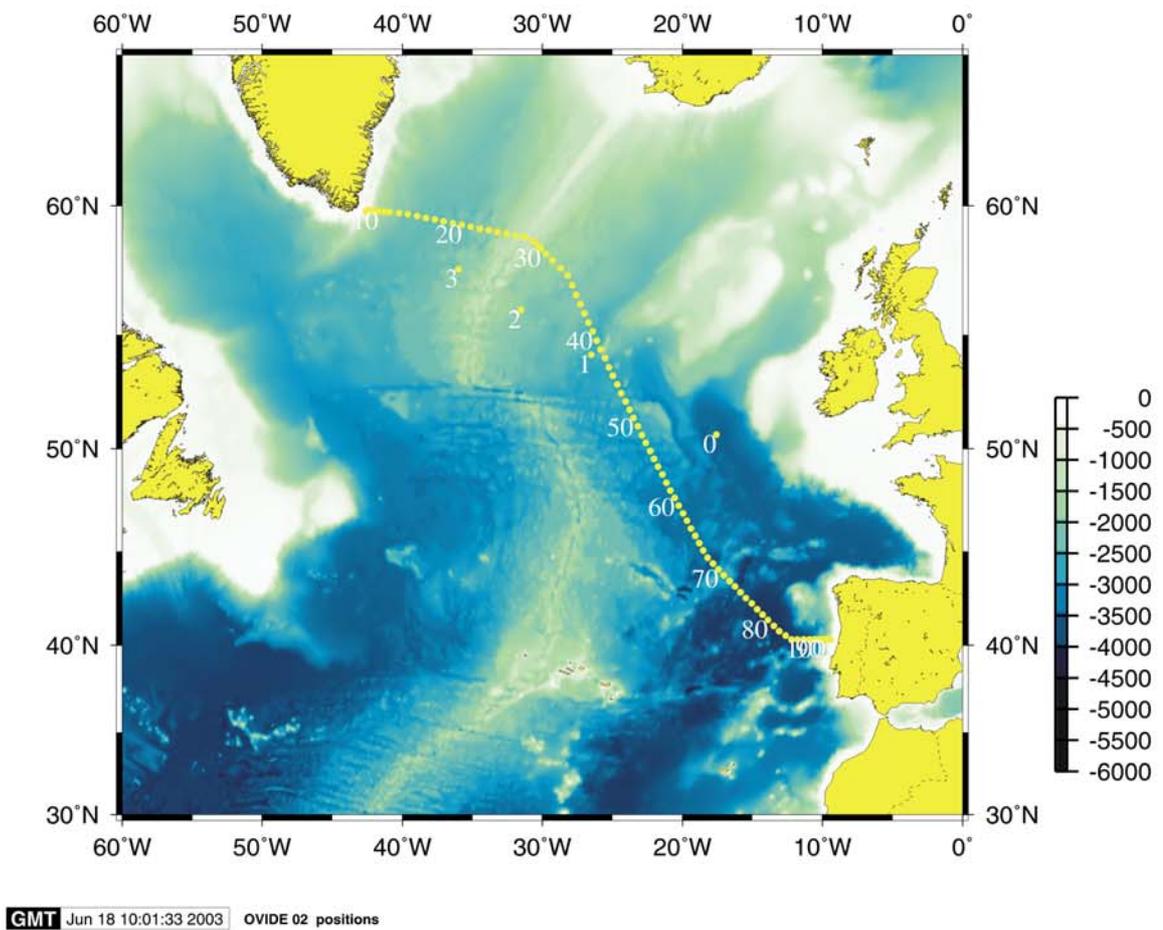


Figure III.1 : Position géographique des 104 stations CTD-O₂ de la campagne OVIDE 2002

III.1.2. Traitement des données

Les signaux de la sonde CTD-O₂ sont transmis au système d'acquisition d'hydrologie du Laboratoire de Physique des Océans (LPO). Ce système, conçu autour d'une station de travail UNIX, permet de visualiser en temps réel les différents paramètres mesurés et calculés sur les profils tout en contrôlant la qualité du signal transmis par la sonde. L'ensemble des données transmises par la sonde, à la cadence de 32 cycles par seconde, est sauvegardé sur disque. Après chaque station, un programme de traitement permet d'obtenir un profil de données réduites et validées tous les décibars selon une procédure décrite dans Billant (1985 et 1987). La validation consiste à comparer chaque paramètre d'un cycle à sa valeur au cycle précédent, le cycle est éliminé si la nouvelle valeur diffère de la précédente de :

0.5 dbar en pression (P),

0.032°C pour $0 < P < 1500$ dbar ou 0.005°C à $P > 1500$ dbar en température,

0.032 mmho/cm pour $0 < P < 1500$ dbar ou 0.005 mmho/cm à $P > 1500$ dbar en conductivité,

0.010 μ A en courant oxygène,

0.3°C en température oxygène.

Une moyenne arithmétique est calculée pour chaque paramètre aux niveaux entiers de pression à condition d'avoir validé 25 % du nombre théorique de mesures dans l'intervalle de 1 dbar (32 pour un profil réalisé à un mètre par seconde). Les mesures de pression, de température, de conductivité et d'oxygène dissous ont été exploitées sur le profil descente de la sonde.

III.2. Échantillonnage en mer

La rosette de prélèvement PASH 6000 utilisée a été conçue au LPO. Initialement développée en 1984 pour supporter 16 bouteilles, elle a été équipée d'un deuxième étage de prélèvement portant ainsi sa capacité à 32 bouteilles de 8 litres. Le nombre de bouteilles est limité à 28 lorsque le châssis est équipé de deux ADCPs, ce qui est le cas d'OVIDE 2002.

Les bouteilles sont fermées au cours de la remontée de la sonde après arrêt aux niveaux de prélèvement. Ces niveaux sont répartis sur toute la hauteur du profil de manière à échantillonner toutes les masses d'eau : les 28 bouteilles étaient fermées systématiquement à chaque station. Le but des chimistes embarqués était d'échantillonner de manière plus dense la couche supérieure de l'océan. Il a donc été nécessaire d'établir un compromis acceptable afin de pouvoir disposer à chaque station de niveaux de prélèvements répartis sur toute la colonne d'eau pour recalculer les profils de salinité et d'oxygène dissous. Ainsi, un minimum de 16 échantillons ont été prélevés pour mesurer salinité et oxygène dissous afin de recalculer les profils.

La [figure III-2](#) présente l'ensemble des niveaux de prélèvement auxquels salinité et oxygène dissous ont été mesurés.

Dès la remontée en surface, les échantillons sont recueillis dans chaque bouteille pour les très nombreuses analyses effectuées à bord suivant l'ordre préconisé par les instructions de WOCE. Les bouteilles sont échantillonnées suivant leur chronologie de 1 à 28.

Au cours de la campagne, 2227 mesures de salinité et 2212 mesures d'oxygène dissous ont été effectuées à bord.

Pour estimer l'erreur sur les méthodes analytiques, des doublets ont été effectués à quelques stations en déclenchant la fermeture de deux bouteilles au même niveau de prélèvement. Nous disposons ainsi de 39 doublets en salinité et 35 doublets en oxygène.

Campagne OVIDE 2002
Répartition des prélèvements

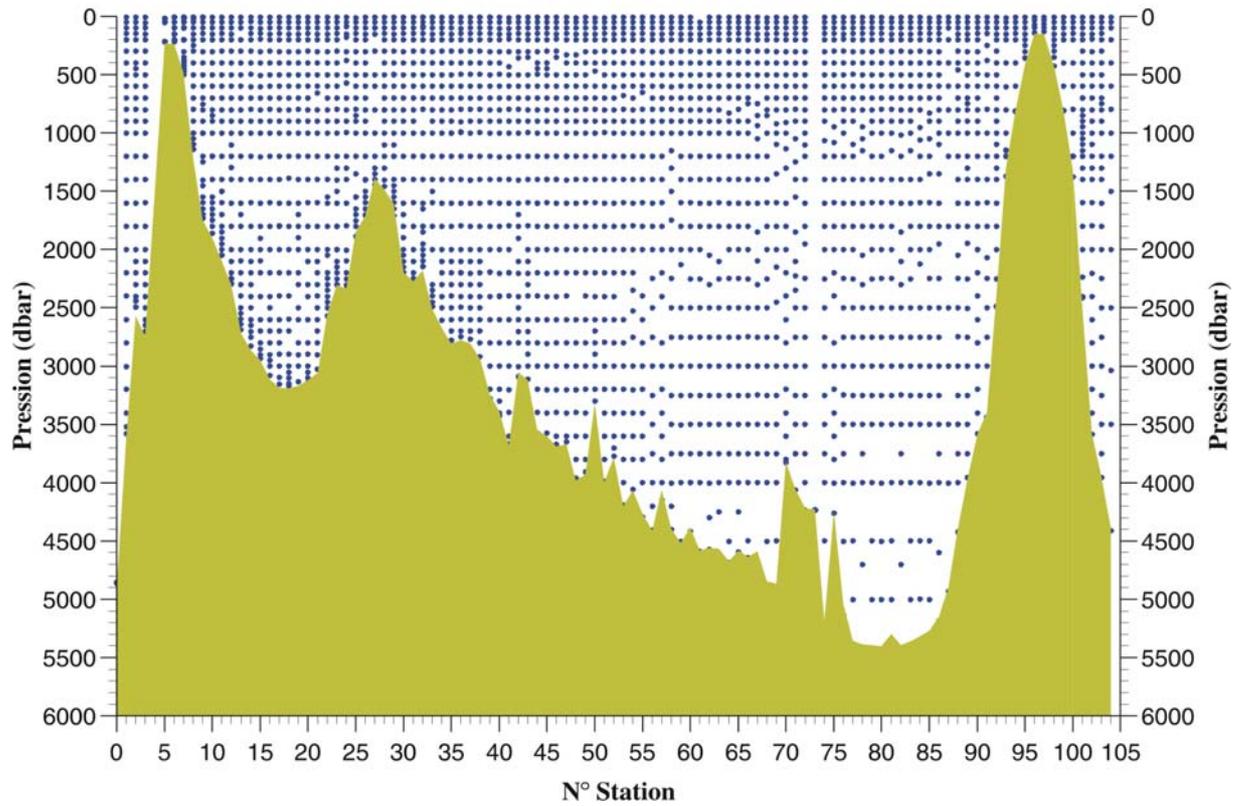


Figure III.2 : Carte synoptique indiquant le niveau des prélèvements pour dosage de salinité et d'oxygène dissous à chaque station de la campagne OVIDE 2002.

III.3. Analyse des échantillons de salinité et d'oxygène dissous

III.3.1. Salinité

Les échantillons sont recueillis après trois rinçages successifs dans des flacons de 125 ml dont l'étanchéité est assurée par un joint en caoutchouc. Dès la fin des prélèvements, les échantillons sont placés dans le conteneur d'analyses dont la température contrôlée est fixée à 20°C ($\pm 1^\circ$). Les échantillons sont analysés 20 à 30 heures après le prélèvement pour leur permettre d'atteindre un équilibre thermique.

La salinité des échantillons est déterminée d'après l'équation PSS 78 (UNESCO, 1981). Le salinomètre est standardisé en utilisant des ampoules d'eau normale du lot P 139 ($K_{15} = 0.99993$) fabriquées par l'OSIL à Petersfield (UK), le 10 novembre 2000 : pendant toute la campagne, la température du bain thermostaté est fixée à 21°C.

Tous les jours, avant chaque série d'analyses, la standardisation de l'appareil est vérifiée puis ajustée si nécessaire. Après l'analyse des échantillons d'une station, la standardisation est vérifiée par une nouvelle ampoule d'eau normale puis consignée sur la fiche d'analyses. Pour chaque échantillon, trois rinçages successifs de la cellule sont effectués avant de faire deux ou trois lectures séparées à chaque fois par un rinçage.

Tous les échantillons de la campagne ont été analysés avec le même salinomètre de type PORTASAL. La stabilité de l'appareil a été satisfaisante pendant la durée de la campagne.

La [figure III-3](#) montre les écarts de salinité obtenus sur les doublets de la campagne : ils ont été réalisés à des niveaux de prélèvement compris entre la surface et le fond et ont été recueillis à des stations réparties sur toute la durée de la campagne.

Les écarts entre deux mesures de salinité ont été étudiés pour 39 doublets : la [figure III-4](#) en présente l'histogramme. On observe que dans 62 % des cas l'écart de salinité mesurée sur les deux bouteilles est inférieur à 0.001 et dans 87 % des cas il est inférieur à 0.003, et l'écart-type est de 0.0018. En ne considérant que les doublets effectués à pression supérieure à 980 dbar, l'écart-type est de 0.0017.

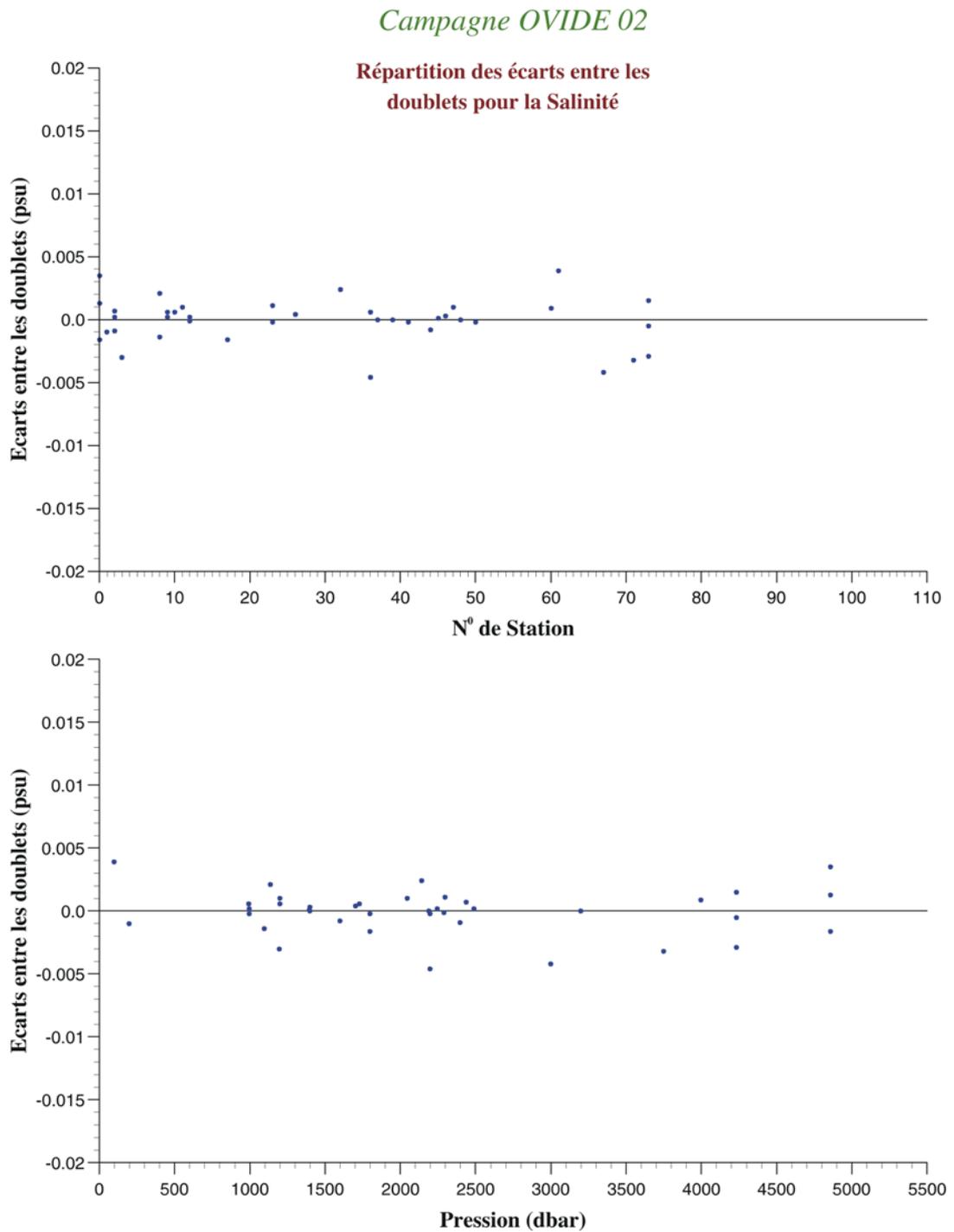


Figure III.3 : Ecart de salinité entre deux bouteilles fermées au même niveau :
 a) en fonction du numéro de station à laquelle a été réalisé le doublet,
 b) en fonction de la pression à laquelle a été réalisé le doublet.

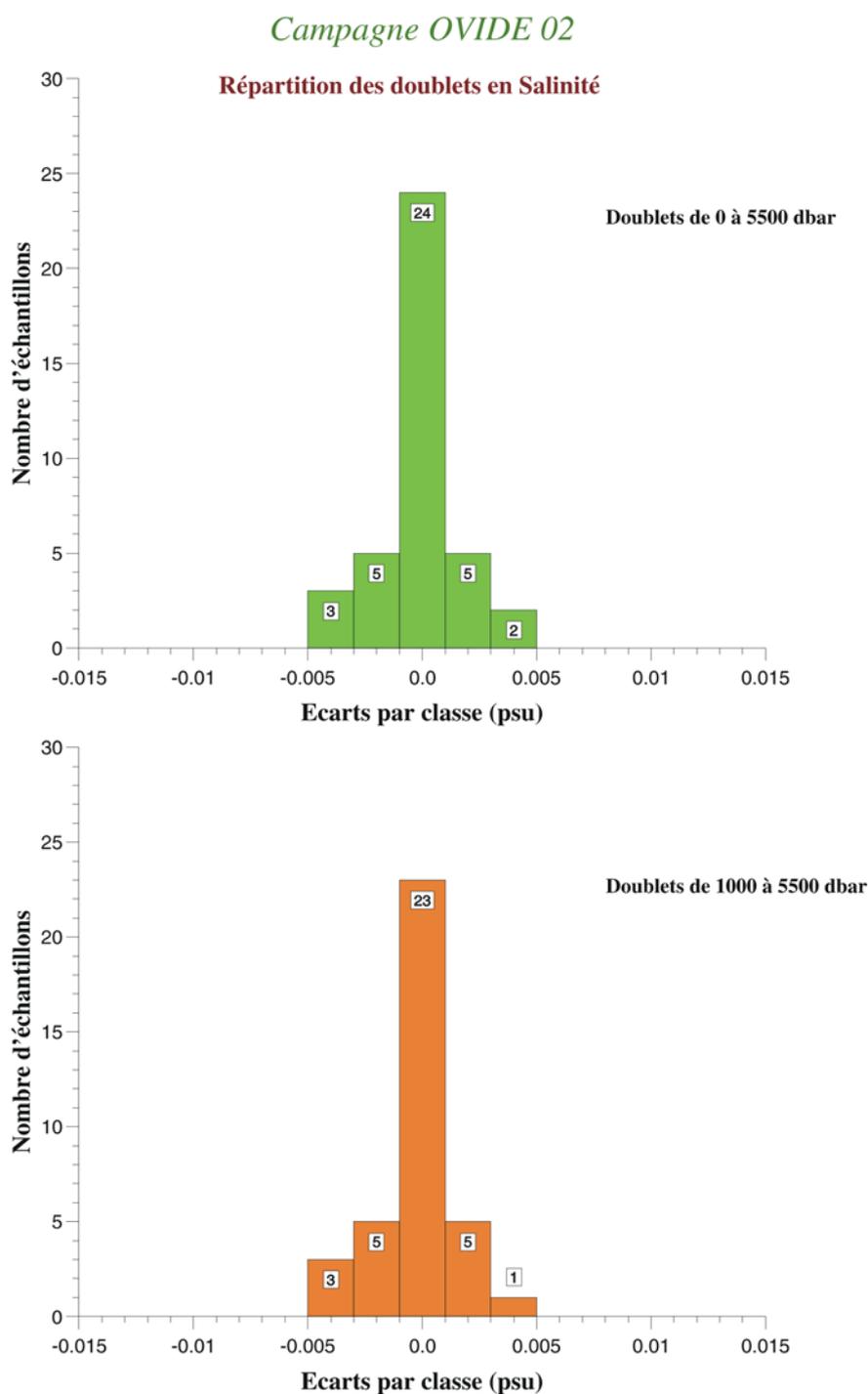


Figure III.4 : Histogramme des écarts de salinité sur les doublets :

- pour les 39 doublets de la campagne,
- pour les 37 doublets réalisés à pression supérieure à 980 dbar.

III.3.2. Oxygène dissous

Pour analyse d'oxygène dissous, les échantillons sont recueillis dans des flacons à bouchon plongeur de 120 ml. Après remplissage du flacon, la température de l'échantillon est notée avant de laisser déborder trois fois l'équivalent de volume du flacon. Après addition successive des deux réactifs et bouchage, une agitation est pratiquée pendant 30 secondes. Dès que tous les prélèvements sont terminés, les flacons sont retournés un à un pour remettre en suspension le précipité. Les échantillons sont entreposés dans le conteneur laboratoire à la température de 20°C ($\pm 1^\circ$) puis analysés dans un délai de 4 à 24 heures.

Les conditions opératoires et la méthode d'analyse sont conformes aux recommandations de WOCE (WOCE Operations Manual, 1991). Après acidification dans le flacon de prélèvement, l'iode libéré est dosé par une solution de thiosulfate de sodium dont la normalité est de l'ordre de 0.02N. Celle-ci est préparée en quantité suffisante pour analyser une centaine de stations : sa normalité est déterminée tous les jours, avant le début des séries d'analyses, comparativement à une solution d'iodate de potassium dont la normalité, obtenue par pesée, est 0.020013.

Le dosage est piloté par un titroprocesseur associé à une électrode de platine qui mesure le potentiel de la réaction et contrôle la burette de thiosulfate de sodium. Le volume de thiosulfate nécessaire à la réduction de l'iode est déduit de la détermination automatique du point d'inflexion sur la courbe de potentiel à l'équivalence.

La [figure III-5](#) montre les écarts obtenus entre les mesures effectuées sur les 35 doublets : la [figure III-6](#) en présente des histogrammes. Pour l'ensemble des doublets prélevés entre le fond et la surface, 17 % des écarts sont inférieurs à 0.005 ml/l et 74 % sont inférieurs à 0.015 ml/l pour un écart-type de 0.014 ml/l. En éliminant les niveaux compris entre la surface et 980 dbar, où la variabilité en oxygène est plus importante, l'écart-type est encore de 0.015 ml/l.

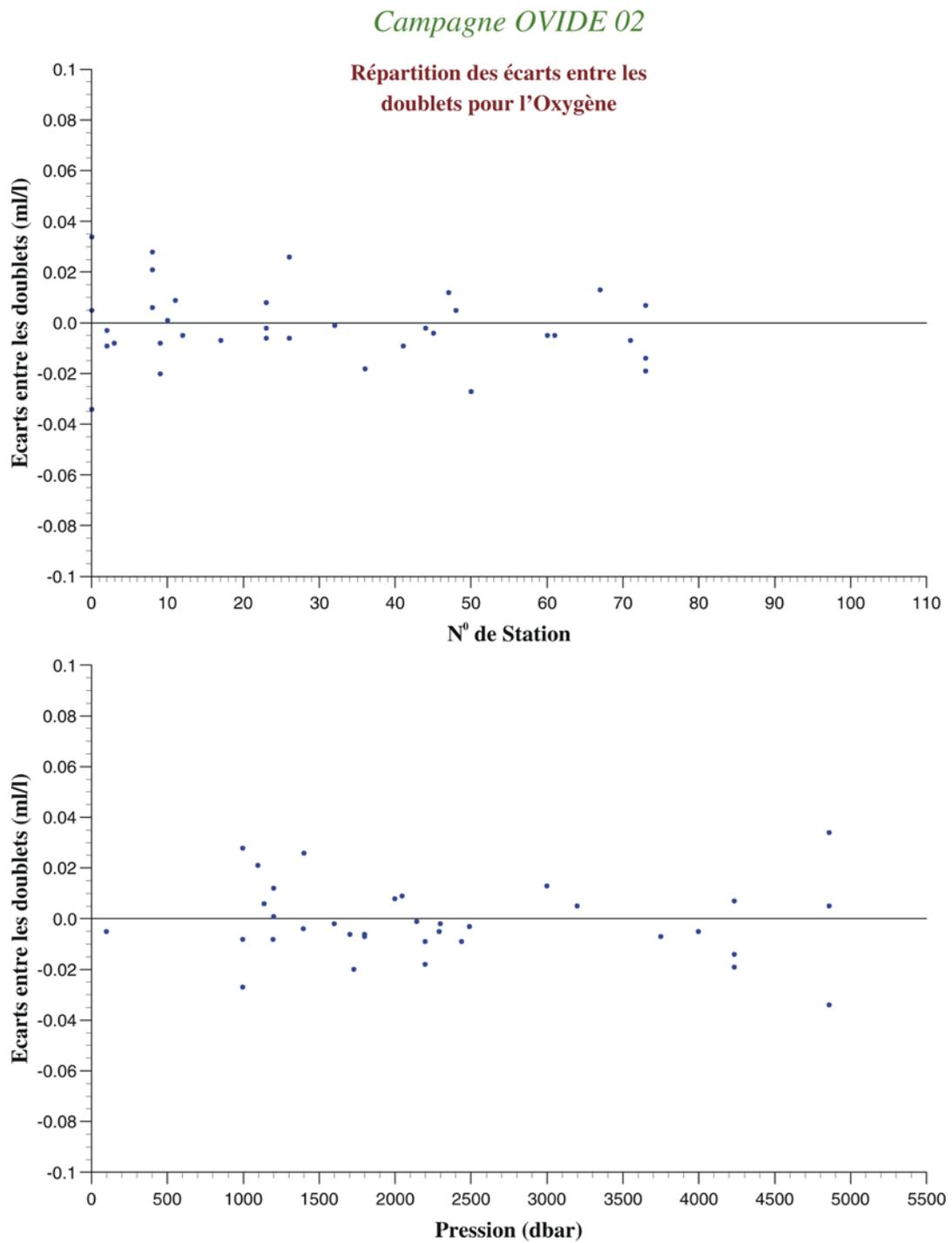


Figure III.5 : Ecart en oxygène entre deux bouteilles fermées au même niveau :
 a) en fonction du numéro de station à laquelle a été réalisé le doublet,
 b) en fonction de la pression à laquelle a été réalisé le doublet.

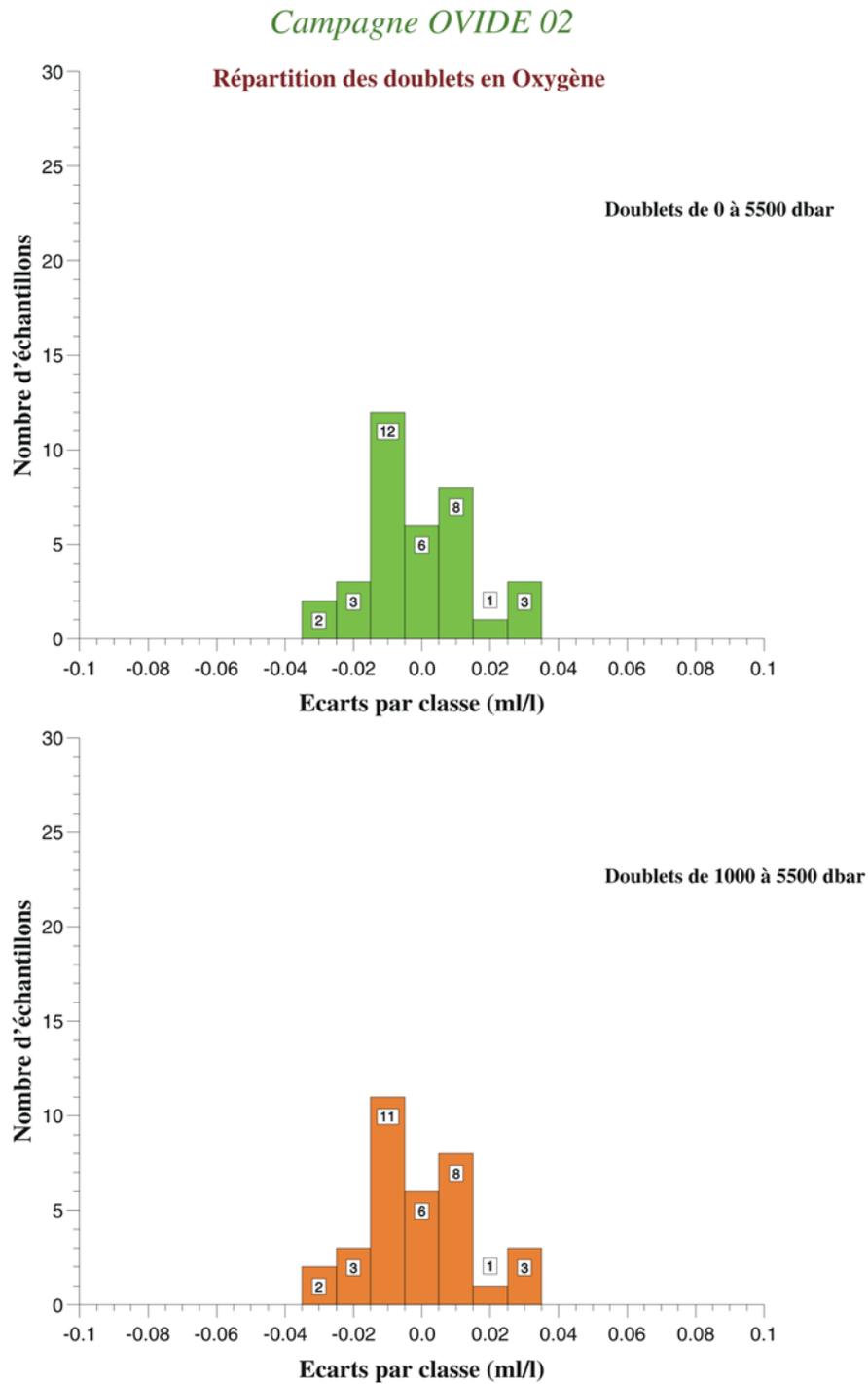


Figure III.6 : Histogramme des écarts en oxygène sur les doublets :

- a) pour les 35 doublets de la campagne,
- b) pour les 34 doublets réalisés à pression supérieure à 980 dbar.

III.4. Étalonnage de la mesure de pression sur les profils CTD

La sonde utilisée est équipée d'un capteur de pression de type Paine dont la résolution est de 0.1 dbar et, d'après le constructeur, la précision de ± 6.5 dbar.

De manière habituelle, les capteurs sont étalonnés avant et après la campagne au laboratoire de métrologie de l'IFREMER, habilité par le Bureau National de Métrologie (B.N.M.). Le capteur est branché sur un banc balance Desgranges et Huot qui délivre une pression référence avec une erreur maximale de ± 0.75 dbar au niveau 6000 dbar.

III.4.1. Etalonnage du capteur dans les conditions du laboratoire à 20°C

Trois cycles de montée et descente en pression, par paliers successifs de 600 dbar, de 0 à 6000 dbar, sont réalisés à la température du laboratoire soit 20°C ($\pm 1^\circ$). Les résultats obtenus sont présentés sur la [figure III-7](#) sous forme d'écarts entre la pression référence délivrée par le banc balance et la pression équivalente indiquée par le capteur sur les cycles montée en pression (profil descente de la sonde) et descente en pression (profil montée). La répartition des points résultant des étalonnages pré- et post- campagnes, peut être corrigée par un polynôme de degré 5. Ces résultats mettent en évidence une excellente stabilité du capteur : tous les points d'étalonnage sont situés à moins de 1 dbar de la courbe de correction.

Cette stabilité du capteur de pression est également vérifiée dans le temps. La [figure III-8](#) montre le suivi annuel de l'étalonnage à 20°C de ce capteur lors des différentes campagnes réalisées par le laboratoire. La dérive du capteur au cours des sept dernières années est de l'ordre de 3 dbar.

III.4.2. Influence de la température statique

La réponse du capteur est influencée par sa température interne. La température océanique présente des écarts supérieurs à 20°C entre la surface et le fond. Il est donc nécessaire de connaître la température interne du capteur en cours de profil. Celle-ci est mesurée comme paramètre annexe et transmise dans les cycles de mesures de la sonde.

L'influence statique de température interne du capteur est étudiée au laboratoire en immergeant la sonde dans un bain d'eau à différentes températures. Après stabilisation de la température interne du capteur, on effectue un cycle de montée puis de descente en pression en relevant l'indication du capteur de pression à des paliers séparés de 1000 dbar. Cette opération est répétée en cinq différents points de température compris entre 0 et 30°C. La série d'essais montre qu'une différence de température interne de 30°C provoque un décalage de l'indication de pression de l'ordre de 6 dbar à toutes les pressions expérimentales.

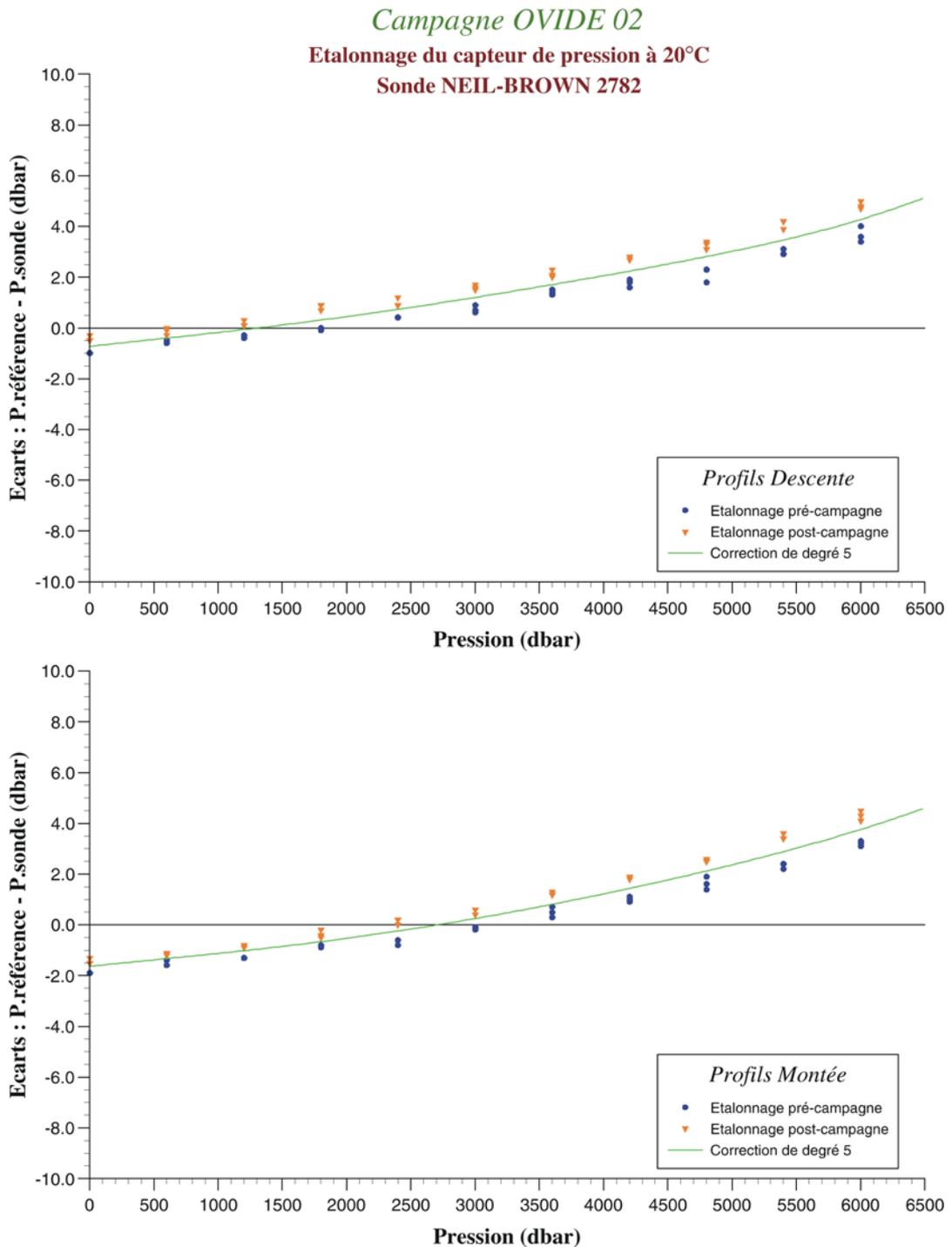


Figure III.7 : Répartition des écarts, tous les 600 dbar, entre la pression de référence et la pression indiquée pour le capteur Neil-Brown lors des étalonnages pré et post-campagne à la température du laboratoire (20°C) :

- a) cycles montée en pression (profils descente),
- b) cycles descente en pression (profils montée).

La courbe de degré 5 qui réduit les écarts est représentée.

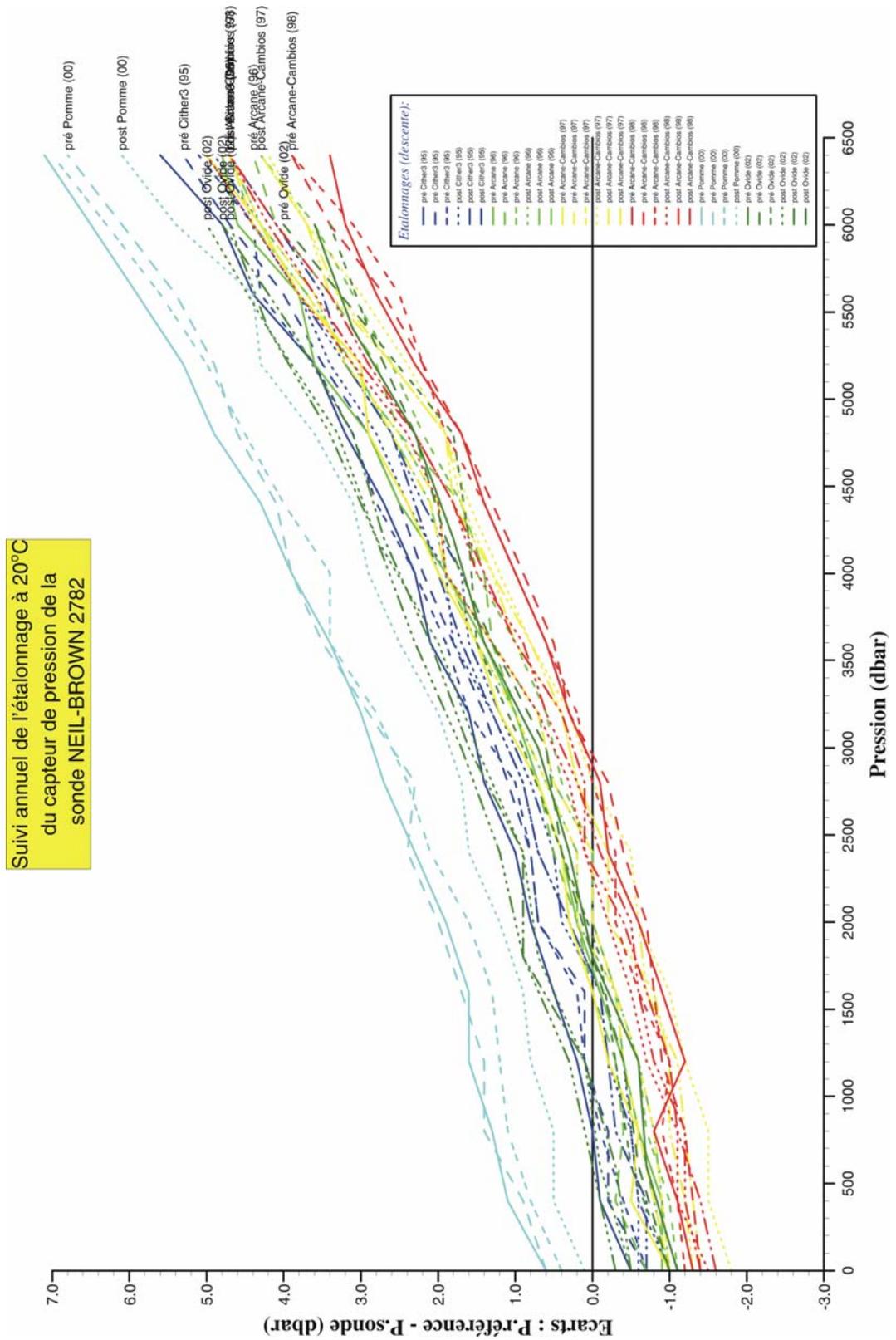


Figure III.8 : Suivi annuel de l'étalonnage du capteur de pression de la sonde Neil-Brown 2782

La température interne à un niveau de pression donné (profil descente ou montée) est déterminée pour l'ensemble des stations de la campagne en utilisant un profil moyen. La correction de température statique est ainsi obtenue à chaque niveau de pression. L'erreur maximum d'une telle correction (0.5 dbar) est obtenue entre 0 et 1000 dbar. L'erreur est inférieure à 0.3 dbar lorsque la pression est supérieure à 2000 dbar.

La correction de température statique appliquée aux pressions obtenues à la température de 20°C est de 1.1 dbar en surface (à la pression zéro) et de 2.9 dbar à la profondeur de 6000 mètres dans le cas d'un profil montée.

III.4.3. Influence de l'effet dynamique de température

Le passage de la thermocline, à la descente et à la montée, provoque une variation brutale de température. Ce choc thermique, appelé influence de température dynamique, est simulé en laboratoire afin d'étudier le comportement du capteur qui dépend essentiellement de la qualité de son isolation.

Le capteur a été soumis à une série de chocs thermiques en immergeant brutalement la sonde après un séjour à une température donnée dans un bain plus chaud ou plus froid suivant le cas. Les paramètres transmis par la sonde (pression, température in-situ et température interne du capteur de pression) sont enregistrés pendant un temps suffisamment long pour étudier le comportement du capteur après ce phénomène.

Ces expériences permettent de constater que le capteur subit, dans les conditions de son utilisation en mer, un décalage de 2.1 dbar 27 minutes après un choc thermique de 15°C : ce décalage reste constant pendant une durée de 4 heures.

La correction de ce type de choc a été appliquée à la pression enregistrée sur les profils de la campagne en admettant que :

- Le passage de la thermocline provoque un choc thermique de 12°C et donc un décalage de 1.7 dbar sur le profil descente puis de sens inverse en fin de montée.
- Le profil descente est exécuté à la vitesse de 1 mètre par seconde au-delà de 100 dbar.
- L'arrêt à chaque palier pour fermer la bouteille en cours de montée dure 1 minute.

III.4.4. Correction de la mesure de pression sur les profils CTD et au niveau des prélèvements

Après correction de l'indication du capteur de pression à la température du laboratoire soit 20°C (paragraphe 4.1), on ajoute successivement la correction liée à l'effet statique (paragraphe 4.2) puis celle associée à l'effet dynamique (paragraphe 4.3).

Ces corrections sont appliquées à chaque type de profil (descente ou montée). Le résultat de ces trois corrections fournit une série de points expérimentaux, séparés de 200 dbar, qui permettent d'appliquer une correction globale à l'indication du capteur de pression enregistrée sur les profils CTD. Ces points expérimentaux, présentés à la [figure III-9](#), permettent de calculer les coefficients d'un polynôme de degré 5 qui corrige la valeur de la pression enregistrée en temps réel sur les deux types de profil.

On constate que la correction globale de l'indication du capteur reste inférieure à 5 dbar et que les effets de température ne sont pas négligeables.

III.4.5. Vérifications de la mesure de pression CTD

L'indication du capteur de pression CTD était relevée à différents niveaux, à chaque station, de manière à établir des comparaisons avec d'autres types de mesures.

III.4.5.1. Suivi du capteur de pression en surface

Pendant la campagne, le relevé de l'indication du capteur de pression, dans l'air, avant le début de chaque station, a montré que cette valeur est restée stable et variait entre 1.7 et 3.4 décibars.

Les niveaux de pression obtenus en surface (en sortie du programme de réduction des données), au début du profil descente et à la fin du profil montée, sont portés au fil des stations sur la [figure III-10](#). La correction de la mesure de pression résultant de l'application du polynôme est portée sur les figures. On observe que la hauteur d'eau au-dessus du capteur (de 1 à 7 mètres en début de descente et 1 à 10 mètres en fin de montée) est tout à fait compatible avec l'immersion du capteur observée en surface à chaque station.

III.4.5.2. Comparaison avec le pressiomètre SIS

Un pressiomètre de type SIS est monté sur la bouteille de prélèvement déclenchée au fond. L'affichage du pressiomètre est comparé à la mesure corrigée du capteur de pression au niveau de fermeture de la bouteille. L'indication du pressiomètre est corrigée en utilisant les résultats d'un étalonnage au laboratoire avant et après la campagne. La comparaison de ces deux types de mesure, après correction, montre que la différence reste inférieure à l'écart de 3 dbar observé entre les deux étalonnages du pressiomètre en laboratoire.

La bonne stabilité du capteur de pression vérifiée par l'étalonnage en laboratoire et les différentes comparaisons effectuées pendant la campagne (longueur de câble filé pendant la station et indication du sondeur) permettent de considérer que l'erreur maximale de la mesure de pression sur les profils est de l'ordre de 2 dbar.

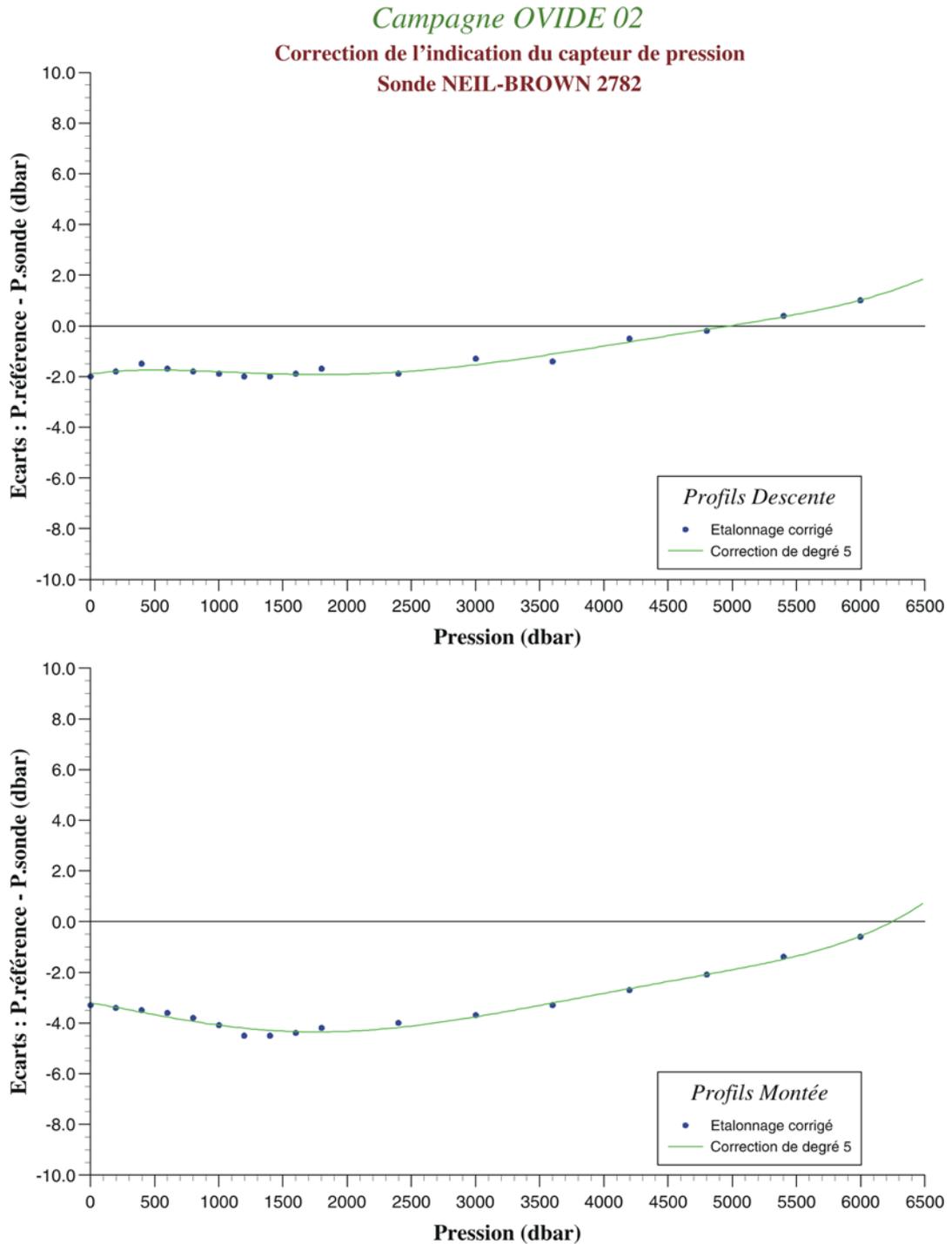


Figure III.9 : Répartition des écarts entre la pression de référence et la pression indiquée par le capteur Neil-Brown après correction, de la linéarité du capteur à 20°C, de l'influence de la température statique et de l'effet dynamique de température :

- a) cycles montée en pression (profils descente),
- b) cycles descente en pression (profils montée).

La courbe de degré 5 qui corrige la pression sur les profils est représentée.

Campagne OVIDE 02

Indication du capteur de Pression en surface

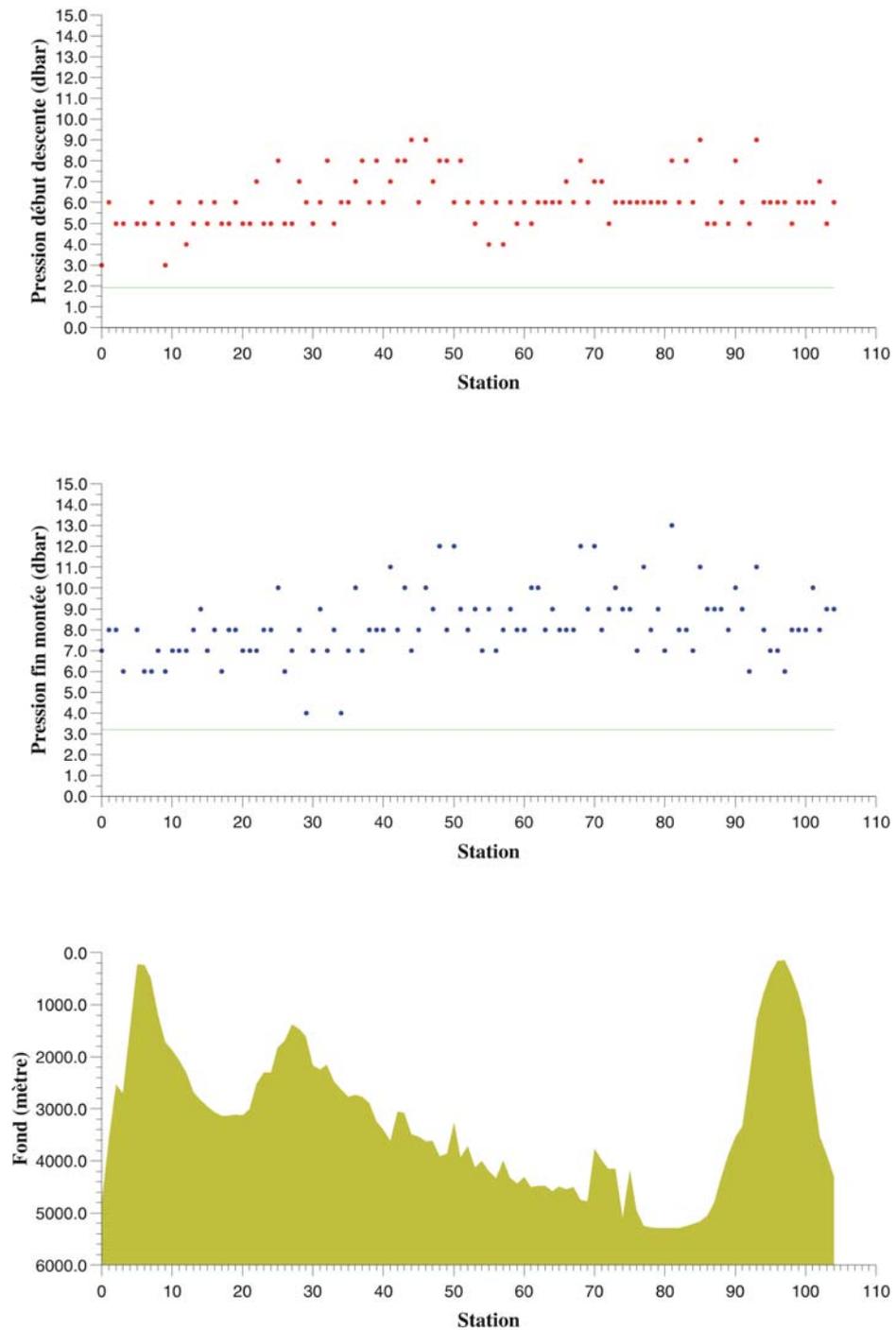


Figure III-10 : Suivi de l'indication du capteur de pression en surface :

- a) au début du profil descente
- b) à la fin du profil montée

La correction appliquée à l'indication du capteur est représentée sur les 2 figures.
Le graphique c) permet de connaître la profondeur de chaque station.

III.5. Etalonnage de la mesure de température sur les profils CTD

La mesure de température résulte de la combinaison d'un thermomètre à résistance de platine de type Rosemount avec une thermistance de type Fenwall, tels que fournis en version standard. La résolution de la mesure est de 0.0005°C et la précision annoncée par le constructeur est de 0.005°C .

III.5.1. Mode opératoire

Les sondes du LPO sont régulièrement étalonnées au laboratoire de métrologie de l'IFREMER avant et après chaque campagne. La sonde est totalement immergée dans un bain d'eau thermostaté dont la stabilité en température est strictement contrôlée. La température référence du bain est fournie par un thermomètre à résistance de platine de type Rosemount placé à proximité immédiate du capteur CTD. Ce thermomètre est périodiquement contrôlé et l'agrément fourni par le Bureau National de Métrologie (B.N.M.). La température mesurée est exprimée dans l'échelle EIT 90. Plusieurs points de mesure sont ainsi contrôlés en relevant l'indication de température CTD pour la comparer à la température référence du bain en plusieurs points compris entre 0 et 30°C .

La sonde mise en oeuvre pendant la campagne OVIDE 2002 a été utilisée sur de nombreuses campagnes : les étalonnages successifs ([figure III-11](#)) montrent que l'indication de température n'a pas varié de plus de 0.012°C pendant ce temps. Les étalonnages effectués avant et après la campagne sont présentés sur la [figure III-12](#) sous forme d'écart entre la température de référence et la température indiquée par le capteur Neil-Brown. Ces deux étalonnages confirment l'excellente stabilité du capteur.

Les mesures de température obtenues sur les profils de la campagne sont corrigées en appliquant un polynôme de degré 3, dont la courbe est présentée sur la [figure III-12](#). Cette courbe minimise les écarts obtenus avant et après la campagne : l'erreur maximale est de $\pm 0.002^{\circ}\text{C}$.

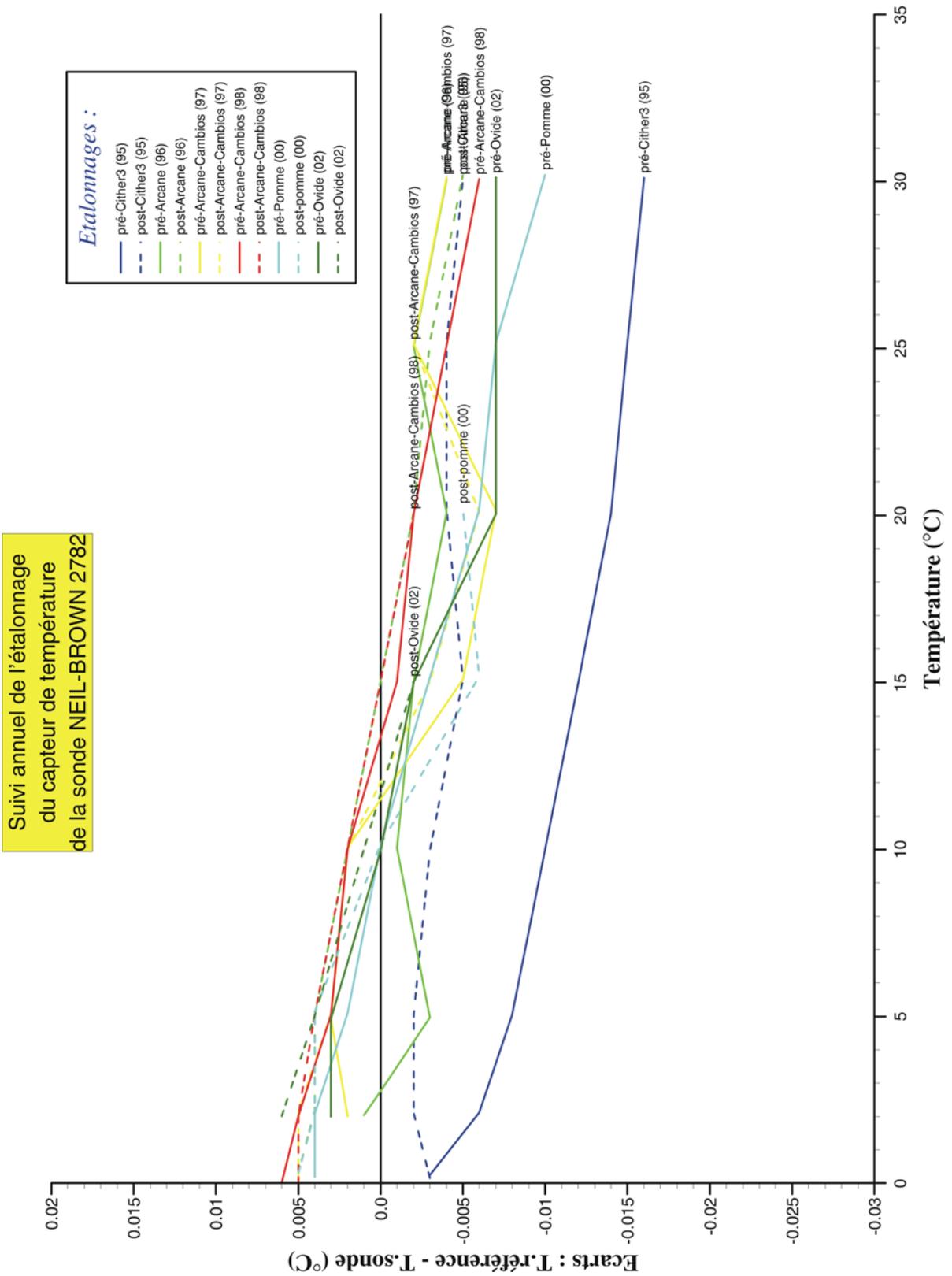


Figure III-11 : Suivi annuel de l'étalonnage du capteur de température de la sonde Neil-Brown 2782

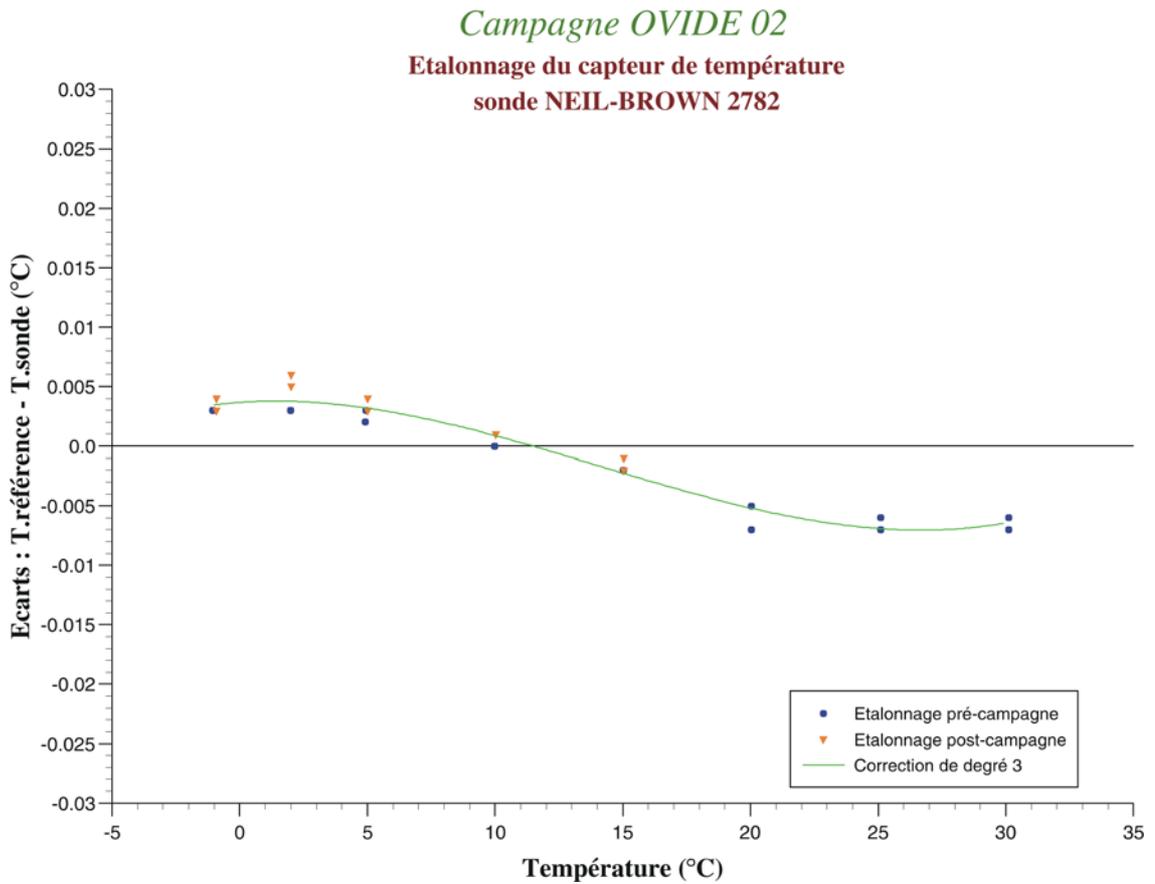


Figure III.12 : Ecart entre la température de référence et la température indiquée par le capteur Neil-Brown lors des étalonnages pré et post-campagne.
 La courbe de degré 3 qui corrige la température sur les profils est représentée.

III.5.2. Vérification de la mesure de température CTD

Deux thermomètres SIS (n° 1726 et n° 960) ont été placés sur les bouteilles de prélèvement, déclenchées au fond : ils ont été étalonnés au laboratoire avant et après la campagne. Les écarts de lecture entre ces thermomètres et la mesure CTD non corrigée, au niveau de la fermeture de la bouteille à chaque station, sont reportés sur la [figure III-13](#).

La température observée à ces niveaux de prélèvement est comprise entre 1.3 et 4.0°C sauf aux stations 93 à 100 où elle est nettement supérieure. On observe aux deux niveaux de comparaison, une distribution relativement homogène des écarts autour d'une valeur moyenne à 0.002°C. A cette température d'observation, la température CTD doit être corrigée de +0.004°C. La correction de lecture du thermomètre SIS n° 1726 est de 0.000°C et celle du thermomètre SIS n° 960 est de -0.008°C. La correction globale est de +0.004°C dans le premier cas et de -0.004°C dans le second.

Ces corrections portées sur la [figure III-13](#) permettent de constater que les mesures de température CTD et celles des thermomètres SIS sont cohérentes avec un écart qui n'excède pas 0.001°C.

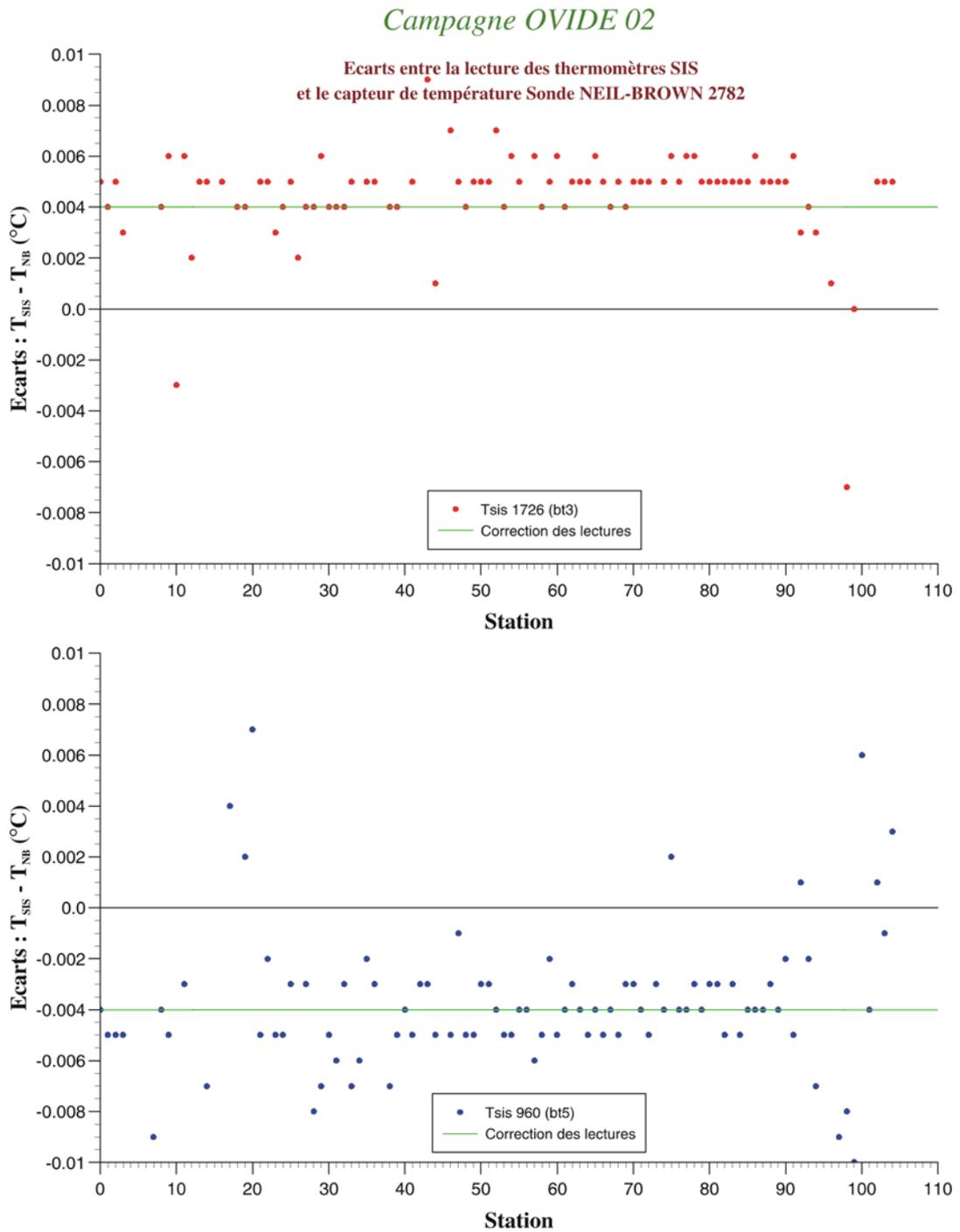


Figure III-13 : Ecart obtenu, à chaque station, entre la lecture des thermomètres SIS et la température indiquée par la sonde Neil-Brown.

La correction des lectures reportée sur le graphique montre que l'écart moyen entre les deux types de mesure est inférieur à 0.001°C .

III.6. Calibration de la conductivité sur les profils CTD

III.6.1. Mode opératoire

La procédure de calibration, décrite dans Billant (1985), consiste à comparer la conductivité CO_S indiquée par la sonde au niveau du prélèvement à la conductivité in-situ CO_H déterminée sur les échantillons. La conductivité CO_S est obtenue en calculant une moyenne sur les valeurs transmises par la sonde au niveau de fermeture de la bouteille et en appliquant à cette moyenne la correction de l'effet de pression et de température sur la cellule. La salinité de l'échantillon est transformée en conductivité in-situ CO_H en utilisant les valeurs de pression et de température corrigées de la sonde au niveau du prélèvement.

Les valeurs de conductivité d'un profil sont corrigées en déterminant les coefficients C_1 et C_0 d'un polynôme de degré 1 pour une station, ou un groupe de stations, qui minimisent les écarts $\Delta C = CO_H - CO_S$. Le polynôme est de la forme :

$$CO_R = C_1 * CO_S + C_0$$

Les coefficients retenus résultent d'itérations successives sur le groupe d'échantillons considéré. Le processus est stoppé lorsque aucun échantillon supplémentaire n'est éliminé à la sortie de l'itération en cours. Il en résulte que, à la sortie de la dernière itération, tous les écarts ΔC sont inférieurs à la valeur $\Delta C_{max} = 2.8 * \text{écart-type}$ pour les échantillons retenus dans le processus de calcul.

Un premier calcul est ainsi effectué sur l'ensemble des 2227 échantillons prélevés aux stations 0 à 104.

III.6.2. Analyse des premiers résultats et stratégie adoptée

Pour maintenir une bonne stabilité de la mesure de conductivité pendant la durée de la campagne, un nettoyage périodique de la cellule a été effectué pour éliminer les dépôts. Ces nettoyages ont été réalisés après les stations 18, 32, 46, 57, 70, 81 et 92.

L'observation des diagrammes TETA-S obtenus avec ces premiers coefficients met en évidence une « cassure » dans leur partie profonde dont l'origine est instrumentale. Ce phénomène, observé sur les campagnes précédentes, a pour origine un saut de conductivité au passage de la mi-échelle de mesure à la valeur de 32.768 mmho/cm (2^{15}). Ce phénomène, observé également par T.S. Muller et al. (1994) est corrigé en appliquant un « offset » de -0.001 à toutes les mesures de la campagne lorsque la conductivité est inférieure à 32.768. Cette correction permet de restituer sur les profils une continuité dans la mesure de conductivité.

Après correction de « l'offset » précédent, un nouveau calcul est lancé sur la totalité de la campagne. Une observation détaillée de la distribution des ces écarts montre qu'un découpage par groupe de stations doit mieux centrer leur répartition.

III.6.3. Bilan de la calibration des profils

Le tableau, ci-dessous, regroupe l'ensemble des coefficients C_1 et C_0 utilisés pour corriger les valeurs de conductivité sur les profils de la campagne :

Station ou groupe	Nombre d'échantillons considérés	Nombre d'échantillons retenus par le calcul	Déviation standard (0-5500 dbar)	Coefficients	
				C_1	C_0
0 - 27	549	500	0.00136	0.998916	0.03757
28 - 50	495	451	0.00141	0.998713	0.04570
51	28	28	0.00239	0.998732	0.04883
52 - 92	1054	957	0.00220	0.998589	0.05191
93 - 104	101	92	0.00236	0.998590	0.05038
0 - 104	2227	2028 (91.1 %)			

Le tableau indique également pour chaque groupe de stations ou station isolée, le nombre d'échantillons considérés pour le calcul, le nombre de ceux retenus par le processus ainsi que la déviation standard qui en résulte pour le groupe considéré.

Pendant la campagne, la salinité a été mesurée sur 2227 échantillons. Le processus de calcul en a validé 2028, soit 91.1 % d'entre eux. Ceci revient à dire que, au niveau des prélèvements, l'écart entre la conductivité de l'échantillon et la conductivité corrigée sur le profil est inférieur à $2.8 * \text{écart-type}$ pour le groupe de stations considéré.

La [figure III-14](#) présente les écarts qui subsistent, au niveau de chaque prélèvement, station par station et en fonction de la pression. Il apparaît ainsi que les écarts sont acceptables à tous les niveaux et à toutes les stations.

Les histogrammes de la [figure III-15](#) confirment que la distribution des écarts est tout à fait correcte. On peut noter que dans 47 % des cas les écarts sont inférieurs à 0.001 mmho/cm tandis que pour 89 % il est inférieur à 0.003 mmho/cm. En ne considérant que les prélèvements recueillis à une profondeur supérieure à 1000 dbar, les résultats précédents sont encore de meilleure qualité.

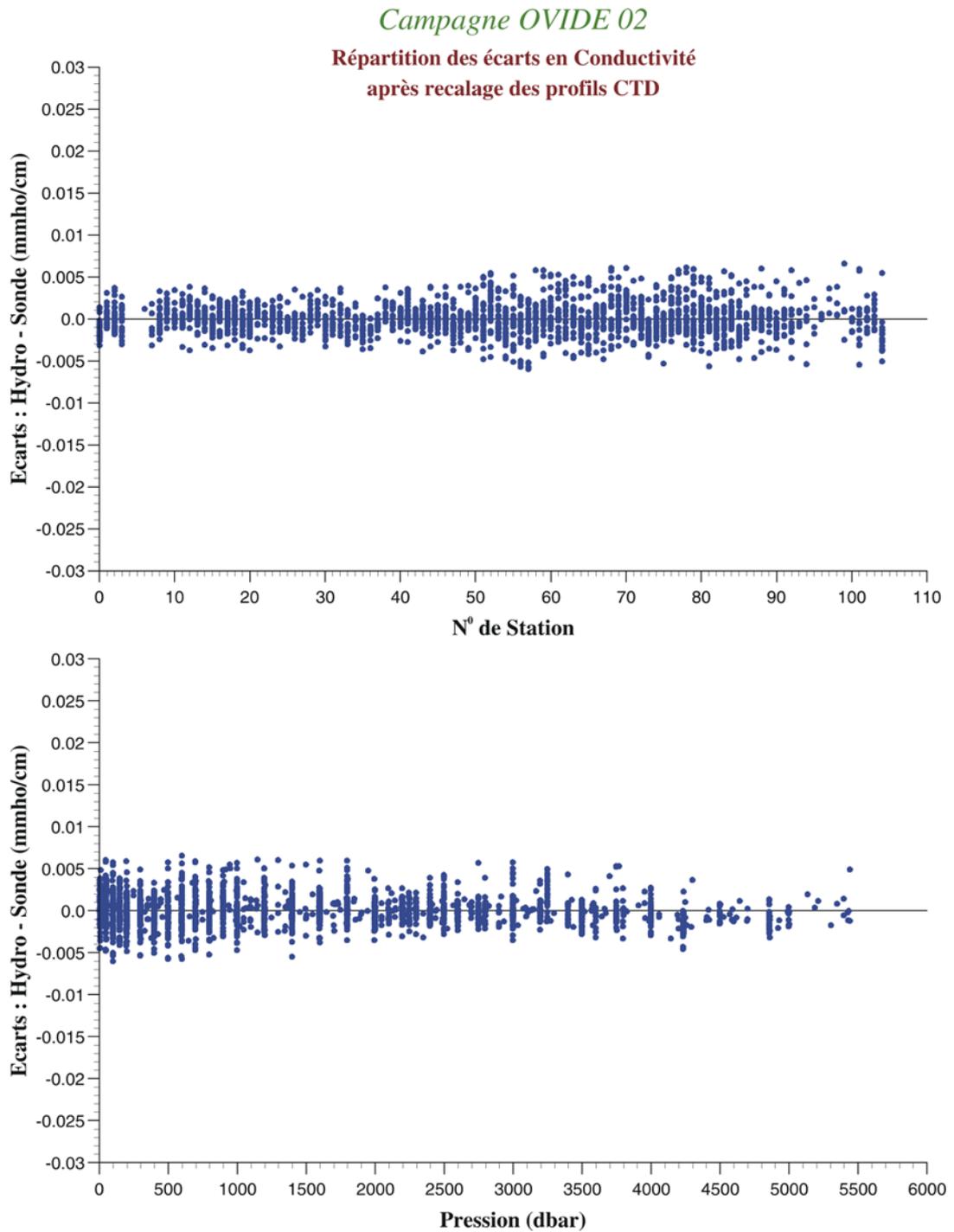


Figure III.14 : Ecart entre la conductivité des 2028 échantillons validés et la conductivité « bathysonde » corrigée au niveau de chaque prélèvement :

- a) en fonction du numéro de la station concernée,
- b) en fonction de la pression au niveau de prélèvement.

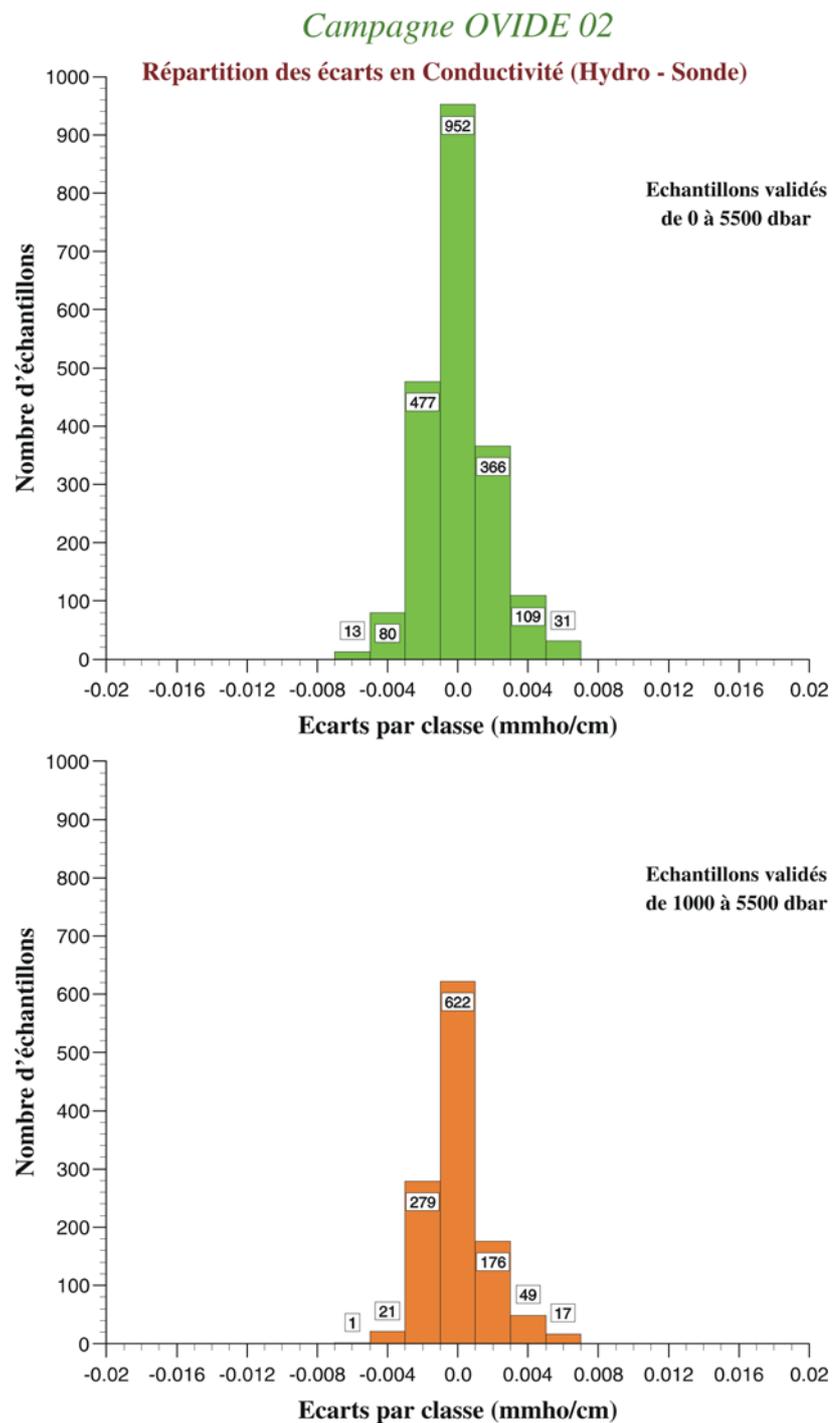


Figure III.15 : Histogramme des écarts entre la conductivité des échantillons validés et la conductivité « bathysonde » au niveau du prélèvement (mesures finales sur les profils montée) :

- pour la totalité des 2028 échantillons validés sur la campagne,
- pour les 1165 échantillons validés et prélevés à pression supérieure à 980 dbar.

Le bilan d'ensemble peut être établi comme suit : *les valeurs de conductivité des 2028 échantillons validés indiquent un écart quadratique moyen pour l'ensemble de la campagne de 0.0018 mmho/cm*. La valeur obtenue pour l'ensemble de la campagne est au niveau de l'objectif fixé dans les campagnes du programme WOCE (0.002 mmho/cm).

Pour faciliter la comparaison avec les résultats obtenus sur les doublets, les histogrammes d'écart en salinité sont présentés à la [figure III-16](#) : l'écart-type en salinité est de 0.0020. Cette valeur montre qu'on ne pouvait espérer beaucoup mieux de la calibration des profils CTD car elle est très proche de celle obtenue sur les doublets (0.0018).

III.6.4. Vérification des résultats

La [figure III-17](#) présente l'ensemble des diagrammes θ -S qui sont l'image des profils descente de la campagne OVIDE 2002 à grande profondeur. On observe une bonne répétabilité des diagrammes qui se superposent de manière tout à fait acceptable. A une température potentielle inférieure à 2.5°C correspond une salinité connue avec une incertitude inférieure à 0.002 psu.

Saunders (1986) a établi une relation entre température potentielle et salinité dans les masses d'eau profonde de l'Atlantique Nord-Est. Cette relation ($S = 34.698 + 0.098 * \theta$) est matérialisée sur la [figure III-17](#). On constate que tous les diagrammes θ -S de la campagne OVIDE 2002, obtenus dans la zone géographique concernée, confirment cette relation avec un écart maximum en salinité de 0.002 psu. Sur la même figure sont représentés les diagrammes θ -S qui correspondent aux mesures de salinité in situ obtenues sur les prélèvements utilisés pour recalibrer les profils CTD.

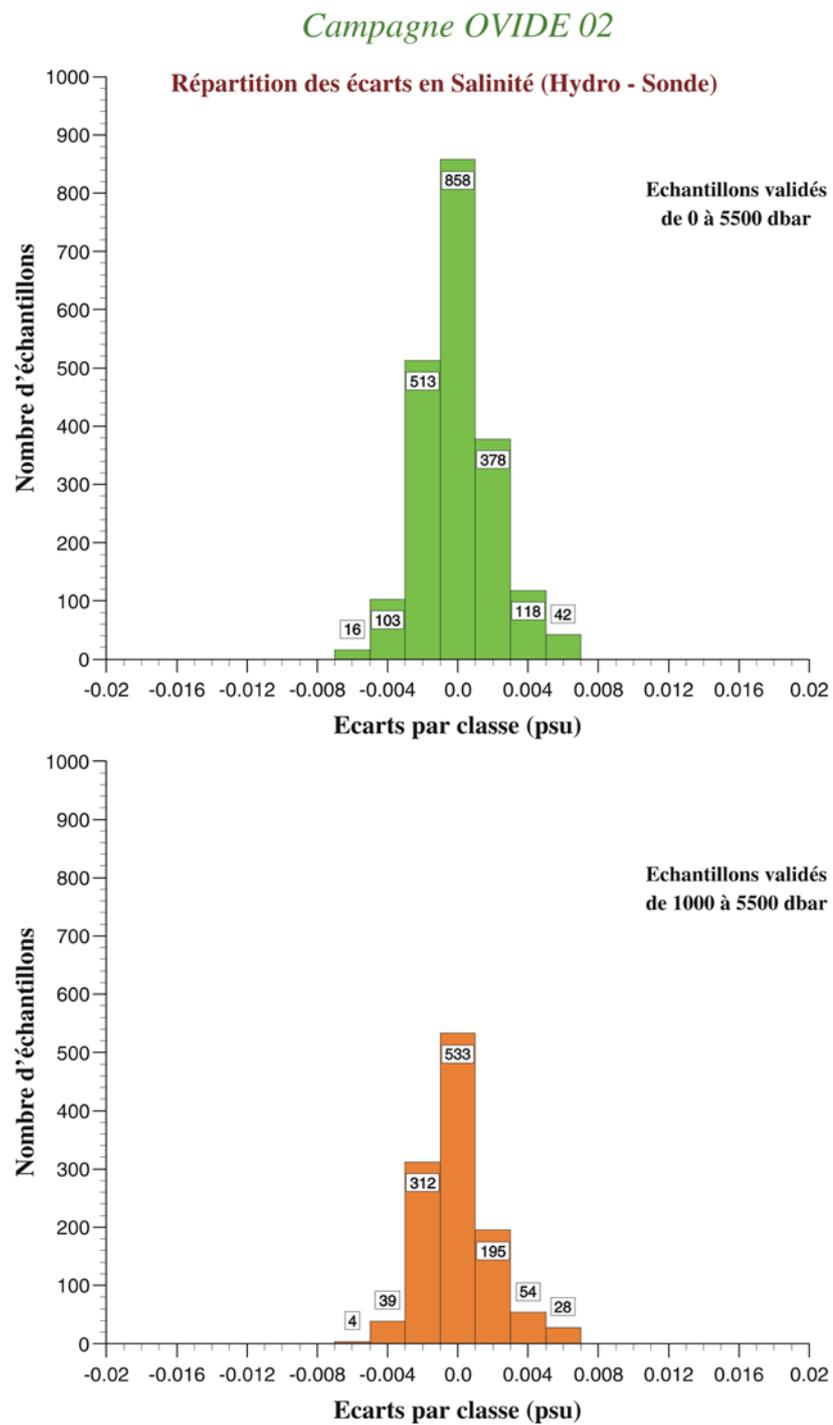


Figure III.16 : Même légende que [figure III.15](#) pour les écarts en salinité.

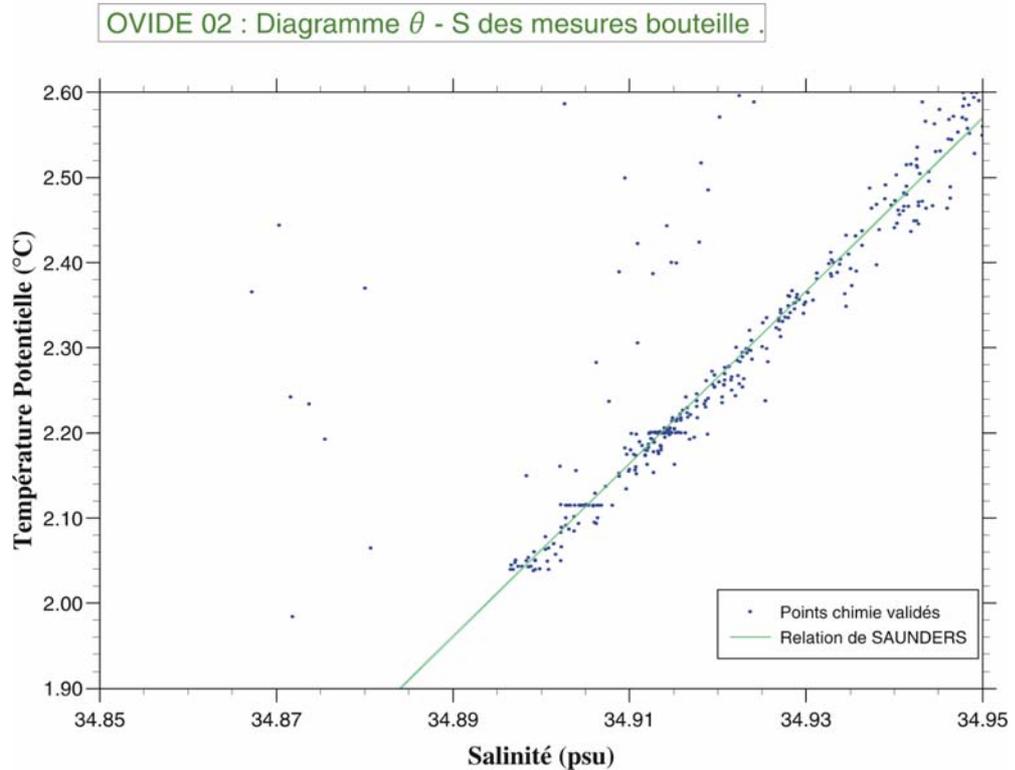
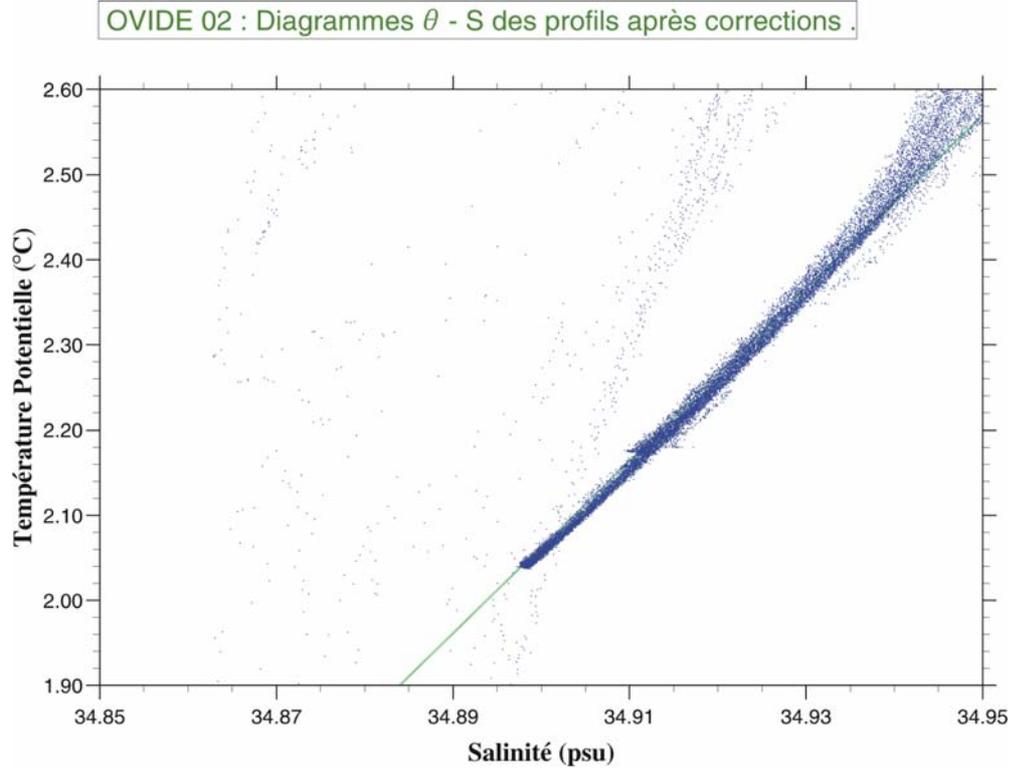


Figure III.17 : Ensemble des diagrammes θ -S des 104 stations de la campagne OVIDE 2002 :
 a) mesures en continu sur les profils descente,
 b) salinité « bouteille » combinée à la température potentielle CTD.
 La droite matérialise la relation préconisée par Saunders (1986).

III.7. Calibration des profils d'oxygène dissous

III.7.1. Mode opératoire

La teneur en oxygène dissous OXYC, exprimée en ml/l, est calculée à partir des informations OC et OT transmises par le capteur en utilisant la formule préconisée par Millard (1982).

$$OXYC = soc * OC * OXSAT * \exp[oxtc (oxc1 * T + oxc2 (OT - T)) + oxpc * P]$$

OC : courant oxygène	} capteur Beckman	} transmis par la sonde Neil-Brown
OT : température de l'électrolyte		
P : mesure pression corrigée	}	
T : mesure température corrigée		

soc, oxpc, oxtc, oxc1, oxc2 : caractéristiques du capteur Beckman

OXSAT : oxygène à saturation calculé par la méthode Benson et Krause (1984)

La méthode utilisée, décrite dans Billant (1985), consiste à ajuster les valeurs d'oxygène dissous (OXYC), calculées par la méthode précédente sur le profil descente, sur la valeur d'oxygène déterminée par voie chimique sur les échantillons (OH) prélevés au cours de la montée. Les mesures de la sonde en cours de descente sont moyennées dans une tranche d'eau de 15 dbars centrée sur la valeur de pression au niveau du prélèvement.

Les coefficients, caractéristiques du capteur Beckman, sont déterminés, pour un ensemble d'échantillons, en utilisant des itérations successives basées sur un principe similaire à celui de la conductivité. Les caractéristiques du capteur sont ainsi déterminées pour une station ou un groupe de stations.

III.7.2. Unités d'oxygène dissous

L'unité utilisée dans la procédure de calibration et dans les représentations graphiques de ce rapport est exprimée en millilitres par litre (ml/l).

La température de l'eau dans les bouteilles a été relevée lors de la fixation de l'oxygène par les réactifs. On en déduit la densité de l'échantillon d'eau de mer, et la teneur en oxygène dissous peut être convertie en micromoles par kilogramme ($\mu\text{mol/kg}$).

Les profils de la campagne sont également recalés dans cette unité en utilisant le même découpage par station ou groupe de stations.

Les données d'oxygène dissous du capteur "bathysonde" sont donc produites dans les deux unités.

III.7.3. Stratégie de regroupement des stations

Une première détermination des « caractéristiques » du capteur sur l'ensemble des échantillons de la campagne permet d'observer les différentes phases successives de son comportement.

La [figure III-18](#) montre la distribution des écarts obtenus après cette première détermination globale. Elle met bien en évidence des ruptures brutales de la distribution des écarts et notamment entre les stations 72 et 73, qui correspond à la période de l'interruption du réseau CTD.

Chacune de ses phases doit donc être considérée séparément. Leur identification puis un calcul spécifique permet d'obtenir pour chacune des stations un profil d'oxygène dissous bien recalé sur les valeurs d'oxygène obtenues par analyse chimique.

III.7.4. Bilan de la calibration des profils

Le tableau suivant regroupe l'ensemble des valeurs caractéristiques des coefficients utilisés pour recalcr les profils de la campagne. Ce tableau indique, pour chaque groupe de stations, le nombre d'échantillons considérés, le nombre de ceux qui sont validés et la déviation standard dans trois intervalles de pression ainsi que les paramètres caractéristiques du capteur.

Bilan de la calibration des profils d'oxygène dissous de la campagne OVIDE 2002

Station ou groupe de stations	Nombre d'échantillons considérés	Nombre d'échantillons retenus par le calcul	Déviation standard			Coefficients			
			0 à 5500	0 à 1000	1000 à 5500	SOC	OXPC	OXTC	OXC2
0 - 3	110	96	0.037	0.057	0.026	0.0607	0.000141	-0.0304	0.632
5 - 27	444	392	0.047	0.061	0.031	0.0616	0.000141	-0.0308	0.757
28 - 72	1091	989	0.049	0.062	0.039	0.0631	0.000137	-0.0336	0.550
73 - 104	567	502	0.044	0.058	0.033	0.0592	0.000138	-0.0320	0.571
0 - 104	2212	1979 (89.5 %)							

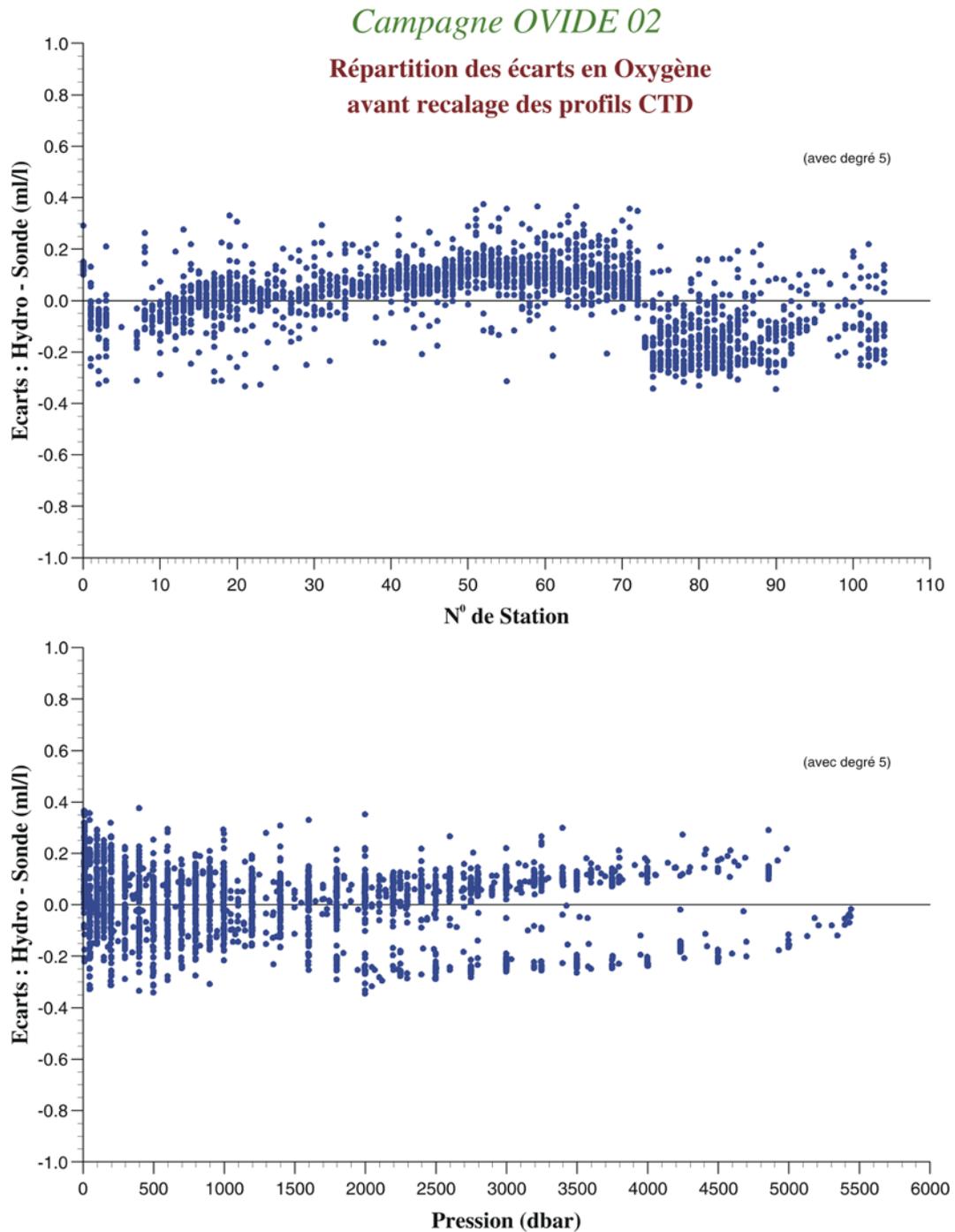


Figure III-18 : Ecart entre la valeur d'oxygène mesurée sur les échantillons et celle du profil descente « bathysonde » à la pression du prélèvement :

- a) en fonction du numéro de la station concernée,
- b) en fonction de la pression au niveau du prélèvement.

Ces écarts sont le résultat d'un calcul effectué sur l'ensemble des échantillons de la campagne.

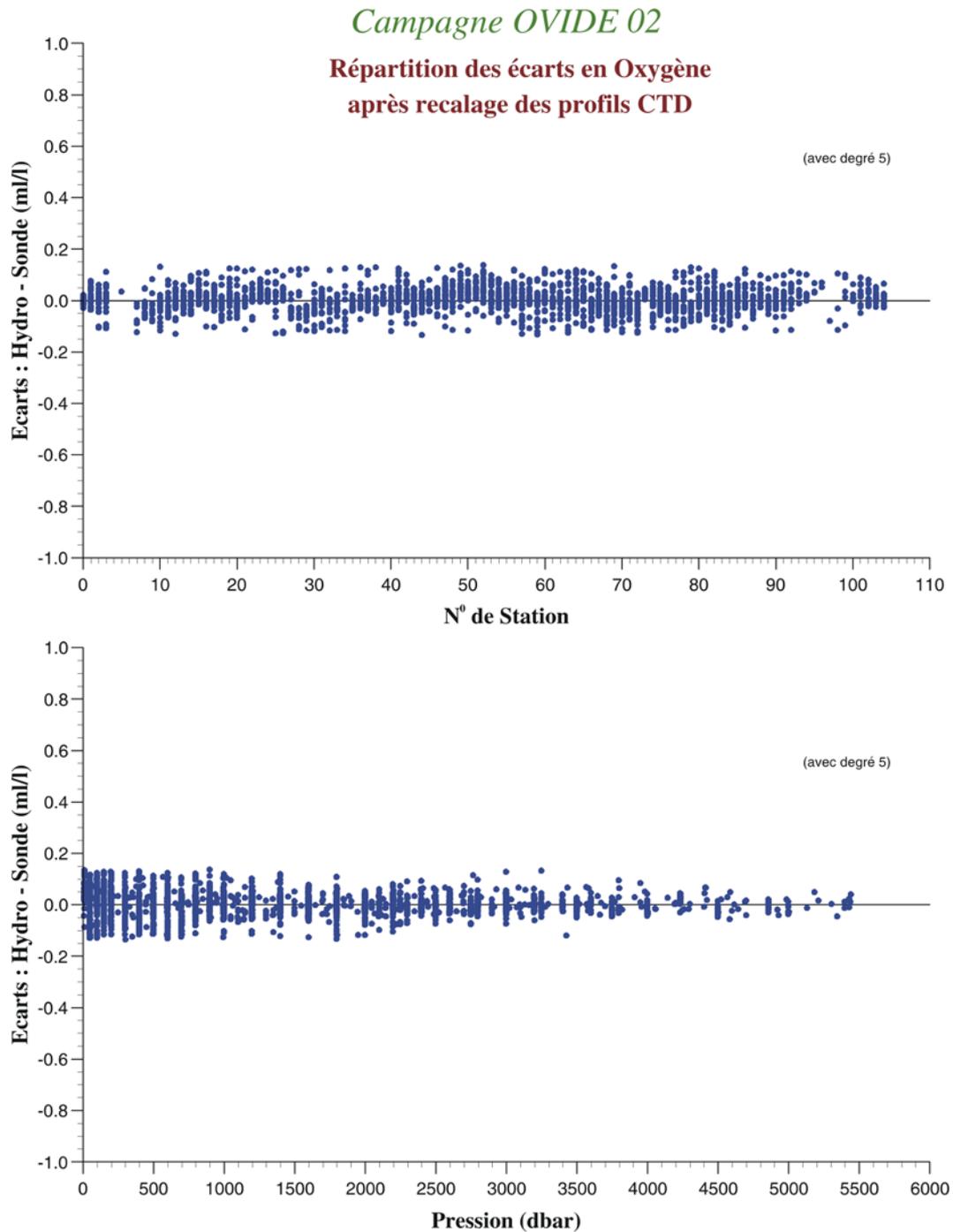


Figure III.19 : Ecart entre la valeur d'oxygène mesurée sur les 1979 échantillons validés et celle du profil descente « bathysonde » à la pression du prélèvement :

- a) en fonction du numéro de la station concernée,
- b) en fonction de la pression au niveau du prélèvement.

Ces écarts sont obtenus après un calcul spécifique effectué par station ou groupe de stations (un polynôme de degré 5 élimine la dépendance des écarts à la pression).

Les mesures « bathysonde » sont moyennées sur une tranche d'eau de 15 dbars.

La [figure III-19](#) présente les écarts finaux, après recalage des profils et application d'un facteur correctif complémentaire de degré 5, entre les valeurs d'oxygène obtenues par l'analyse des échantillons et celles fournies par le profil descente au niveau du prélèvement. La distribution de ces écarts est correctement centrée et acceptable pour chacune des stations de la campagne. La répartition des écarts présentée en fonction de la pression montre qu'elle est aussi acceptable à tous les niveaux de prélèvement.

Les histogrammes de la [figure III-20](#) permettent de visualiser de manière différente la distribution des écarts et de vérifier que leur distribution est correctement centrée.

Pour l'ensemble de la campagne OVIDE 2002, 1979 échantillons parmi les 2212 analysés, soit 89.5 %, ont été validés et utilisés pour recaler les profils « bathysonde » d'oxygène dissous. Les écarts en oxygène sont inférieurs à 0.025 ml/l dans 46 % des cas et inférieurs à 0.075 ml/l pour 88 %, ceci donne une déviation standard de 0.047 ml/l.

En ne considérant que la partie de profil d'oxygène supérieur à 980 dbar, soit 1193 échantillons, les écarts sont inférieurs à 0.025 ml/l pour 57 % et inférieurs à 0.075 ml/l pour 96%. L'écart quadratique moyen est réduit à 0.035 ml/l.

L'histogramme des écarts finaux exprimés en $\mu\text{mol/kg}$ est présenté sur la [figure III-21](#). Dans cette unité, la déviation standard est de 2.0 $\mu\text{mol/kg}$ pour la totalité du profil, elle est réduite à 1.5 $\mu\text{mol/kg}$ pour la partie profonde des profils, au-delà de 980 dbar.

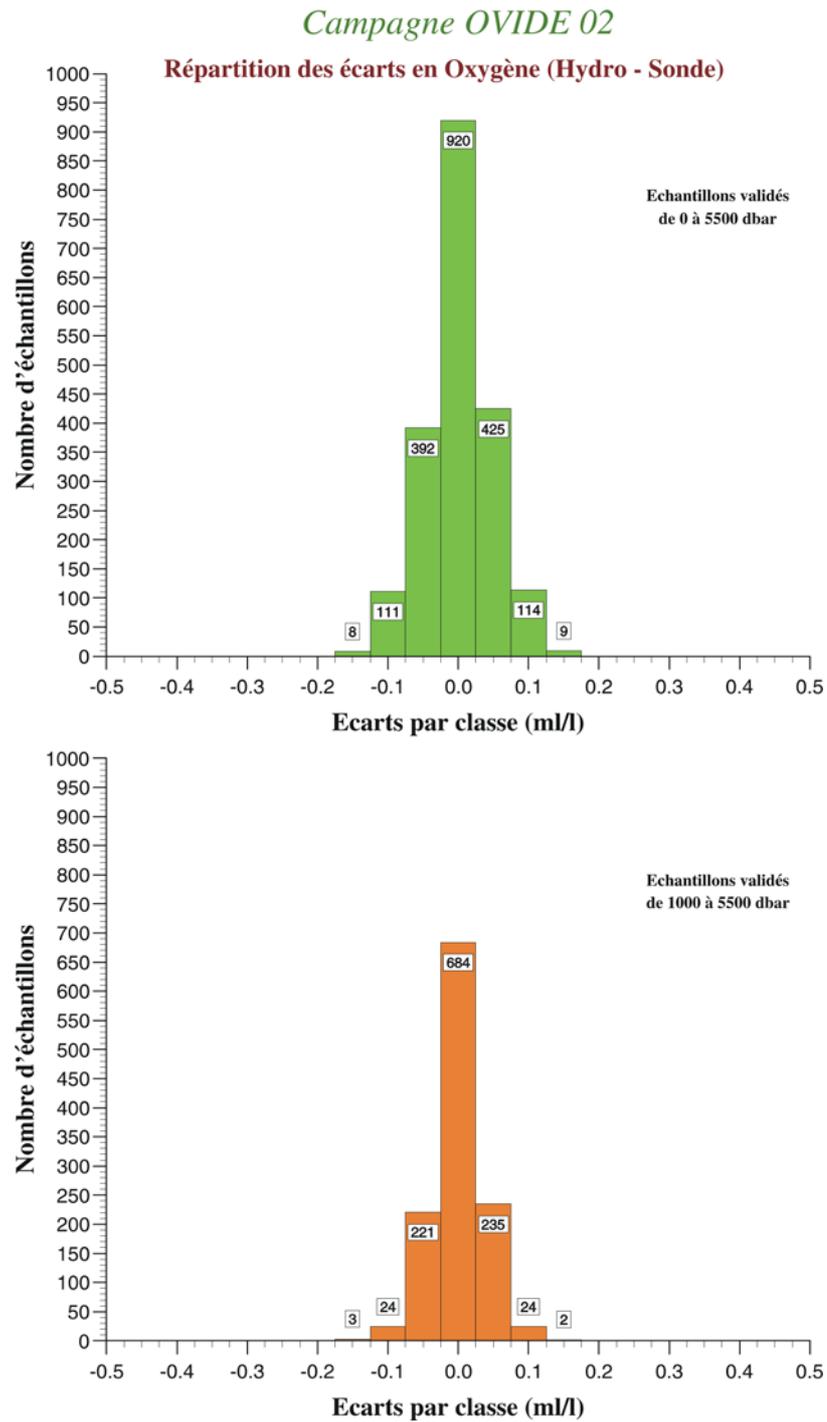


Figure III.20 : Histogramme des écarts en oxygène (ml/l) entre la valeur mesurée sur les échantillons validés et celle du profil descente « bathysonde » à la pression du prélèvement (mesures finales) :

- a) pour la totalité des 1979 échantillons validés sur la campagne,
- b) pour les 1193 échantillons validés et prélevés à pression supérieure à 980 dbars.

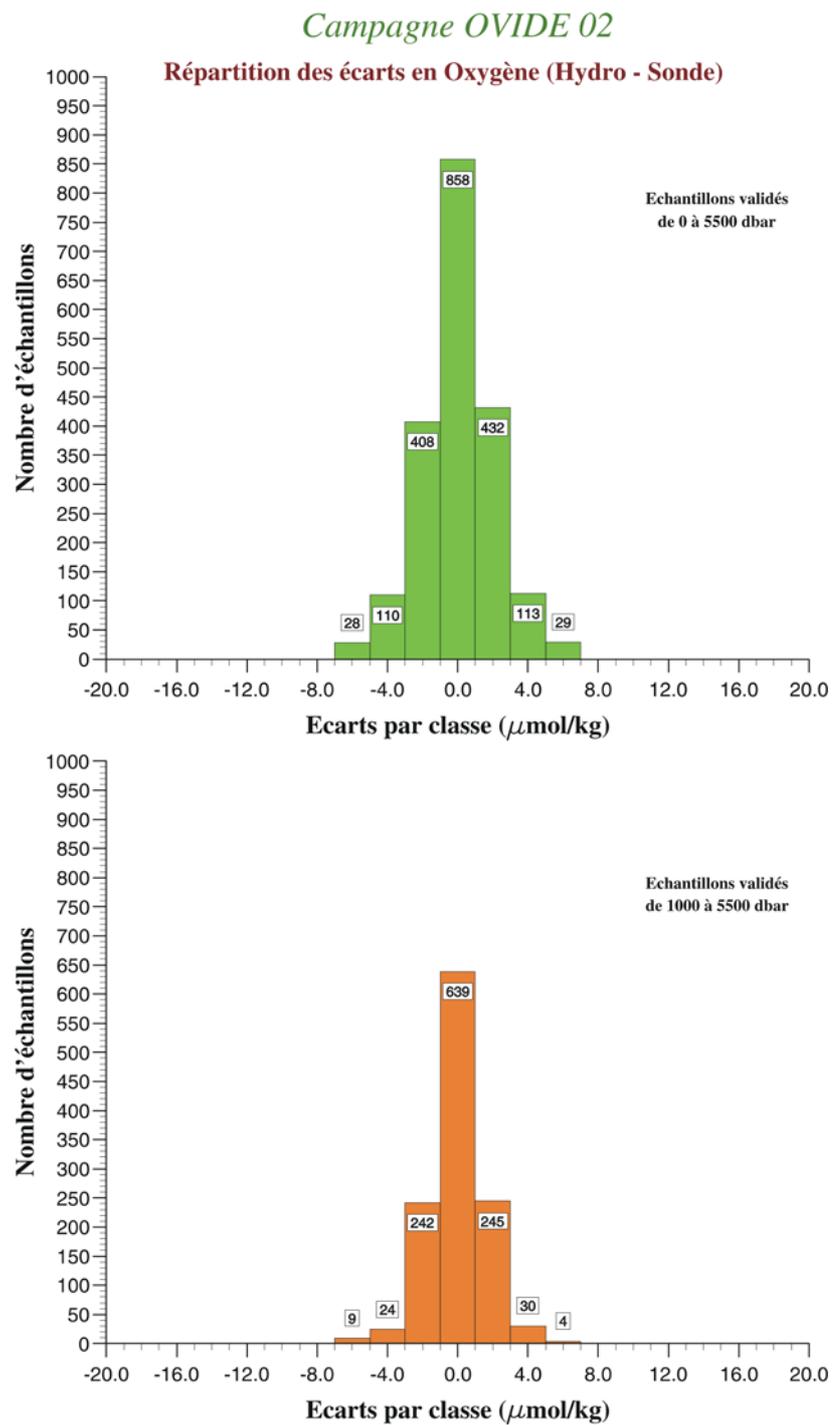


Figure III.21 : Même légende que [figure III-20](#) pour les écarts exprimés dans l'unité $\mu\text{mol/kg}$.

III.7.5.Vérification des résultats

Saunders (1986) indique que la concentration en oxygène dissous est quasiment uniforme dans l'Atlantique nord-est, à pression supérieure à 3500 dbar, avec une valeur de 5.67 ± 0.02 ml/l. Il annonce toutefois que cette concentration peut être plus faible de 0.010 ml/l dans la partie est du bassin. La concentration moyenne obtenue au cours de la campagne BORDEST puis les trois campagnes ARCANE 96, 97 et 98, dans la zone géographique de POMME, était de 5.59 ± 0.03 ml/l.

La [figure III-22](#) présente l'ensemble des mesures d'oxygène dissous obtenues par la méthode de Winkler sur les prélèvements, ainsi que les profils recalés d'oxygène dissous de la campagne OVIDE 2002. D'après les résultats de cette campagne, à pression supérieure à 3700 dbar et pour les stations 70 à 80 réalisées dans la même zone géographique que les campagnes précédentes, la valeur moyenne des mesures d'oxygène dissous confirme la valeur de 5.59 ml/l.

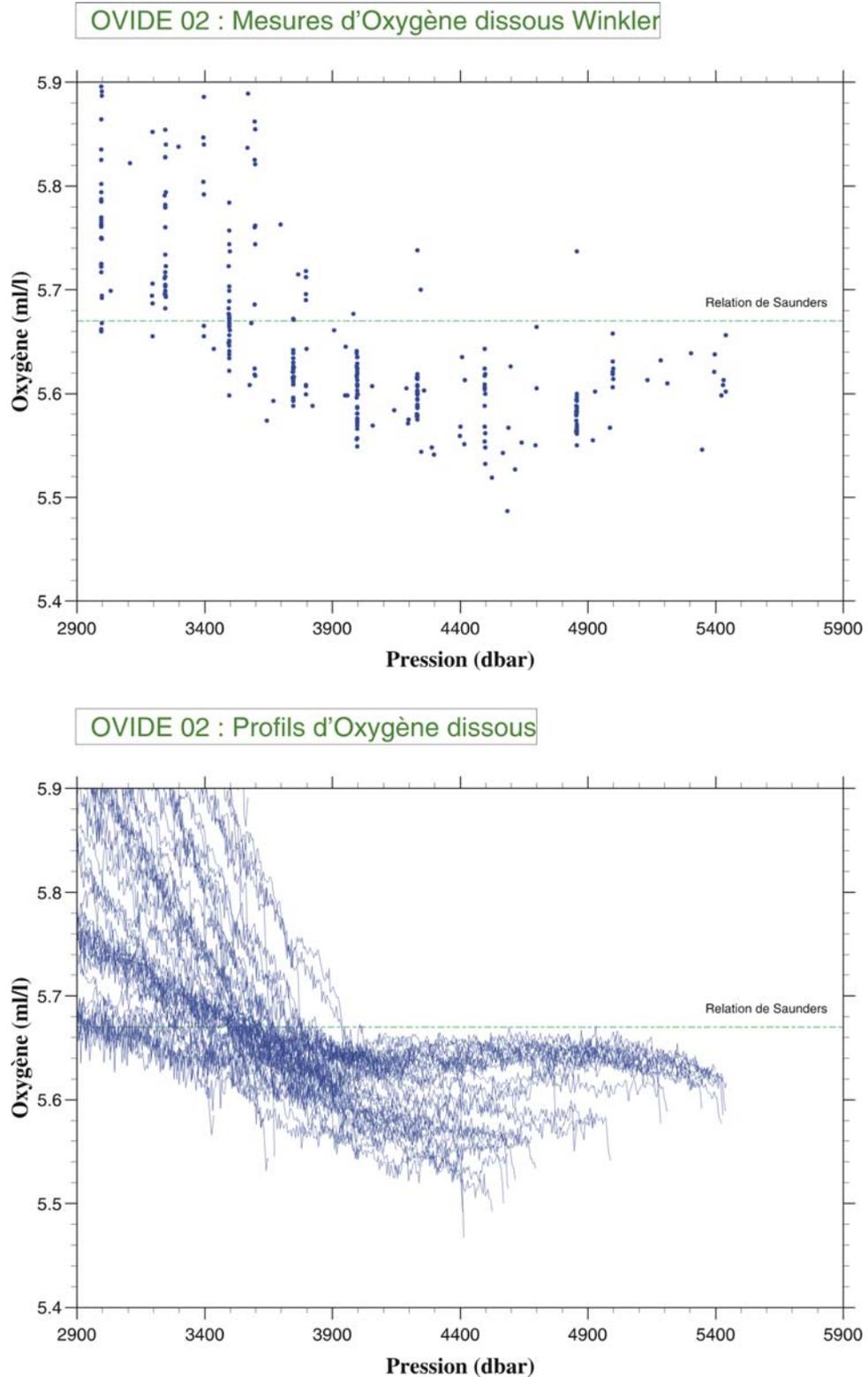


Figure III.22 : Ensemble des mesures d'oxygène dissous de la campagne OVIDE 2002 à pression supérieure à 2900 dbar.

- a) mesures « chimie » obtenues sur les prélèvements.
- b) Mesures en continu sur les profils descente de la sonde.

Le trait représente la valeur référence préconisée par Saunders (1986) dans l'Atlantique Nord-Est.

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V - LISTINGS ET FIGURES DES PARAMÈTRES BATHYSONDE

Remarques

a) Descriptif des stations :

1. La latitude et la longitude indiquent le positionnement du navire en station au début du profil descente.
2. La profondeur est la mesure brute du sondeur EK 500 au début du profil descente pour une vitesse du son à 1500m/s (pas de correction sur cette indication).

b) Les mesures de température, salinité et oxygène dissous sont celles du profil descente de la bathysonde.

c) Les mesures présentées sont extraites des fichiers de type **.clc**.

d) Aux niveaux de pression absents (moyenne non calculée dans l'acquisition des données), les mesures sont interpolées. Près de la surface, les mesures sont extrapolées jusqu'au niveau 1 en recopiant celles du premier niveau réduit.

e) **Les mesures d'oxygène dissous ont été lissées verticalement sur 11 dbars pour éliminer l'effet de houle** (le profil de la station 6 n'a pu être exploité).

f) Les listings et tracés présentent les résultats en fonction de la pression (exprimée en dbar).

g) les stations sont numérotées séquentiellement de 0 à 104 :

- A l'approche de la pointe du Groenland, quelques stations n'ont pu être réalisées à la position prévue, à cause de la présence de glace. Pour cette raison, la station 4 n'existe pas, la station 6 a été réalisée avant la station 5 et approximativement à la même position géographique.
- La radiale d'hydrologie a été interrompue après la station 72 pour relever les mouillages de pièges à particules. Après ces opérations, la radiale est reprise à la station 73, réalisée à la même position géographique que la station 72.

Corrections apportées aux profils OVIDE 2002

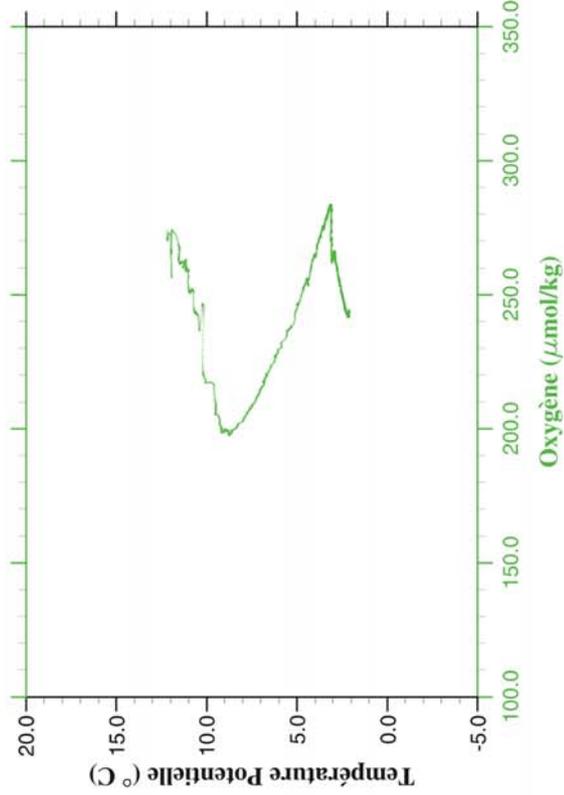
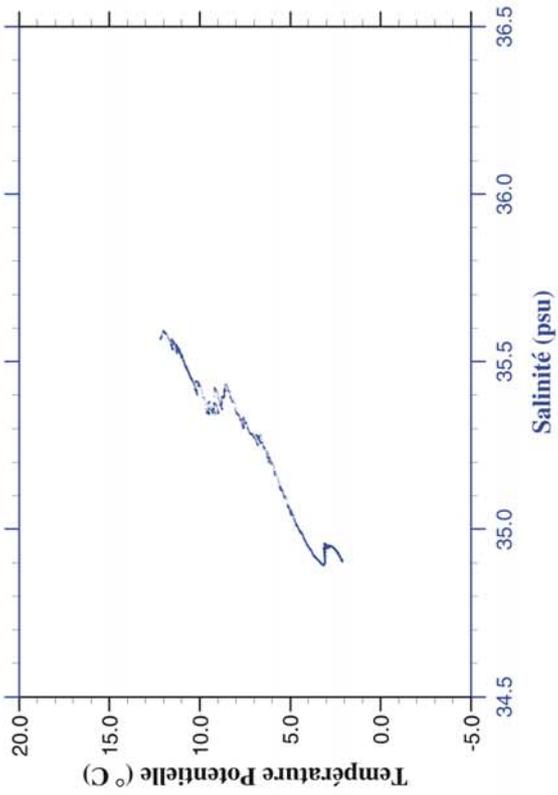
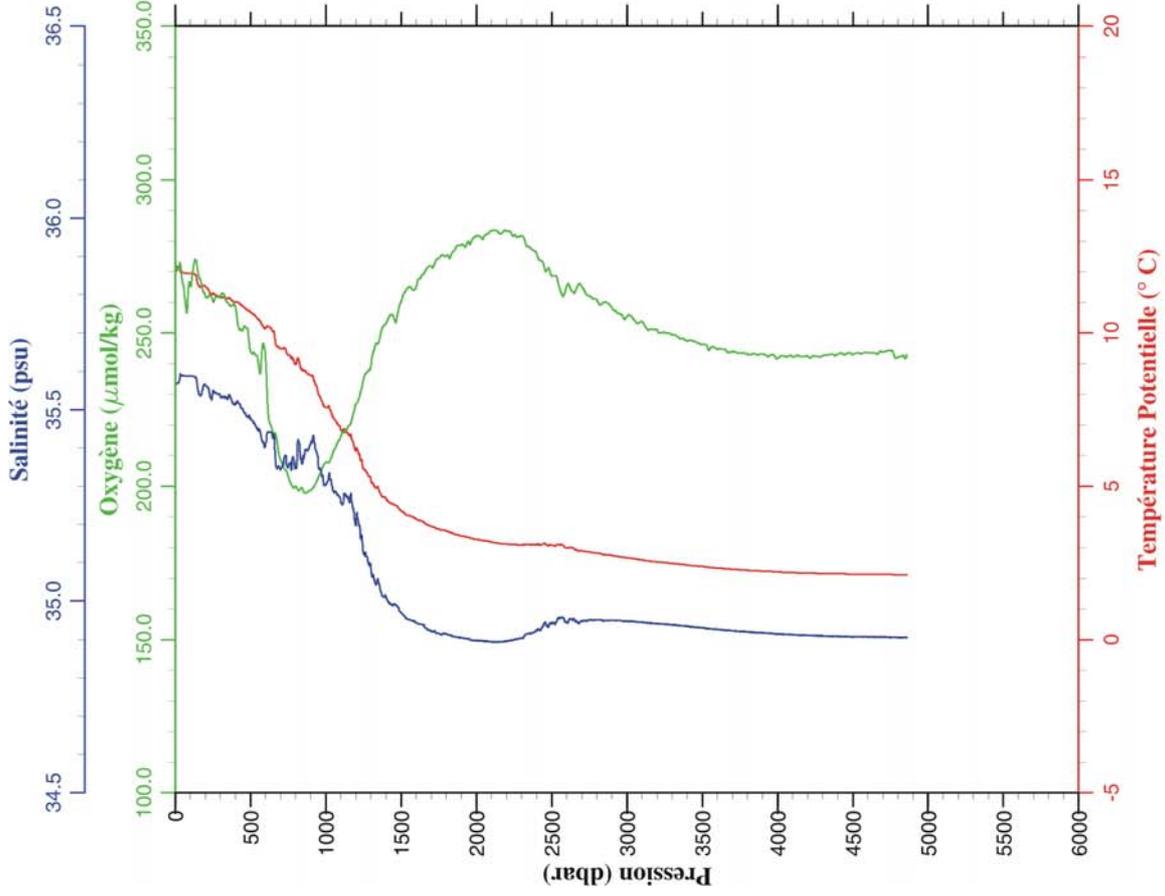
Les mesures obtenues sur le profil de certaines stations ont du être corrigées à cause du mauvais fonctionnement momentané de l'un ou l'autre des capteurs CTD.

Le tableau suivant regroupe les corrections apportées au jeu de données afin d'obtenir un ensemble cohérent de mesures.

Station	Début correction (pression)	Fin correction (pression)	Paramètre concerné	Type de correction
0	2	2	O ₂	On prend la valeur mesurée à P=3
6	4	215	O ₂	On remplace par 99.999
21	4	117	O ₂	On prend les valeurs du profil de la station 20
33	4	21	O ₂	On prend la valeur mesurée à P=22
50	116	136	S	Interpolation linéaire
52	1927	1954	S	Interpolation linéaire
	2462	2473	S	Interpolation linéaire
	2991	3011	S	Interpolation linéaire
	3066	3095	S	Interpolation linéaire
	3350	3374	S	Interpolation linéaire
	3548	3559	S	Interpolation linéaire
53	1931	2144	S	Interpolation linéaire
56	5	131	O ₂	On prend les valeurs du profil de la station 57
64	1439	4680	S	Salinité recalée de +0.040
	1372	1443	S	Interpolation linéaire
68	7	9	O ₂	On prend la valeur mesurée à P=10
98	4	89	O ₂	On prend les valeurs du profil de la station 99

Station : 0 Campagne : OVIDE 02
 Date : 13-06-02 Navire : N/O THALASSA
 Profondeur : 4788 Organisme : IFREMER
 Position : N 50 39.27
 W 17 35.37

PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	12.175	35.568	273.8	12.175	3050.0	2.888	34.946	254.1	2.635
10.0	12.173	35.568	270.4	12.172	3100.0	2.855	34.945	253.8	2.596
20.0	12.164	35.569	270.7	12.161	3150.0	2.823	34.942	251.2	2.560
30.0	12.102	35.577	272.9	12.098	3200.0	2.798	34.941	251.0	2.530
40.0	11.995	35.589	270.2	11.989	3250.0	2.779	34.939	250.2	2.506
50.0	11.986	35.588	266.3	11.979	3300.0	2.764	34.939	249.4	2.487
100.0	11.960	35.588	265.3	11.946	3350.0	2.738	34.936	248.3	2.456
150.0	11.609	35.549	270.1	11.590	3400.0	2.718	34.934	247.4	2.431
200.0	11.539	35.562	262.1	11.513	3450.0	2.697	34.932	247.2	2.405
250.0	11.338	35.546	260.4	11.307	3500.0	2.678	34.931	246.3	2.381
300.0	11.213	35.535	261.5	11.175	3550.0	2.654	34.928	244.7	2.352
350.0	11.169	35.530	260.0	11.125	3600.0	2.639	34.927	244.7	2.332
400.0	11.070	35.517	258.5	11.020	3650.0	2.625	34.923	244.7	2.313
450.0	10.928	35.501	251.1	10.872	3700.0	2.608	34.923	244.0	2.290
500.0	10.750	35.479	244.0	10.688	3750.0	2.598	34.920	243.5	2.276
550.0	10.517	35.447	241.2	10.450	3800.0	2.587	34.920	243.0	2.259
600.0	10.244	35.410	241.9	10.172	3850.0	2.580	34.918	243.2	2.246
650.0	10.131	35.426	217.3	10.053	3900.0	2.575	34.918	243.1	2.236
700.0	9.569	35.344	208.5	9.488	3950.0	2.564	34.916	242.7	2.220
750.0	9.365	35.348	203.3	9.278	4000.0	2.552	34.915	241.8	2.202
800.0	9.066	35.347	200.0	8.976	4050.0	2.550	34.914	242.4	2.194
850.0	8.893	35.381	198.5	8.798	4100.0	2.545	34.912	242.2	2.184
900.0	8.728	35.411	198.7	8.627	4150.0	2.542	34.911	242.4	2.175
950.0	8.104	35.353	202.9	8.002	4200.0	2.540	34.910	242.5	2.167
1000.0	7.669	35.304	207.8	7.564	4250.0	2.537	34.910	242.5	2.159
1050.0	7.354	35.288	211.4	7.246	4300.0	2.537	34.910	242.6	2.153
1100.0	6.956	35.260	216.3	6.846	4350.0	2.538	34.908	242.9	2.148
1150.0	6.798	35.266	219.6	6.684	4400.0	2.539	34.908	243.2	2.143
1200.0	6.311	35.204	226.8	6.196	4450.0	2.542	34.907	243.1	2.139
1250.0	5.679	35.124	234.9	5.565	4500.0	2.544	34.906	242.9	2.136
1300.0	5.294	35.090	239.3	5.178	4550.0	2.548	34.906	243.3	2.133
1350.0	5.025	35.050	246.6	4.908	4600.0	2.551	34.907	243.6	2.130
1400.0	4.724	35.010	253.2	4.605	4650.0	2.554	34.907	243.4	2.127
1450.0	4.533	34.992	255.5	4.412	4700.0	2.557	34.906	243.8	2.124
1500.0	4.335	34.971	260.2	4.211	4750.0	2.560	34.906	244.3	2.120
1550.0	4.172	34.952	264.9	4.045	4800.0	2.562	34.905	242.1	2.116
1600.0	4.067	34.945	265.0	3.937	4850.0	2.567	34.905	241.7	2.115
1650.0	3.959	34.938	269.3	3.825	4860.0	2.569	34.905	243.0	2.115
1700.0	3.827	34.922	271.7	3.690					
1750.0	3.743	34.916	274.3	3.603					
1800.0	3.691	34.915	275.1	3.547					
1850.0	3.593	34.907	276.8	3.446					
1900.0	3.531	34.904	279.0	3.380					
1950.0	3.484	34.902	279.6	3.329					
2000.0	3.422	34.897	281.7	3.263					
2050.0	3.387	34.895	281.4	3.224					
2100.0	3.342	34.894	283.3	3.176					
2150.0	3.304	34.893	282.5	3.133					
2200.0	3.286	34.895	283.2	3.111					
2250.0	3.276	34.899	282.1	3.096					
2300.0	3.263	34.904	281.8	3.079					
2350.0	3.288	34.915	278.2	3.097					
2400.0	3.299	34.923	276.0	3.104					
2450.0	3.339	34.943	271.6	3.138					
2500.0	3.282	34.941	268.6	3.076					
2550.0	3.316	34.958	265.0	3.105					
2600.0	3.206	34.945	265.4	2.992					
2650.0	3.187	34.953	263.0	2.968					
2700.0	3.111	34.947	265.1	2.889					
2750.0	3.086	34.951	262.1	2.859					
2800.0	3.050	34.952	260.8	2.819					
2850.0	3.007	34.950	260.1	2.771					
2900.0	2.986	34.950	258.4	2.746					
2950.0	2.950	34.949	256.4	2.705					
3000.0	2.912	34.948	255.4	2.664					



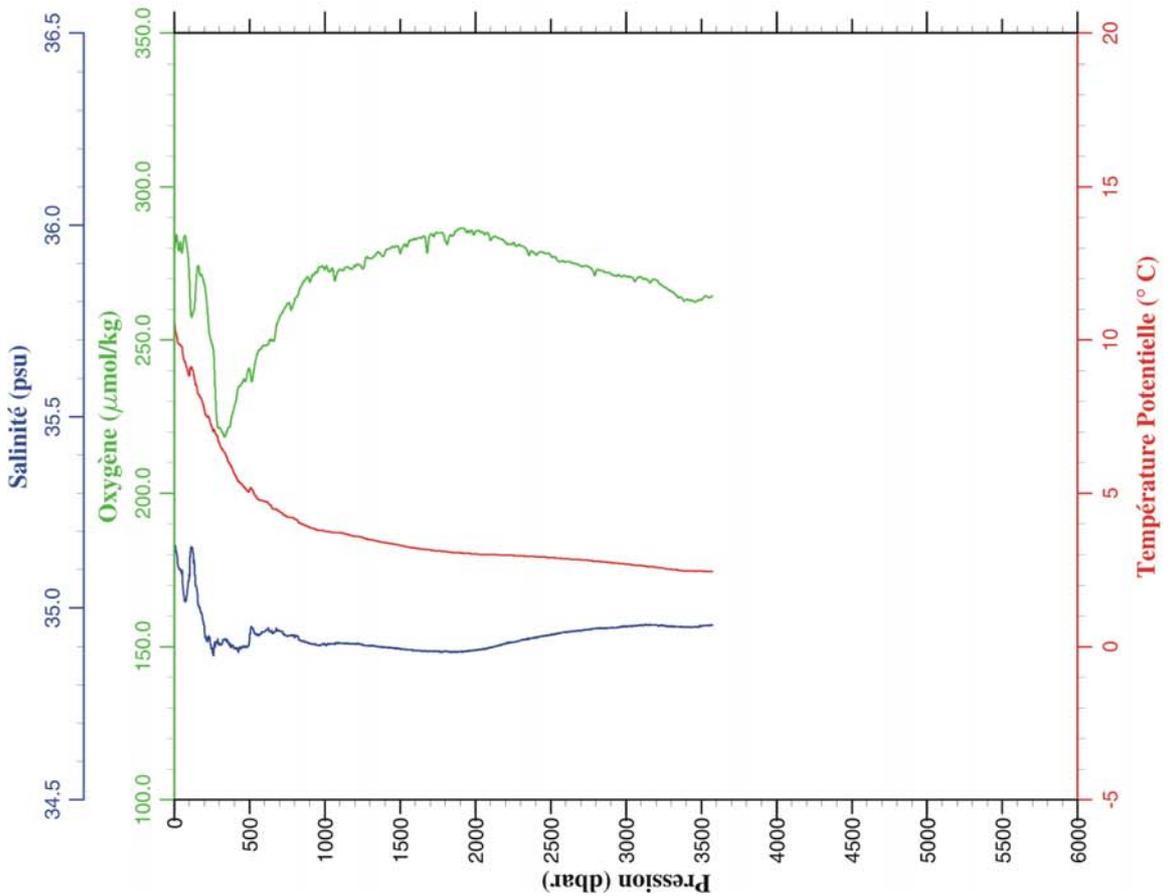
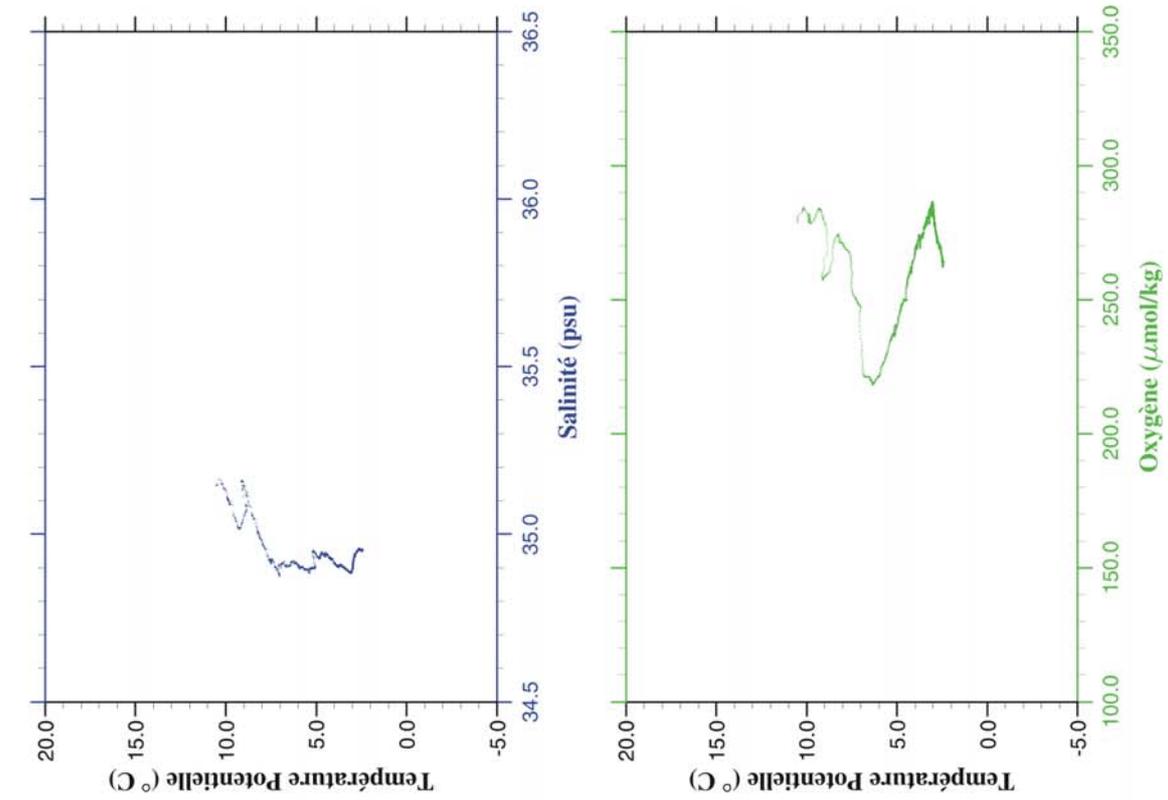
Station 0

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Station      : 1          Campagne   : OVIDE 02
Date        : 15-06-02   Navire    : N/O THALASSA
Profondeur  : 3566       Organisme : IFREMER
Position    : N 54 9.95
              W 26 29.77

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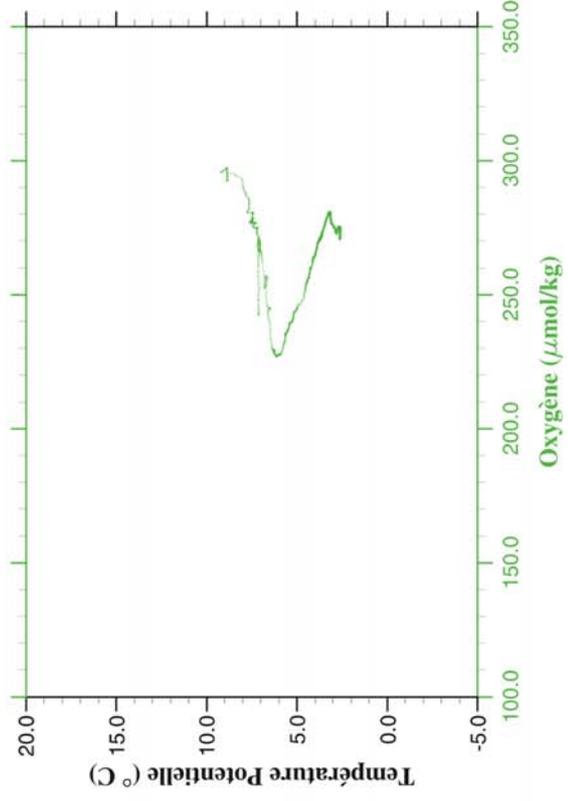
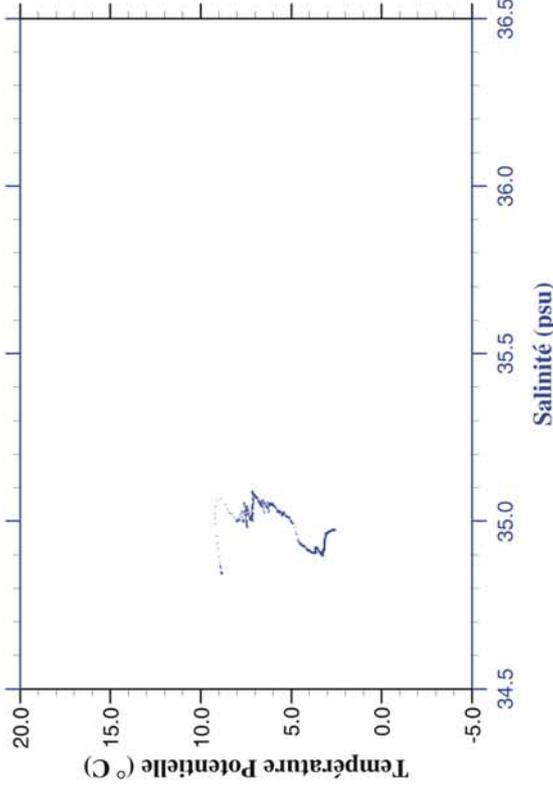
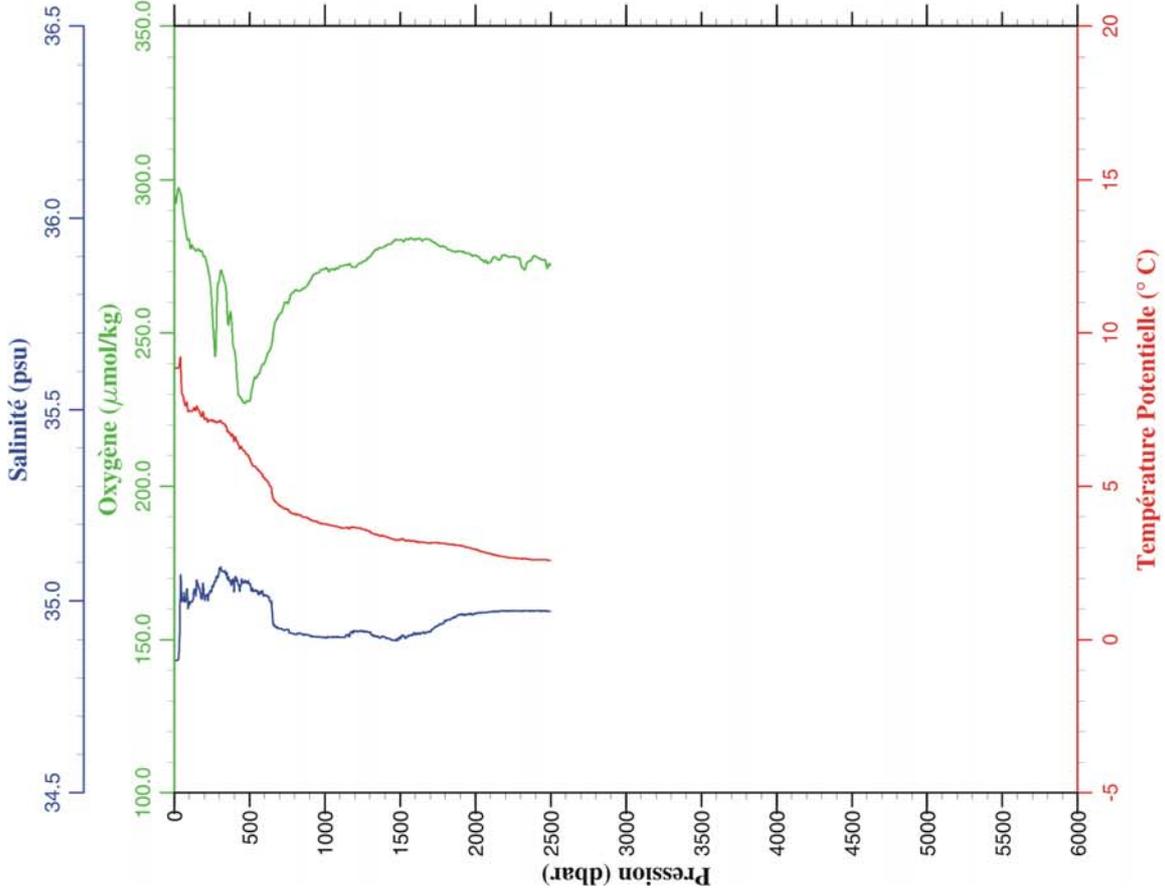
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	10.489	35.146	278.9	10.489	3050.0	2.913	34.955	270.0	2.659
10.0	10.233	35.151	283.2	10.232	3100.0	2.897	34.956	270.6	2.638
20.0	10.045	35.133	283.0	10.042	3150.0	2.867	34.957	269.4	2.603
30.0	9.884	35.105	279.0	9.881	3200.0	2.854	34.956	269.5	2.585
40.0	9.854	35.101	281.9	9.850	3250.0	2.822	34.954	267.4	2.549
50.0	9.791	35.091	278.5	9.785	3300.0	2.793	34.952	266.0	2.515
100.0	8.854	35.086	270.3	8.843	3350.0	2.772	34.952	263.8	2.489
150.0	8.484	35.050	271.9	8.468	3400.0	2.752	34.951	263.1	2.464
200.0	7.732	34.946	268.3	7.712	3450.0	2.750	34.951	262.7	2.457
250.0	7.194	34.895	248.7	7.170	3500.0	2.756	34.954	263.1	2.457
300.0	6.647	34.906	221.3	6.620	3550.0	2.753	34.954	263.8	2.448
350.0	6.209	34.912	220.2	6.178	3576.0	2.760	34.956	264.4	2.453
400.0	5.666	34.896	228.6	5.632					
450.0	5.324	34.900	236.0	5.287					
500.0	5.141	34.917	240.6	5.100					
550.0	4.879	34.927	245.1	4.835					
600.0	4.782	34.939	248.2	4.734					
650.0	4.565	34.936	249.9	4.514					
700.0	4.458	34.940	257.6	4.404					
750.0	4.285	34.927	261.9	4.228					
800.0	4.211	34.924	262.9	4.149					
850.0	4.057	34.913	268.3	3.993					
900.0	3.951	34.908	269.0	3.884					
950.0	3.872	34.904	272.1	3.801					
1000.0	3.835	34.908	273.0	3.760					
1050.0	3.808	34.907	273.4	3.729					
1100.0	3.800	34.909	273.0	3.716					
1150.0	3.745	34.909	273.8	3.658					
1200.0	3.687	34.907	274.4	3.597					
1250.0	3.651	34.906	273.3	3.557					
1300.0	3.584	34.901	276.6	3.486					
1350.0	3.530	34.899	278.7	3.428					
1400.0	3.495	34.898	278.6	3.389					
1450.0	3.460	34.896	280.5	3.350					
1500.0	3.414	34.893	278.2	3.301					
1550.0	3.369	34.892	280.8	3.251					
1600.0	3.329	34.890	282.9	3.208					
1650.0	3.299	34.889	283.7	3.174					
1700.0	3.279	34.888	284.3	3.150					
1750.0	3.257	34.887	284.9	3.124					
1800.0	3.233	34.887	282.4	3.096					
1850.0	3.210	34.886	284.0	3.068					
1900.0	3.198	34.887	286.5	3.052					
1950.0	3.188	34.888	285.6	3.038					
2000.0	3.169	34.891	285.4	3.014					
2050.0	3.162	34.893	285.3	3.003					
2100.0	3.158	34.897	282.5	2.994					
2150.0	3.158	34.903	283.4	2.990					
2200.0	3.154	34.908	281.9	2.981					
2250.0	3.149	34.910	281.8	2.971					
2300.0	3.139	34.915	280.9	2.956					
2350.0	3.131	34.920	278.3	2.943					
2400.0	3.123	34.923	277.8	2.931					
2450.0	3.113	34.928	278.6	2.916					
2500.0	3.101	34.931	277.7	2.900					
2550.0	3.086	34.935	275.8	2.880					
2600.0	3.071	34.938	275.6	2.860					
2650.0	3.059	34.939	275.1	2.843					
2700.0	3.052	34.941	274.2	2.831					
2750.0	3.031	34.943	273.9	2.805					
2800.0	3.013	34.946	272.1	2.783					
2850.0	2.993	34.947	272.5	2.758					
2900.0	2.974	34.949	271.6	2.734					
2950.0	2.956	34.950	271.3	2.711					
3000.0	2.935	34.952	270.7	2.686					



Station 1

Station	: 2	Campagne	: OVIDE 02
Date	: 16-06-02	Navire	: N/O THALASSA
Profondeur	: 2527	Organisme	: IFREMER
Position	: N 56 1.23		
	W 31 31.62		

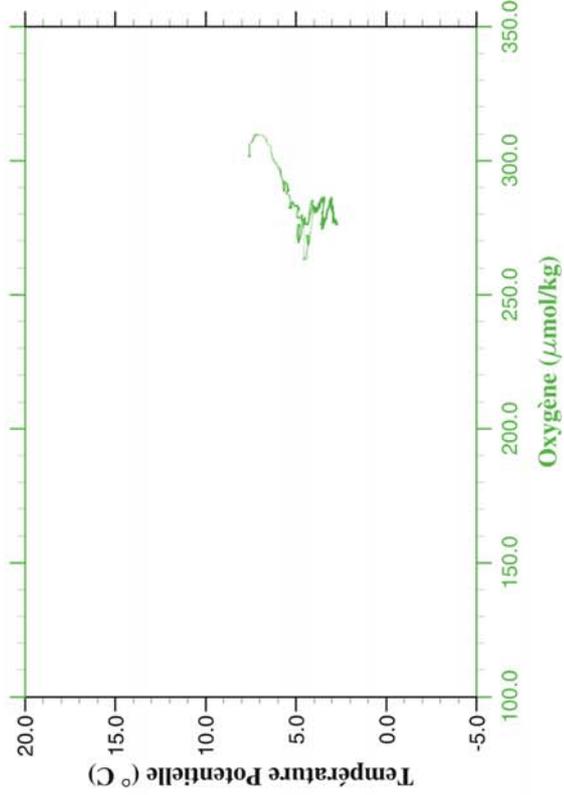
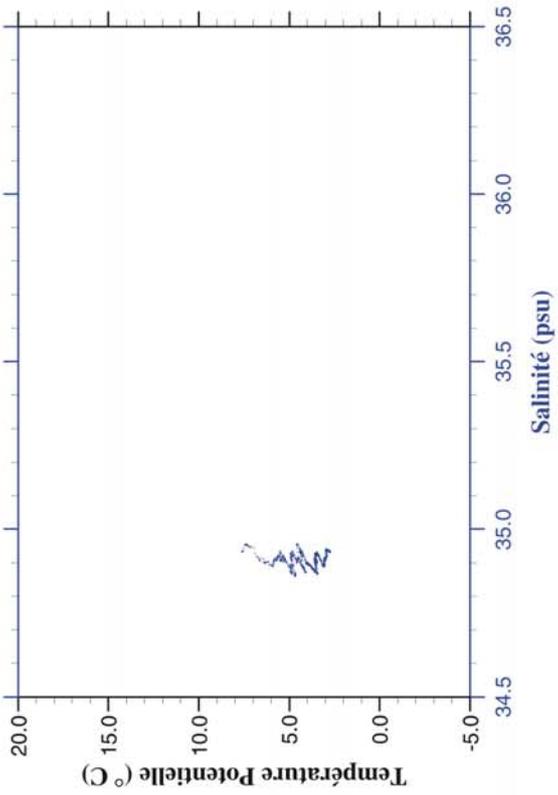
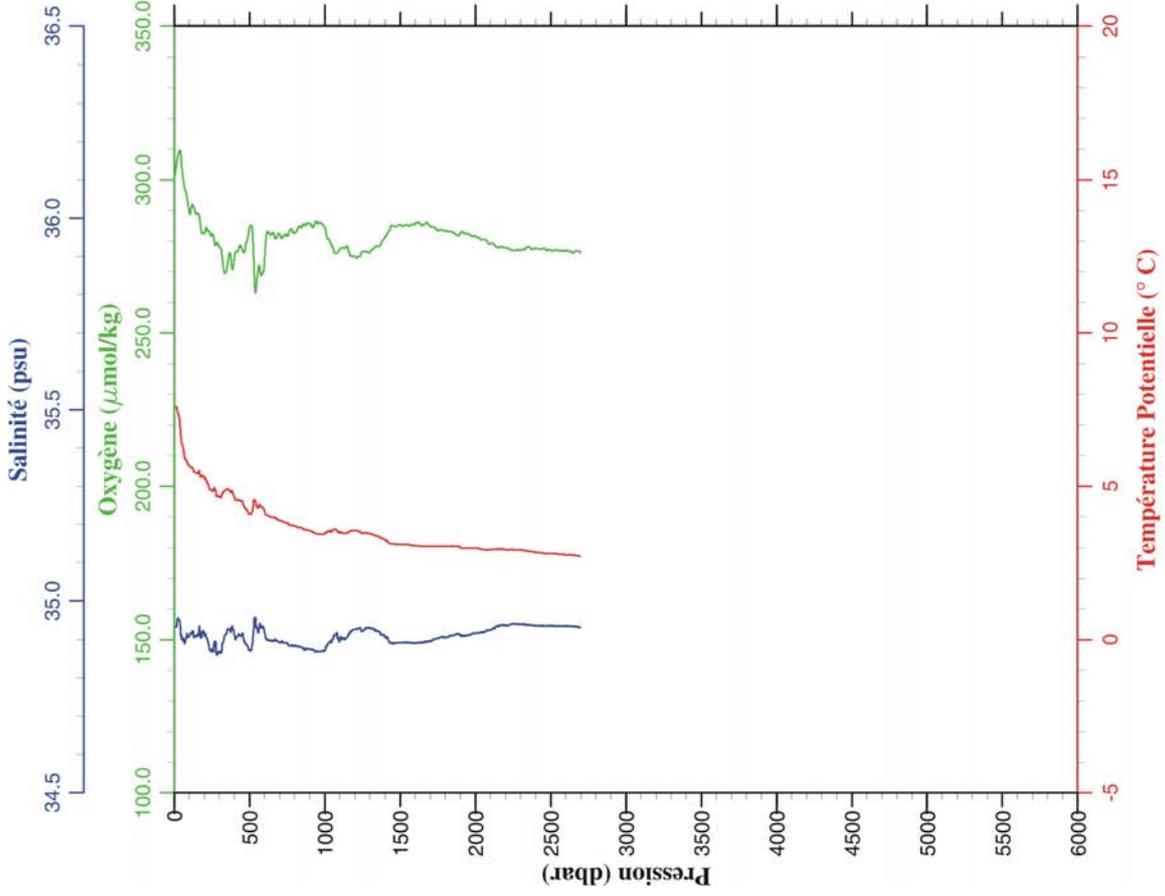
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	8.845	34.843	295.8	8.845
10.0	8.853	34.846	292.5	8.852
20.0	8.854	34.846	295.5	8.852
30.0	8.899	34.864	297.3	8.895
40.0	9.210	35.011	295.8	9.206
50.0	8.138	35.012	293.8	8.133
100.0	7.470	34.992	280.1	7.460
150.0	7.621	35.055	276.9	7.606
200.0	7.232	35.011	275.0	7.213
250.0	7.191	35.034	259.8	7.167
300.0	7.171	35.085	267.4	7.142
350.0	6.914	35.069	259.1	6.881
400.0	6.612	35.044	244.4	6.575
450.0	6.282	35.052	228.2	6.241
500.0	5.961	35.044	227.7	5.917
550.0	5.640	35.027	235.7	5.593
600.0	5.311	35.016	240.2	5.261
650.0	4.791	34.970	247.1	4.739
700.0	4.422	34.927	256.2	4.368
750.0	4.308	34.927	259.8	4.250
800.0	4.155	34.914	263.8	4.094
850.0	4.077	34.914	264.5	4.013
900.0	3.988	34.910	267.0	3.920
950.0	3.905	34.907	269.6	3.834
1000.0	3.840	34.905	270.9	3.765
1050.0	3.794	34.906	271.0	3.715
1100.0	3.742	34.906	271.8	3.660
1150.0	3.733	34.912	272.2	3.646
1200.0	3.743	34.922	271.5	3.652
1250.0	3.701	34.921	273.3	3.606
1300.0	3.626	34.918	274.8	3.527
1350.0	3.526	34.908	277.1	3.424
1400.0	3.467	34.906	278.3	3.362
1450.0	3.378	34.898	279.6	3.269
1500.0	3.352	34.901	280.4	3.239
1550.0	3.345	34.909	280.6	3.228
1600.0	3.317	34.914	280.3	3.196
1650.0	3.302	34.919	280.1	3.176
1700.0	3.270	34.920	280.5	3.141
1750.0	3.286	34.936	278.8	3.152
1800.0	3.271	34.949	278.1	3.133
1850.0	3.242	34.956	276.7	3.100
1900.0	3.210	34.965	276.7	3.063
1950.0	3.151	34.966	276.1	3.001
2000.0	3.099	34.968	275.4	2.945
2050.0	3.017	34.970	273.7	2.859
2100.0	2.957	34.972	273.0	2.795
2150.0	2.898	34.973	273.9	2.733
2200.0	2.860	34.974	275.4	2.692
2250.0	2.830	34.974	274.8	2.657
2300.0	2.818	34.975	273.1	2.640
2350.0	2.806	34.975	273.2	2.624
2400.0	2.795	34.975	275.1	2.609
2450.0	2.793	34.974	273.8	2.602
2498.0	2.785	34.973	272.1	2.589



Station 2

Station	: 3	Campagne	: OVIDE 02
Date	: 17-06-02	Navire	: N/O THALASSA
Profondeur	: 2723	Organisme	: IFREMER
Position	: N 57 37.37		
	W 36 0.31		

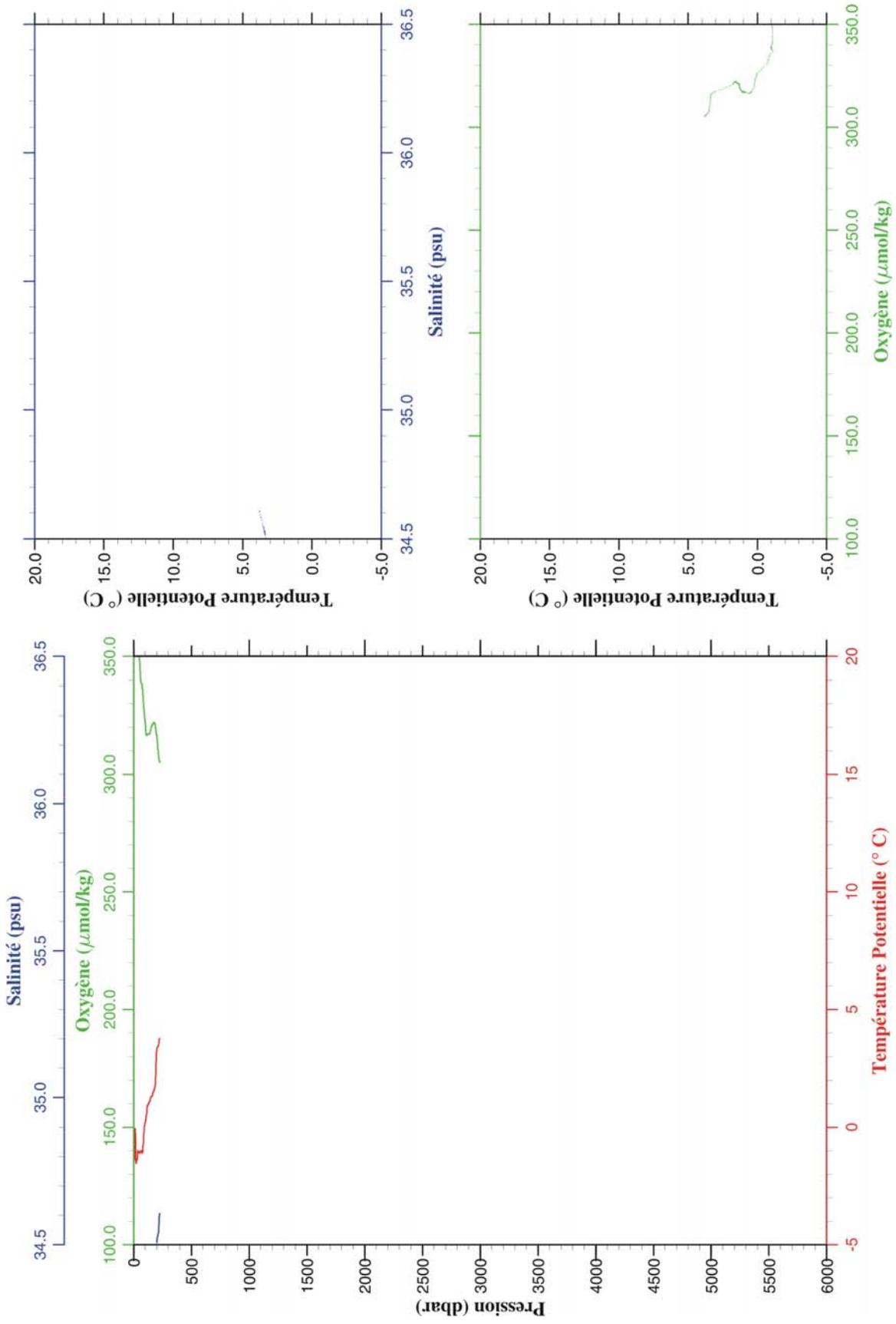
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	7.589	34.934	301.7	7.589
10.0	7.594	34.932	303.0	7.593
20.0	7.440	34.954	306.7	7.438
30.0	7.299	34.952	309.0	7.296
40.0	6.869	34.929	309.4	6.866
50.0	6.398	34.902	304.9	6.394
100.0	5.690	34.909	289.5	5.682
150.0	5.445	34.911	289.1	5.433
200.0	5.268	34.911	282.5	5.252
250.0	4.895	34.874	282.0	4.875
300.0	4.686	34.868	278.1	4.663
350.0	4.924	34.918	271.1	4.897
400.0	4.679	34.913	274.8	4.648
450.0	4.550	34.914	277.4	4.516
500.0	4.129	34.872	284.1	4.092
550.0	4.418	34.931	267.2	4.377
600.0	4.228	34.918	273.6	4.183
650.0	4.036	34.897	282.6	3.988
700.0	3.932	34.892	282.2	3.880
750.0	3.850	34.889	281.6	3.795
800.0	3.766	34.884	282.7	3.708
850.0	3.691	34.879	284.9	3.630
900.0	3.614	34.874	285.6	3.548
950.0	3.533	34.870	286.0	3.464
1000.0	3.510	34.871	284.6	3.437
1050.0	3.639	34.900	278.3	3.561
1100.0	3.585	34.904	277.4	3.503
1150.0	3.568	34.906	278.2	3.482
1200.0	3.641	34.926	275.0	3.551
1250.0	3.552	34.922	276.6	3.459
1300.0	3.552	34.930	276.5	3.454
1350.0	3.487	34.923	278.3	3.385
1400.0	3.367	34.909	281.3	3.263
1450.0	3.224	34.891	285.1	3.117
1500.0	3.207	34.892	285.3	3.096
1550.0	3.207	34.892	285.2	3.092
1600.0	3.178	34.891	285.6	3.059
1650.0	3.167	34.892	285.1	3.043
1700.0	3.162	34.896	284.8	3.034
1750.0	3.179	34.903	283.3	3.046
1800.0	3.178	34.906	283.4	3.041
1850.0	3.176	34.910	282.9	3.035
1900.0	3.150	34.913	282.5	3.005
1950.0	3.122	34.911	282.4	2.972
2000.0	3.129	34.916	281.6	2.975
2050.0	3.095	34.919	280.6	2.936
2100.0	3.093	34.925	279.2	2.930
2150.0	3.121	34.935	277.9	2.952
2200.0	3.104	34.937	277.8	2.932
2250.0	3.108	34.941	277.0	2.931
2300.0	3.094	34.940	277.0	2.911
2350.0	3.072	34.939	278.2	2.885
2400.0	3.038	34.936	277.6	2.847
2450.0	3.015	34.937	277.7	2.820
2500.0	3.010	34.936	277.1	2.810
2550.0	2.993	34.936	277.0	2.788
2600.0	2.980	34.934	276.9	2.771
2650.0	2.967	34.935	276.1	2.753
2698.0	2.941	34.932	276.1	2.722



Station 3

Station	: 5	Campagne	: OVIDE 02
Date	: 18-06-02	Navire	: N/O THALASSA
Profondeur	: 226	Organisme	: IFREMER
Position	: N 59 47.01		
	W 42 34.59		

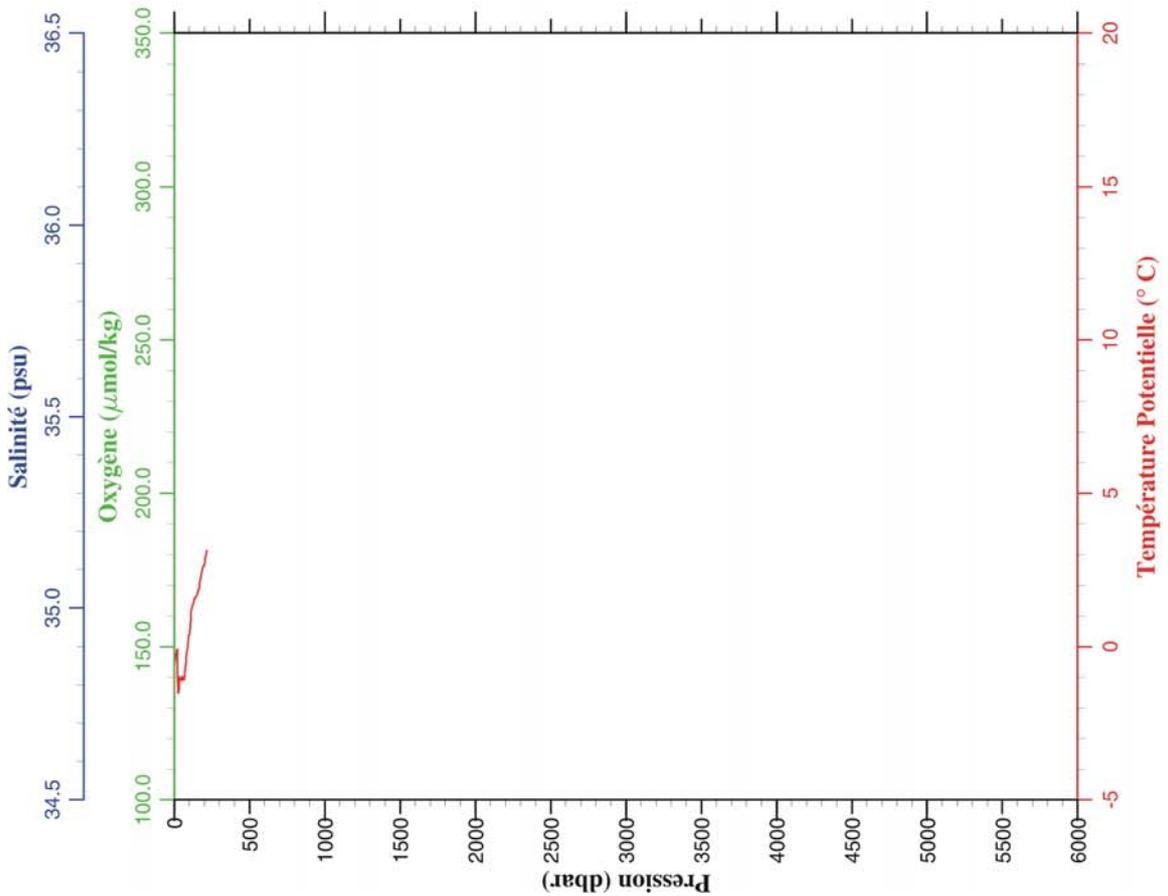
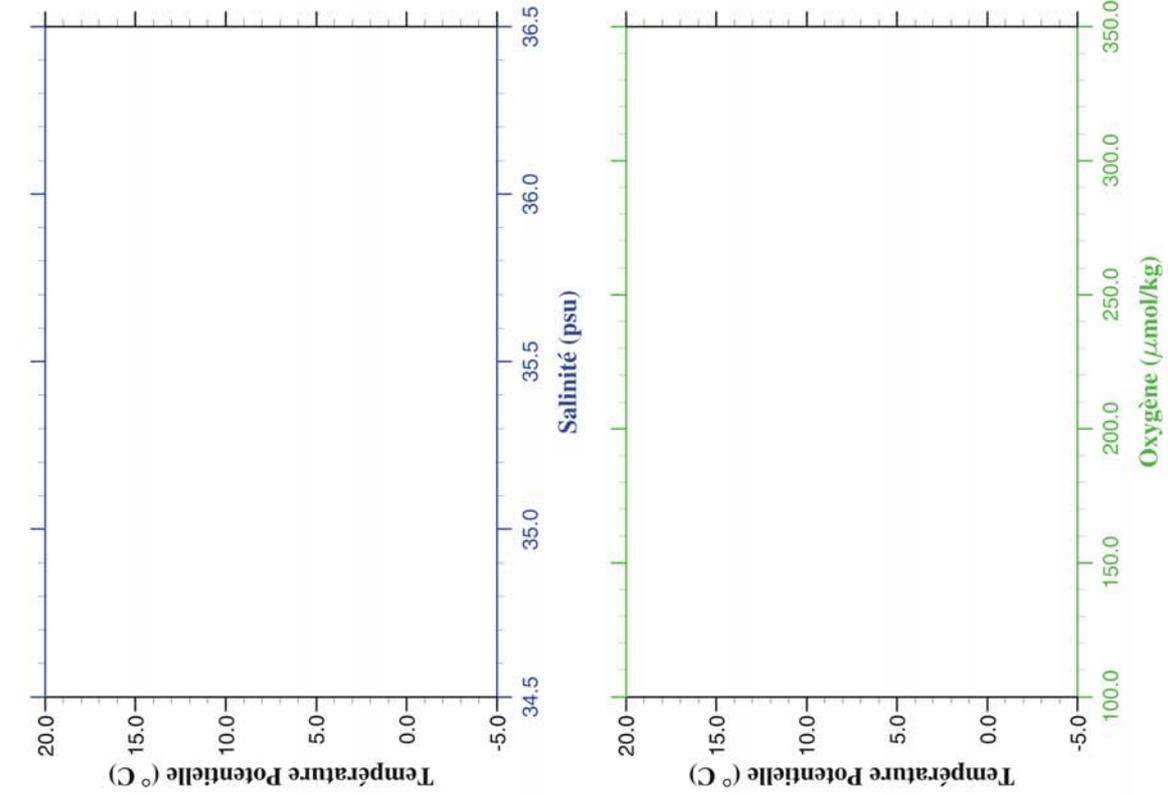
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	-1.388	32.043	387.2	-1.388
10.0	-0.345	32.589	388.2	-0.346
20.0	-1.536	32.822	386.2	-1.536
30.0	-1.388	33.068	363.8	-1.389
40.0	-1.095	33.258	353.6	-1.096
50.0	-1.038	33.303	349.7	-1.039
100.0	0.200	33.790	321.9	0.196
150.0	1.295	34.049	319.5	1.288
200.0	3.326	34.506	316.2	3.313
225.0	3.796	34.607	305.1	3.780



Station 5

Station	: 6	Campagne	: OVIDE 02
Date	: 18-06-02	Navire	: N/O THALASSA
Profondeur	: 236	Organisme	: IFREMER
Position	: N 59 49.84		
	W 42 31.51		

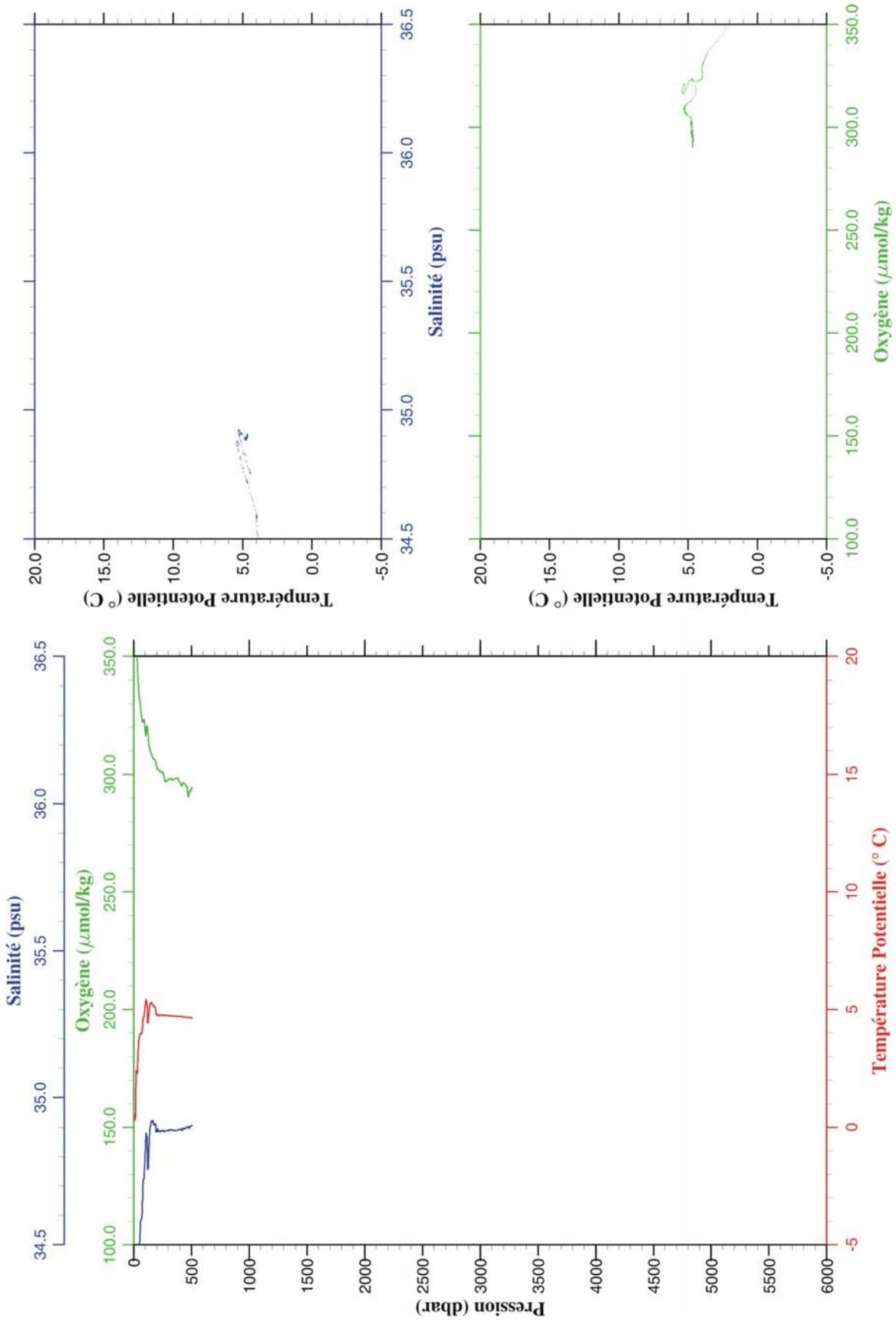
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	-0.525	32.356	*****	-0.525
10.0	-0.383	32.548	*****	-0.383
20.0	-0.089	32.779	*****	-0.090
30.0	-1.375	33.040	*****	-1.376
40.0	-1.086	33.269	*****	-1.087
50.0	-1.086	33.350	*****	-1.087
100.0	0.388	33.852	*****	0.384
150.0	1.678	34.141	*****	1.671
200.0	2.678	34.365	*****	2.666
215.0	3.155	34.473	*****	3.142



Station 6

Station	: 7	Campagne	: OVIDE 02
Date	: 18-06-02	Navire	: N/O THALASSA
Profondeur	: 506	Organisme	: IFREMER
Position	: N 59 48.42		
	W 42 19.77		

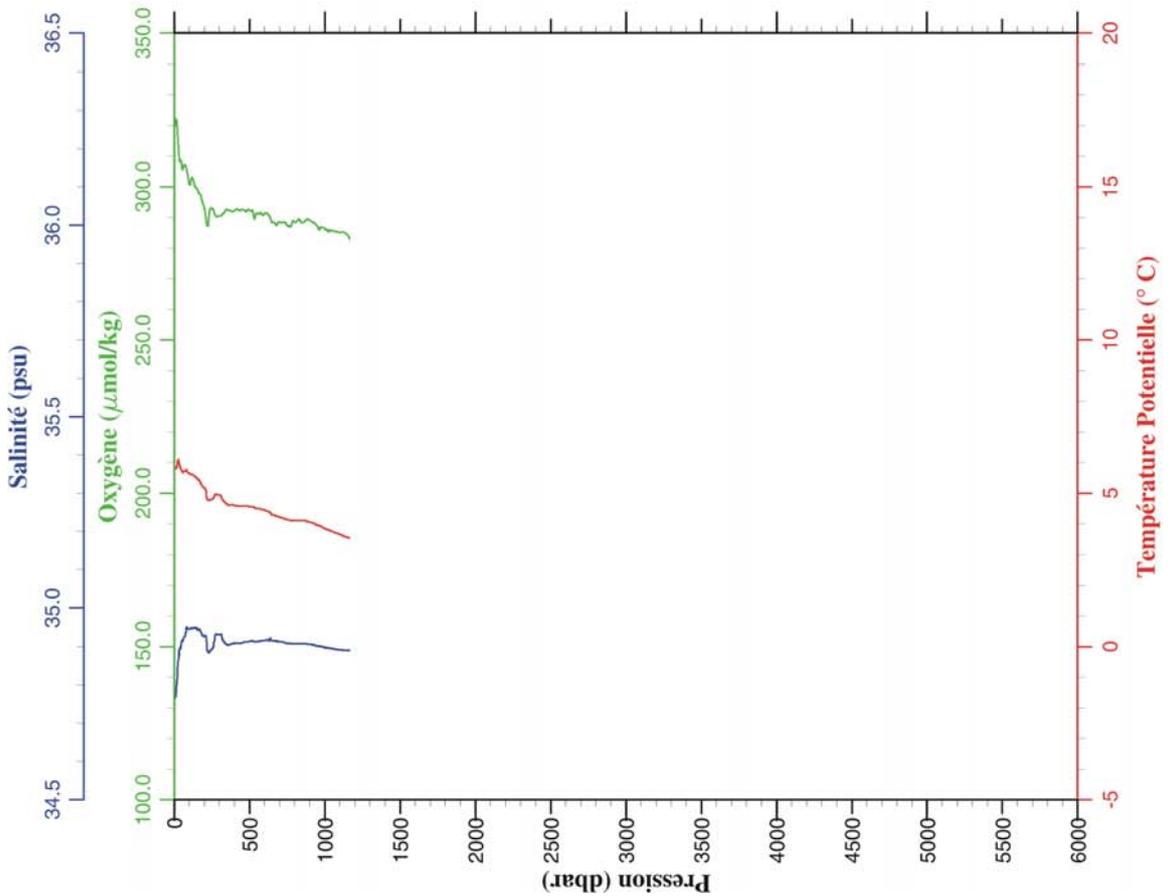
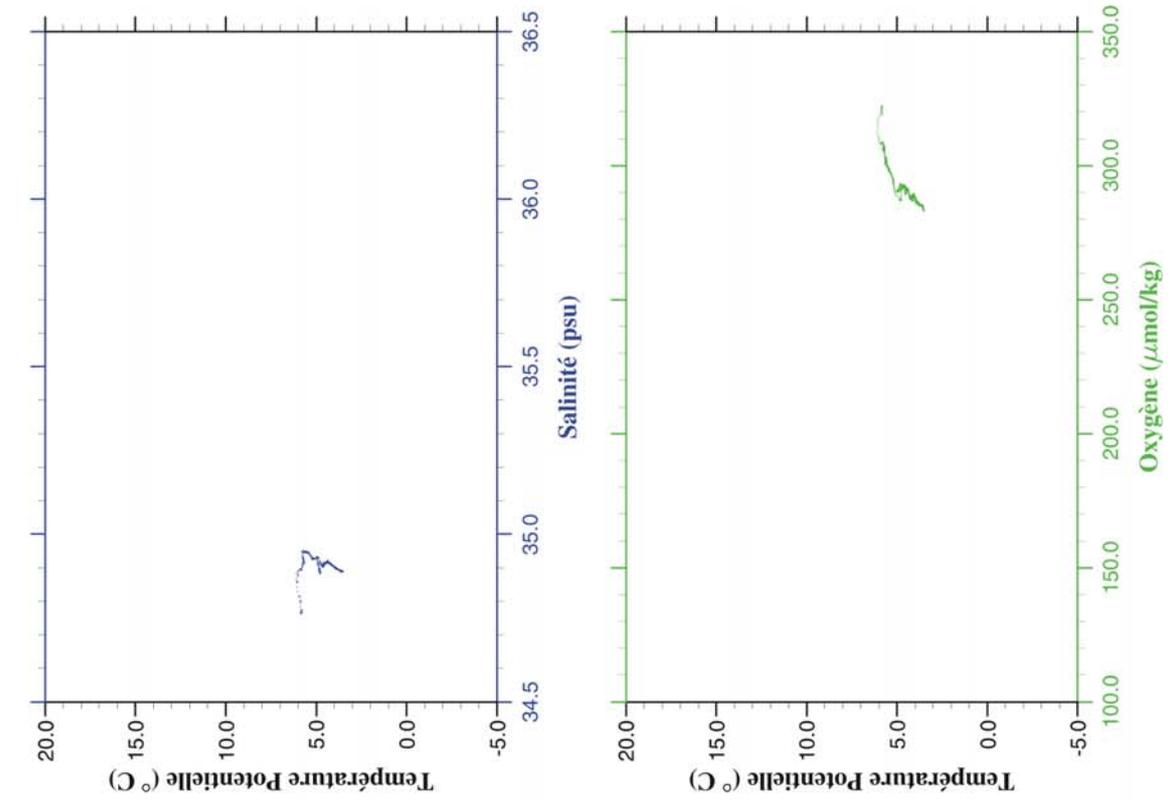
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	0.369	33.314	390.5	0.369
10.0	0.547	33.505	384.5	0.546
20.0	1.943	33.883	362.8	1.942
30.0	2.331	34.128	349.5	2.330
40.0	3.379	34.369	338.3	3.376
50.0	3.829	34.490	332.6	3.825
100.0	5.160	34.814	318.1	5.152
150.0	5.312	34.918	309.0	5.300
200.0	4.786	34.884	302.9	4.771
250.0	4.781	34.888	301.0	4.762
300.0	4.762	34.888	297.6	4.739
350.0	4.728	34.888	297.9	4.701
400.0	4.733	34.892	296.6	4.702
450.0	4.713	34.896	295.3	4.678
500.0	4.681	34.904	293.7	4.642
507.0	4.670	34.906	294.4	4.631



Station 7

Station	: 8	Campagne	: OVIDE 02
Date	: 18-06-02	Navire	: N/O THALASSA
Profondeur	: 1194	Organisme	: IFREMER
Position	: N 59 48.38		
	W 42 15.10		

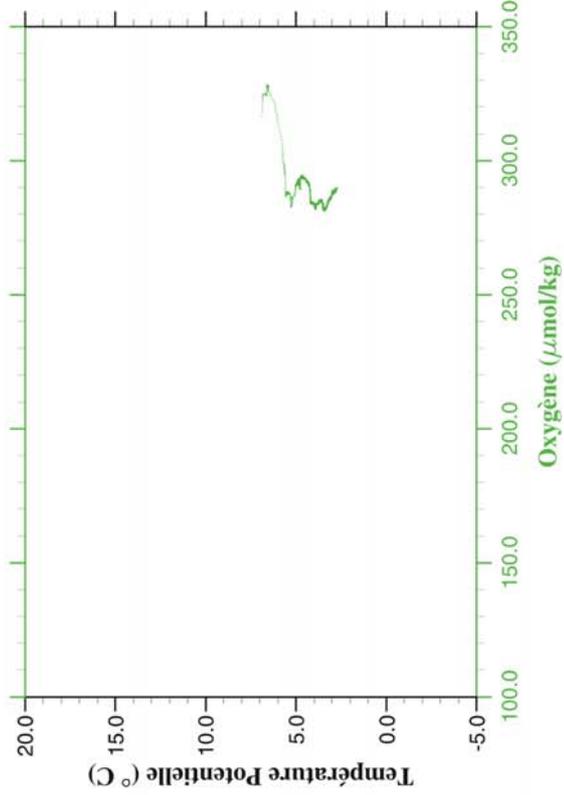
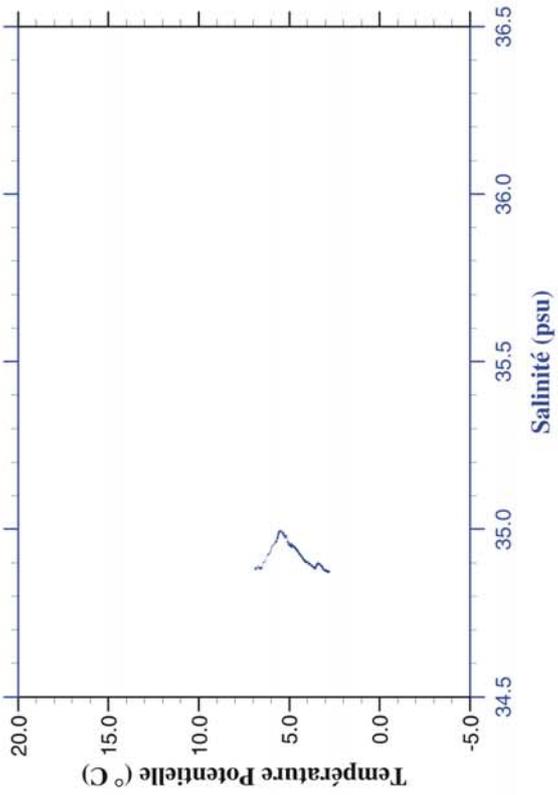
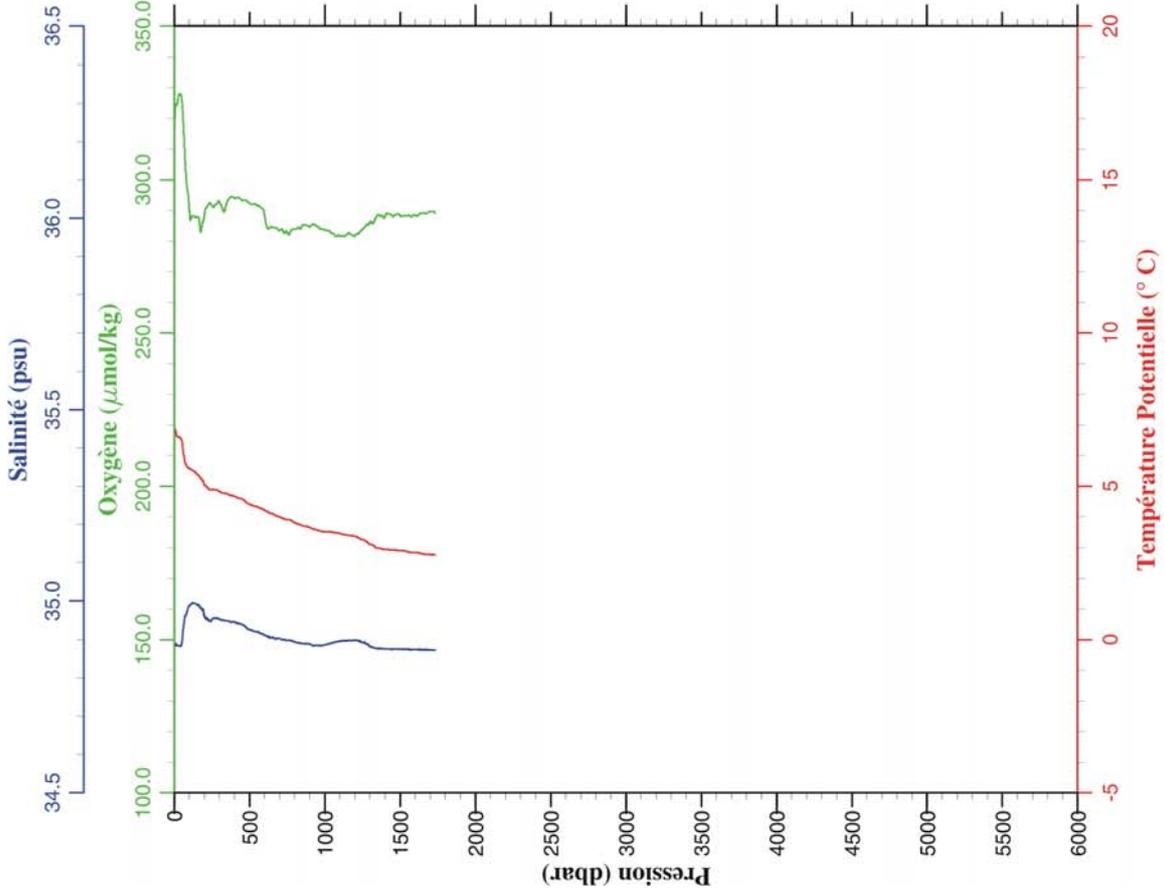
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	5.829	34.765	319.0	5.829
10.0	5.810	34.768	322.0	5.809
20.0	5.913	34.816	319.4	5.912
30.0	6.043	34.886	311.1	6.040
40.0	5.837	34.893	308.4	5.834
50.0	5.750	34.911	307.3	5.746
100.0	5.660	34.945	300.9	5.652
150.0	5.513	34.948	299.5	5.501
200.0	5.201	34.927	293.1	5.185
250.0	4.823	34.892	293.1	4.804
300.0	4.963	34.931	290.5	4.939
350.0	4.663	34.905	292.7	4.637
400.0	4.634	34.908	292.2	4.603
450.0	4.624	34.909	292.6	4.589
500.0	4.609	34.913	292.4	4.570
550.0	4.551	34.913	291.4	4.508
600.0	4.502	34.915	291.3	4.456
650.0	4.347	34.915	288.3	4.298
700.0	4.273	34.914	288.4	4.219
750.0	4.201	34.908	287.3	4.144
800.0	4.174	34.907	288.4	4.113
850.0	4.182	34.908	288.3	4.117
900.0	4.127	34.905	289.0	4.058
950.0	4.036	34.901	287.1	3.963
1000.0	3.925	34.897	286.3	3.849
1050.0	3.838	34.895	285.6	3.759
1100.0	3.738	34.891	285.1	3.655
1150.0	3.652	34.889	284.3	3.566
1164.0	3.613	34.890	283.0	3.526



Station 8

Station	: 9	Campagne	: OVIDE 02
Date	: 18-06-02	Navire	: N/O THALASSA
Profondeur	: 1676	Organisme	: IFREMER
Position	: N 59 47.97		
	W 42 0.29		

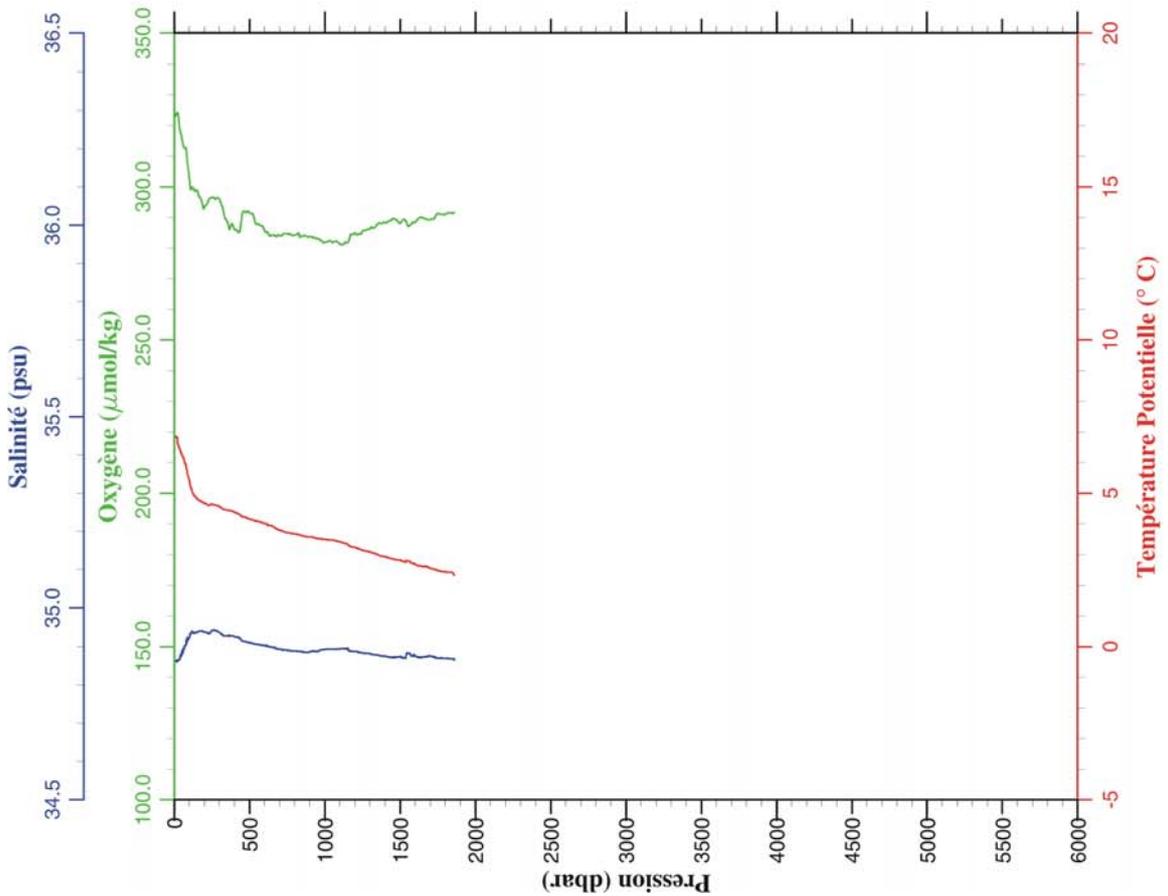
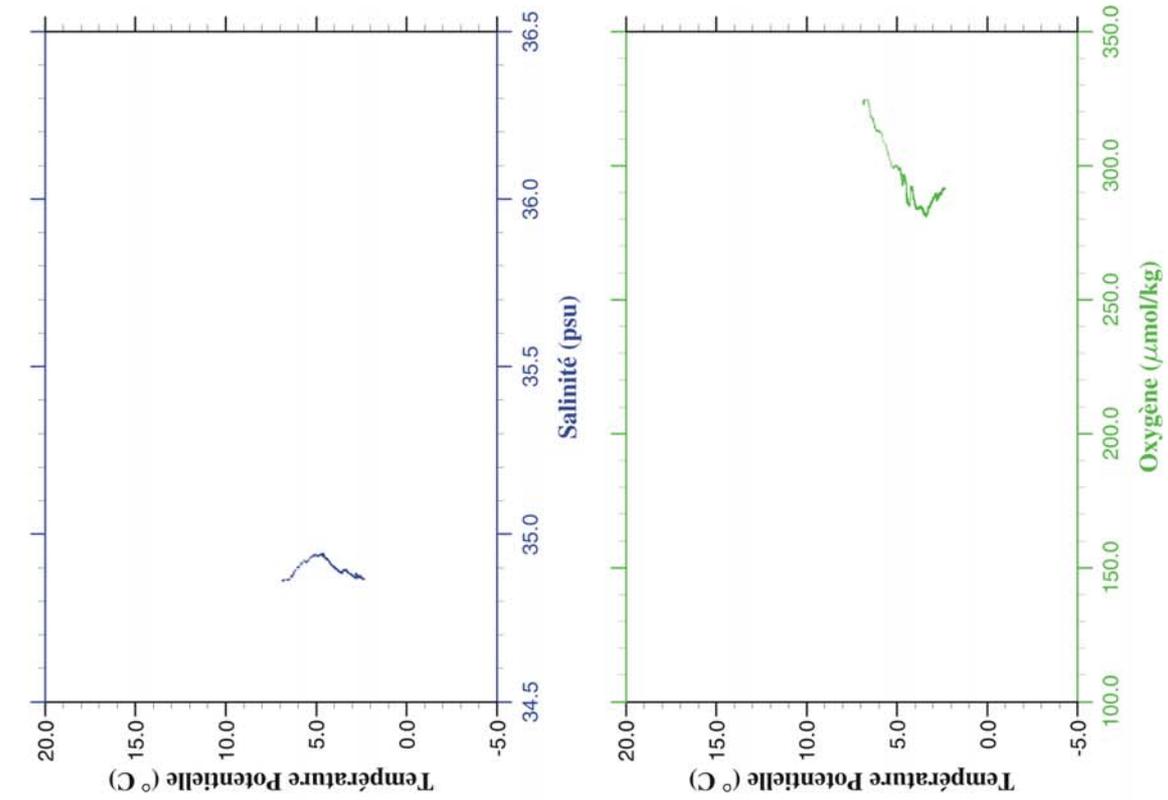
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	6.860	34.881	316.8	6.859
10.0	6.811	34.884	324.6	6.810
20.0	6.633	34.884	324.8	6.632
30.0	6.604	34.883	327.8	6.602
40.0	6.581	34.883	328.0	6.578
50.0	6.519	34.885	326.5	6.515
100.0	5.582	34.988	290.3	5.574
150.0	5.415	34.991	287.9	5.402
200.0	5.060	34.961	288.4	5.044
250.0	4.912	34.952	291.6	4.892
300.0	4.857	34.953	292.9	4.834
350.0	4.780	34.948	292.7	4.753
400.0	4.710	34.946	294.0	4.679
450.0	4.627	34.939	293.3	4.593
500.0	4.451	34.925	292.3	4.413
550.0	4.372	34.920	291.5	4.330
600.0	4.256	34.911	288.4	4.211
650.0	4.153	34.906	284.6	4.104
700.0	4.056	34.903	283.5	4.004
750.0	3.969	34.898	282.9	3.914
800.0	3.868	34.893	284.0	3.809
850.0	3.767	34.889	284.9	3.705
900.0	3.726	34.889	284.6	3.660
950.0	3.643	34.884	284.8	3.573
1000.0	3.592	34.886	283.7	3.519
1050.0	3.577	34.892	282.6	3.500
1100.0	3.536	34.894	281.7	3.455
1150.0	3.477	34.897	282.4	3.393
1200.0	3.466	34.898	281.6	3.378
1250.0	3.345	34.892	283.9	3.253
1300.0	3.203	34.881	286.3	3.109
1350.0	3.085	34.876	288.5	2.988
1400.0	3.047	34.876	288.2	2.946
1450.0	3.020	34.874	288.0	2.916
1500.0	3.007	34.875	288.4	2.898
1550.0	2.978	34.875	288.4	2.865
1600.0	2.957	34.874	288.5	2.841
1650.0	2.915	34.873	289.2	2.795
1700.0	2.897	34.872	289.8	2.773
1733.0	2.895	34.873	289.0	2.768



Station 9

Station	: 10	Campagne	: OVIDE 02
Date	: 18-06-02	Navire	: N/O THALASSA
Profondeur	: 1869	Organisme	: IFREMER
Position	: N 59 47.77		
	W 41 43.37		

PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	6.838	34.863	324.5	6.837
10.0	6.841	34.863	323.1	6.840
20.0	6.818	34.861	324.3	6.816
30.0	6.527	34.866	321.9	6.525
40.0	6.396	34.878	317.9	6.393
50.0	6.306	34.876	316.3	6.301
100.0	5.422	34.923	302.8	5.414
150.0	4.843	34.937	299.0	4.831
200.0	4.687	34.938	293.1	4.672
250.0	4.660	34.942	296.5	4.641
300.0	4.588	34.937	296.1	4.565
350.0	4.479	34.928	288.9	4.453
400.0	4.413	34.926	286.0	4.383
450.0	4.272	34.915	290.7	4.239
500.0	4.195	34.910	291.7	4.158
550.0	4.137	34.906	287.7	4.096
600.0	4.053	34.902	285.7	4.009
650.0	3.974	34.898	284.2	3.926
700.0	3.846	34.893	284.1	3.795
750.0	3.770	34.890	284.6	3.716
800.0	3.738	34.888	284.2	3.680
850.0	3.682	34.886	283.9	3.620
900.0	3.635	34.886	283.7	3.569
950.0	3.592	34.887	283.1	3.523
1000.0	3.567	34.893	281.9	3.494
1050.0	3.549	34.893	281.9	3.473
1100.0	3.501	34.893	281.4	3.420
1150.0	3.429	34.893	281.8	3.345
1200.0	3.316	34.887	284.9	3.229
1250.0	3.231	34.883	285.5	3.140
1300.0	3.176	34.882	286.3	3.082
1350.0	3.105	34.878	287.8	3.007
1400.0	3.032	34.875	288.2	2.932
1450.0	2.970	34.872	289.6	2.866
1500.0	2.922	34.872	288.1	2.815
1550.0	2.911	34.883	287.4	2.800
1600.0	2.793	34.875	288.4	2.679
1650.0	2.731	34.872	289.8	2.613
1700.0	2.673	34.876	289.3	2.551
1750.0	2.599	34.869	291.3	2.475
1800.0	2.567	34.869	291.0	2.438
1850.0	2.535	34.868	291.3	2.403
1861.0	2.466	34.867	291.6	2.334



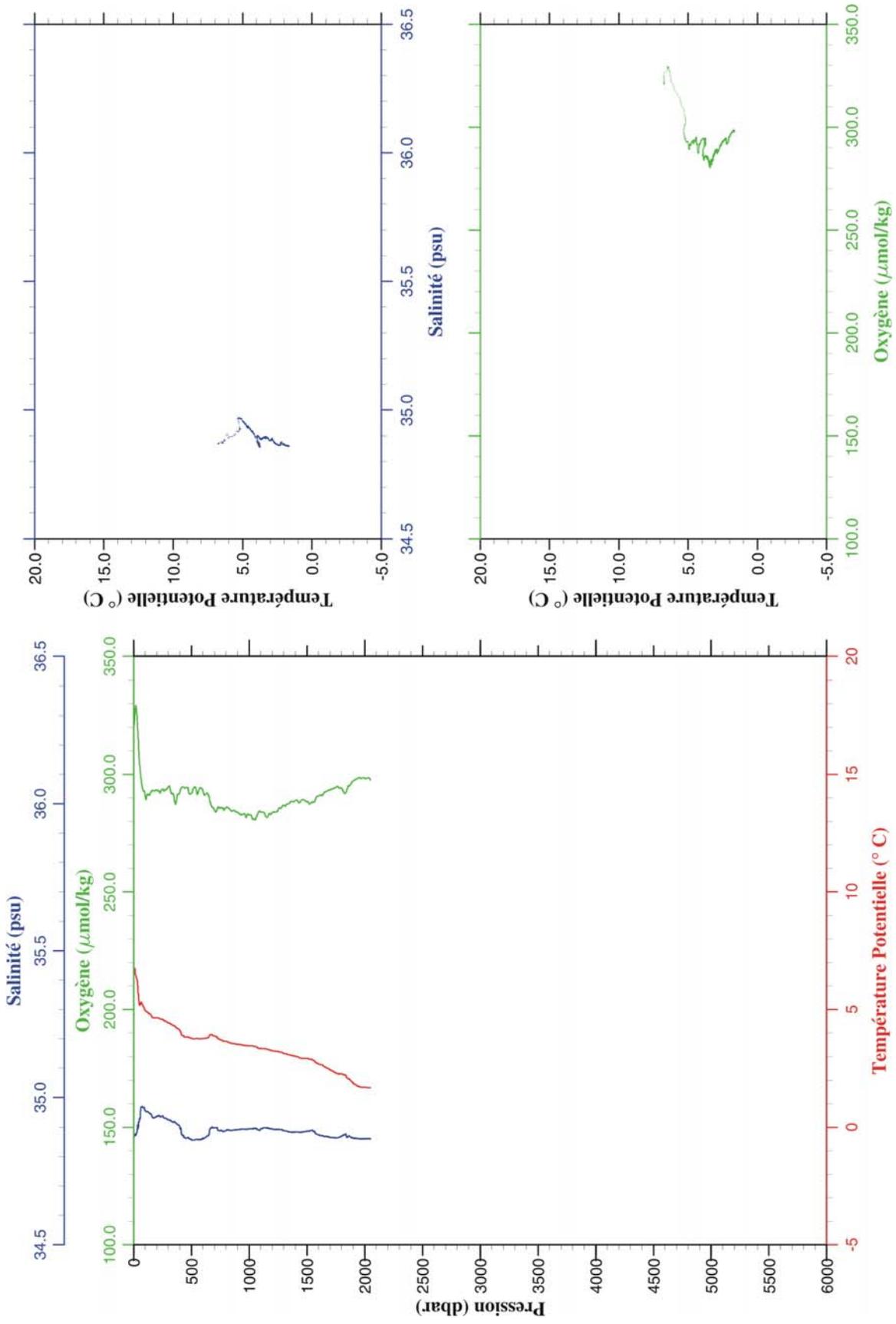
Station 10

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Station   : 11          Campagne  : OVIDE 02
Date      : 18-06-02   Navire    : N/O THALASSA
Profondeur : 2056      Organisme : IFREMER
Position  : N 59 46.46
           : W 41 18.62
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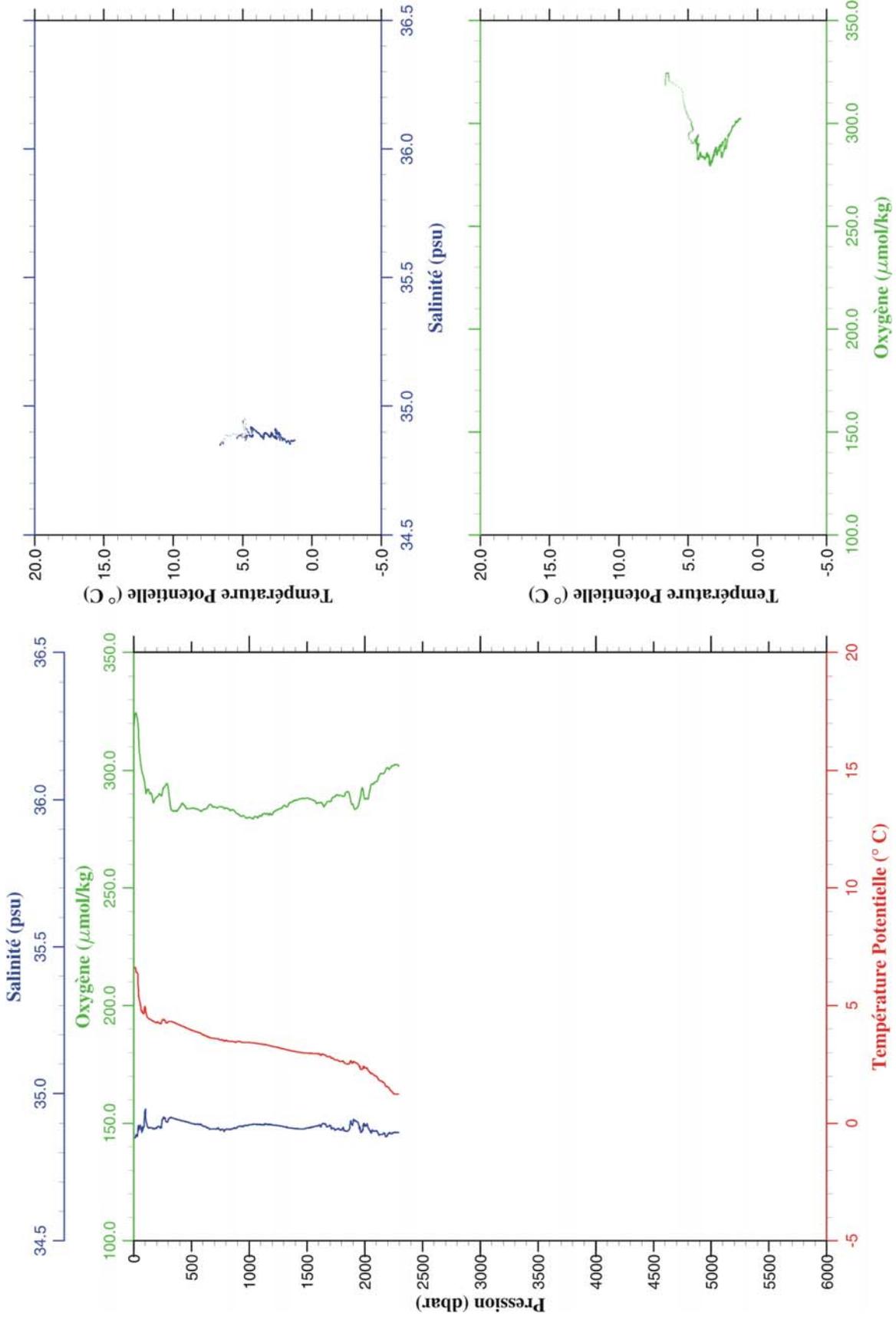
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	6.739	34.870	320.8	6.738
10.0	6.737	34.870	324.6	6.736
20.0	6.452	34.874	329.3	6.451
30.0	6.274	34.882	323.6	6.271
40.0	5.622	34.902	314.4	5.619
50.0	5.236	34.925	305.4	5.232
100.0	4.978	34.956	290.7	4.970
150.0	4.765	34.944	292.5	4.754
200.0	4.657	34.937	293.3	4.642
250.0	4.609	34.937	293.7	4.590
300.0	4.457	34.925	294.6	4.435
350.0	4.351	34.918	290.0	4.325
400.0	4.131	34.901	292.6	4.102
450.0	3.858	34.862	294.2	3.826
500.0	3.801	34.856	291.9	3.766
550.0	3.803	34.858	291.5	3.764
600.0	3.813	34.862	293.0	3.770
650.0	3.869	34.873	290.8	3.822
700.0	3.925	34.897	284.9	3.874
750.0	3.772	34.887	285.8	3.718
800.0	3.709	34.888	285.7	3.651
850.0	3.623	34.889	284.3	3.562
900.0	3.588	34.892	283.8	3.522
950.0	3.553	34.893	283.0	3.484
1000.0	3.529	34.894	282.7	3.456
1050.0	3.506	34.895	280.6	3.430
1100.0	3.428	34.894	284.0	3.348
1150.0	3.394	34.897	281.8	3.310
1200.0	3.337	34.893	283.8	3.250
1250.0	3.302	34.892	284.8	3.211
1300.0	3.226	34.888	287.0	3.131
1350.0	3.172	34.884	287.7	3.074
1400.0	3.115	34.883	288.8	3.013
1450.0	3.026	34.883	288.9	2.922
1500.0	3.024	34.886	288.4	2.915
1550.0	2.971	34.890	288.3	2.858
1600.0	2.807	34.874	290.7	2.693
1650.0	2.690	34.869	292.2	2.572
1700.0	2.555	34.865	293.3	2.436
1750.0	2.416	34.864	294.6	2.294
1800.0	2.385	34.869	294.1	2.259
1850.0	2.212	34.865	293.9	2.084
1900.0	1.996	34.864	297.2	1.867
1950.0	1.858	34.861	298.5	1.727
2000.0	1.826	34.861	298.4	1.691
2049.0	1.812	34.860	297.6	1.673



Station 11

Station	: 12	Campagne	: OVIDE 02
Date	: 19-06-02	Navire	: N/O THALASSA
Profondeur	: 2299	Organisme	: IFREMER
Position	: N 59 45.48		
	W 40 54.20		

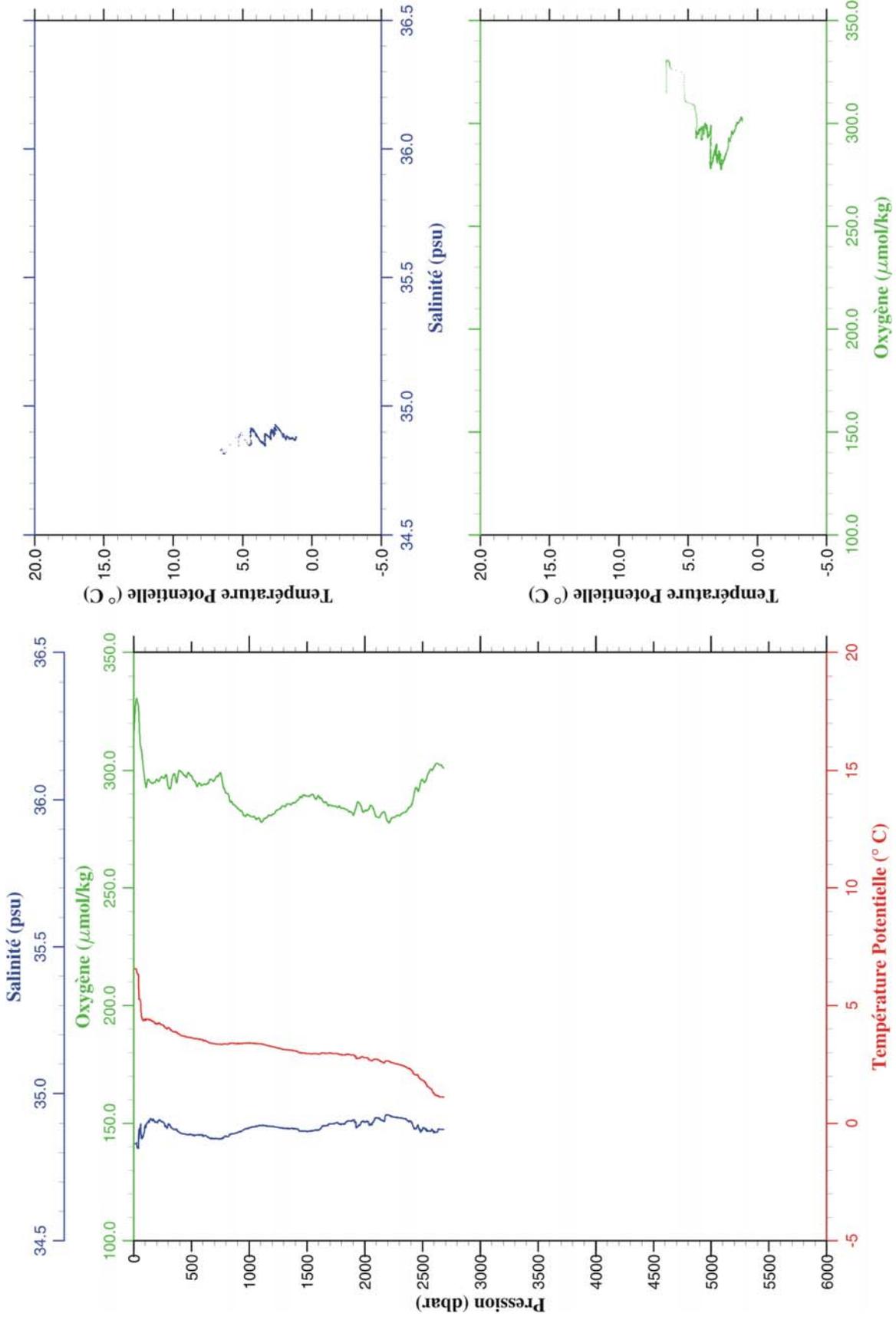
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	6.624	34.849	318.5	6.624
10.0	6.613	34.850	322.5	6.612
20.0	6.486	34.861	324.5	6.485
30.0	6.410	34.855	322.4	6.408
40.0	5.650	34.893	317.6	5.647
50.0	5.243	34.884	308.3	5.239
100.0	4.940	34.940	292.7	4.933
150.0	4.405	34.885	290.4	4.394
200.0	4.296	34.882	288.5	4.281
250.0	4.396	34.912	290.9	4.378
300.0	4.339	34.914	292.3	4.317
350.0	4.304	34.916	282.6	4.278
400.0	4.199	34.910	284.5	4.170
450.0	4.091	34.905	284.4	4.058
500.0	3.999	34.899	283.9	3.963
550.0	3.913	34.896	283.6	3.873
600.0	3.806	34.890	283.1	3.763
650.0	3.695	34.882	285.1	3.649
700.0	3.651	34.880	284.4	3.601
750.0	3.582	34.876	284.6	3.529
800.0	3.570	34.878	283.9	3.512
850.0	3.530	34.879	283.2	3.470
900.0	3.533	34.887	281.4	3.469
950.0	3.503	34.889	280.8	3.435
1000.0	3.499	34.894	280.1	3.426
1050.0	3.479	34.897	280.4	3.403
1100.0	3.448	34.896	280.5	3.368
1150.0	3.416	34.897	281.5	3.332
1200.0	3.349	34.893	281.2	3.261
1250.0	3.309	34.892	283.3	3.218
1300.0	3.251	34.888	285.1	3.156
1350.0	3.194	34.883	286.3	3.096
1400.0	3.150	34.880	287.2	3.048
1450.0	3.106	34.880	288.0	3.001
1500.0	3.084	34.883	288.3	2.974
1550.0	3.081	34.888	287.4	2.968
1600.0	3.070	34.892	286.3	2.953
1650.0	3.029	34.897	284.7	2.907
1700.0	2.966	34.893	286.6	2.841
1750.0	2.819	34.877	289.3	2.692
1800.0	2.760	34.878	289.2	2.629
1850.0	2.644	34.874	290.9	2.510
1900.0	2.731	34.904	285.4	2.592
1950.0	2.604	34.892	285.9	2.462
2000.0	2.487	34.888	287.8	2.342
2050.0	2.275	34.873	292.6	2.130
2100.0	2.151	34.874	295.2	2.003
2150.0	1.927	34.862	298.6	1.778
2200.0	1.685	34.864	301.1	1.536
2250.0	1.419	34.867	302.1	1.270
2294.0	1.390	34.868	301.8	1.238



Station 12

Station : 13 Campagne : OVIDE 02
 Date : 19-06-02 Navire : N/O THALASSA
 Profondeur : 2683 Organisme : IFREMER
 Position : N 59 43.53
 W 40 15.14

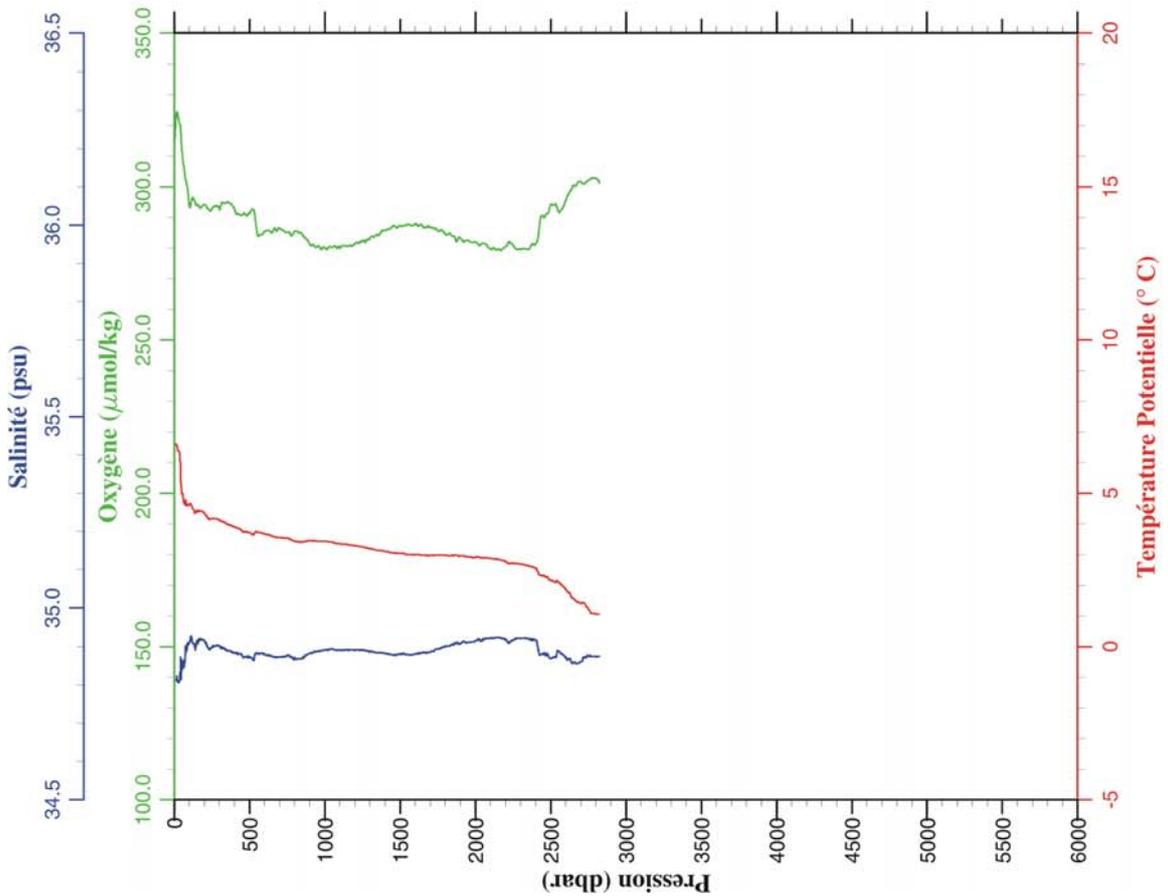
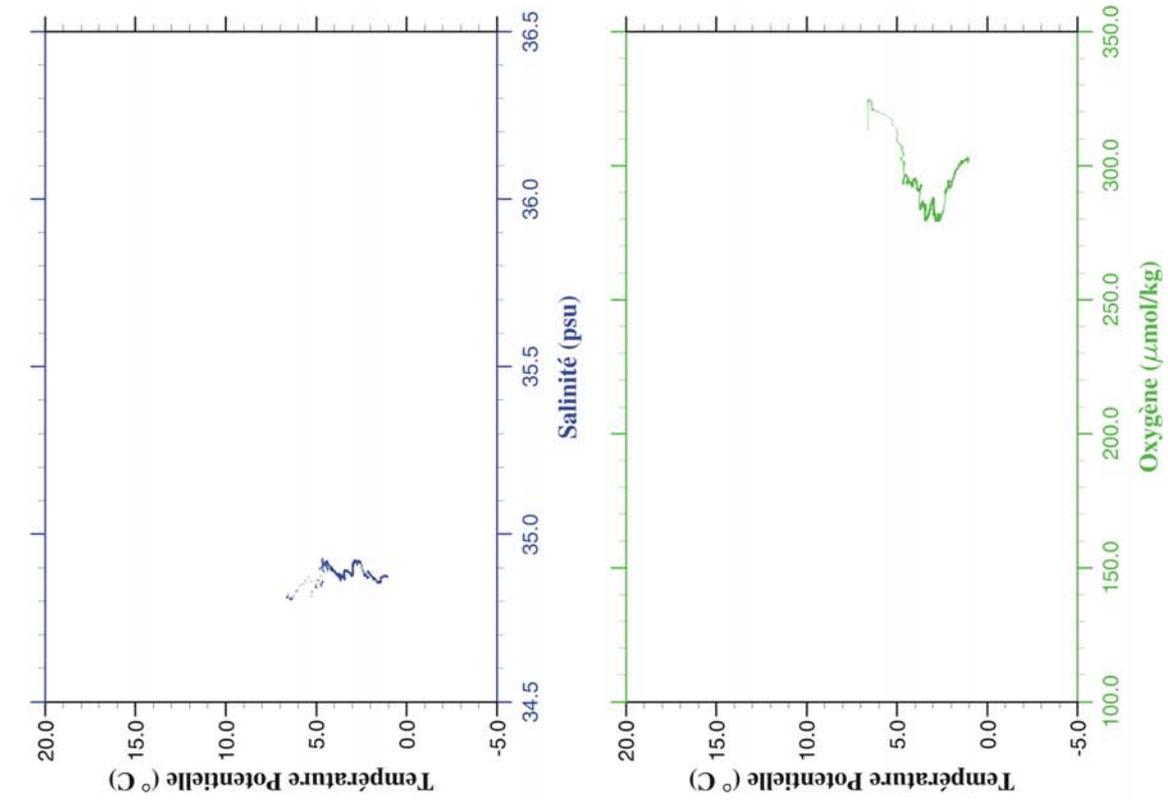
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	6.563	34.830	315.1	6.563
10.0	6.563	34.829	323.0	6.563
20.0	6.563	34.830	329.7	6.561
30.0	6.374	34.817	329.9	6.372
40.0	6.300	34.817	327.5	6.296
50.0	5.303	34.874	318.5	5.299
100.0	4.419	34.891	294.8	4.412
150.0	4.372	34.910	294.9	4.362
200.0	4.245	34.904	296.2	4.230
250.0	4.192	34.904	297.0	4.174
300.0	4.089	34.897	293.1	4.067
350.0	3.908	34.879	298.7	3.883
400.0	3.797	34.868	299.9	3.769
450.0	3.707	34.862	297.2	3.675
500.0	3.667	34.861	297.7	3.632
550.0	3.623	34.860	293.1	3.584
600.0	3.563	34.856	293.8	3.522
650.0	3.468	34.850	294.9	3.423
700.0	3.421	34.847	295.9	3.372
750.0	3.399	34.846	299.0	3.346
800.0	3.428	34.857	290.3	3.372
850.0	3.457	34.864	286.7	3.396
900.0	3.451	34.868	283.9	3.386
950.0	3.467	34.876	281.0	3.399
1000.0	3.478	34.883	280.9	3.406
1050.0	3.469	34.889	280.1	3.393
1100.0	3.448	34.891	278.3	3.368
1150.0	3.399	34.891	279.9	3.315
1200.0	3.346	34.890	281.2	3.259
1250.0	3.286	34.886	283.2	3.195
1300.0	3.230	34.882	284.7	3.135
1350.0	3.202	34.880	285.6	3.104
1400.0	3.173	34.881	286.4	3.071
1450.0	3.093	34.873	288.5	2.988
1500.0	3.069	34.871	289.1	2.959
1550.0	3.063	34.875	289.8	2.950
1600.0	3.062	34.876	289.3	2.944
1650.0	3.101	34.891	286.2	2.978
1700.0	3.107	34.898	285.2	2.980
1750.0	3.095	34.901	284.8	2.964
1800.0	3.044	34.897	283.9	2.909
1850.0	3.068	34.905	283.2	2.928
1900.0	3.048	34.910	281.1	2.904
1950.0	2.915	34.893	286.2	2.769
2000.0	2.934	34.905	282.8	2.782
2050.0	2.830	34.897	285.1	2.676
2100.0	2.877	34.919	280.3	2.717
2150.0	2.767	34.909	281.9	2.604
2200.0	2.809	34.928	278.3	2.641
2250.0	2.728	34.921	279.9	2.557
2300.0	2.668	34.919	280.7	2.493
2350.0	2.589	34.914	282.2	2.411
2400.0	2.458	34.905	284.7	2.278
2450.0	2.238	34.887	292.6	2.057
2500.0	2.018	34.878	296.1	1.836
2550.0	1.738	34.873	298.7	1.557
2600.0	1.444	34.871	301.4	1.265
2650.0	1.296	34.879	302.3	1.115
2686.0	1.293	34.879	301.0	1.108



Station 13

Station	: 14	Campagne	: OVIDE 02
Date	: 19-06-02	Navire	: N/O THALASSA
Profondeur	: 2805	Organisme	: IFREMER
Position	: N 59 41.30		
	W 39 36.51		

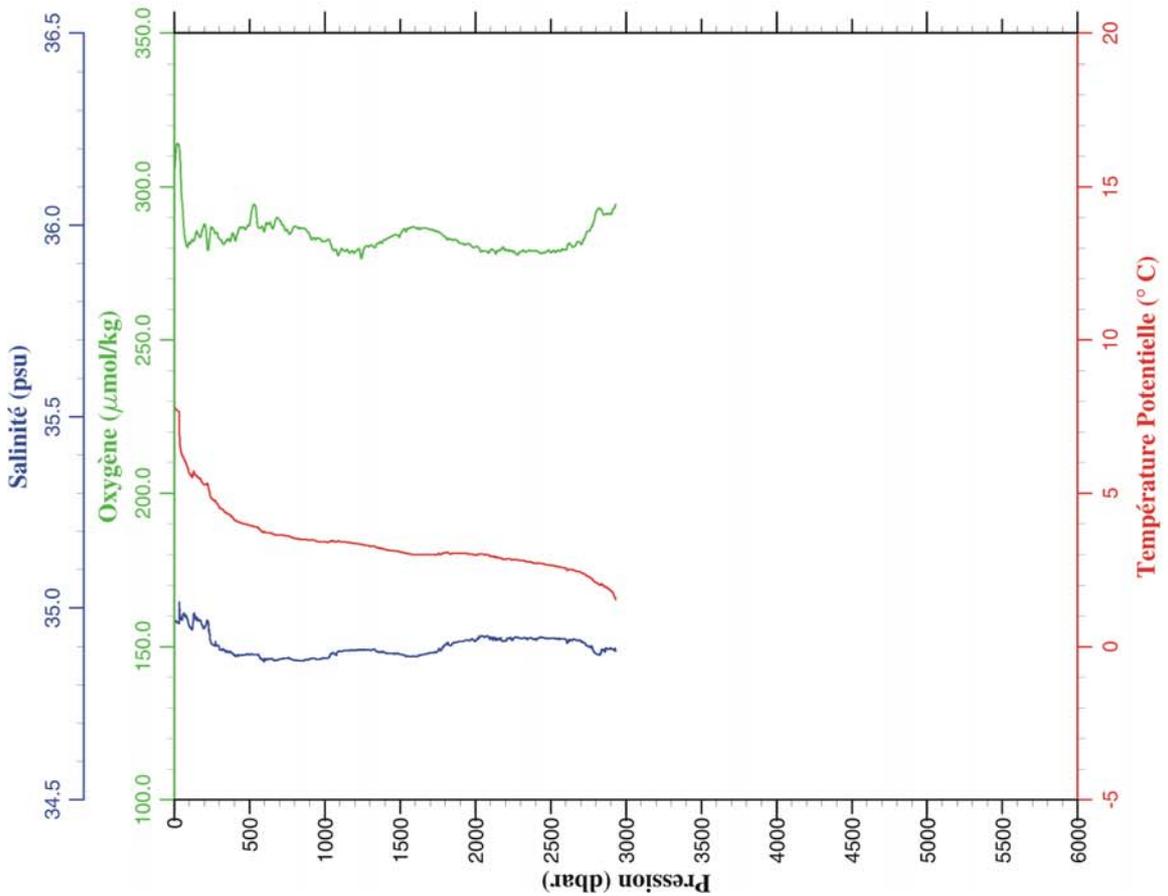
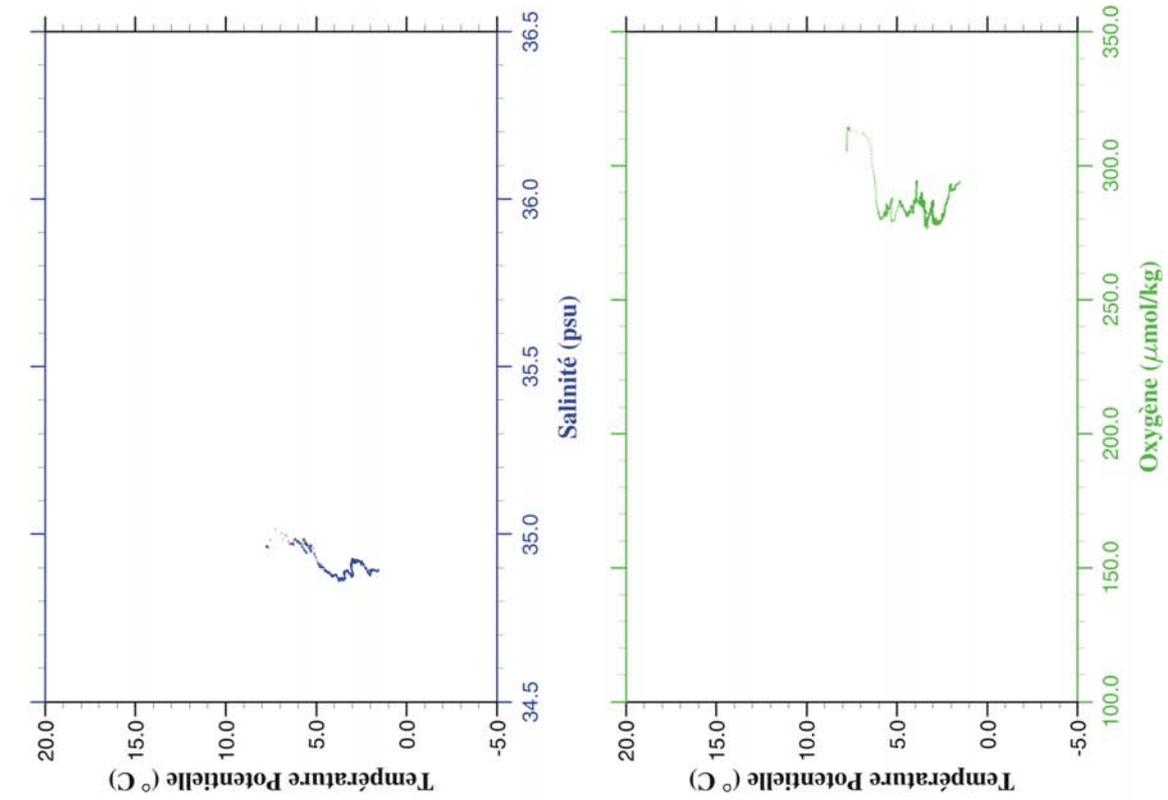
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	6.597	34.812	313.4	6.597
10.0	6.602	34.813	320.9	6.601
20.0	6.508	34.811	324.4	6.507
30.0	6.381	34.806	321.6	6.379
40.0	5.993	34.834	319.8	5.989
50.0	5.002	34.841	313.1	4.998
100.0	4.630	34.910	293.8	4.623
150.0	4.458	34.914	293.9	4.447
200.0	4.371	34.915	294.3	4.356
250.0	4.190	34.898	292.7	4.172
300.0	4.153	34.902	292.7	4.132
350.0	4.020	34.888	294.8	3.995
400.0	3.926	34.883	292.7	3.898
450.0	3.795	34.877	290.8	3.764
500.0	3.748	34.872	291.6	3.713
550.0	3.782	34.884	285.2	3.743
600.0	3.716	34.879	285.4	3.674
650.0	3.652	34.875	285.2	3.606
700.0	3.599	34.873	286.4	3.549
750.0	3.598	34.877	285.1	3.544
800.0	3.500	34.870	285.4	3.444
850.0	3.466	34.868	284.4	3.406
900.0	3.517	34.881	281.2	3.453
950.0	3.509	34.886	280.4	3.441
1000.0	3.502	34.891	280.2	3.429
1050.0	3.486	34.894	280.3	3.410
1100.0	3.430	34.890	280.0	3.350
1150.0	3.411	34.892	280.6	3.327
1200.0	3.374	34.890	281.5	3.287
1250.0	3.342	34.891	282.1	3.251
1300.0	3.290	34.885	283.3	3.195
1350.0	3.239	34.884	284.4	3.141
1400.0	3.207	34.882	286.0	3.104
1450.0	3.157	34.878	287.1	3.051
1500.0	3.155	34.880	287.3	3.045
1550.0	3.115	34.879	287.8	3.001
1600.0	3.114	34.880	287.7	2.995
1650.0	3.104	34.885	287.1	2.981
1700.0	3.099	34.887	286.6	2.972
1750.0	3.113	34.895	285.6	2.981
1800.0	3.113	34.899	284.6	2.977
1850.0	3.109	34.904	283.9	2.969
1900.0	3.102	34.909	283.2	2.957
1950.0	3.073	34.910	282.5	2.924
2000.0	3.064	34.914	282.0	2.910
2050.0	3.046	34.918	281.5	2.889
2100.0	3.035	34.922	279.8	2.873
2150.0	3.012	34.923	279.7	2.846
2200.0	2.923	34.916	280.5	2.753
2250.0	2.888	34.917	281.0	2.714
2300.0	2.870	34.921	279.6	2.691
2350.0	2.822	34.921	279.5	2.640
2400.0	2.738	34.915	281.4	2.552
2450.0	2.499	34.882	290.4	2.313
2500.0	2.345	34.868	294.1	2.158
2550.0	2.313	34.888	292.1	2.122
2600.0	2.055	34.870	295.5	1.864
2650.0	1.756	34.858	300.5	1.566
2700.0	1.600	34.859	301.6	1.408
2750.0	1.418	34.876	302.1	1.226
2800.0	1.263	34.874	302.8	1.068
2824.0	1.264	34.874	301.2	1.068



Station 14

Station	: 15	Campagne	: OVIDE 02
Date	: 19-06-02	Navire	: N/O THALASSA
Profondeur	: 2950	Organisme	: IFREMER
Position	: N 59 37.43		
	W 38 57.37		

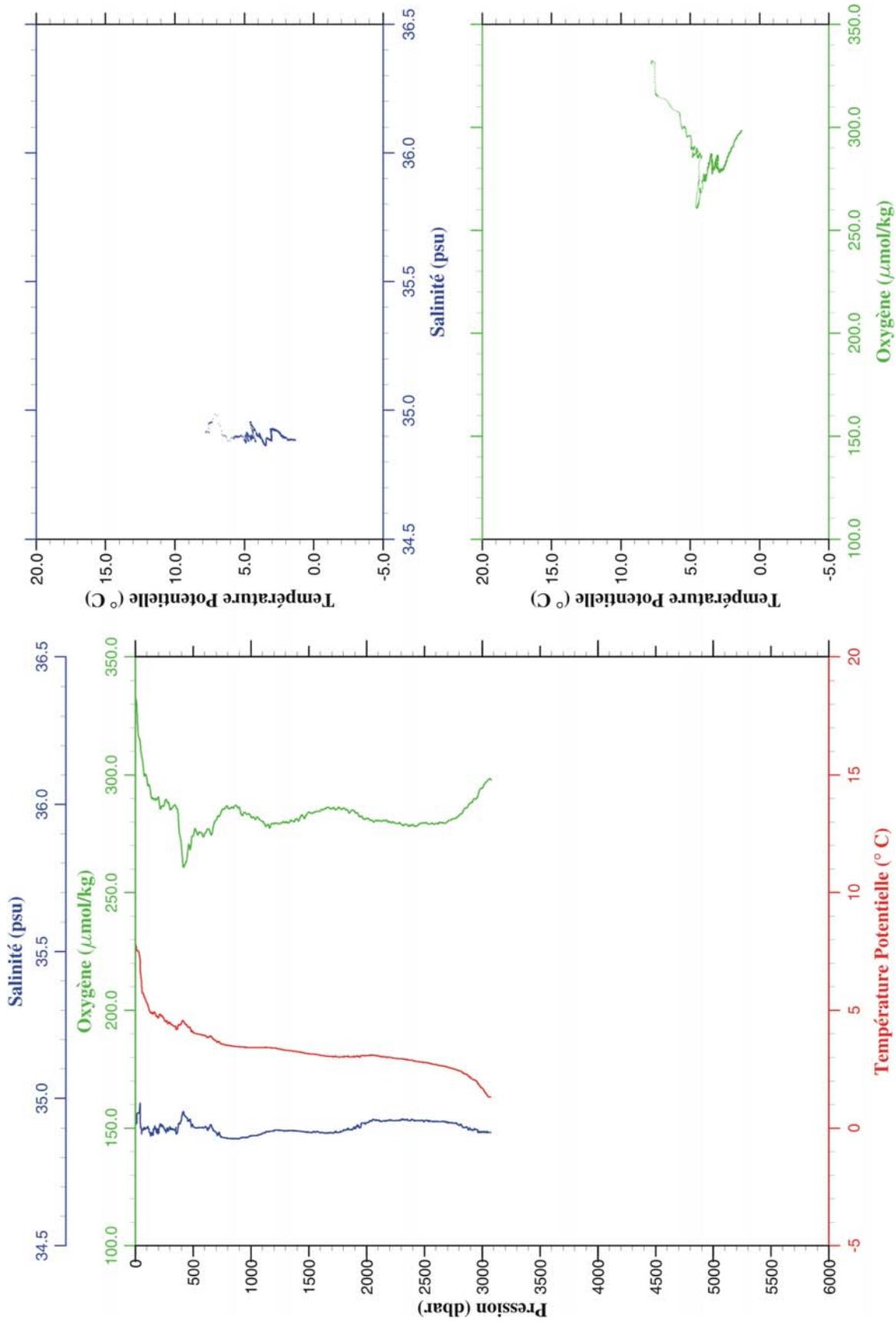
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	7.771	34.964	305.6	7.771
10.0	7.762	34.965	310.1	7.761
20.0	7.699	34.963	314.1	7.697
30.0	7.674	34.961	313.7	7.671
40.0	6.491	34.975	308.1	6.487
50.0	6.282	34.971	296.9	6.278
100.0	5.675	34.953	281.9	5.666
150.0	5.585	34.975	285.5	5.573
200.0	5.300	34.949	287.8	5.284
250.0	4.851	34.907	286.9	4.831
300.0	4.546	34.893	283.0	4.524
350.0	4.380	34.889	282.5	4.354
400.0	4.154	34.876	283.2	4.125
450.0	4.060	34.877	286.7	4.028
500.0	3.991	34.879	287.5	3.955
550.0	3.938	34.879	289.1	3.898
600.0	3.785	34.869	285.6	3.742
650.0	3.731	34.868	286.6	3.684
700.0	3.681	34.866	289.1	3.630
750.0	3.666	34.869	286.0	3.613
800.0	3.586	34.864	287.1	3.529
850.0	3.553	34.863	286.4	3.493
900.0	3.543	34.868	284.3	3.479
950.0	3.496	34.866	283.3	3.428
1000.0	3.489	34.870	282.2	3.417
1050.0	3.524	34.883	279.8	3.447
1100.0	3.506	34.887	278.7	3.425
1150.0	3.485	34.889	279.5	3.400
1200.0	3.448	34.890	278.6	3.360
1250.0	3.417	34.891	277.8	3.325
1300.0	3.363	34.889	280.7	3.267
1350.0	3.316	34.886	281.6	3.216
1400.0	3.265	34.883	282.7	3.162
1450.0	3.234	34.882	284.0	3.127
1500.0	3.197	34.880	284.1	3.086
1550.0	3.150	34.875	286.4	3.035
1600.0	3.116	34.874	286.8	2.997
1650.0	3.118	34.879	286.5	2.995
1700.0	3.123	34.883	285.9	2.995
1750.0	3.131	34.886	285.5	2.999
1800.0	3.201	34.904	283.7	3.063
1850.0	3.191	34.909	282.6	3.049
1900.0	3.190	34.914	281.5	3.044
1950.0	3.170	34.917	281.5	3.020
2000.0	3.134	34.914	280.4	2.979
2050.0	3.172	34.926	279.1	3.013
2100.0	3.130	34.924	279.3	2.966
2150.0	3.065	34.919	279.5	2.898
2200.0	3.011	34.915	279.3	2.840
2250.0	3.004	34.917	279.1	2.829
2300.0	2.987	34.922	278.8	2.806
2350.0	2.949	34.921	279.2	2.765
2400.0	2.902	34.918	279.0	2.713
2450.0	2.890	34.923	278.6	2.697
2500.0	2.848	34.921	278.6	2.651
2550.0	2.806	34.919	279.3	2.604
2600.0	2.761	34.918	279.3	2.556
2650.0	2.709	34.918	280.3	2.500
2700.0	2.631	34.915	281.3	2.419
2750.0	2.499	34.900	285.5	2.284
2800.0	2.303	34.881	291.5	2.087
2850.0	2.208	34.890	290.9	1.989
2900.0	2.040	34.896	291.0	1.820
2931.0	1.747	34.888	294.1	1.531



Station 15

Station	: 16	Campagne	: OVIDE 02
Date	: 19-06-02	Navire	: N/O THALASSA
Profondeur	: 3061	Organisme	: IFREMER
Position	: N 59 33.56		
	W 38 19.19		

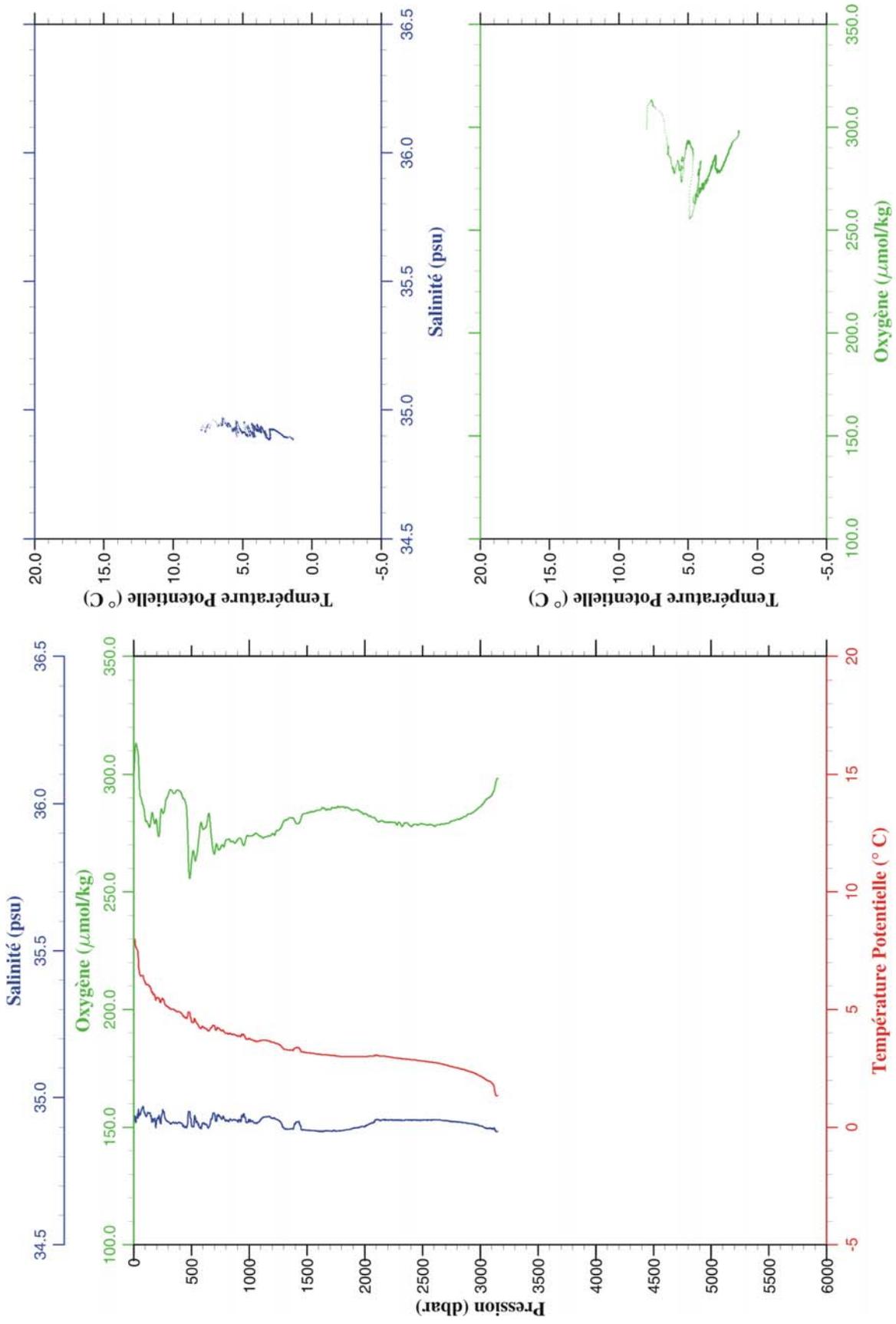
PRESSION	TEMPERA-	SALINITE	OXYGENE	TEMP.	PRESSION	TEMPERA-	SALINITE	OXYGENE	TEMP.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	7.775	34.915	330.6	7.775	3050.0	1.567	34.885	297.8	1.343
10.0	7.578	34.915	331.5	7.577	3077.0	1.541	34.884	297.9	1.315
20.0	7.530	34.951	320.9	7.528					
30.0	7.471	34.952	315.8	7.468					
40.0	7.136	34.985	314.3	7.132					
50.0	6.403	34.903	309.9	6.398					
100.0	5.320	34.900	298.5	5.312					
150.0	4.856	34.878	290.0	4.844					
200.0	4.712	34.885	290.5	4.697					
250.0	4.627	34.901	287.3	4.609					
300.0	4.506	34.905	285.5	4.484					
350.0	4.330	34.902	286.6	4.304					
400.0	4.498	34.930	269.0	4.468					
450.0	4.363	34.932	265.6	4.329					
500.0	4.108	34.906	274.0	4.071					
550.0	4.023	34.901	275.5	3.982					
600.0	3.972	34.902	274.9	3.928					
650.0	3.961	34.910	275.1	3.913					
700.0	3.741	34.883	280.8	3.691					
750.0	3.614	34.868	285.2	3.560					
800.0	3.564	34.865	286.3	3.507					
850.0	3.529	34.863	286.0	3.468					
900.0	3.517	34.864	286.2	3.452					
950.0	3.490	34.867	284.1	3.422					
1000.0	3.496	34.873	282.3	3.423					
1050.0	3.493	34.875	282.0	3.416					
1100.0	3.502	34.881	280.4	3.422					
1150.0	3.494	34.887	279.0	3.409					
1200.0	3.486	34.892	279.2	3.398					
1250.0	3.444	34.892	279.3	3.352					
1300.0	3.399	34.891	279.8	3.302					
1350.0	3.374	34.891	280.7	3.274					
1400.0	3.350	34.890	281.3	3.246					
1450.0	3.303	34.887	282.5	3.195					
1500.0	3.263	34.885	284.2	3.152					
1550.0	3.248	34.887	284.2	3.132					
1600.0	3.206	34.884	284.7	3.086					
1650.0	3.178	34.883	285.7	3.055					
1700.0	3.159	34.883	285.6	3.031					
1750.0	3.143	34.885	285.7	3.011					
1800.0	3.173	34.893	285.9	3.036					
1850.0	3.163	34.894	283.8	3.022					
1900.0	3.159	34.898	284.3	3.013					
1950.0	3.190	34.904	282.5	3.039					
2000.0	3.231	34.918	281.6	3.075					
2050.0	3.254	34.927	280.7	3.094					
2100.0	3.228	34.926	280.5	3.063					
2150.0	3.194	34.925	280.8	3.025					
2200.0	3.179	34.927	280.1	3.005					
2250.0	3.140	34.926	279.4	2.961					
2300.0	3.126	34.929	279.0	2.943					
2350.0	3.100	34.929	278.9	2.913					
2400.0	3.063	34.928	278.9	2.872					
2450.0	3.013	34.925	279.0	2.818					
2500.0	2.979	34.923	279.5	2.780					
2550.0	2.943	34.924	279.2	2.739					
2600.0	2.900	34.923	279.4	2.692					
2650.0	2.857	34.922	279.5	2.645					
2700.0	2.806	34.920	280.1	2.590					
2750.0	2.731	34.917	281.4	2.512					
2800.0	2.652	34.910	282.7	2.429					
2850.0	2.523	34.900	285.7	2.298					
2900.0	2.354	34.894	288.1	2.128					
2950.0	2.227	34.894	290.1	1.998					
3000.0	1.913	34.886	294.4	1.686					



Station 16

Station	: 17	Campagne	: OVIDE 02
Date	: 20-06-02	Navire	: N/O THALASSA
Profondeur	: 3131	Organisme	: IFREMER
Position	: N 59 29.72		
	W 37 41.46		

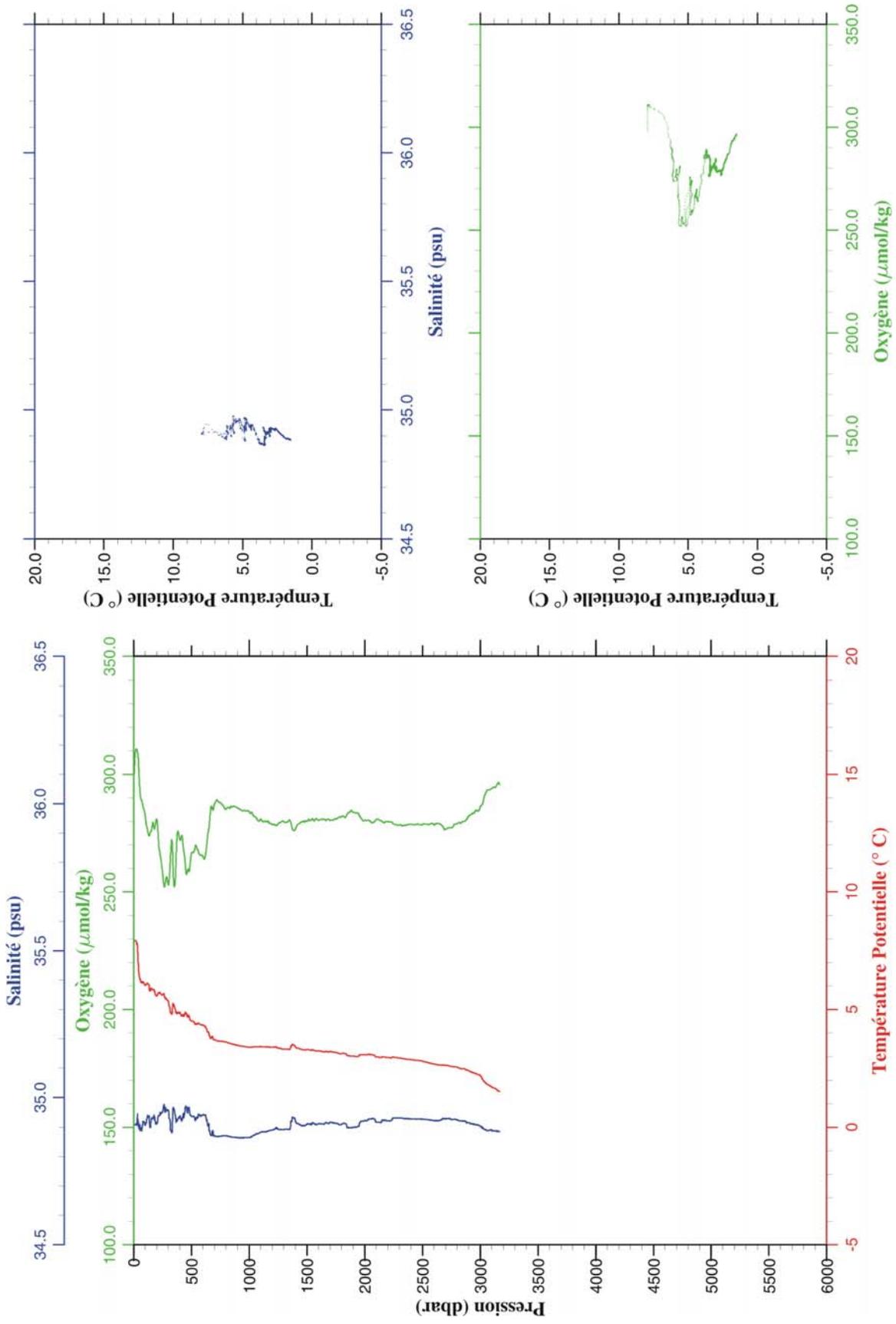
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	7.971	34.923	299.6	7.971	3050.0	2.256	34.896	289.2	2.016
10.0	7.965	34.923	307.6	7.964	3100.0	2.111	34.895	291.1	1.870
20.0	7.654	34.916	313.2	7.652	3150.0	1.578	34.885	298.2	1.344
30.0	7.554	34.935	311.1	7.551	3154.0	1.579	34.884	298.3	1.344
40.0	7.105	34.961	307.9	7.101					
50.0	6.583	34.949	295.8	6.578					
100.0	6.144	34.942	280.9	6.135					
150.0	5.896	34.936	280.7	5.883					
200.0	5.536	34.925	279.7	5.519					
250.0	5.511	34.955	283.8	5.491					
300.0	5.131	34.919	291.3	5.107					
350.0	5.016	34.914	291.8	4.988					
400.0	4.924	34.916	292.7	4.892					
450.0	4.676	34.902	287.7	4.641					
500.0	4.547	34.911	262.1	4.509					
550.0	4.457	34.919	266.4	4.415					
600.0	4.316	34.913	276.6	4.270					
650.0	4.146	34.899	283.4	4.098					
700.0	4.350	34.945	266.2	4.296					
750.0	4.202	34.936	268.5	4.145					
800.0	4.059	34.923	272.1	3.999					
850.0	4.004	34.922	271.4	3.940					
900.0	3.918	34.919	272.2	3.850					
950.0	4.020	34.943	269.9	3.948					
1000.0	3.818	34.918	273.7	3.743					
1050.0	3.739	34.914	274.8	3.661					
1100.0	3.765	34.925	273.6	3.682					
1150.0	3.774	34.935	273.4	3.687					
1200.0	3.695	34.930	274.7	3.604					
1250.0	3.625	34.924	276.1	3.531					
1300.0	3.425	34.897	280.0	3.329					
1350.0	3.367	34.893	281.5	3.267					
1400.0	3.465	34.912	279.6	3.360					
1450.0	3.313	34.891	281.4	3.205					
1500.0	3.279	34.890	283.6	3.167					
1550.0	3.252	34.888	284.0	3.136					
1600.0	3.221	34.886	284.8	3.101					
1650.0	3.198	34.886	285.6	3.074					
1700.0	3.178	34.887	284.9	3.050					
1750.0	3.161	34.887	285.8	3.029					
1800.0	3.144	34.888	286.1	3.007					
1850.0	3.143	34.891	285.8	3.002					
1900.0	3.148	34.896	284.7	3.002					
1950.0	3.152	34.899	284.5	3.002					
2000.0	3.148	34.902	283.3	2.993					
2050.0	3.177	34.912	282.3	3.017					
2100.0	3.220	34.926	280.7	3.055					
2150.0	3.192	34.924	280.2	3.023					
2200.0	3.167	34.925	279.7	2.993					
2250.0	3.137	34.925	279.6	2.959					
2300.0	3.104	34.923	279.6	2.922					
2350.0	3.088	34.925	279.4	2.901					
2400.0	3.062	34.924	277.9	2.870					
2450.0	3.035	34.924	278.6	2.839					
2500.0	3.012	34.924	278.9	2.812					
2550.0	2.981	34.924	278.4	2.777					
2600.0	2.954	34.925	278.0	2.746					
2650.0	2.917	34.924	278.5	2.704					
2700.0	2.865	34.922	279.0	2.647					
2750.0	2.798	34.918	279.9	2.577					
2800.0	2.742	34.917	280.9	2.518					
2850.0	2.681	34.916	281.6	2.452					
2900.0	2.617	34.913	283.1	2.385					
2950.0	2.528	34.909	284.3	2.292					
3000.0	2.406	34.904	286.2	2.168					



Station 17

Station	: 18	Campagne	: OVIDE 02
Date	: 20-06-02	Navire	: N/O THALASSA
Profondeur	: 3136	Organisme	: IFREMER
Position	: N 59 25.65		
	W 37 2.22		

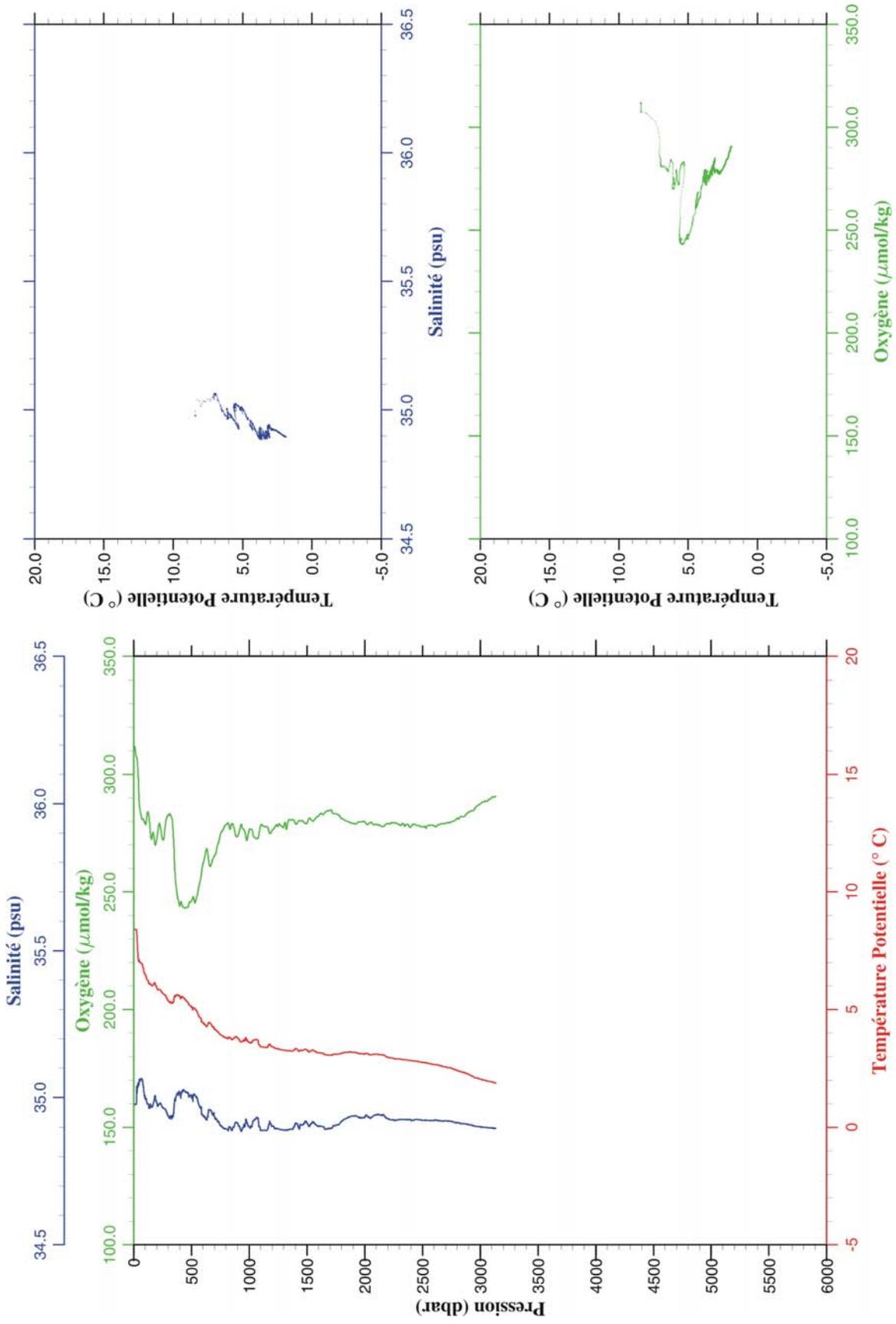
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	7.920	34.908	298.0	7.920	3050.0	2.098	34.890	292.4	1.862
10.0	7.924	34.909	306.0	7.923	3100.0	1.927	34.888	294.0	1.690
20.0	7.921	34.909	310.7	7.919	3150.0	1.804	34.888	296.1	1.564
30.0	7.830	34.926	310.1	7.827	3167.0	1.764	34.885	295.6	1.524
40.0	6.909	34.917	306.4	6.906					
50.0	6.448	34.895	296.9	6.444					
100.0	6.034	34.905	282.3	6.026					
150.0	5.917	34.921	275.8	5.904					
200.0	5.595	34.911	280.9	5.578					
250.0	5.649	34.949	258.3	5.629					
300.0	5.378	34.957	253.0	5.353					
350.0	5.223	34.961	252.3	5.195					
400.0	4.912	34.936	272.1	4.880					
450.0	4.902	34.970	259.8	4.866					
500.0	4.549	34.937	266.1	4.510					
550.0	4.423	34.933	268.3	4.381					
600.0	4.382	34.941	265.0	4.337					
650.0	4.066	34.912	276.9	4.017					
700.0	3.769	34.870	287.4	3.718					
750.0	3.711	34.869	287.9	3.657					
800.0	3.666	34.870	285.2	3.608					
850.0	3.595	34.866	286.4	3.534					
900.0	3.538	34.864	285.5	3.473					
950.0	3.496	34.864	284.5	3.428					
1000.0	3.472	34.864	284.2	3.400					
1050.0	3.485	34.874	282.1	3.409					
1100.0	3.505	34.882	281.0	3.425					
1150.0	3.489	34.884	279.8	3.405					
1200.0	3.489	34.890	278.6	3.400					
1250.0	3.457	34.893	278.9	3.365					
1300.0	3.417	34.892	279.8	3.321					
1350.0	3.397	34.892	280.6	3.296					
1400.0	3.517	34.920	276.6	3.411					
1450.0	3.414	34.906	279.7	3.305					
1500.0	3.407	34.909	280.0	3.294					
1550.0	3.407	34.916	281.1	3.289					
1600.0	3.365	34.912	280.4	3.244					
1650.0	3.325	34.910	281.0	3.200					
1700.0	3.341	34.916	280.3	3.211					
1750.0	3.305	34.914	281.0	3.171					
1800.0	3.266	34.909	282.1	3.128					
1850.0	3.178	34.898	283.2	3.036					
1900.0	3.163	34.899	283.9	3.017					
1950.0	3.179	34.902	282.8	3.028					
2000.0	3.240	34.921	280.6	3.084					
2050.0	3.249	34.928	279.9	3.088					
2100.0	3.151	34.917	280.8	2.987					
2150.0	3.159	34.924	280.0	2.991					
2200.0	3.126	34.921	279.9	2.953					
2250.0	3.152	34.931	278.8	2.974					
2300.0	3.121	34.931	278.5	2.939					
2350.0	3.081	34.928	278.3	2.895					
2400.0	3.057	34.928	278.8	2.866					
2450.0	3.037	34.927	278.9	2.841					
2500.0	3.004	34.928	278.5	2.805					
2550.0	2.940	34.925	278.6	2.736					
2600.0	2.883	34.922	278.5	2.675					
2650.0	2.847	34.923	278.9	2.636					
2700.0	2.842	34.929	276.8	2.625					
2750.0	2.800	34.926	277.1	2.579					
2800.0	2.771	34.926	279.0	2.546					
2850.0	2.715	34.920	280.0	2.486					
2900.0	2.635	34.915	282.2	2.402					
2950.0	2.531	34.909	283.6	2.295					
3000.0	2.421	34.903	286.1	2.183					



Station 18

Station	: 19	Campagne	: OVIDE 02
Date	: 20-06-02	Navire	: N/O THALASSA
Profondeur	: 3113	Organisme	: IFREMER
Position	: N 59 22.01		
	W 36 23.79		

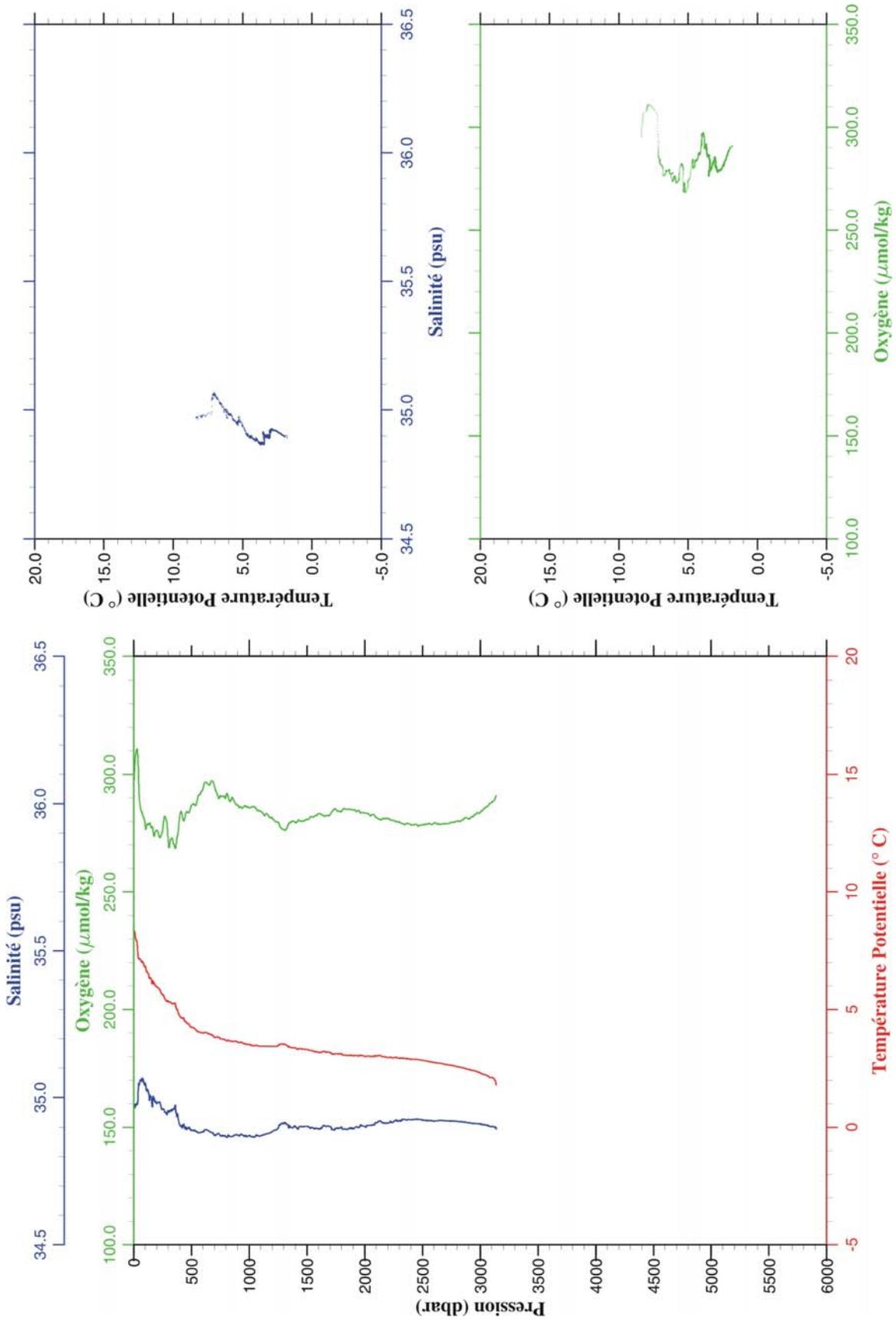
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	8.410	34.978	311.4	8.410	3050.0	2.221	34.899	288.6	1.982
10.0	8.404	34.977	311.8	8.403	3100.0	2.170	34.897	290.1	1.927
20.0	8.404	34.977	308.2	8.402	3135.0	2.107	34.895	290.6	1.862
30.0	7.987	35.017	306.4	7.984					
40.0	7.147	35.052	298.0	7.143					
50.0	7.088	35.063	287.2	7.083					
100.0	6.485	34.995	279.0	6.476					
150.0	6.060	34.968	272.9	6.047					
200.0	5.960	34.984	272.4	5.943					
250.0	5.715	34.967	272.3	5.694					
300.0	5.401	34.940	282.4	5.376					
350.0	5.519	34.973	267.2	5.490					
400.0	5.588	35.017	244.1	5.555					
450.0	5.438	35.018	243.1	5.400					
500.0	5.130	35.006	246.1	5.089					
550.0	4.956	34.999	248.3	4.912					
600.0	4.494	34.941	262.0	4.448					
650.0	4.497	34.960	263.1	4.446					
700.0	4.248	34.932	265.5	4.195					
750.0	3.985	34.906	274.2	3.929					
800.0	3.858	34.894	278.6	3.799					
850.0	3.793	34.891	279.1	3.731					
900.0	3.868	34.915	273.7	3.801					
950.0	3.760	34.898	276.7	3.689					
1000.0	3.685	34.902	276.2	3.611					
1050.0	3.793	34.928	273.0	3.714					
1100.0	3.501	34.890	278.1	3.421					
1150.0	3.470	34.889	277.8	3.386					
1200.0	3.501	34.902	276.3	3.412					
1250.0	3.422	34.894	277.9	3.330					
1300.0	3.366	34.890	277.8	3.271					
1350.0	3.352	34.894	280.7	3.252					
1400.0	3.444	34.913	279.1	3.339					
1450.0	3.376	34.908	280.1	3.267					
1500.0	3.398	34.915	279.2	3.285					
1550.0	3.391	34.917	280.1	3.274					
1600.0	3.280	34.903	282.3	3.160					
1650.0	3.211	34.897	283.5	3.087					
1700.0	3.192	34.896	284.8	3.064					
1750.0	3.235	34.906	283.1	3.102					
1800.0	3.283	34.919	281.1	3.144					
1850.0	3.323	34.931	280.0	3.180					
1900.0	3.331	34.938	279.2	3.183					
1950.0	3.278	34.932	279.8	3.126					
2000.0	3.266	34.935	279.8	3.110					
2050.0	3.234	34.930	279.5	3.073					
2100.0	3.266	34.942	278.7	3.100					
2150.0	3.242	34.939	277.8	3.072					
2200.0	3.145	34.929	279.1	2.972					
2250.0	3.096	34.924	279.2	2.918					
2300.0	3.077	34.926	278.6	2.895					
2350.0	3.048	34.926	278.0	2.861					
2400.0	3.022	34.926	277.6	2.832					
2450.0	2.993	34.926	278.3	2.799					
2500.0	2.953	34.923	277.7	2.754					
2550.0	2.918	34.923	278.1	2.714					
2600.0	2.878	34.923	278.1	2.670					
2650.0	2.829	34.921	278.6	2.617					
2700.0	2.774	34.921	279.2	2.559					
2750.0	2.728	34.920	279.8	2.509					
2800.0	2.632	34.916	281.3	2.410					
2850.0	2.562	34.911	281.9	2.336					
2900.0	2.474	34.909	283.9	2.245					
2950.0	2.342	34.904	285.3	2.111					
3000.0	2.277	34.902	287.5	2.042					



Station 19

Station	: 20	Campagne	: OVIDE 02
Date	: 20-06-02	Navire	: N/O THALASSA
Profondeur	: 3120	Organisme	: IFREMER
Position	: N 59 17.97		
	W 35 45.44		

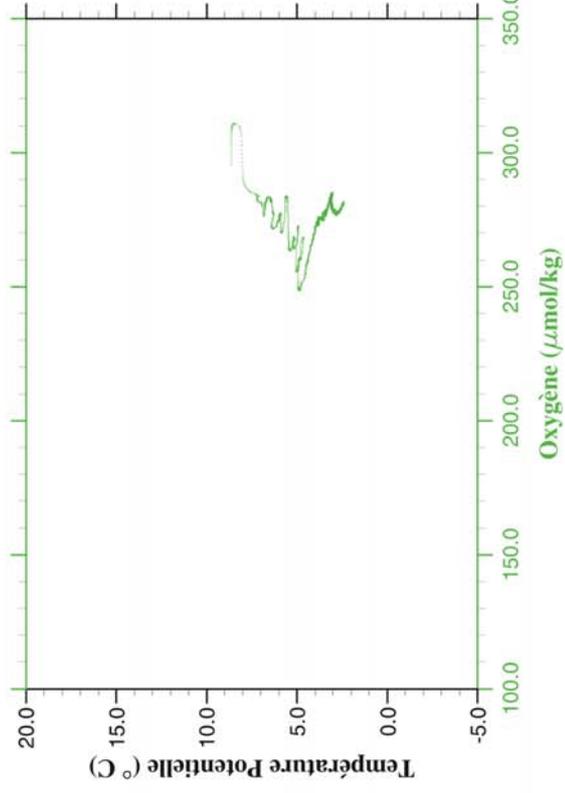
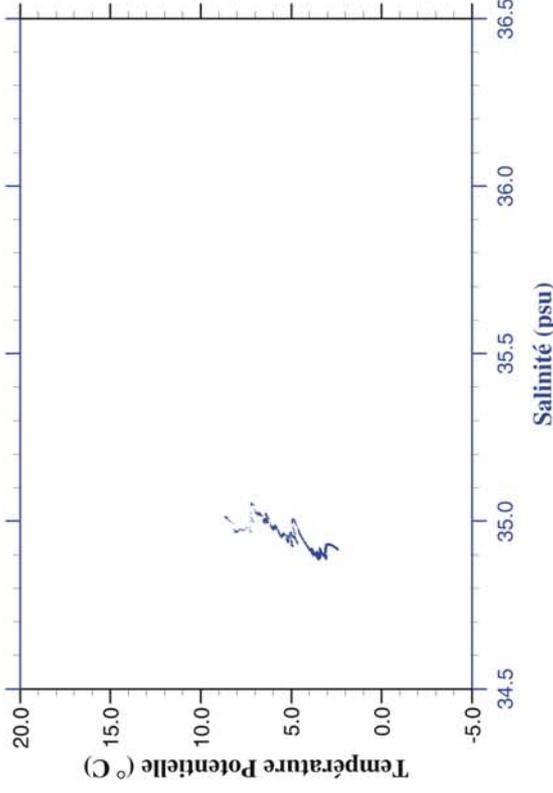
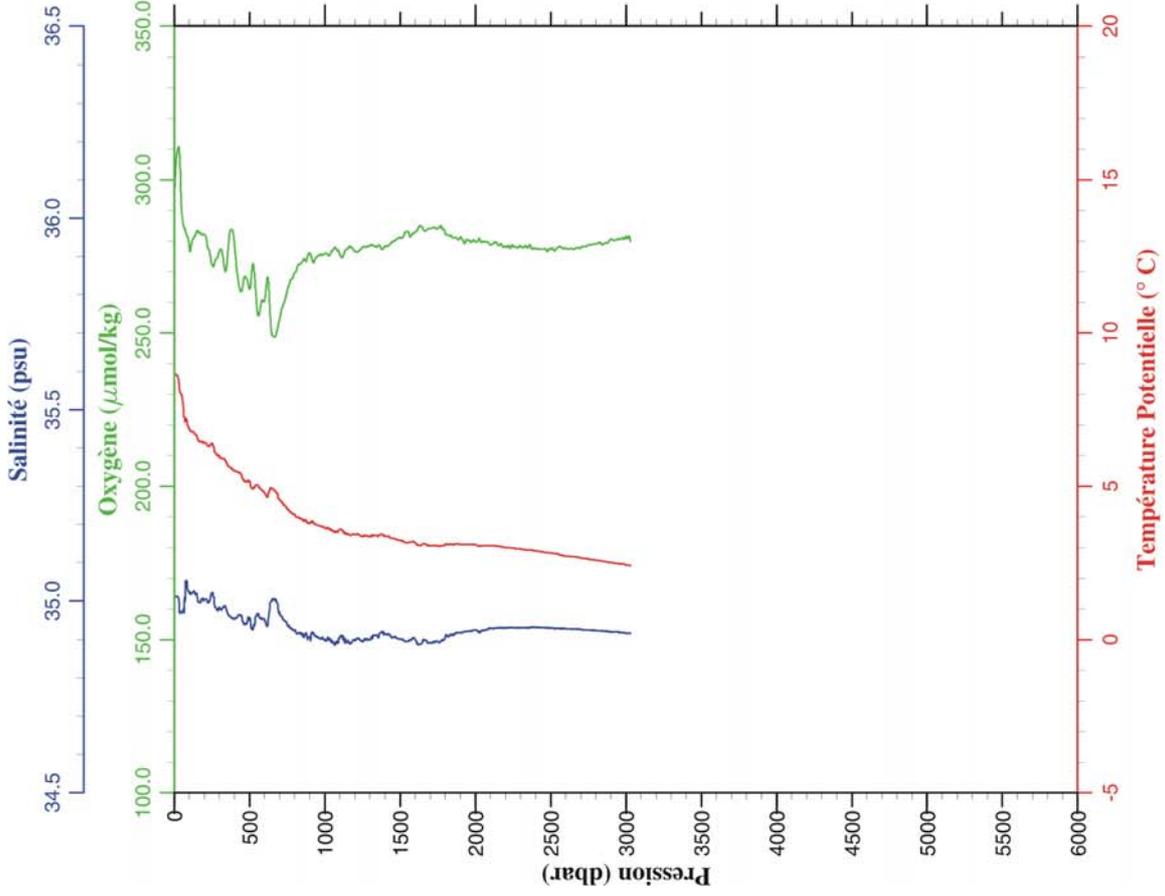
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	8.361	34.971	295.2	8.361	3050.0	2.453	34.907	286.0	2.209
10.0	8.292	34.973	303.5	8.291	3100.0	2.353	34.902	288.1	2.107
20.0	7.968	34.975	309.2	7.966	3139.0	2.029	34.893	290.9	1.786
30.0	7.807	34.981	310.8	7.804					
40.0	7.227	35.037	302.8	7.223					
50.0	7.148	35.044	289.8	7.144					
100.0	6.813	35.042	278.2	6.804					
150.0	6.345	35.003	277.5	6.332					
200.0	5.976	34.982	276.2	5.958					
250.0	5.665	34.961	276.0	5.644					
300.0	5.379	34.954	271.2	5.354					
350.0	5.272	34.960	270.0	5.243					
400.0	4.736	34.909	282.6	4.705					
450.0	4.533	34.899	283.3	4.498					
500.0	4.289	34.890	286.7	4.251					
550.0	4.118	34.882	288.8	4.077					
600.0	4.056	34.885	293.8	4.012					
650.0	4.020	34.886	295.6	3.972					
700.0	3.863	34.872	294.8	3.812					
750.0	3.818	34.871	291.0	3.763					
800.0	3.742	34.868	290.7	3.683					
850.0	3.706	34.868	290.1	3.644					
900.0	3.677	34.872	287.0	3.612					
950.0	3.629	34.872	286.0	3.560					
1000.0	3.589	34.871	285.8	3.515					
1050.0	3.535	34.867	286.0	3.458					
1100.0	3.510	34.870	284.3	3.430					
1150.0	3.511	34.876	283.3	3.426					
1200.0	3.526	34.885	281.4	3.437					
1250.0	3.549	34.896	279.7	3.456					
1300.0	3.630	34.914	276.5	3.532					
1350.0	3.523	34.904	279.4	3.421					
1400.0	3.471	34.902	279.4	3.366					
1450.0	3.438	34.902	279.9	3.329					
1500.0	3.412	34.902	280.8	3.298					
1550.0	3.363	34.898	281.7	3.246					
1600.0	3.303	34.893	283.2	3.182					
1650.0	3.338	34.905	282.2	3.213					
1700.0	3.296	34.902	282.7	3.167					
1750.0	3.258	34.896	285.1	3.124					
1800.0	3.254	34.900	284.3	3.116					
1850.0	3.188	34.892	285.1	3.046					
1900.0	3.177	34.895	284.8	3.031					
1950.0	3.178	34.899	284.6	3.028					
2000.0	3.168	34.902	283.5	3.013					
2050.0	3.175	34.906	282.3	3.015					
2100.0	3.191	34.914	281.6	3.026					
2150.0	3.169	34.916	280.9	3.000					
2200.0	3.139	34.914	281.2	2.965					
2250.0	3.128	34.917	280.3	2.950					
2300.0	3.109	34.920	279.8	2.927					
2350.0	3.112	34.927	278.8	2.924					
2400.0	3.082	34.925	278.6	2.891					
2450.0	3.076	34.927	278.6	2.880					
2500.0	3.037	34.923	278.7	2.837					
2550.0	3.000	34.922	279.0	2.795					
2600.0	2.957	34.920	279.3	2.748					
2650.0	2.932	34.922	278.8	2.718					
2700.0	2.885	34.922	279.1	2.668					
2750.0	2.851	34.920	279.6	2.629					
2800.0	2.800	34.920	280.1	2.574					
2850.0	2.750	34.918	280.6	2.520					
2900.0	2.687	34.914	281.1	2.453					
2950.0	2.631	34.913	282.8	2.393					
3000.0	2.549	34.911	283.7	2.309					



Station 20

Station	: 21	Campagne	: OVIDE 02
Date	: 20-06-02	Navire	: N/O THALASSA
Profondeur	: 3006	Organisme	: IFREMER
Position	: N 59 13.95		
	W 35 7.09		

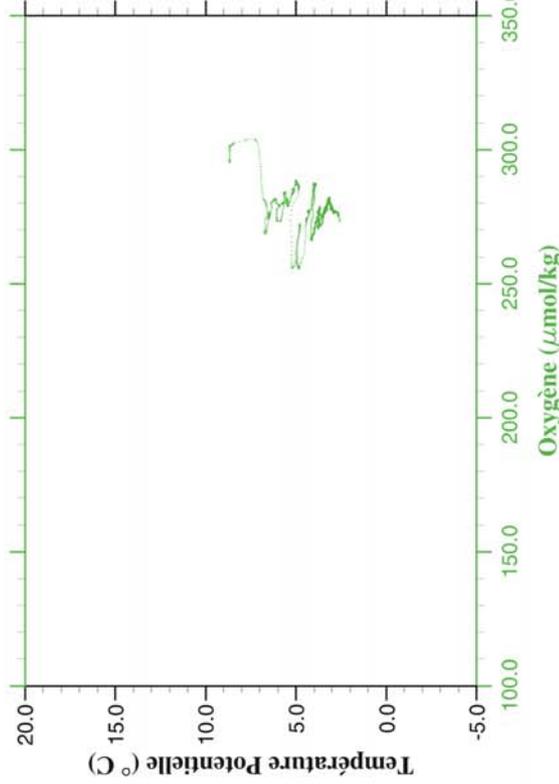
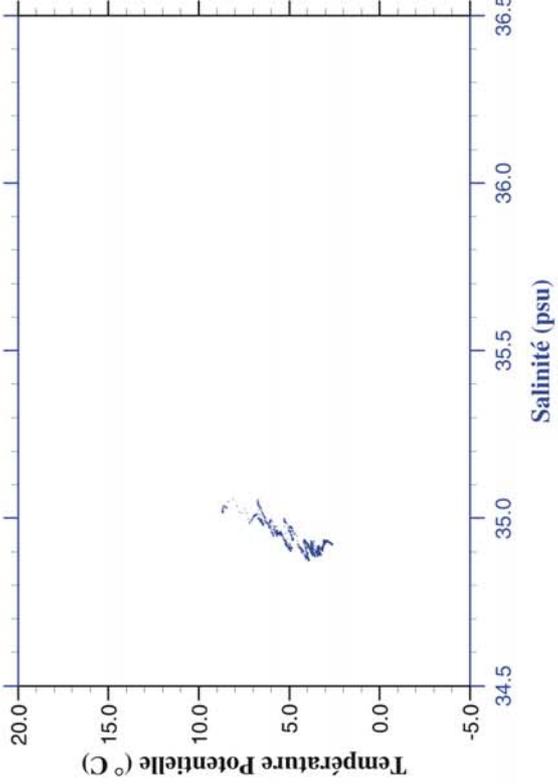
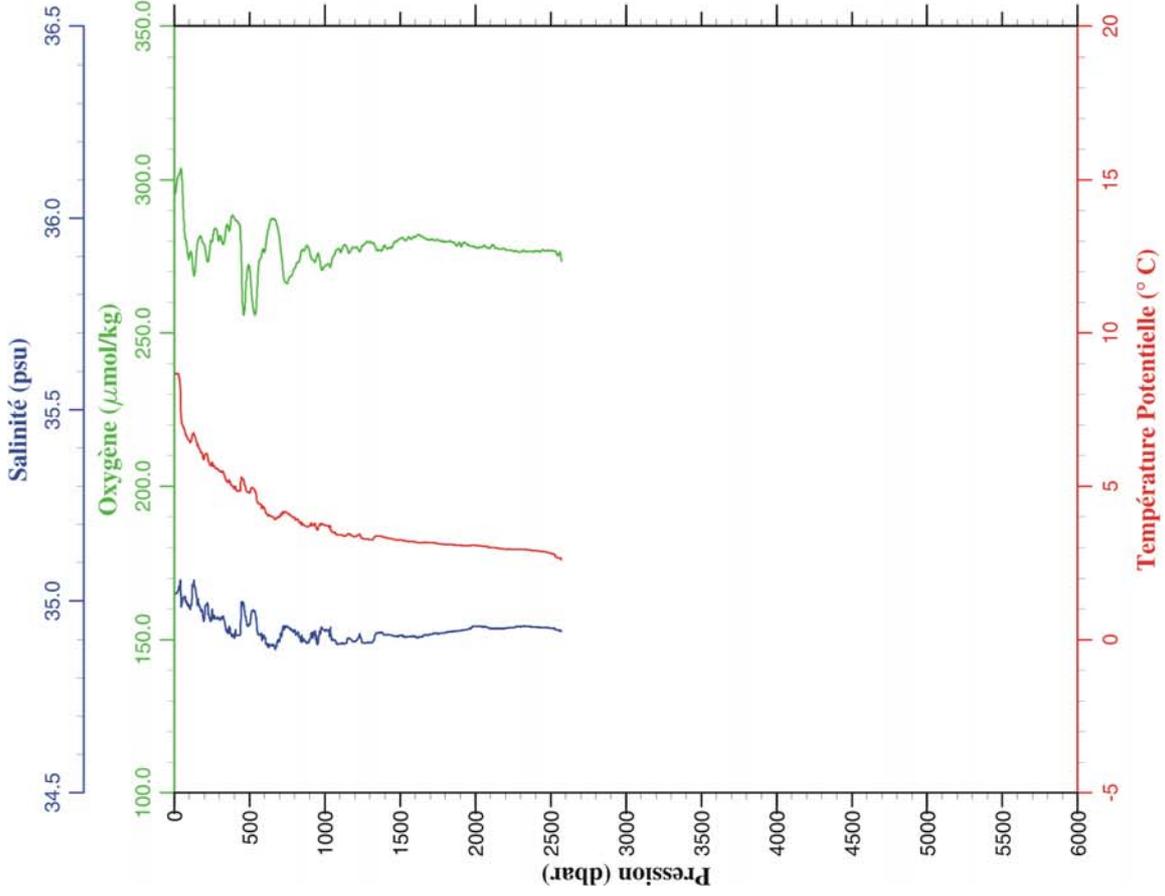
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	8.631	35.012	295.2	8.631	3029.0	2.660	34.916	280.0	2.414
10.0	8.634	35.012	303.5	8.620					
20.0	8.622	35.012	309.2	8.620					
30.0	8.431	35.002	310.8	8.428					
40.0	8.061	34.969	302.8	8.057					
50.0	7.978	34.970	289.8	7.973					
100.0	6.883	35.024	278.2	6.873					
150.0	6.653	35.020	283.3	6.639					
200.0	6.446	35.005	282.1	6.428					
250.0	6.415	35.020	272.5	6.392					
300.0	6.015	34.984	276.6	5.989					
350.0	5.766	34.973	272.7	5.737					
400.0	5.553	34.955	278.9	5.520					
450.0	5.343	34.959	263.9	5.305					
500.0	5.191	34.950	264.3	5.150					
550.0	5.089	34.966	258.0	5.044					
600.0	4.829	34.950	260.5	4.781					
650.0	4.973	35.003	249.4	4.920					
700.0	4.594	34.968	254.6	4.539					
750.0	4.320	34.938	263.6	4.263					
800.0	4.123	34.923	269.6	4.062					
850.0	3.993	34.916	273.2	3.929					
900.0	3.869	34.906	276.0	3.802					
950.0	3.810	34.907	275.0	3.740					
1000.0	3.711	34.898	275.9	3.637					
1050.0	3.644	34.897	276.9	3.566					
1100.0	3.668	34.905	275.8	3.586					
1150.0	3.533	34.892	277.4	3.448					
1200.0	3.513	34.896	276.6	3.424					
1250.0	3.457	34.896	277.9	3.364					
1300.0	3.454	34.899	278.5	3.358					
1350.0	3.477	34.909	278.2	3.376					
1400.0	3.487	34.914	278.4	3.381					
1450.0	3.401	34.905	279.8	3.293					
1500.0	3.346	34.901	281.2	3.234					
1550.0	3.275	34.895	283.2	3.159					
1600.0	3.274	34.900	282.9	3.154					
1650.0	3.234	34.893	284.2	3.110					
1700.0	3.192	34.891	284.1	3.064					
1750.0	3.185	34.895	284.2	3.052					
1800.0	3.246	34.903	282.6	3.108					
1850.0	3.237	34.913	281.0	3.095					
1900.0	3.247	34.918	281.2	3.100					
1950.0	3.252	34.921	280.2	3.101					
2000.0	3.245	34.924	279.9	3.089					
2050.0	3.214	34.924	279.9	3.054					
2100.0	3.220	34.929	278.9	3.054					
2150.0	3.210	34.930	278.8	3.040					
2200.0	3.178	34.930	278.3	3.004					
2250.0	3.154	34.930	278.3	2.975					
2300.0	3.134	34.930	278.5	2.951					
2350.0	3.111	34.929	277.9	2.923					
2400.0	3.082	34.932	277.6	2.891					
2450.0	3.048	34.931	277.4	2.852					
2500.0	3.023	34.930	277.4	2.822					
2550.0	2.988	34.930	278.1	2.783					
2600.0	2.930	34.928	277.7	2.722					
2650.0	2.912	34.927	277.3	2.699					
2700.0	2.882	34.927	277.9	2.665					
2750.0	2.843	34.925	278.7	2.622					
2800.0	2.819	34.923	279.2	2.592					
2850.0	2.784	34.922	279.0	2.553					
2900.0	2.735	34.920	280.6	2.501					
2950.0	2.720	34.919	280.8	2.481					
3000.0	2.678	34.917	281.5	2.435					



Station 21

Station : 22 Campagne : OVIDE 02
 Date : 21-06-02 Navire : N/O THALASSA
 Profondeur : 2512 Organisme : IFREMER
 Position : N 59 10.02
 W 34 28.63

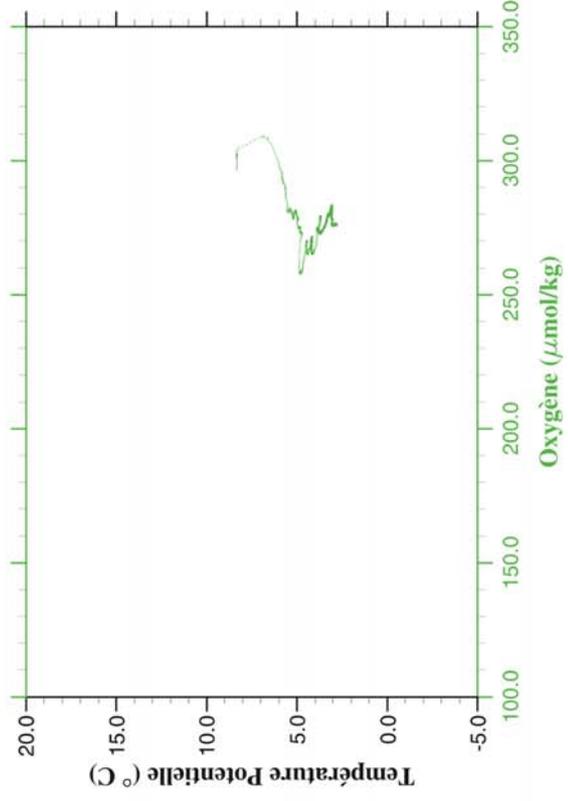
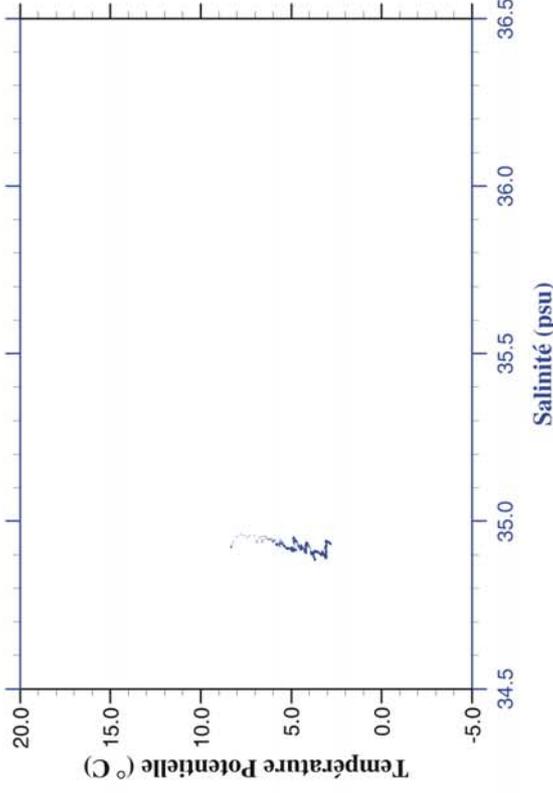
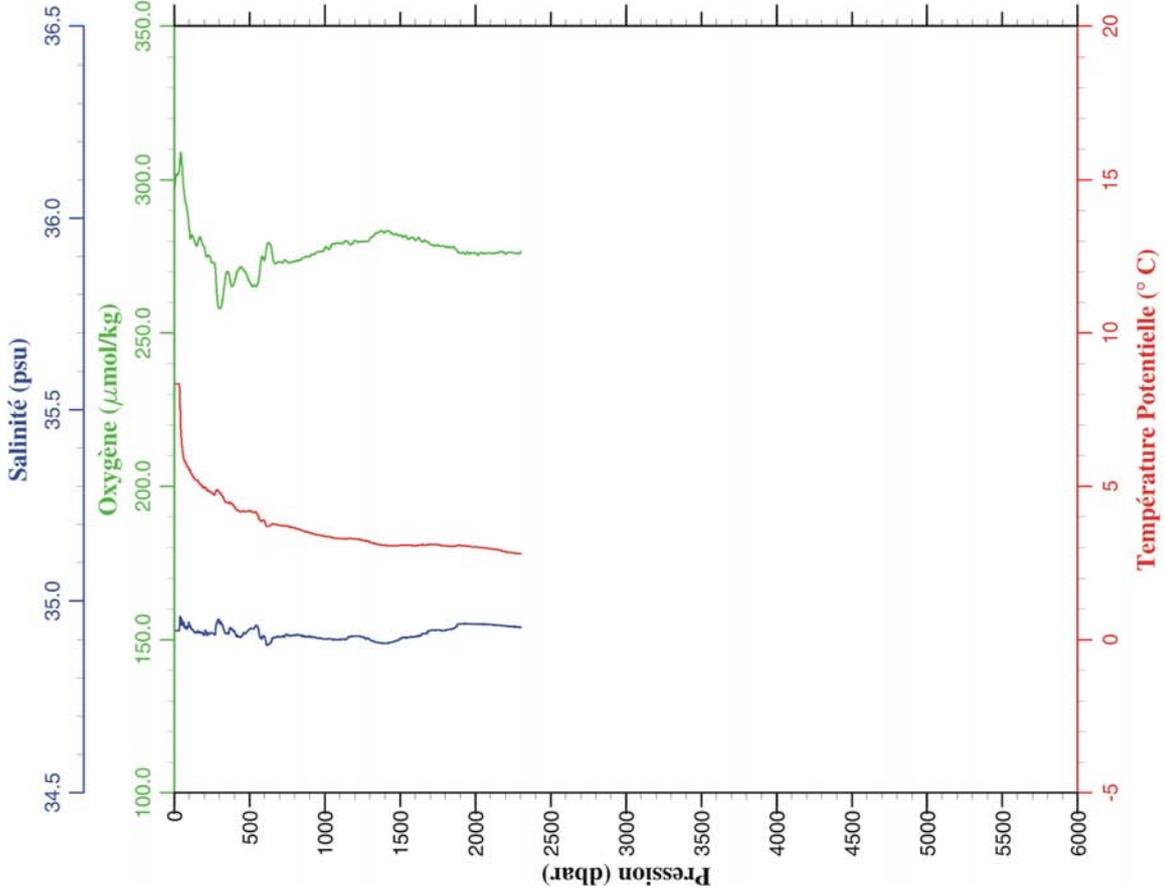
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	8.661	35.017	295.6	8.661
10.0	8.669	35.019	296.1	8.668
20.0	8.680	35.022	300.0	8.678
30.0	8.606	35.038	301.6	8.603
40.0	8.110	35.056	303.0	8.106
50.0	7.127	34.992	302.2	7.122
100.0	6.505	34.990	274.8	6.496
150.0	6.410	35.008	277.4	6.396
200.0	5.936	34.958	278.8	5.919
250.0	5.816	34.973	279.9	5.795
300.0	5.527	34.952	280.6	5.502
350.0	5.206	34.924	285.4	5.178
400.0	4.952	34.902	287.3	4.921
450.0	5.275	34.992	265.7	5.238
500.0	4.822	34.938	271.4	4.783
550.0	4.566	34.924	262.7	4.524
600.0	4.317	34.904	276.3	4.271
650.0	4.052	34.884	287.3	4.004
700.0	4.059	34.896	280.5	4.006
750.0	4.182	34.933	266.2	4.125
800.0	4.042	34.925	271.0	3.982
850.0	3.787	34.892	277.2	3.725
900.0	3.777	34.899	276.2	3.710
950.0	3.634	34.887	275.5	3.565
1000.0	3.796	34.924	271.8	3.722
1050.0	3.586	34.899	274.2	3.509
1100.0	3.495	34.890	277.0	3.414
1150.0	3.530	34.902	277.4	3.445
1200.0	3.452	34.894	277.8	3.364
1250.0	3.382	34.891	278.5	3.291
1300.0	3.357	34.892	279.6	3.261
1350.0	3.481	34.917	276.7	3.380
1400.0	3.434	34.912	278.4	3.329
1450.0	3.387	34.910	278.3	3.278
1500.0	3.367	34.910	280.7	3.255
1550.0	3.323	34.908	281.0	3.207
1600.0	3.304	34.908	281.3	3.183
1650.0	3.286	34.908	281.4	3.161
1700.0	3.281	34.914	280.4	3.152
1750.0	3.261	34.915	280.4	3.128
1800.0	3.244	34.918	280.0	3.107
1850.0	3.238	34.920	279.5	3.095
1900.0	3.222	34.924	278.9	3.075
1950.0	3.214	34.926	278.9	3.063
2000.0	3.231	34.934	277.9	3.075
2050.0	3.209	34.933	278.2	3.049
2100.0	3.171	34.929	277.9	3.007
2150.0	3.151	34.929	277.7	2.982
2200.0	3.122	34.929	277.2	2.949
2250.0	3.125	34.931	276.8	2.947
2300.0	3.127	34.933	276.4	2.944
2350.0	3.111	34.934	276.6	2.923
2400.0	3.087	34.932	276.8	2.895
2450.0	3.066	34.931	277.1	2.870
2500.0	3.016	34.930	276.8	2.816
2550.0	2.872	34.924	275.3	2.670
2572.0	2.806	34.921	273.3	2.602



Station 22

Station	: 23	Campagne	: OVIDE 02
Date	: 21-06-02	Navire	: N/O THALASSA
Profondeur	: 2301	Organisme	: IFREMER
Position	: N 59 6.24		
	W 33 50.02		

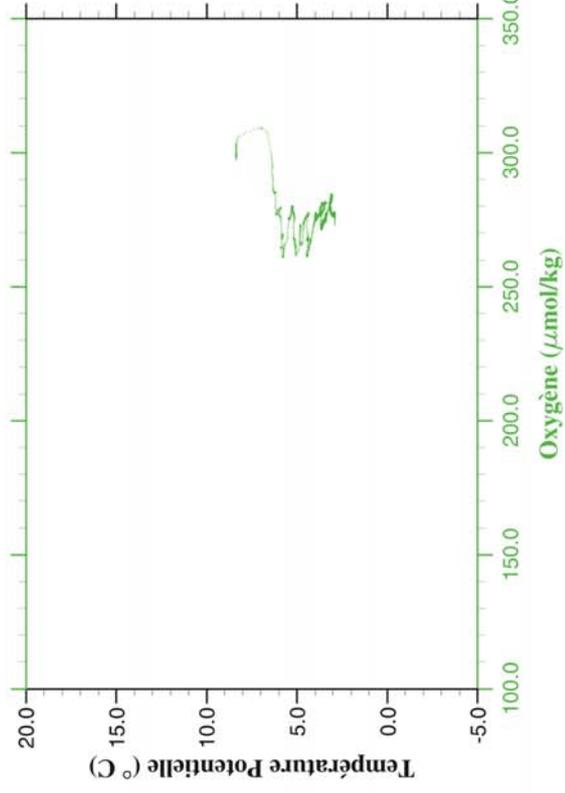
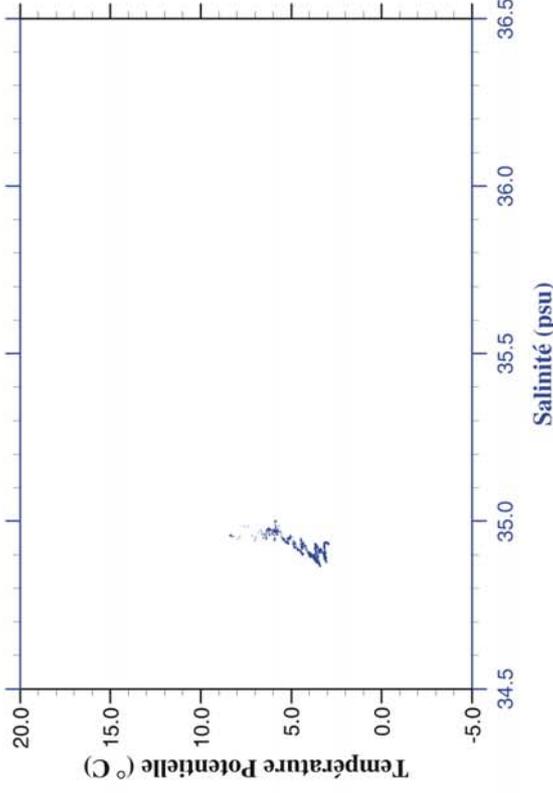
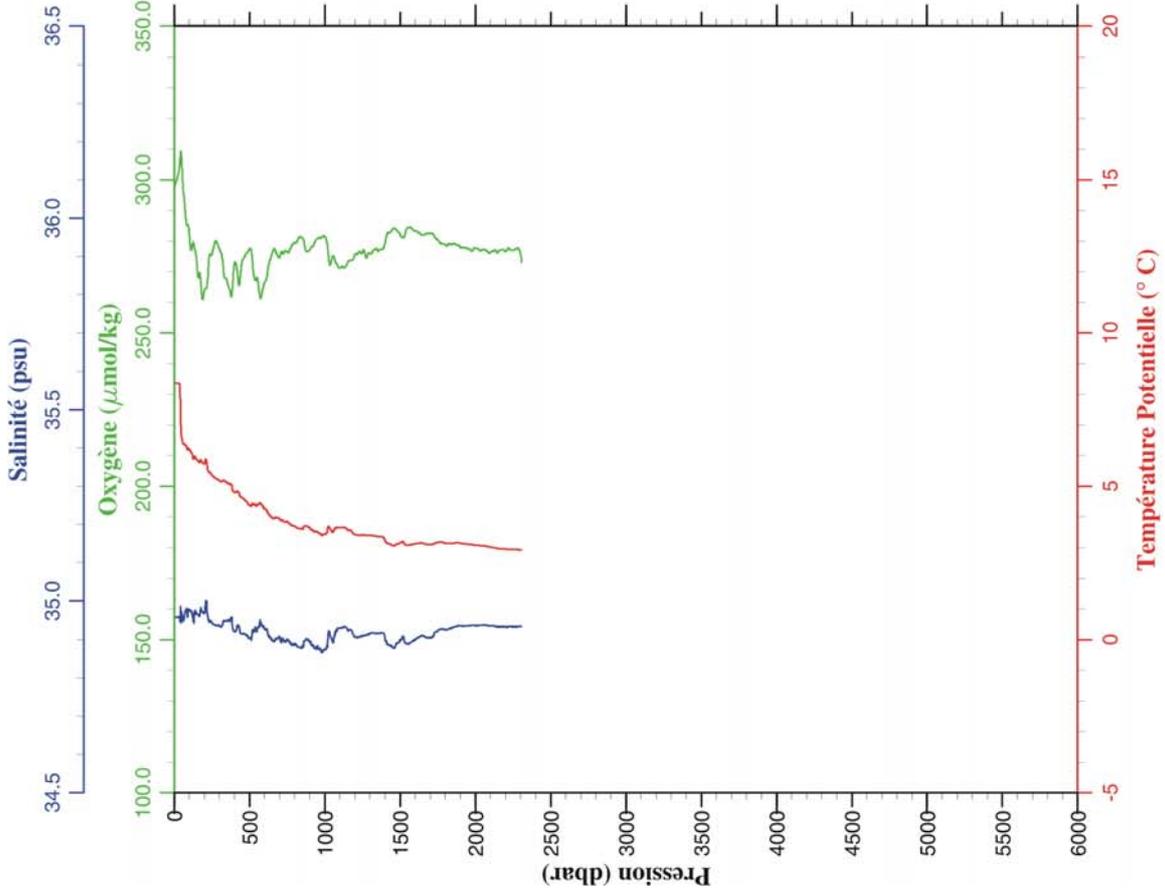
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	8.340	34.923	296.5	8.339
10.0	8.340	34.923	300.4	8.339
20.0	8.342	34.923	302.0	8.340
30.0	8.341	34.923	302.3	8.338
40.0	7.417	34.953	307.5	7.413
50.0	6.464	34.955	306.6	6.459
100.0	5.539	34.933	283.8	5.531
150.0	5.206	34.919	278.4	5.194
200.0	4.971	34.913	278.0	4.955
250.0	4.816	34.916	273.0	4.797
300.0	4.807	34.944	258.0	4.784
350.0	4.487	34.916	270.1	4.461
400.0	4.373	34.921	266.7	4.343
450.0	4.213	34.909	271.4	4.180
500.0	4.241	34.927	266.7	4.204
550.0	4.149	34.934	265.5	4.108
600.0	3.907	34.908	273.8	3.863
650.0	3.816	34.903	276.1	3.769
700.0	3.779	34.907	273.2	3.728
750.0	3.748	34.910	273.3	3.693
800.0	3.699	34.911	273.3	3.641
850.0	3.617	34.908	274.5	3.555
900.0	3.555	34.908	275.0	3.490
950.0	3.487	34.904	276.5	3.419
1000.0	3.441	34.901	277.7	3.369
1050.0	3.397	34.899	279.1	3.321
1100.0	3.378	34.900	279.4	3.298
1150.0	3.375	34.904	279.9	3.291
1200.0	3.369	34.909	280.2	3.282
1250.0	3.338	34.907	279.7	3.246
1300.0	3.272	34.899	280.8	3.177
1350.0	3.205	34.892	282.8	3.107
1400.0	3.176	34.890	282.9	3.074
1450.0	3.165	34.893	282.4	3.059
1500.0	3.183	34.902	282.0	3.072
1550.0	3.190	34.904	280.8	3.075
1600.0	3.186	34.906	280.3	3.067
1650.0	3.214	34.915	279.7	3.090
1700.0	3.231	34.923	279.0	3.102
1750.0	3.224	34.925	278.7	3.091
1800.0	3.189	34.924	278.3	3.052
1850.0	3.178	34.928	278.0	3.037
1900.0	3.217	34.940	276.1	3.070
1950.0	3.191	34.941	276.5	3.041
2000.0	3.174	34.940	276.1	3.019
2050.0	3.151	34.940	276.0	2.992
2100.0	3.125	34.939	276.1	2.962
2150.0	3.098	34.937	276.3	2.930
2200.0	3.036	34.935	275.9	2.864
2250.0	3.007	34.934	276.2	2.831
2300.0	2.989	34.933	276.5	2.809
2301.0	2.990	34.933	276.6	2.809



Station 23

Station	: 24	Campagne	: OVIDE 02
Date	: 21-06-02	Navire	: N/O THALASSA
Profondeur	: 2302	Organisme	: IFREMER
Position	: N 59 2.36		
	W 33 11.48		

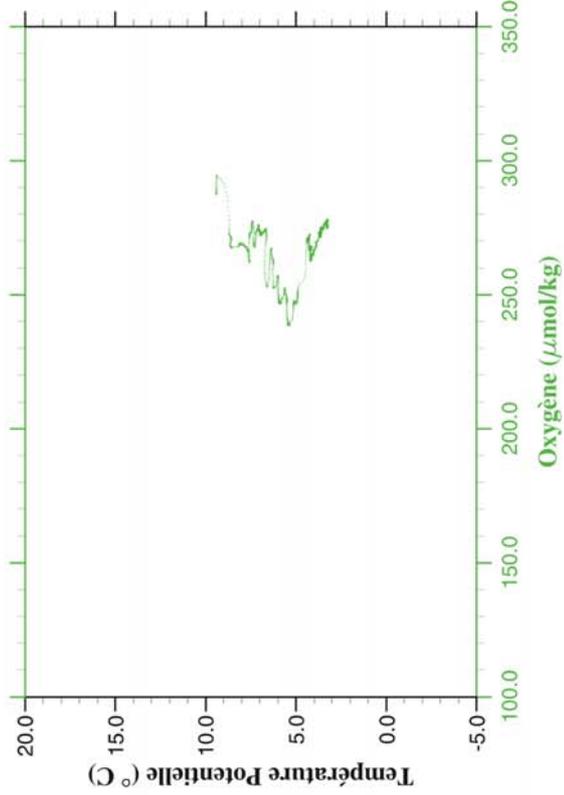
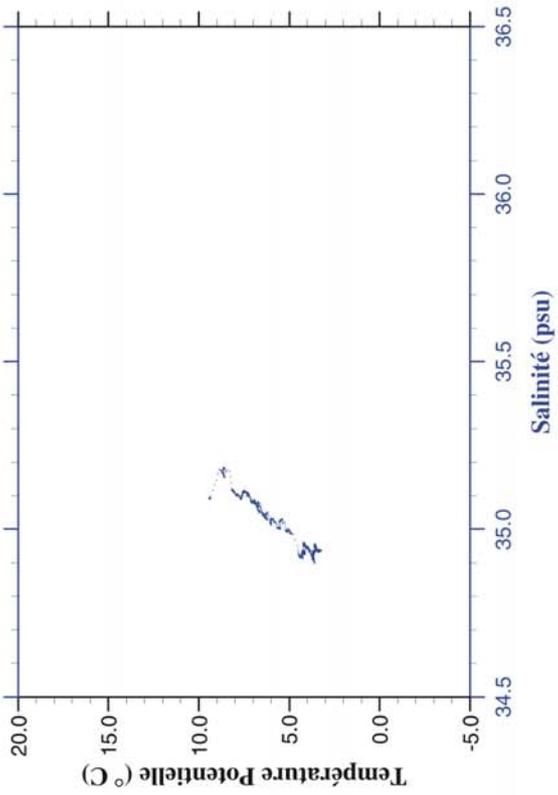
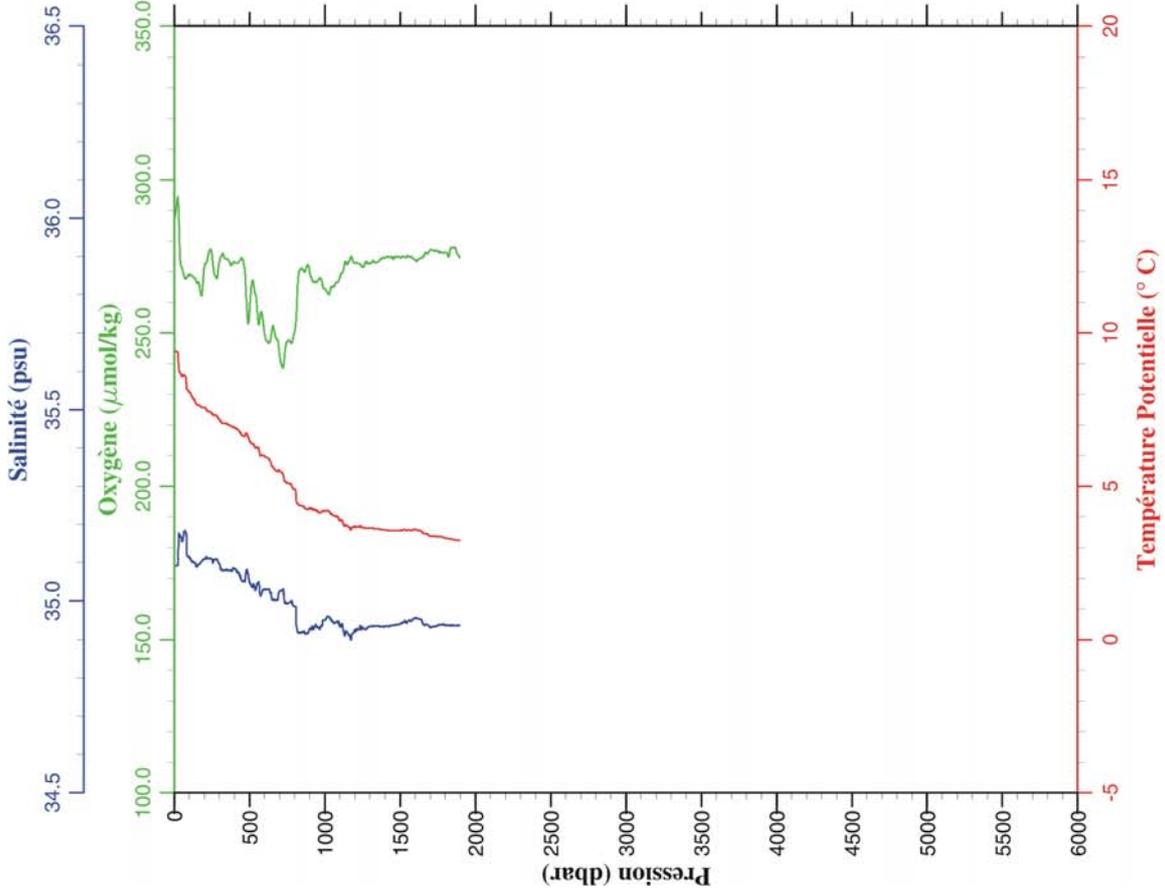
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	8.365	34.959	297.6	8.365
10.0	8.364	34.958	299.1	8.363
20.0	8.366	34.958	300.5	8.364
30.0	8.366	34.959	302.7	8.362
40.0	7.824	34.954	307.4	7.820
50.0	6.603	34.961	306.4	6.598
100.0	6.204	34.976	282.3	6.195
150.0	5.866	34.968	272.8	5.854
200.0	5.742	34.968	263.9	5.725
250.0	5.399	34.943	275.7	5.379
300.0	5.209	34.935	277.4	5.185
350.0	5.153	34.951	267.1	5.124
400.0	4.831	34.920	272.9	4.800
450.0	4.663	34.915	273.2	4.628
500.0	4.414	34.903	277.4	4.376
550.0	4.423	34.922	268.1	4.381
600.0	4.312	34.927	266.5	4.266
650.0	4.038	34.898	276.0	3.990
700.0	3.999	34.907	274.7	3.947
750.0	3.908	34.901	276.4	3.853
800.0	3.749	34.886	279.5	3.690
850.0	3.685	34.878	281.2	3.623
900.0	3.688	34.894	277.2	3.622
950.0	3.576	34.884	280.8	3.507
1000.0	3.503	34.874	281.5	3.431
1050.0	3.581	34.895	274.7	3.504
1100.0	3.745	34.929	271.3	3.662
1150.0	3.662	34.927	272.8	3.576
1200.0	3.514	34.906	275.7	3.425
1250.0	3.499	34.910	276.4	3.406
1300.0	3.495	34.916	276.0	3.397
1350.0	3.467	34.916	277.1	3.365
1400.0	3.312	34.900	279.4	3.209
1450.0	3.169	34.879	283.9	3.063
1500.0	3.264	34.899	282.2	3.153
1550.0	3.197	34.888	284.3	3.082
1600.0	3.242	34.900	283.3	3.122
1650.0	3.260	34.909	282.1	3.135
1700.0	3.219	34.905	282.6	3.091
1750.0	3.295	34.922	280.4	3.161
1800.0	3.283	34.925	279.0	3.145
1850.0	3.289	34.931	279.2	3.146
1900.0	3.289	34.936	277.9	3.142
1950.0	3.259	34.936	277.5	3.107
2000.0	3.235	34.936	277.7	3.079
2050.0	3.221	34.938	277.3	3.061
2100.0	3.178	34.936	276.3	3.013
2150.0	3.138	34.934	276.2	2.969
2200.0	3.130	34.934	276.6	2.957
2250.0	3.117	34.934	277.1	2.940
2300.0	3.103	34.934	275.9	2.921
2308.0	3.103	34.934	273.1	2.920



Station 24

Station	: 25	Campagne	: OVIDE 02
Date	: 21-06-02	Navire	: N/O THALASSA
Profondeur	: 1915	Organisme	: IFREMER
Position	: N 58 58.51		
	W 32 33.66		

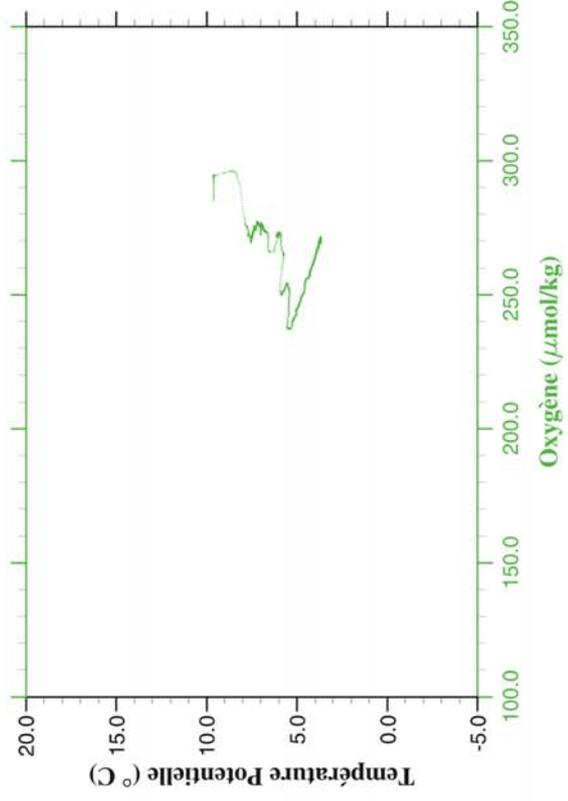
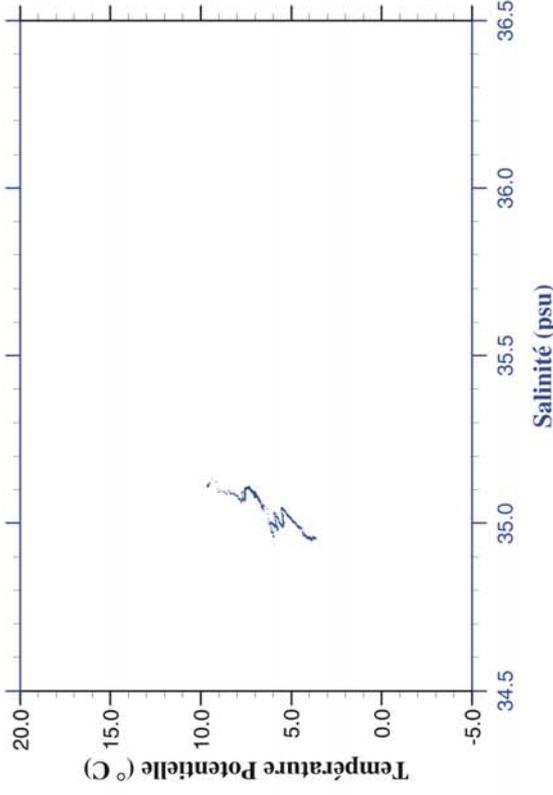
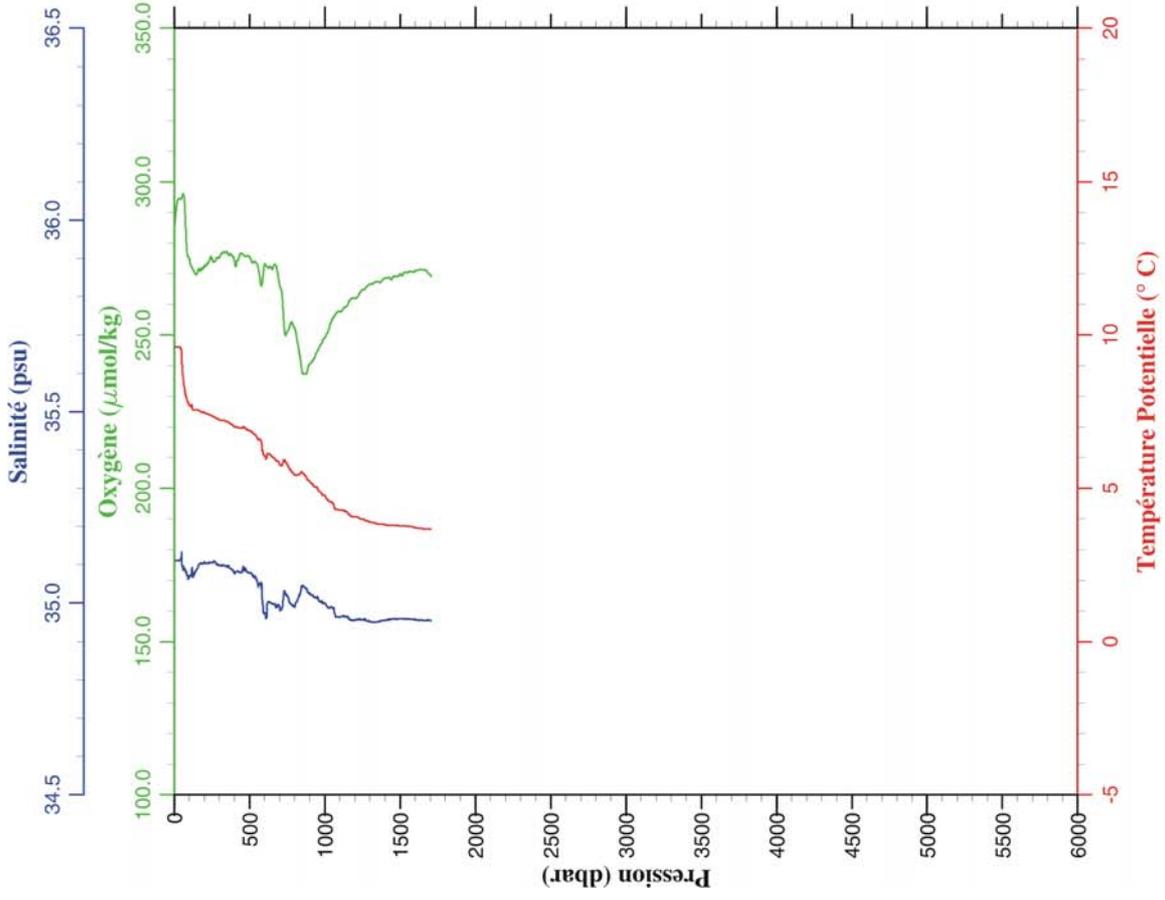
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	9.409	35.092	287.2	9.409
10.0	9.410	35.093	289.3	9.409
20.0	9.384	35.094	293.7	9.382
30.0	8.879	35.178	288.4	8.876
40.0	8.707	35.169	273.4	8.703
50.0	8.606	35.160	271.6	8.600
100.0	8.078	35.113	269.1	8.067
150.0	7.679	35.090	266.4	7.664
200.0	7.591	35.110	271.6	7.571
250.0	7.420	35.109	276.0	7.396
300.0	7.226	35.097	273.3	7.197
350.0	7.054	35.081	274.2	7.021
400.0	6.960	35.085	273.0	6.922
450.0	6.706	35.053	274.5	6.664
500.0	6.539	35.050	256.8	6.493
550.0	6.328	35.045	258.7	6.278
600.0	6.023	35.033	249.9	5.970
650.0	5.704	35.005	251.3	5.648
700.0	5.562	35.026	242.7	5.501
750.0	5.158	34.993	247.2	5.095
800.0	4.963	34.986	250.4	4.897
850.0	4.423	34.919	271.1	4.356
900.0	4.367	34.928	269.7	4.297
950.0	4.274	34.933	266.8	4.200
1000.0	4.266	34.952	264.4	4.187
1050.0	4.159	34.949	265.3	4.077
1100.0	3.958	34.940	268.1	3.873
1150.0	3.791	34.917	272.4	3.703
1200.0	3.754	34.921	272.8	3.663
1250.0	3.767	34.932	271.5	3.671
1300.0	3.734	34.934	272.7	3.635
1350.0	3.717	34.936	273.2	3.613
1400.0	3.677	34.933	274.5	3.569
1450.0	3.664	34.936	274.4	3.553
1500.0	3.673	34.940	274.7	3.556
1550.0	3.688	34.947	275.2	3.567
1600.0	3.713	34.956	273.9	3.587
1650.0	3.600	34.941	274.8	3.471
1700.0	3.505	34.932	277.0	3.373
1750.0	3.499	34.938	276.9	3.362
1800.0	3.442	34.937	276.4	3.302
1850.0	3.407	34.939	277.8	3.263
1894.0	3.385	34.937	274.7	3.236



Station 25

Station	: 26	Campagne	: OVIDE 02
Date	: 21-06-02	Navire	: N/O THALASSA
Profondeur	: 1712	Organisme	: IFREMER
Position	: N 58 54.75		
	W 31 54.64		

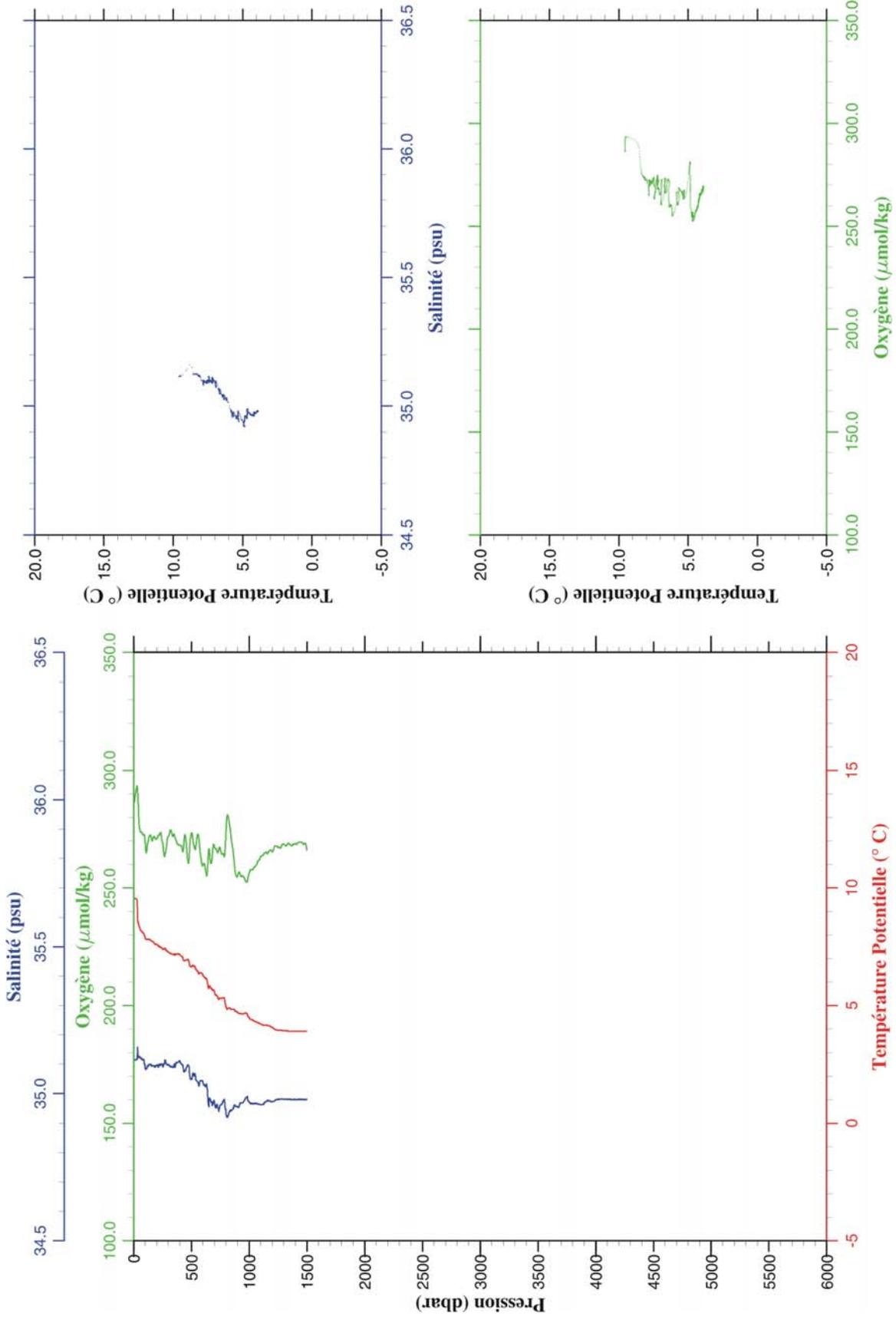
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	9.624	35.113	285.2	9.624
10.0	9.620	35.110	289.5	9.618
20.0	9.616	35.111	293.3	9.614
30.0	9.610	35.111	294.5	9.607
40.0	9.593	35.114	294.4	9.589
50.0	9.389	35.133	294.8	9.384
100.0	7.731	35.069	274.9	7.721
150.0	7.572	35.089	269.9	7.558
200.0	7.488	35.107	272.6	7.468
250.0	7.392	35.106	275.2	7.368
300.0	7.262	35.098	275.1	7.233
350.0	7.205	35.094	277.2	7.171
400.0	7.040	35.078	274.1	7.001
450.0	7.002	35.082	276.6	6.959
500.0	6.929	35.078	275.5	6.881
550.0	6.729	35.060	273.2	6.678
600.0	6.122	34.974	273.1	6.069
650.0	6.082	34.999	271.5	6.024
700.0	5.825	34.986	266.0	5.763
750.0	5.869	35.020	251.0	5.802
800.0	5.509	34.989	252.3	5.440
850.0	5.602	35.047	237.7	5.527
900.0	5.294	35.026	240.7	5.217
950.0	5.092	35.019	244.6	5.012
1000.0	4.842	35.000	249.2	4.760
1050.0	4.613	34.989	255.2	4.527
1100.0	4.380	34.963	257.7	4.292
1150.0	4.296	34.965	259.7	4.204
1200.0	4.169	34.956	262.0	4.074
1250.0	4.087	34.956	264.7	3.988
1300.0	3.996	34.951	266.6	3.894
1350.0	3.947	34.951	267.5	3.841
1400.0	3.921	34.956	268.4	3.811
1450.0	3.905	34.959	268.8	3.790
1500.0	3.896	34.960	269.9	3.777
1550.0	3.885	34.958	270.3	3.762
1600.0	3.840	34.957	270.8	3.713
1650.0	3.811	34.956	271.2	3.680
1700.0	3.807	34.956	269.6	3.671
1706.0	3.812	34.954	269.2	3.675



Station 26

Station	: 27	Campagne	: OVIDE 02
Date	: 21-06-02	Navire	: N/O THALASSA
Profondeur	: 1423	Organisme	: IFREMER
Position	: N 58 50.64		
	W 31 16.66		

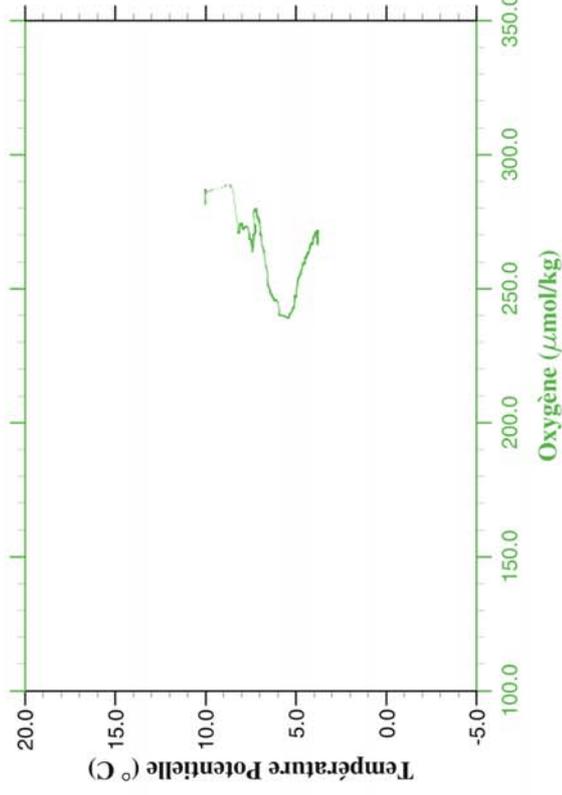
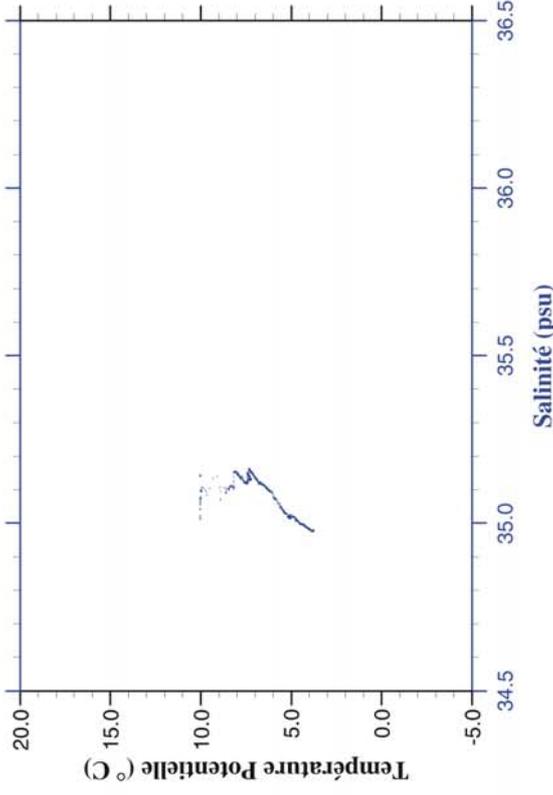
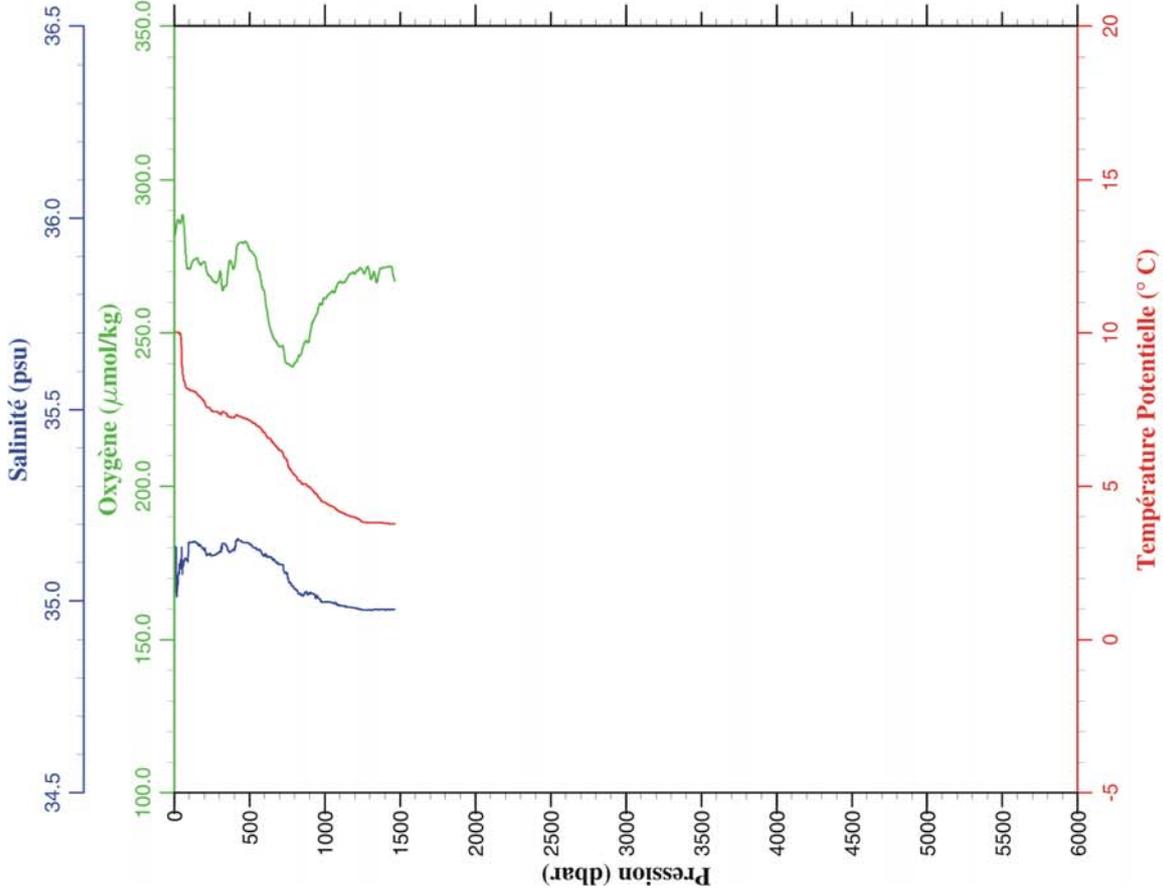
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	9.547	35.116	286.5	9.547
10.0	9.547	35.115	287.7	9.545
20.0	9.547	35.115	291.2	9.545
30.0	9.426	35.117	293.4	9.422
40.0	8.503	35.125	284.9	8.499
50.0	8.368	35.124	276.1	8.363
100.0	7.859	35.087	269.3	7.849
150.0	7.779	35.101	271.8	7.764
200.0	7.616	35.097	271.0	7.597
250.0	7.441	35.099	269.4	7.416
300.0	7.308	35.099	271.7	7.279
350.0	7.228	35.098	272.8	7.194
400.0	7.212	35.112	268.0	7.173
450.0	6.961	35.080	271.7	6.918
500.0	6.698	35.050	273.2	6.651
550.0	6.534	35.043	271.9	6.483
600.0	6.340	35.038	259.6	6.285
650.0	5.786	34.960	266.4	5.729
700.0	5.602	34.969	267.5	5.542
750.0	5.381	34.961	266.6	5.317
800.0	5.005	34.933	273.8	4.939
850.0	4.908	34.944	269.3	4.838
900.0	4.776	34.956	255.1	4.702
950.0	4.721	34.972	254.7	4.643
1000.0	4.584	34.972	256.3	4.503
1050.0	4.411	34.967	259.0	4.327
1100.0	4.302	34.962	263.2	4.214
1150.0	4.252	34.974	265.0	4.161
1200.0	4.170	34.973	265.3	4.074
1250.0	4.057	34.980	267.2	3.959
1300.0	4.034	34.982	268.6	3.932
1350.0	4.024	34.981	268.5	3.917
1400.0	4.024	34.980	269.0	3.912
1450.0	4.026	34.981	269.5	3.910
1498.0	4.029	34.981	266.0	3.908



Station 27

Station	: 28	Campagne	: OVIDE 02
Date	: 21-06-02	Navire	: N/O THALASSA
Profondeur	: 1470	Organisme	: IFREMER
Position	: N 58 43.80		
	W 30 42.21		

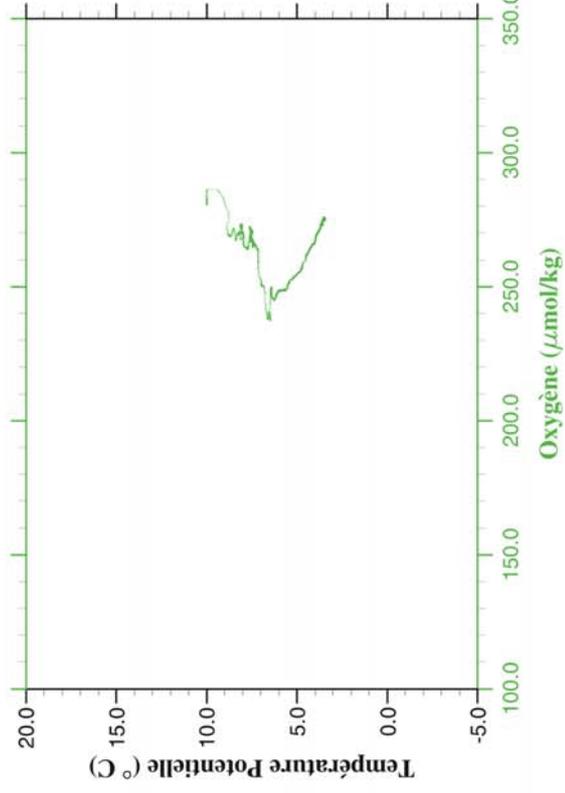
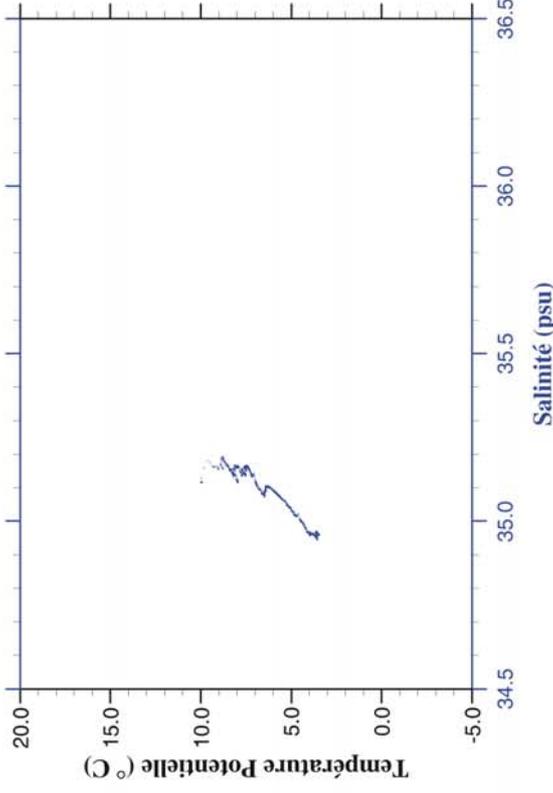
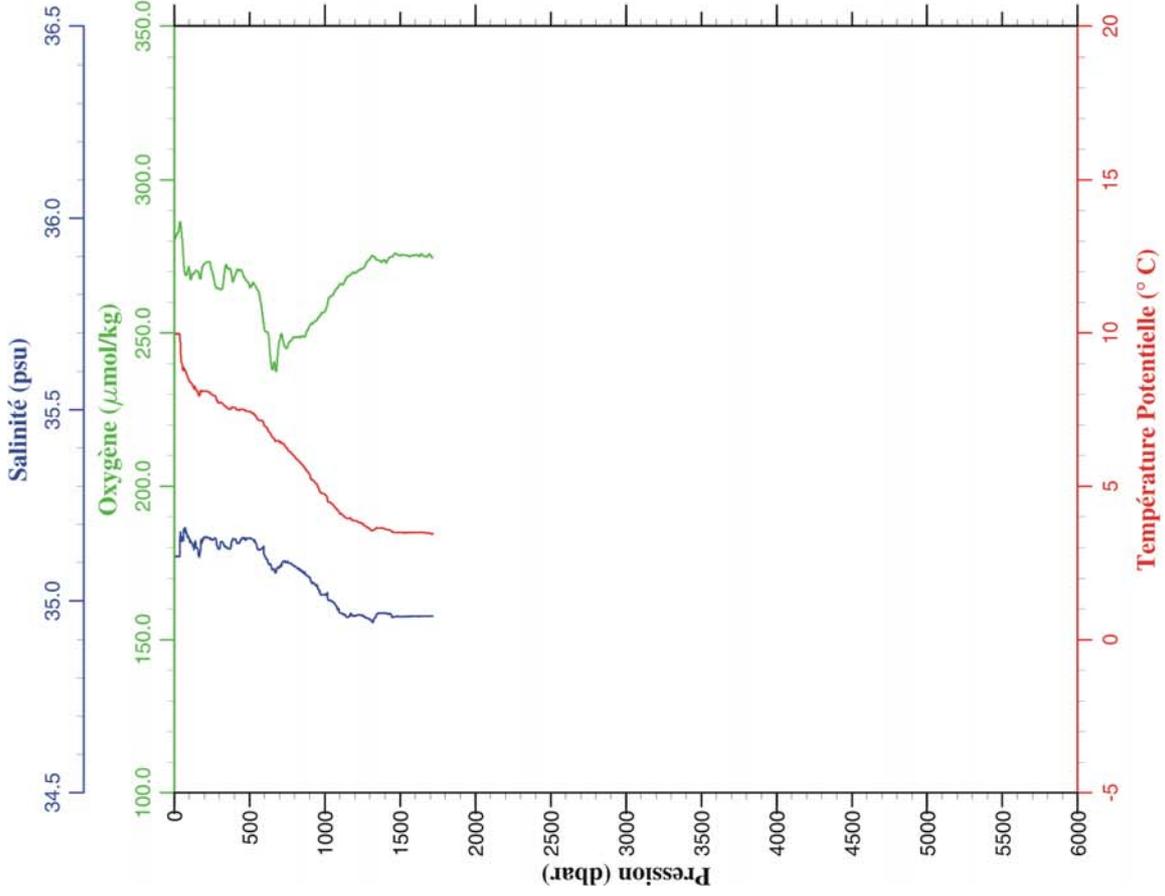
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	10.030	35.144	281.7	10.029
10.0	10.027	35.141	283.4	10.026
20.0	10.027	35.041	286.5	10.024
30.0	10.009	35.079	286.8	10.005
40.0	10.002	35.098	285.8	9.998
50.0	9.313	35.136	287.3	9.308
100.0	8.159	35.154	270.9	8.149
150.0	8.041	35.152	274.4	8.025
200.0	7.774	35.132	273.2	7.754
250.0	7.501	35.118	267.6	7.476
300.0	7.406	35.130	269.2	7.376
350.0	7.383	35.142	266.5	7.349
400.0	7.275	35.133	271.6	7.236
450.0	7.295	35.155	279.6	7.251
500.0	7.197	35.150	277.3	7.148
550.0	7.023	35.134	272.1	6.970
600.0	6.810	35.119	263.2	6.753
650.0	6.504	35.110	249.5	6.444
700.0	6.240	35.095	245.6	6.176
750.0	5.913	35.075	240.0	5.846
800.0	5.442	35.033	240.1	5.373
850.0	5.154	35.016	244.6	5.083
900.0	5.044	35.022	249.1	4.968
950.0	4.789	35.014	256.7	4.711
1000.0	4.562	34.998	261.5	4.481
1050.0	4.425	34.996	263.6	4.341
1100.0	4.253	34.989	266.9	4.166
1150.0	4.146	34.985	268.0	4.055
1200.0	4.078	34.982	269.3	3.984
1250.0	3.935	34.977	270.4	3.838
1300.0	3.917	34.978	269.0	3.816
1350.0	3.921	34.978	267.2	3.815
1400.0	3.903	34.978	271.5	3.793
1450.0	3.887	34.978	270.0	3.773
1466.0	3.890	34.978	267.0	3.774



Station 28

Station	: 29	Campagne	: OVIDE 02
Date	: 22-06-02	Navire	: N/O THALASSA
Profondeur	: 1630	Organisme	: IFREMER
Position	: N 58 33.07		
	W 30 21.78		

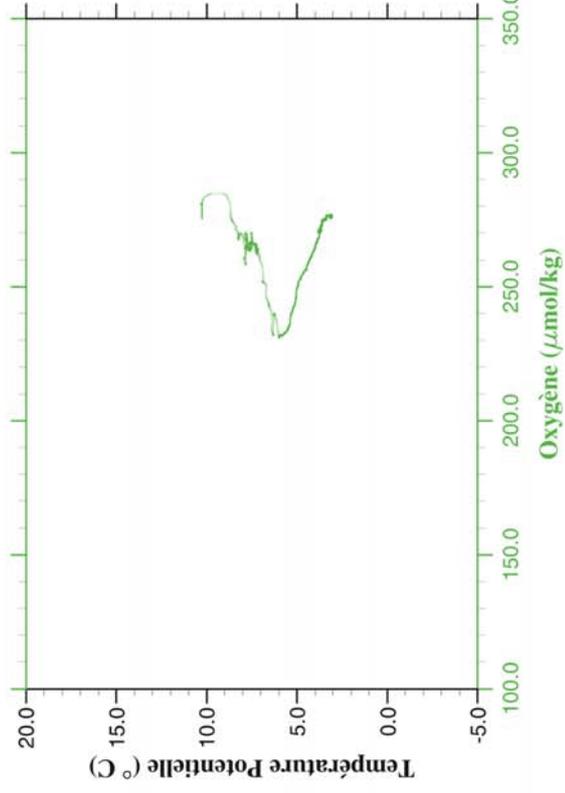
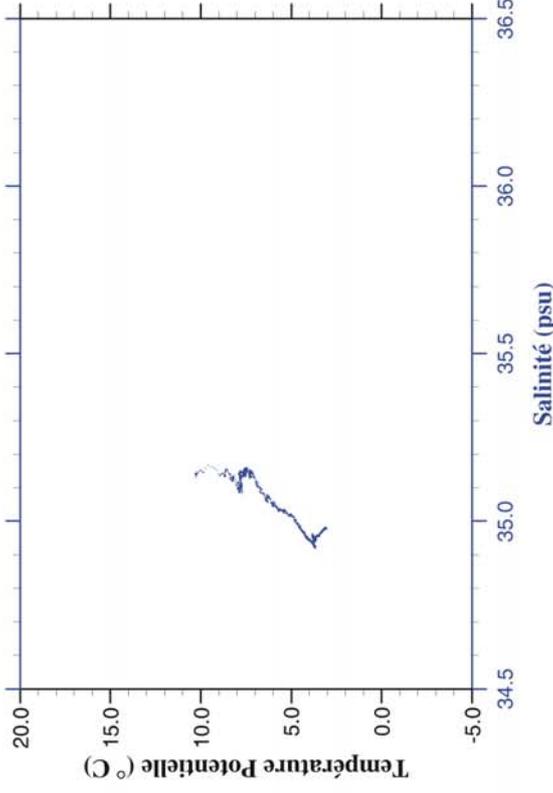
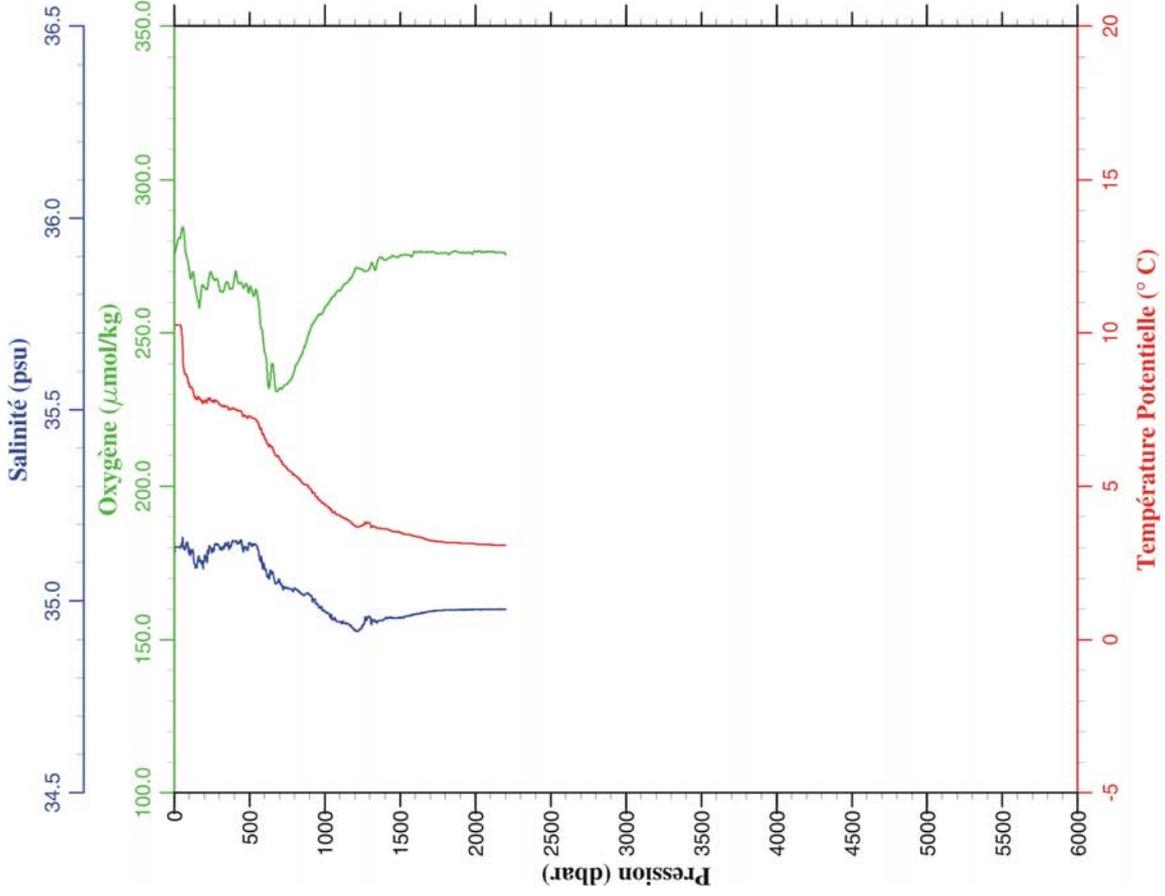
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	9.979	35.117	280.9	9.979
10.0	9.980	35.117	281.0	9.979
20.0	9.981	35.116	282.5	9.978
30.0	9.981	35.117	283.8	9.977
40.0	9.640	35.181	286.2	9.635
50.0	9.050	35.156	282.3	9.045
100.0	8.460	35.165	270.8	8.449
150.0	8.145	35.140	270.3	8.129
200.0	8.134	35.166	272.5	8.114
250.0	8.032	35.162	270.4	8.006
300.0	7.747	35.136	264.4	7.717
350.0	7.599	35.139	271.7	7.564
400.0	7.610	35.162	268.3	7.570
450.0	7.562	35.164	270.0	7.517
500.0	7.490	35.164	265.5	7.440
550.0	7.272	35.142	264.3	7.218
600.0	7.031	35.118	251.1	6.973
650.0	6.674	35.082	238.1	6.612
700.0	6.515	35.088	247.6	6.450
750.0	6.305	35.102	245.2	6.236
800.0	6.037	35.091	248.6	5.964
850.0	5.784	35.080	249.2	5.709
900.0	5.459	35.060	252.5	5.381
950.0	5.106	35.040	254.4	5.026
1000.0	4.816	35.017	257.1	4.734
1050.0	4.501	34.999	262.3	4.416
1100.0	4.206	34.970	265.9	4.120
1150.0	4.040	34.957	268.3	3.950
1200.0	3.970	34.962	269.6	3.877
1250.0	3.882	34.962	271.1	3.785
1300.0	3.708	34.952	274.2	3.608
1350.0	3.737	34.967	273.8	3.633
1400.0	3.710	34.968	273.5	3.602
1450.0	3.617	34.958	275.0	3.506
1500.0	3.604	34.960	275.3	3.489
1550.0	3.612	34.960	275.2	3.492
1600.0	3.620	34.961	275.3	3.495
1650.0	3.617	34.961	275.3	3.487
1700.0	3.595	34.961	275.6	3.462
1719.0	3.578	34.961	274.6	3.443



Station 29

Station	: 30	Campagne	: OVIDE 02
Date	: 22-06-02	Navire	: N/O THALASSA
Profondeur	: 2169	Organisme	: IFREMER
Position	: N 58 24.58		
	W 30 6.13		

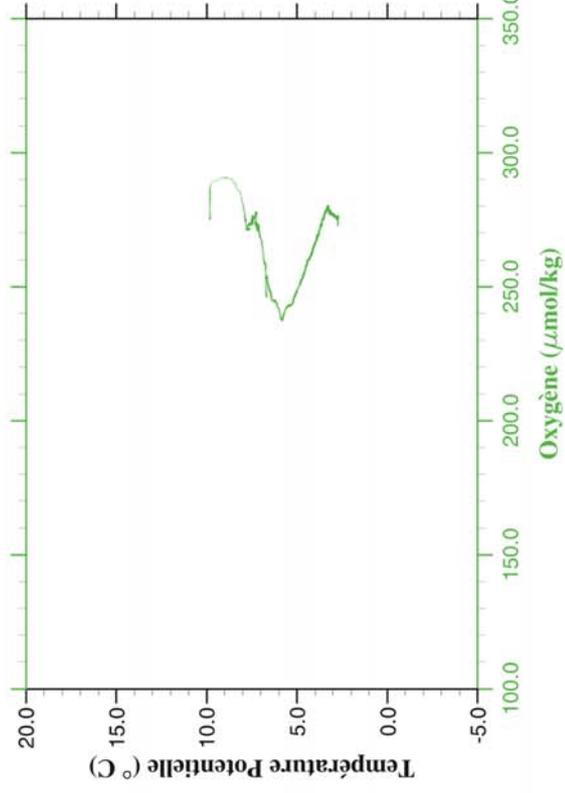
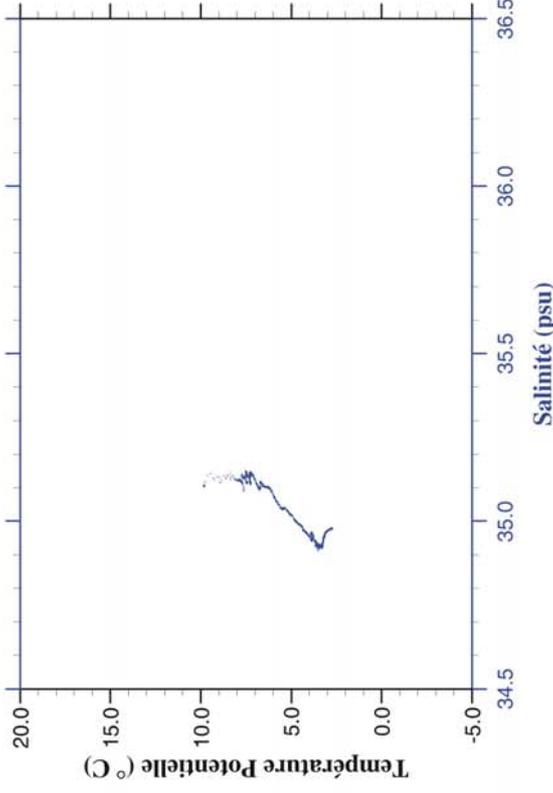
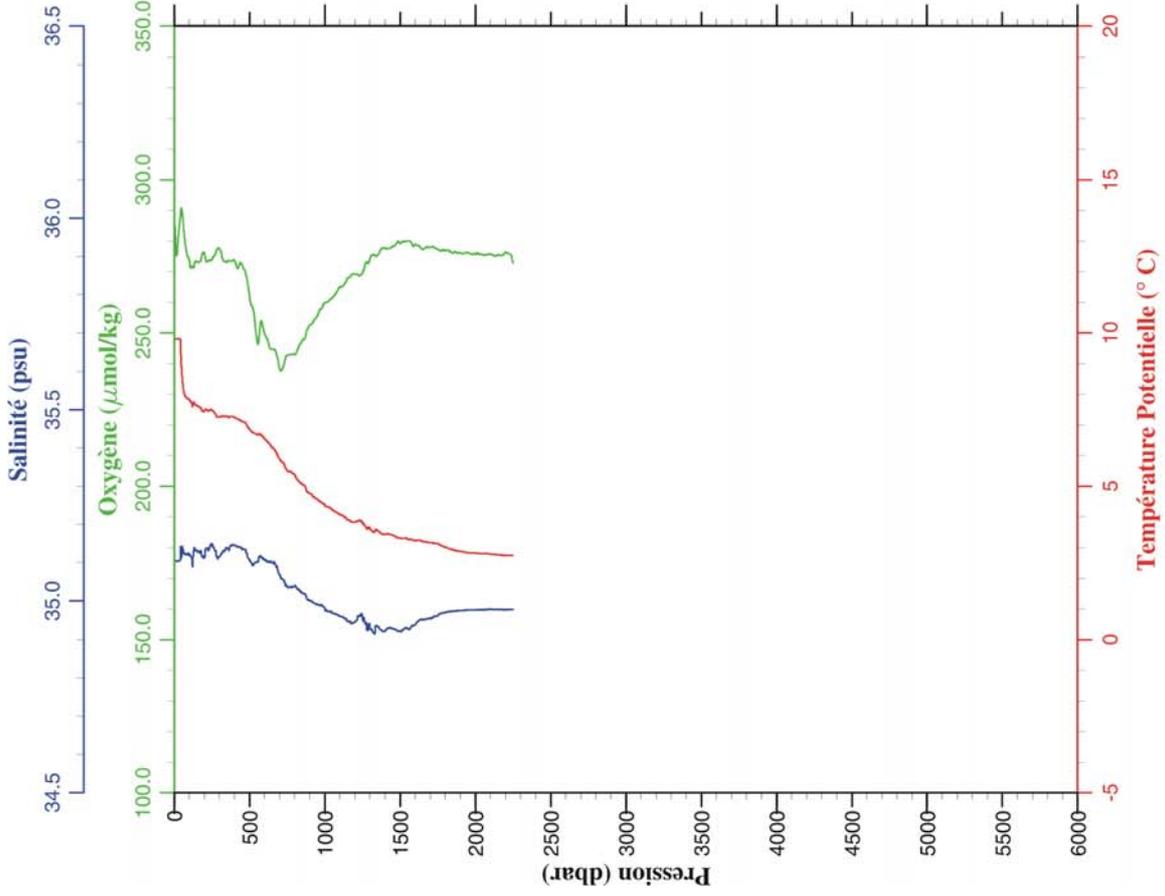
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	10.269	35.142	275.4	10.269
10.0	10.270	35.142	277.3	10.268
20.0	10.274	35.141	279.2	10.271
30.0	10.277	35.141	281.0	10.274
40.0	10.269	35.139	280.9	10.264
50.0	10.046	35.152	283.7	10.040
100.0	8.294	35.125	270.4	8.284
150.0	7.845	35.087	262.1	7.830
200.0	7.811	35.107	264.9	7.791
250.0	7.783	35.126	269.0	7.758
300.0	7.699	35.143	264.7	7.669
350.0	7.622	35.145	266.7	7.587
400.0	7.563	35.156	268.0	7.523
450.0	7.432	35.147	265.9	7.388
500.0	7.339	35.153	264.1	7.289
550.0	7.184	35.141	263.1	7.131
600.0	6.637	35.083	244.0	6.581
650.0	6.337	35.075	240.1	6.278
700.0	5.939	35.050	232.1	5.877
750.0	5.646	35.035	233.3	5.580
800.0	5.438	35.034	238.1	5.369
850.0	5.195	35.017	243.2	5.124
900.0	5.009	35.015	250.6	4.933
950.0	4.725	34.993	255.3	4.647
1000.0	4.483	34.974	258.3	4.403
1050.0	4.245	34.952	261.8	4.163
1100.0	4.142	34.946	263.8	4.056
1150.0	3.994	34.941	266.5	3.905
1200.0	3.806	34.924	270.7	3.714
1250.0	3.817	34.934	270.8	3.721
1300.0	3.886	34.957	271.3	3.785
1350.0	3.730	34.946	273.4	3.626
1400.0	3.724	34.954	273.8	3.616
1450.0	3.640	34.957	275.2	3.529
1500.0	3.617	34.957	275.2	3.501
1550.0	3.552	34.961	275.5	3.433
1600.0	3.491	34.966	276.6	3.368
1650.0	3.438	34.969	276.4	3.311
1700.0	3.368	34.973	276.4	3.238
1750.0	3.332	34.975	275.8	3.198
1800.0	3.306	34.977	276.3	3.167
1850.0	3.303	34.977	276.5	3.160
1900.0	3.297	34.977	276.3	3.149
1950.0	3.289	34.978	276.3	3.136
2000.0	3.271	34.979	276.8	3.114
2050.0	3.255	34.979	276.4	3.094
2100.0	3.254	34.979	276.5	3.088
2150.0	3.257	34.979	276.4	3.086
2200.0	3.258	34.978	275.7	3.083
2202.0	3.259	34.978	275.5	3.084



Station 30

Station	: 31	Campagne	: OVIDE 02
Date	: 22-06-02	Navire	: N/O THALASSA
Profondeur	: 2260	Organisme	: IFREMER
Position	: N 58 12.66		
	W 29 43.90		

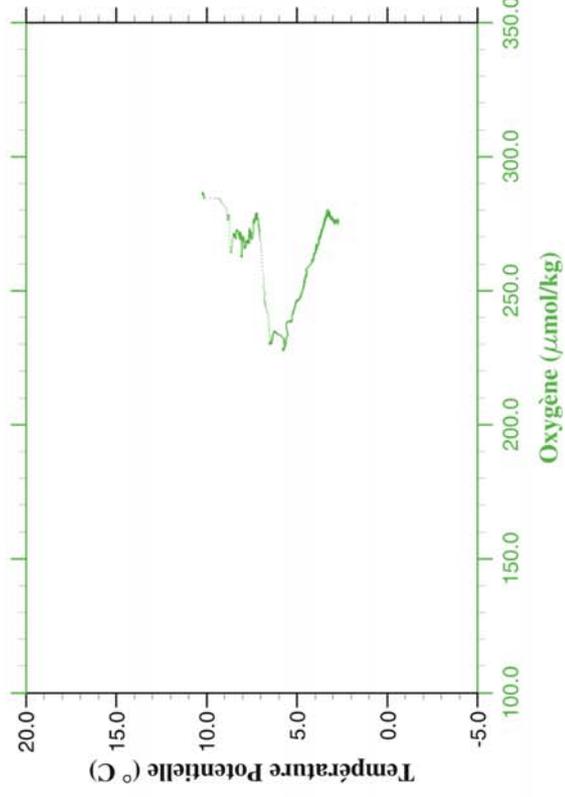
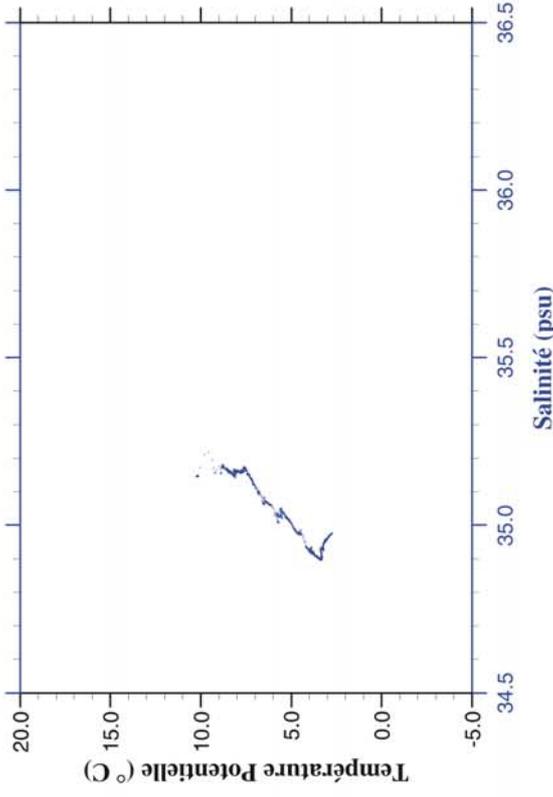
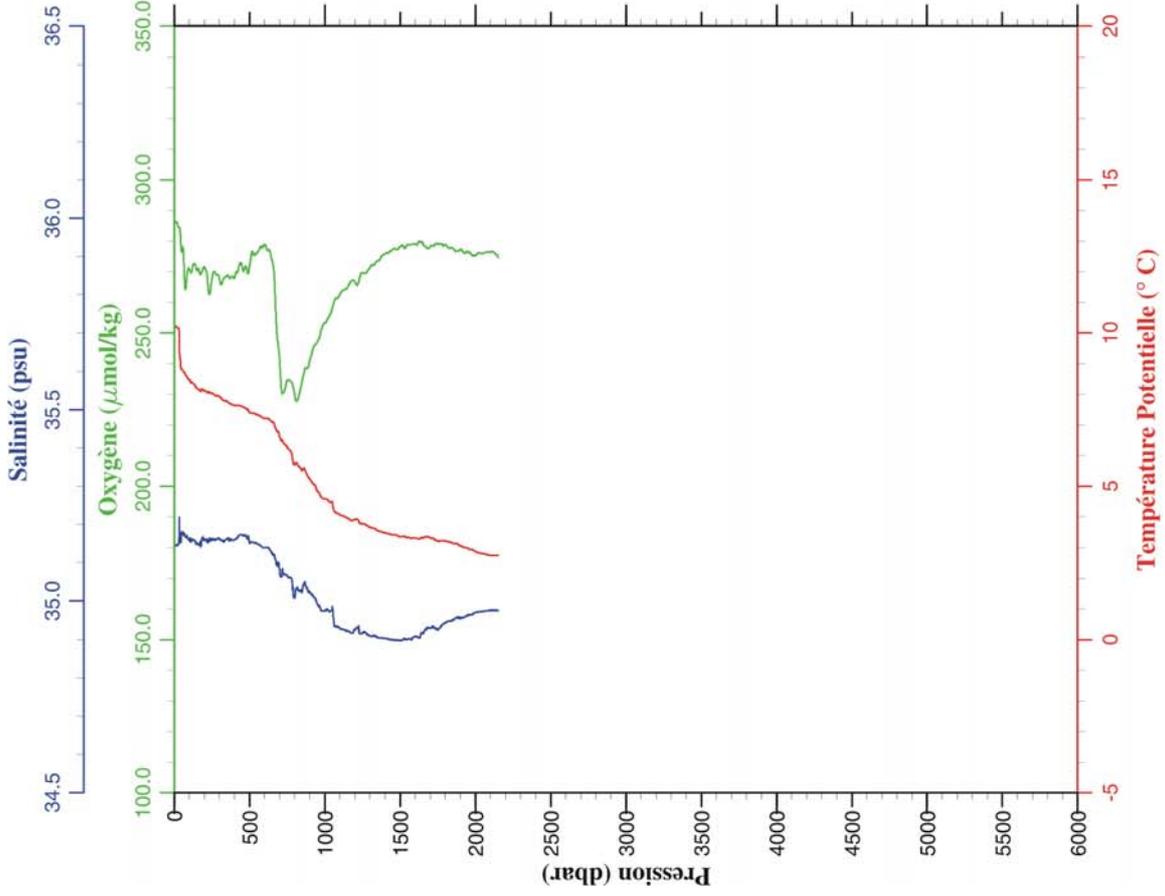
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	9.817	35.105	286.5	9.817
10.0	9.818	35.105	279.1	9.817
20.0	9.819	35.104	276.2	9.816
30.0	9.814	35.106	283.3	9.811
40.0	9.792	35.109	288.0	9.787
50.0	8.845	35.125	290.5	8.840
100.0	7.820	35.120	273.7	7.810
150.0	7.658	35.132	273.4	7.643
200.0	7.451	35.117	276.1	7.431
250.0	7.520	35.150	274.0	7.495
300.0	7.288	35.117	277.4	7.259
350.0	7.312	35.139	273.0	7.278
400.0	7.292	35.146	273.7	7.253
450.0	7.154	35.137	272.2	7.111
500.0	6.903	35.108	262.2	6.856
550.0	6.753	35.102	247.7	6.701
600.0	6.614	35.107	249.8	6.558
650.0	6.330	35.100	244.8	6.270
700.0	5.953	35.067	238.1	5.890
750.0	5.574	35.039	242.6	5.509
800.0	5.455	35.039	243.0	5.386
850.0	5.127	35.021	247.5	5.056
900.0	4.845	35.002	252.6	4.771
950.0	4.652	34.992	255.6	4.575
1000.0	4.461	34.983	259.9	4.381
1050.0	4.319	34.970	261.5	4.236
1100.0	4.157	34.961	265.0	4.071
1150.0	4.001	34.948	267.9	3.912
1200.0	3.927	34.945	269.2	3.834
1250.0	3.889	34.964	269.5	3.792
1300.0	3.685	34.932	274.3	3.586
1350.0	3.665	34.934	275.4	3.562
1400.0	3.536	34.924	277.8	3.430
1450.0	3.508	34.928	278.3	3.398
1500.0	3.421	34.923	279.1	3.308
1550.0	3.388	34.928	279.9	3.271
1600.0	3.344	34.938	278.9	3.222
1650.0	3.332	34.952	277.2	3.206
1700.0	3.284	34.955	277.9	3.154
1750.0	3.263	34.963	277.3	3.129
1800.0	3.152	34.971	276.9	3.015
1850.0	3.076	34.973	276.1	2.936
1900.0	3.018	34.975	276.2	2.874
1950.0	2.980	34.976	276.2	2.832
2000.0	2.969	34.977	275.7	2.817
2050.0	2.955	34.977	275.5	2.798
2100.0	2.951	34.979	275.8	2.790
2150.0	2.929	34.978	275.5	2.763
2200.0	2.919	34.978	276.4	2.749
2250.0	2.914	34.978	272.9	2.739
2251.0	2.914	34.979	272.8	2.739



Station 31

Station	: 32	Campagne	: OVIDE 02
Date	: 22-06-02	Navire	: N/O THALASSA
Profondeur	: 2150	Organisme	: IFREMER
Position	: N 57 58.24		
	W 29 16.54		

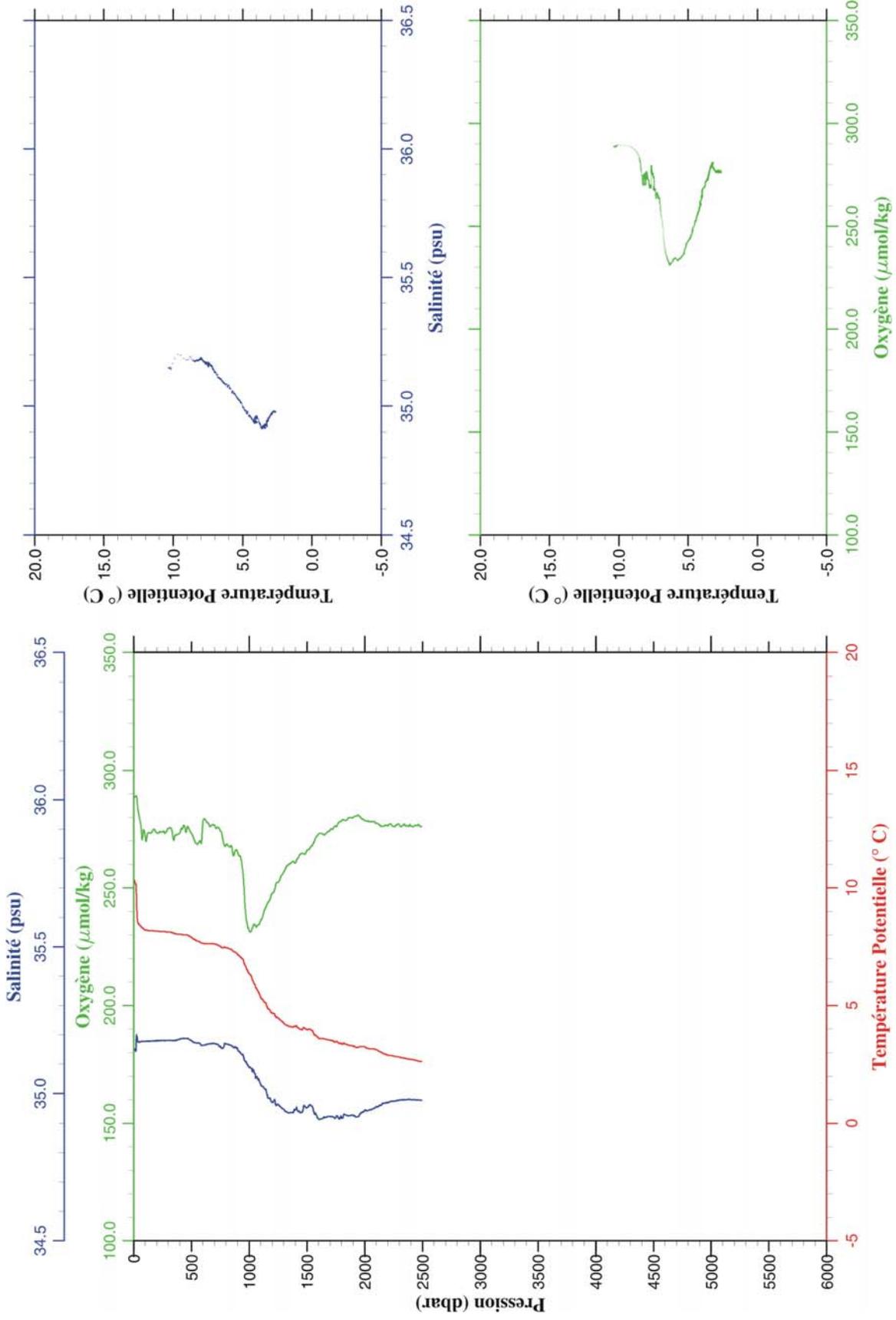
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	10.233	35.146	286.6	10.233
10.0	10.222	35.146	286.0	10.220
20.0	10.175	35.146	285.9	10.172
30.0	10.157	35.147	284.6	10.153
40.0	9.107	35.166	282.3	9.102
50.0	8.830	35.176	276.3	8.824
100.0	8.480	35.158	270.9	8.469
150.0	8.217	35.152	270.3	8.201
200.0	8.134	35.160	271.6	8.114
250.0	8.065	35.163	267.4	8.039
300.0	7.957	35.162	267.8	7.926
350.0	7.804	35.162	268.8	7.769
400.0	7.686	35.160	267.9	7.646
450.0	7.653	35.173	271.9	7.608
500.0	7.463	35.153	271.8	7.413
550.0	7.393	35.150	276.0	7.338
600.0	7.284	35.139	278.9	7.225
650.0	7.179	35.126	273.6	7.115
700.0	6.660	35.075	240.9	6.594
750.0	6.345	35.067	234.6	6.276
800.0	5.771	35.008	229.9	5.700
850.0	5.595	35.024	234.5	5.521
900.0	5.310	35.024	241.1	5.232
950.0	4.929	34.992	247.2	4.850
1000.0	4.668	34.975	253.4	4.586
1050.0	4.581	34.985	258.0	4.495
1100.0	4.149	34.929	262.6	4.063
1150.0	4.053	34.922	264.9	3.963
1200.0	4.010	34.925	266.7	3.916
1250.0	3.881	34.916	269.8	3.784
1300.0	3.760	34.909	271.3	3.661
1350.0	3.660	34.905	273.5	3.557
1400.0	3.591	34.903	275.8	3.484
1450.0	3.526	34.899	277.2	3.416
1500.0	3.477	34.897	278.1	3.363
1550.0	3.445	34.899	278.8	3.327
1600.0	3.440	34.908	279.1	3.317
1650.0	3.433	34.915	279.3	3.307
1700.0	3.452	34.930	278.2	3.321
1750.0	3.344	34.926	278.9	3.209
1800.0	3.353	34.942	278.9	3.214
1850.0	3.280	34.950	277.6	3.137
1900.0	3.207	34.956	277.3	3.061
1950.0	3.125	34.963	276.2	2.975
2000.0	3.025	34.971	275.3	2.872
2050.0	2.958	34.973	276.0	2.802
2100.0	2.908	34.976	276.4	2.748
2150.0	2.899	34.976	274.9	2.734
2151.0	2.899	34.976	274.7	2.734



Station 32

Station	: 33	Campagne	: OVIDE 02
Date	: 22-06-02	Navire	: N/O THALASSA
Profondeur	: 2464	Organisme	: IFREMER
Position	: N 57 40.15		
	W 28 43.71		

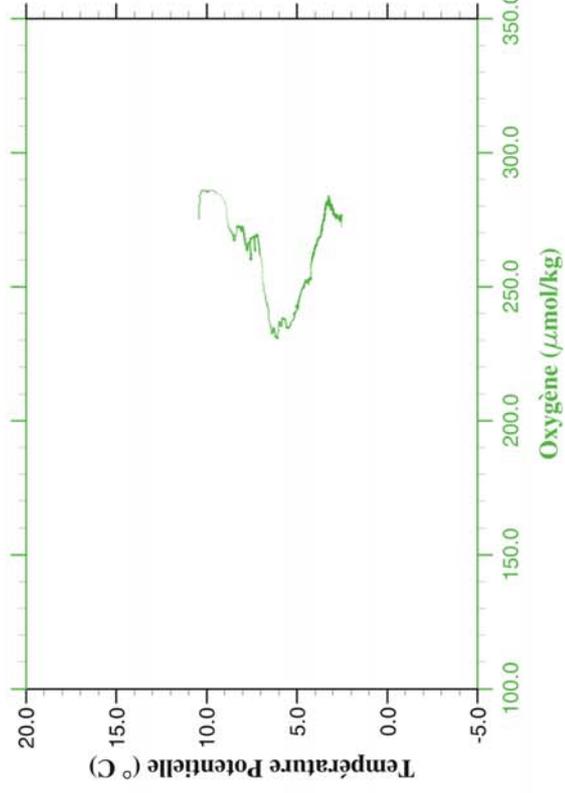
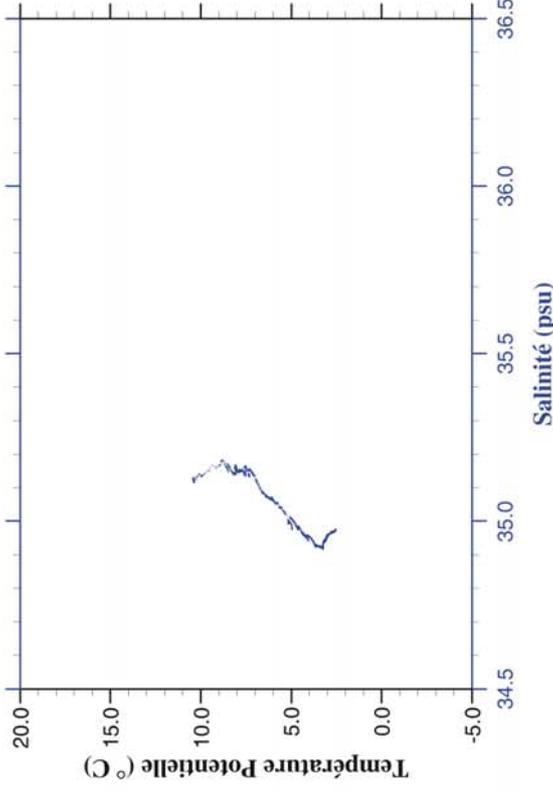
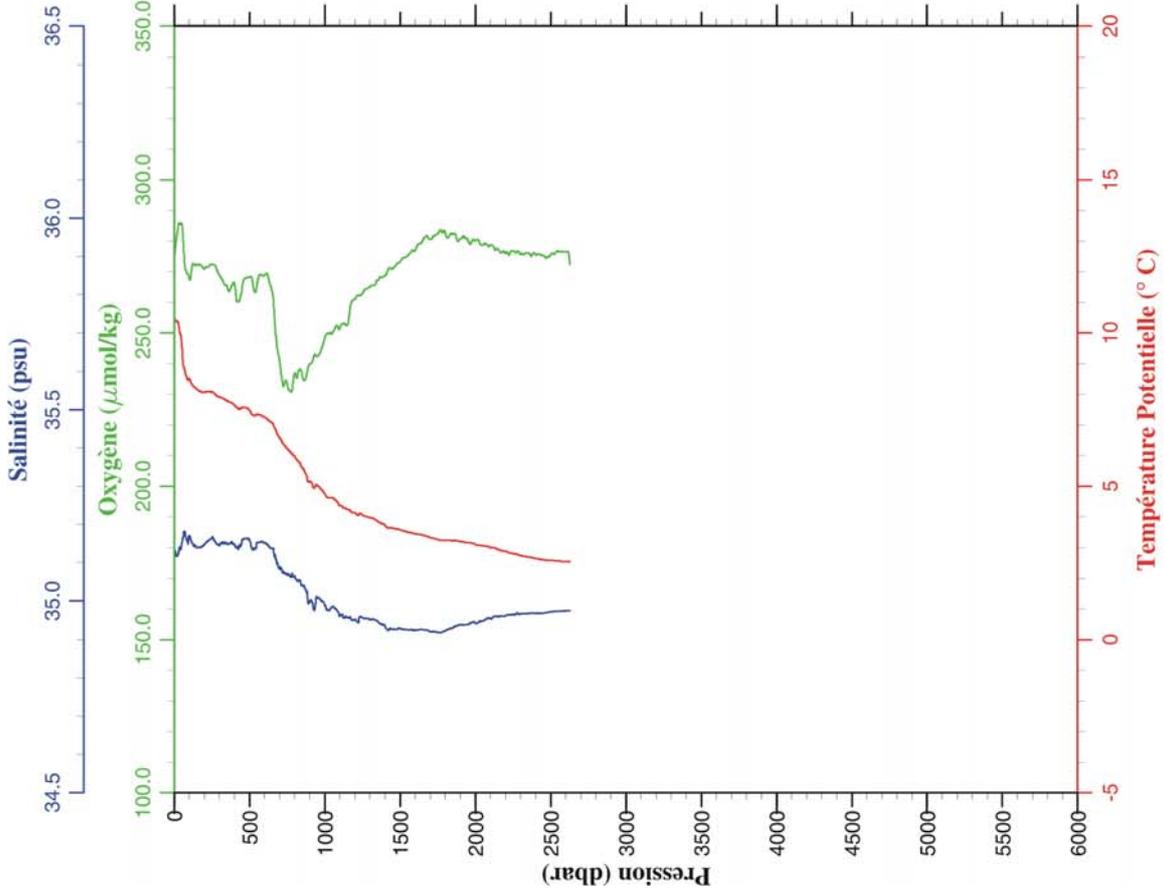
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	10.335	35.149	288.7	10.335
10.0	10.255	35.151	288.7	10.254
20.0	10.159	35.146	289.2	10.157
30.0	8.797	35.191	286.9	8.793
40.0	8.501	35.177	282.6	8.496
50.0	8.439	35.175	280.1	8.434
100.0	8.220	35.177	272.0	8.210
150.0	8.200	35.180	273.4	8.185
200.0	8.185	35.180	273.5	8.164
250.0	8.172	35.181	273.9	8.146
300.0	8.163	35.181	275.3	8.132
350.0	8.101	35.181	270.6	8.065
400.0	8.067	35.185	273.3	8.026
450.0	8.051	35.188	273.9	8.005
500.0	7.951	35.181	273.1	7.900
550.0	7.799	35.172	268.7	7.742
600.0	7.705	35.165	277.9	7.644
650.0	7.701	35.170	277.1	7.635
700.0	7.689	35.171	276.7	7.617
750.0	7.601	35.162	274.4	7.525
800.0	7.547	35.169	268.1	7.465
850.0	7.455	35.164	267.5	7.368
900.0	7.257	35.155	265.1	7.167
950.0	7.007	35.129	254.3	6.913
1000.0	6.459	35.090	231.9	6.364
1050.0	6.004	35.068	234.3	5.908
1100.0	5.455	35.032	236.1	5.358
1150.0	5.105	35.004	242.5	5.006
1200.0	4.781	34.971	247.9	4.680
1250.0	4.588	34.964	252.3	4.484
1300.0	4.363	34.947	256.8	4.257
1350.0	4.223	34.936	260.3	4.114
1400.0	4.229	34.945	260.6	4.116
1450.0	4.100	34.936	264.7	3.984
1500.0	4.102	34.953	265.9	3.981
1550.0	4.048	34.955	268.4	3.923
1600.0	3.755	34.916	272.8	3.629
1650.0	3.718	34.919	272.5	3.588
1700.0	3.664	34.923	274.5	3.530
1750.0	3.588	34.918	276.3	3.450
1800.0	3.507	34.917	278.5	3.365
1850.0	3.484	34.925	279.1	3.338
1900.0	3.414	34.925	280.1	3.265
1950.0	3.384	34.924	280.7	3.231
2000.0	3.419	34.945	278.7	3.260
2050.0	3.326	34.946	278.2	3.164
2100.0	3.290	34.956	277.6	3.123
2150.0	3.165	34.964	276.3	2.996
2200.0	3.067	34.970	276.4	2.894
2250.0	3.028	34.975	276.2	2.852
2300.0	2.992	34.978	277.0	2.812
2350.0	2.947	34.979	276.6	2.762
2400.0	2.902	34.980	276.3	2.713
2450.0	2.853	34.978	276.4	2.661
2492.0	2.822	34.978	276.2	2.626



Station 33

Station	: 34	Campagne	: OVIDE 02
Date	: 22-06-02	Navire	: N/O THALASSA
Profondeur	: 2647	Organisme	: IFREMER
Position	: N 57 21.99		
	W 28 9.57		

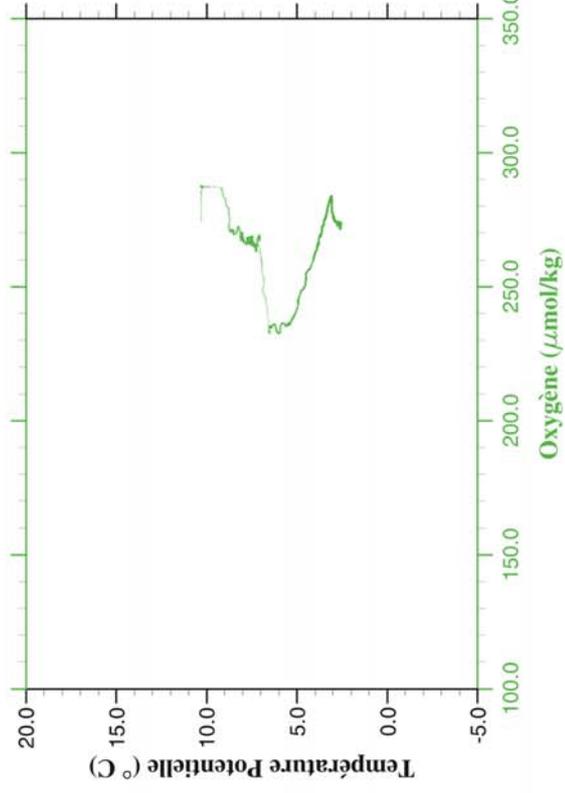
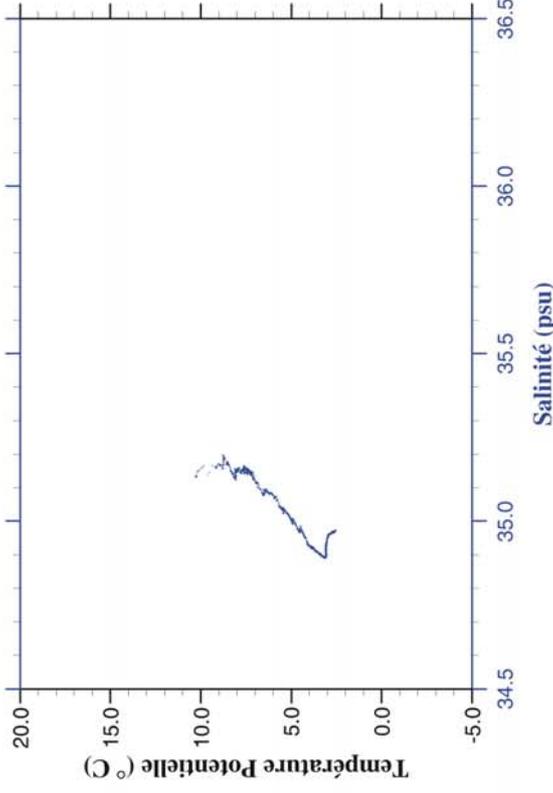
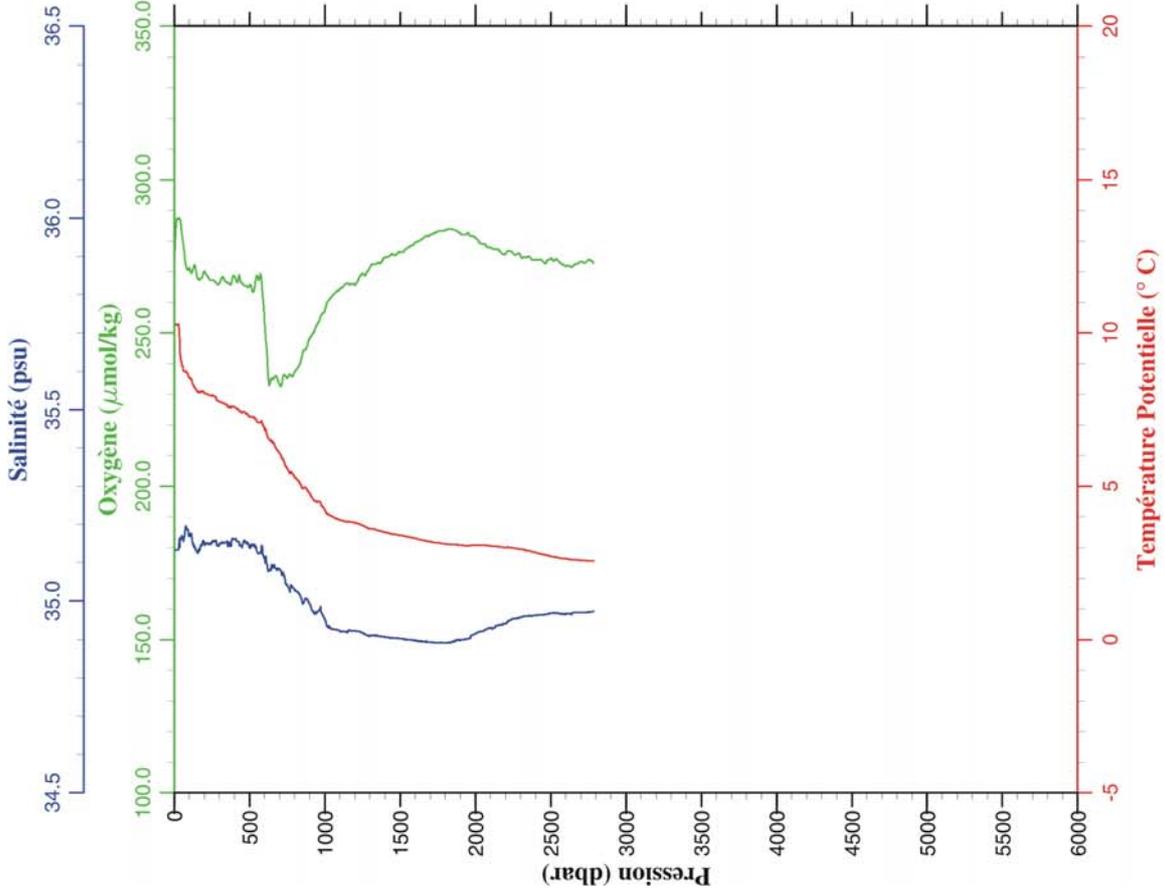
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	10.423	35.125	275.3	10.423
10.0	10.417	35.119	278.8	10.415
20.0	10.357	35.122	282.5	10.354
30.0	10.256	35.131	285.8	10.253
40.0	9.972	35.134	285.4	9.967
50.0	9.639	35.151	285.8	9.634
100.0	8.522	35.171	267.7	8.511
150.0	8.185	35.140	272.2	8.169
200.0	8.094	35.148	270.9	8.074
250.0	8.107	35.164	272.4	8.081
300.0	7.934	35.145	269.0	7.903
350.0	7.832	35.152	265.4	7.797
400.0	7.696	35.149	266.2	7.656
450.0	7.626	35.160	264.4	7.581
500.0	7.533	35.159	268.2	7.483
550.0	7.410	35.153	265.6	7.356
600.0	7.310	35.152	268.9	7.251
650.0	7.135	35.137	263.5	7.072
700.0	6.638	35.083	240.7	6.572
750.0	6.308	35.072	233.5	6.238
800.0	6.057	35.066	236.9	5.984
850.0	5.676	35.041	236.2	5.601
900.0	5.232	35.000	239.9	5.155
950.0	5.099	35.010	242.3	5.019
1000.0	4.830	34.991	248.5	4.747
1050.0	4.714	34.986	249.9	4.628
1100.0	4.455	34.962	251.7	4.367
1150.0	4.337	34.957	252.7	4.245
1200.0	4.227	34.953	261.1	4.132
1250.0	4.169	34.958	263.0	4.069
1300.0	4.075	34.952	265.1	3.972
1350.0	3.972	34.948	267.2	3.866
1400.0	3.826	34.933	268.7	3.716
1450.0	3.744	34.927	270.9	3.631
1500.0	3.700	34.928	273.3	3.583
1550.0	3.625	34.925	275.2	3.504
1600.0	3.577	34.925	276.9	3.453
1650.0	3.535	34.926	280.3	3.407
1700.0	3.456	34.920	280.5	3.324
1750.0	3.397	34.919	282.4	3.262
1800.0	3.372	34.923	282.8	3.233
1850.0	3.368	34.930	282.2	3.224
1900.0	3.348	34.938	280.8	3.200
1950.0	3.306	34.938	280.3	3.154
2000.0	3.248	34.942	280.1	3.092
2050.0	3.214	34.948	278.7	3.054
2100.0	3.163	34.955	278.8	2.999
2150.0	3.111	34.961	277.4	2.942
2200.0	3.049	34.962	275.9	2.877
2250.0	2.981	34.965	276.8	2.806
2300.0	2.921	34.966	275.7	2.742
2350.0	2.874	34.968	276.0	2.691
2400.0	2.832	34.968	275.5	2.645
2450.0	2.796	34.970	275.3	2.604
2500.0	2.779	34.972	275.6	2.583
2550.0	2.762	34.974	276.8	2.562
2600.0	2.750	34.975	276.4	2.545
2628.0	2.742	34.975	272.4	2.534



Station 34

Station	: 35	Campagne	: OVIDE 02
Date	: 23-06-02	Navire	: N/O THALASSA
Profondeur	: 2767	Organisme	: IFREMER
Position	: N 57 0.17		
	W 27 52.63		

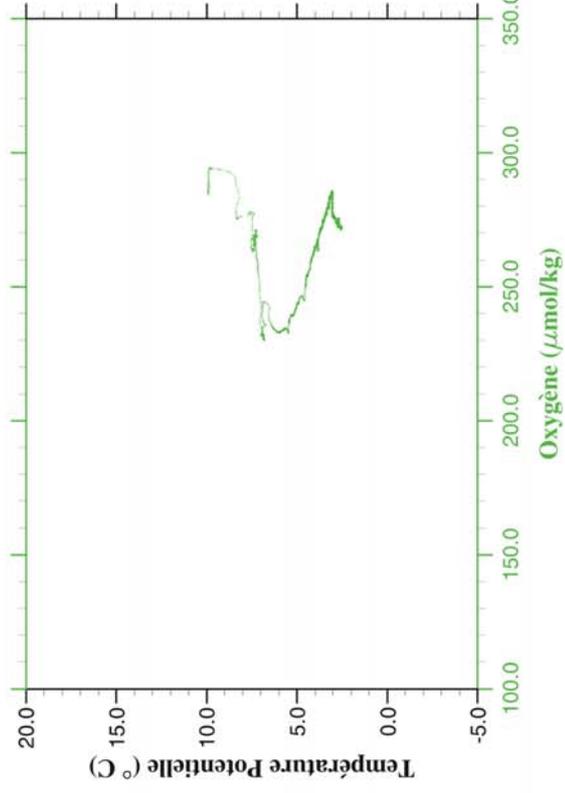
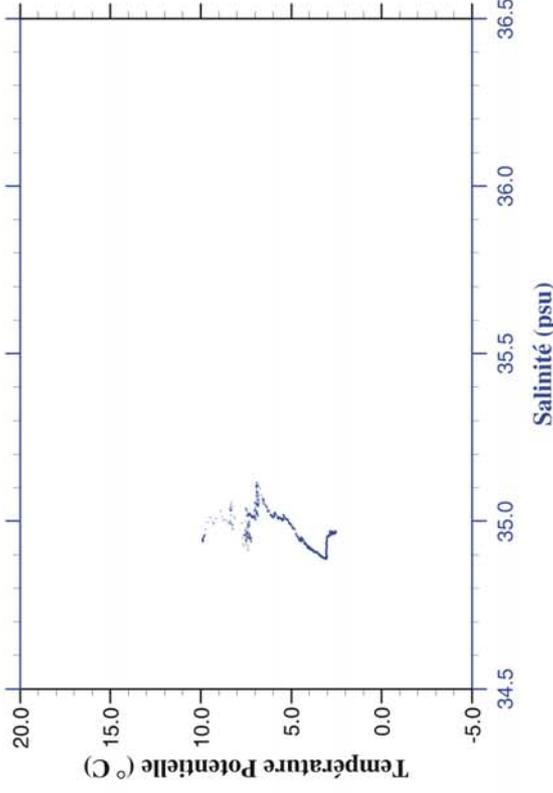
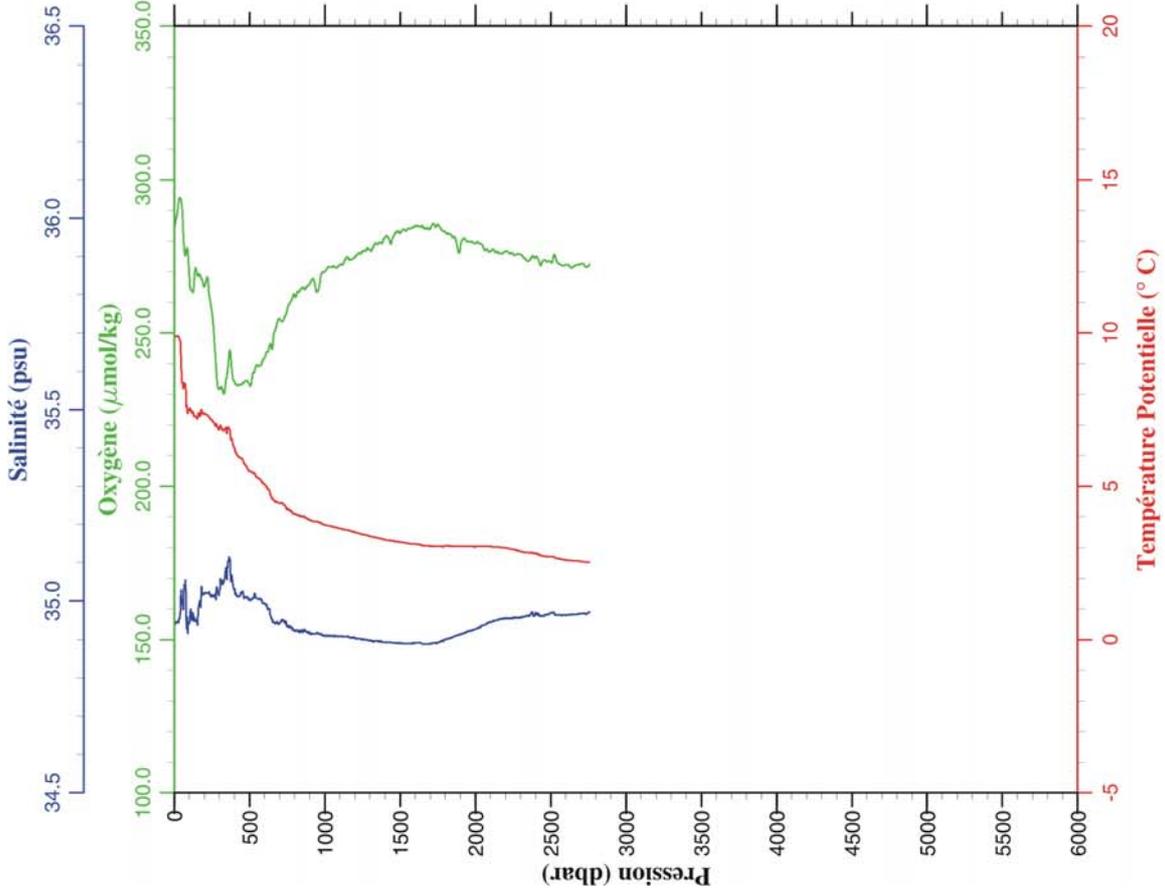
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	10.280	35.133	274.7	10.280
10.0	10.280	35.134	283.1	10.279
20.0	10.280	35.133	287.6	10.278
30.0	10.239	35.144	287.2	10.235
40.0	9.223	35.165	287.0	9.218
50.0	9.024	35.172	283.0	9.019
100.0	8.564	35.172	271.3	8.554
150.0	8.133	35.130	268.8	8.117
200.0	8.045	35.149	270.2	8.025
250.0	7.986	35.152	267.4	7.960
300.0	7.806	35.149	266.3	7.776
350.0	7.702	35.155	266.4	7.667
400.0	7.628	35.162	268.5	7.588
450.0	7.433	35.140	266.3	7.388
500.0	7.311	35.141	265.6	7.262
550.0	7.169	35.130	268.8	7.116
600.0	6.928	35.114	254.0	6.870
650.0	6.531	35.094	234.9	6.470
700.0	6.152	35.083	233.1	6.088
750.0	5.648	35.042	235.2	5.583
800.0	5.373	35.029	237.2	5.305
850.0	5.005	34.998	242.8	4.935
900.0	4.847	34.993	248.4	4.773
950.0	4.565	34.972	253.0	4.489
1000.0	4.306	34.953	257.3	4.228
1050.0	4.095	34.928	262.3	4.013
1100.0	3.983	34.921	264.3	3.898
1150.0	3.922	34.918	266.3	3.834
1200.0	3.901	34.923	265.6	3.808
1250.0	3.823	34.917	269.4	3.727
1300.0	3.718	34.910	271.5	3.619
1350.0	3.667	34.910	272.8	3.563
1400.0	3.609	34.907	274.6	3.502
1450.0	3.555	34.904	275.8	3.444
1500.0	3.514	34.902	276.3	3.399
1550.0	3.469	34.900	277.9	3.351
1600.0	3.423	34.897	279.6	3.300
1650.0	3.363	34.894	280.9	3.237
1700.0	3.323	34.893	282.0	3.193
1750.0	3.289	34.891	283.2	3.155
1800.0	3.257	34.891	283.6	3.119
1850.0	3.242	34.896	283.8	3.100
1900.0	3.224	34.899	282.5	3.077
1950.0	3.215	34.901	282.7	3.064
2000.0	3.235	34.914	281.1	3.079
2050.0	3.240	34.922	279.0	3.079
2100.0	3.224	34.930	277.9	3.059
2150.0	3.214	34.938	277.4	3.044
2200.0	3.177	34.941	275.8	3.003
2250.0	3.162	34.954	276.0	2.984
2300.0	3.125	34.958	275.1	2.943
2350.0	3.093	34.961	275.0	2.906
2400.0	3.027	34.963	274.1	2.836
2450.0	2.978	34.964	273.3	2.783
2500.0	2.918	34.969	274.3	2.719
2550.0	2.875	34.968	273.6	2.673
2600.0	2.845	34.966	271.8	2.638
2650.0	2.818	34.971	272.0	2.606
2700.0	2.807	34.970	273.3	2.591
2750.0	2.789	34.972	273.9	2.568
2785.0	2.782	34.974	272.8	2.557



Station 35

Station	: 36	Campagne	: OVIDE 02
Date	: 23-06-02	Navire	: N/O THALASSA
Profondeur	: 2737	Organisme	: IFREMER
Position	: N 56 37.46		
	W 27 33.35		

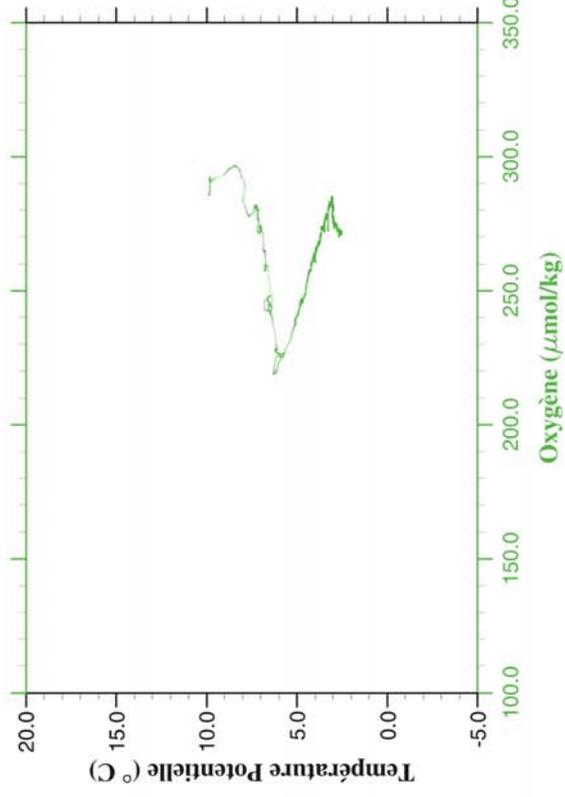
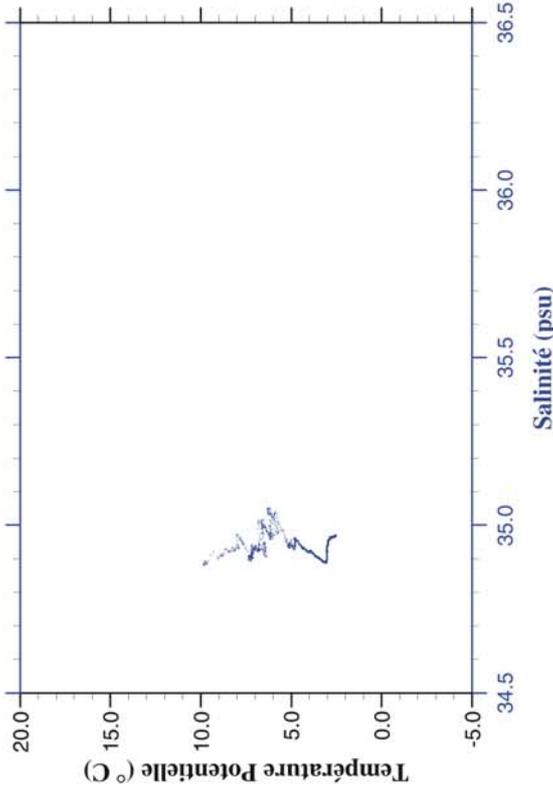
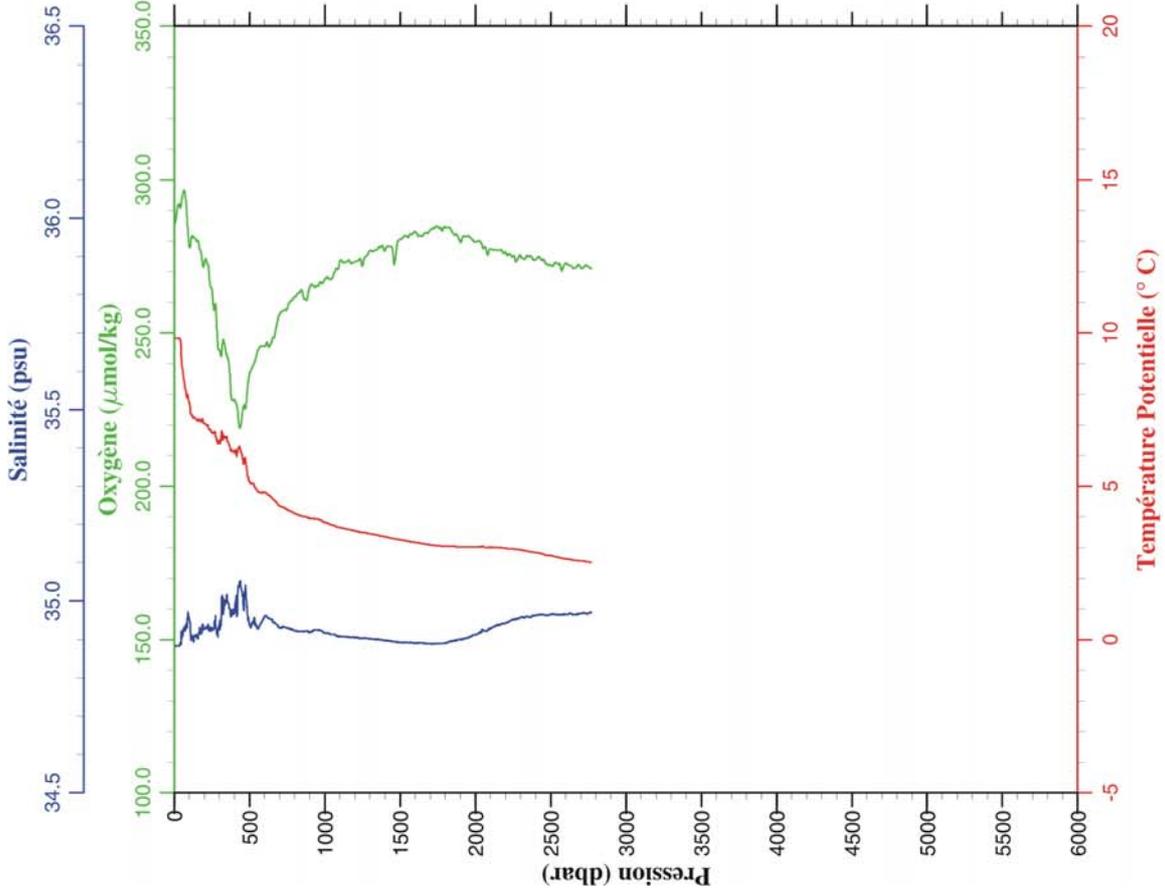
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	9.907	34.940	284.6	9.907
10.0	9.903	34.944	286.7	9.901
20.0	9.890	34.947	288.9	9.888
30.0	9.887	34.949	293.3	9.884
40.0	9.722	34.976	294.0	9.717
50.0	8.647	35.004	292.3	8.641
100.0	7.489	34.942	268.7	7.479
150.0	7.274	34.951	269.7	7.260
200.0	7.389	35.023	265.2	7.370
250.0	7.195	35.013	256.9	7.171
300.0	6.904	35.025	231.6	6.876
350.0	6.807	35.063	236.1	6.774
400.0	6.288	35.027	234.1	6.252
450.0	5.948	35.022	233.3	5.909
500.0	5.528	35.002	233.1	5.485
550.0	5.336	35.007	239.5	5.290
600.0	5.110	34.994	241.7	5.061
650.0	4.634	34.951	244.8	4.583
700.0	4.497	34.942	254.5	4.443
750.0	4.326	34.933	257.5	4.268
800.0	4.158	34.924	262.5	4.098
850.0	4.063	34.921	264.8	3.999
900.0	3.965	34.915	266.1	3.898
950.0	3.919	34.917	263.4	3.848
1000.0	3.814	34.909	270.1	3.739
1050.0	3.758	34.909	271.7	3.680
1100.0	3.702	34.909	272.1	3.620
1150.0	3.661	34.908	274.8	3.575
1200.0	3.595	34.903	274.8	3.505
1250.0	3.522	34.900	276.7	3.429
1300.0	3.468	34.898	277.2	3.372
1350.0	3.415	34.896	278.9	3.315
1400.0	3.359	34.892	281.2	3.255
1450.0	3.329	34.892	281.0	3.221
1500.0	3.291	34.890	282.6	3.179
1550.0	3.257	34.890	284.0	3.141
1600.0	3.234	34.891	284.9	3.114
1650.0	3.194	34.888	284.9	3.070
1700.0	3.177	34.888	284.0	3.049
1750.0	3.169	34.892	285.5	3.036
1800.0	3.187	34.901	283.0	3.050
1850.0	3.190	34.906	281.2	3.049
1900.0	3.187	34.914	278.1	3.041
1950.0	3.184	34.922	279.8	3.033
2000.0	3.184	34.926	279.1	3.029
2050.0	3.196	34.938	278.3	3.035
2100.0	3.195	34.945	276.7	3.031
2150.0	3.190	34.952	276.5	3.021
2200.0	3.161	34.955	276.6	2.987
2250.0	3.115	34.954	275.8	2.937
2300.0	3.055	34.956	275.6	2.873
2350.0	3.019	34.962	273.4	2.833
2400.0	3.009	34.970	274.8	2.819
2450.0	2.921	34.961	273.7	2.727
2500.0	2.907	34.970	273.3	2.709
2550.0	2.843	34.963	272.8	2.641
2600.0	2.801	34.963	272.2	2.595
2650.0	2.782	34.966	271.6	2.571
2700.0	2.761	34.968	272.5	2.546
2750.0	2.748	34.969	271.7	2.528
2758.0	2.750	34.972	272.4	2.530



Station 36

Station	: 37	Campagne	: OVIDE 02
Date	: 23-06-02	Navire	: N/O THALASSA
Profondeur	: 2758	Organisme	: IFREMER
Position	: N 56 14.57		
	W 27 16.66		

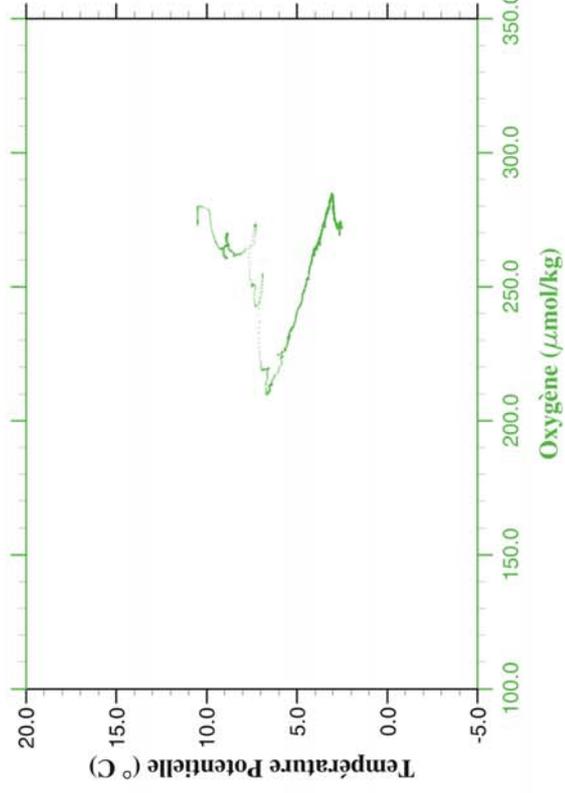
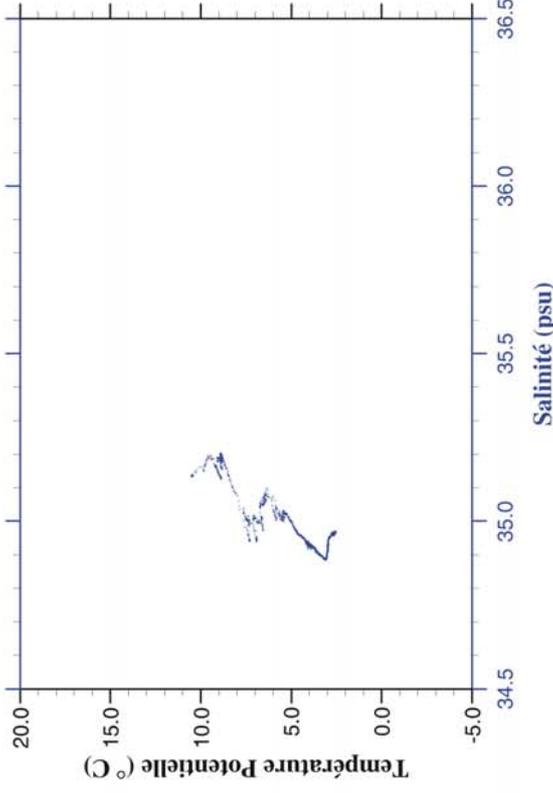
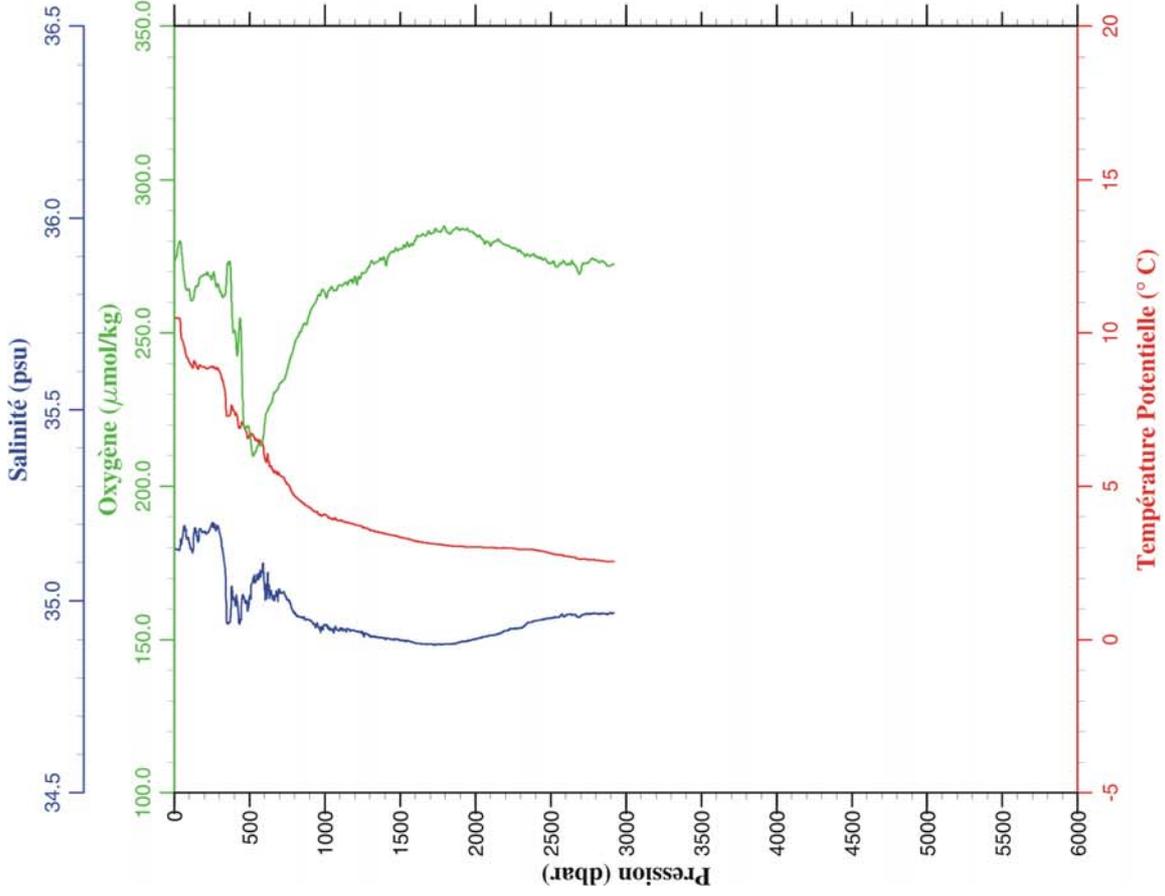
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	9.836	34.883	285.8	9.836
10.0	9.837	34.883	286.7	9.836
20.0	9.834	34.883	290.5	9.832
30.0	9.835	34.883	292.0	9.832
40.0	9.769	34.892	290.9	9.765
50.0	9.042	34.900	293.4	9.036
100.0	7.736	34.952	278.2	7.726
150.0	7.183	34.910	280.0	7.168
200.0	7.060	34.926	273.0	7.041
250.0	6.784	34.923	264.2	6.760
300.0	6.535	34.942	244.6	6.508
350.0	6.634	35.016	242.5	6.602
400.0	6.130	34.968	228.3	6.095
450.0	6.070	35.023	222.7	6.031
500.0	5.196	34.938	236.6	5.155
550.0	4.901	34.929	243.4	4.857
600.0	4.853	34.959	245.6	4.805
650.0	4.639	34.953	247.8	4.588
700.0	4.405	34.931	256.1	4.351
750.0	4.293	34.930	257.8	4.236
800.0	4.178	34.923	261.7	4.117
850.0	4.088	34.921	263.8	4.024
900.0	4.025	34.920	265.0	3.957
950.0	4.003	34.925	265.4	3.931
1000.0	3.889	34.916	267.5	3.814
1050.0	3.816	34.914	267.8	3.737
1100.0	3.732	34.909	273.3	3.649
1150.0	3.682	34.907	273.4	3.595
1200.0	3.633	34.903	273.2	3.543
1250.0	3.584	34.903	271.9	3.491
1300.0	3.549	34.902	276.9	3.451
1350.0	3.505	34.900	277.5	3.403
1400.0	3.456	34.898	277.0	3.351
1450.0	3.409	34.895	277.3	3.300
1500.0	3.366	34.892	280.5	3.253
1550.0	3.331	34.892	281.3	3.214
1600.0	3.286	34.891	283.1	3.165
1650.0	3.251	34.890	281.8	3.126
1700.0	3.215	34.890	283.7	3.087
1750.0	3.191	34.890	284.6	3.058
1800.0	3.179	34.890	284.4	3.042
1850.0	3.174	34.896	282.8	3.032
1900.0	3.166	34.900	279.6	3.020
1950.0	3.165	34.905	281.8	3.015
2000.0	3.170	34.913	279.8	3.015
2050.0	3.189	34.923	277.8	3.029
2100.0	3.175	34.929	277.4	3.010
2150.0	3.177	34.939	277.0	3.008
2200.0	3.149	34.944	276.4	2.976
2250.0	3.135	34.952	275.0	2.957
2300.0	3.109	34.958	275.3	2.927
2350.0	3.053	34.960	275.0	2.867
2400.0	3.033	34.963	273.9	2.842
2450.0	2.983	34.965	273.9	2.788
2500.0	2.936	34.966	272.2	2.737
2550.0	2.887	34.964	272.4	2.684
2600.0	2.835	34.966	272.8	2.628
2650.0	2.802	34.966	271.2	2.590
2700.0	2.778	34.967	271.3	2.562
2750.0	2.754	34.969	271.6	2.534
2770.0	2.750	34.971	271.1	2.528



Station 37

Station	: 38	Campagne	: OVIDE 02
Date	: 23-06-02	Navire	: N/O THALASSA
Profondeur	: 2896	Organisme	: IFREMER
Position	: N 55 52.80		
	W 27 0.02		

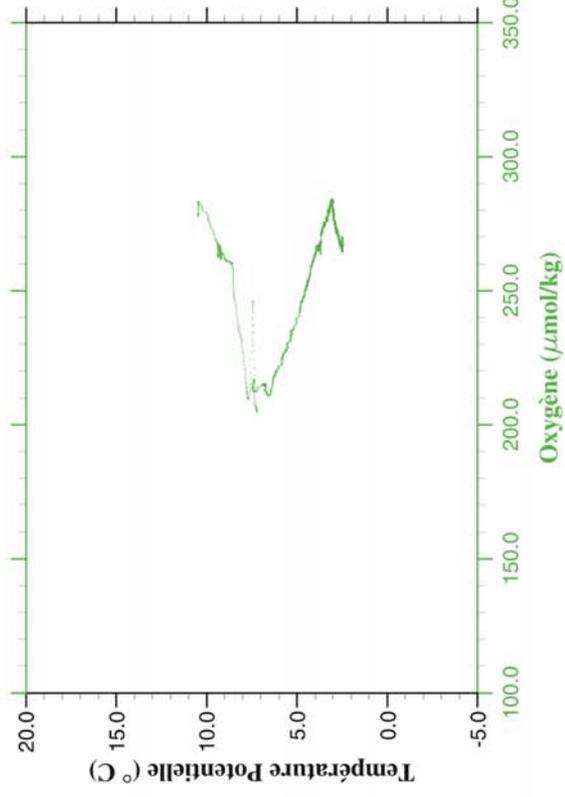
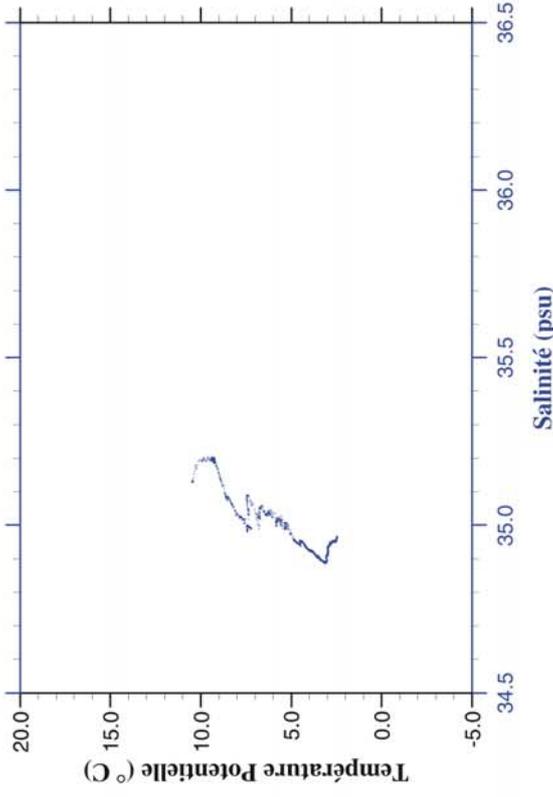
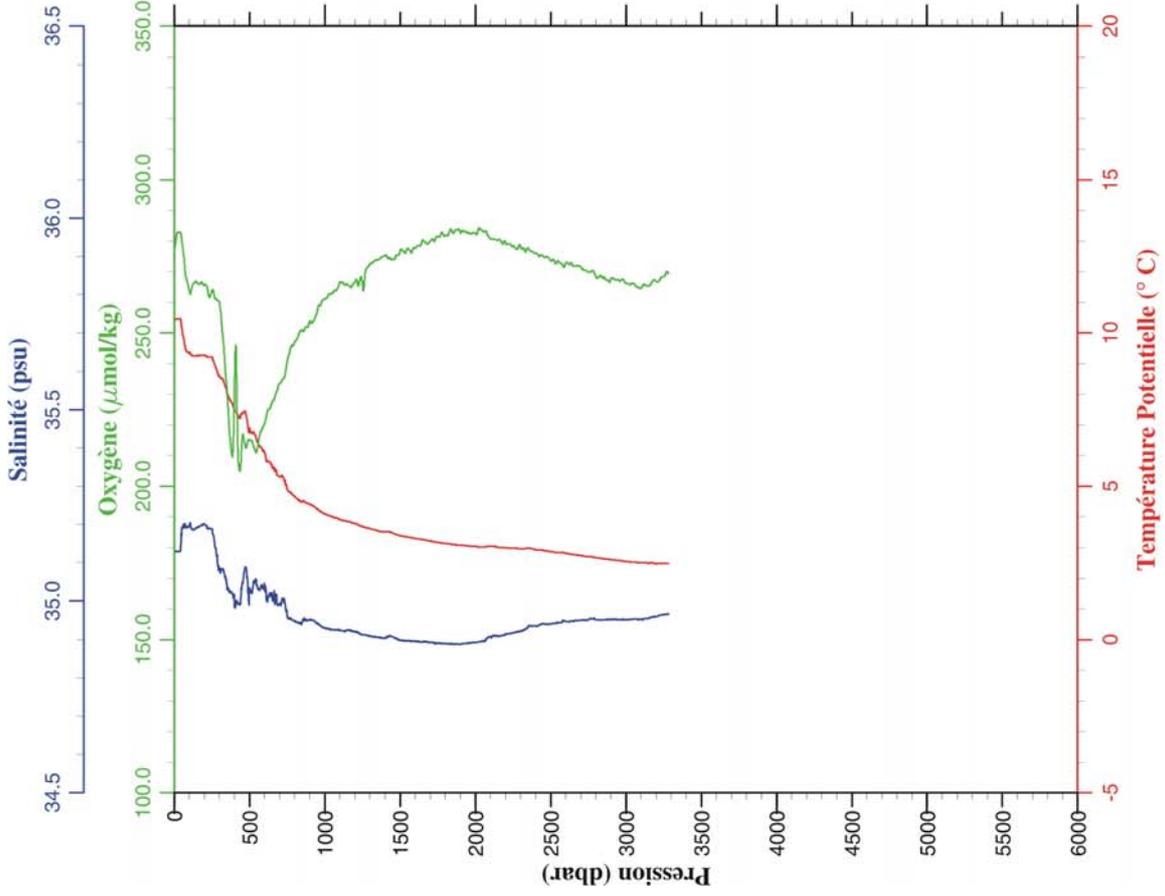
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	10.505	35.138	273.1	10.504
10.0	10.500	35.137	274.4	10.499
20.0	10.492	35.134	276.4	10.490
30.0	10.493	35.135	279.1	10.490
40.0	10.343	35.149	280.0	10.339
50.0	9.820	35.150	276.9	9.814
100.0	9.074	35.153	264.0	9.063
150.0	8.905	35.167	265.2	8.889
200.0	8.913	35.182	269.1	8.892
250.0	8.942	35.201	267.6	8.915
300.0	8.792	35.180	264.3	8.760
350.0	7.326	34.942	270.3	7.292
400.0	7.465	35.002	250.8	7.425
450.0	7.132	35.006	237.1	7.089
500.0	6.704	35.012	217.9	6.657
550.0	6.566	35.063	212.5	6.515
600.0	6.029	35.030	219.9	5.975
650.0	5.615	35.013	227.8	5.559
700.0	5.437	35.026	233.5	5.377
750.0	5.152	35.004	237.9	5.089
800.0	4.754	34.967	246.6	4.690
850.0	4.527	34.956	251.6	4.459
900.0	4.379	34.951	256.4	4.308
950.0	4.231	34.939	261.6	4.157
1000.0	4.157	34.939	263.2	4.079
1050.0	4.030	34.928	264.7	3.949
1100.0	3.983	34.929	265.7	3.898
1150.0	3.920	34.927	265.7	3.831
1200.0	3.847	34.922	268.5	3.755
1250.0	3.764	34.922	269.7	3.669
1300.0	3.675	34.909	272.3	3.576
1350.0	3.610	34.905	273.3	3.507
1400.0	3.559	34.904	273.3	3.453
1450.0	3.508	34.900	276.5	3.398
1500.0	3.459	34.898	277.6	3.345
1550.0	3.403	34.897	279.5	3.286
1600.0	3.335	34.891	280.2	3.214
1650.0	3.295	34.889	282.4	3.170
1700.0	3.265	34.888	282.5	3.136
1750.0	3.238	34.888	283.1	3.105
1800.0	3.214	34.888	284.2	3.077
1850.0	3.188	34.889	283.4	3.047
1900.0	3.184	34.893	283.6	3.038
1950.0	3.171	34.897	283.9	3.021
2000.0	3.169	34.901	282.2	3.014
2050.0	3.168	34.905	280.5	3.008
2100.0	3.158	34.910	278.5	2.994
2150.0	3.155	34.915	280.6	2.986
2200.0	3.159	34.923	278.7	2.986
2250.0	3.153	34.927	277.8	2.975
2300.0	3.124	34.931	276.9	2.941
2350.0	3.134	34.944	275.5	2.947
2400.0	3.109	34.949	274.9	2.916
2450.0	3.071	34.953	274.0	2.875
2500.0	3.015	34.956	272.8	2.814
2550.0	2.962	34.959	271.7	2.758
2600.0	2.928	34.962	272.5	2.720
2650.0	2.889	34.964	272.7	2.676
2700.0	2.842	34.962	270.3	2.625
2750.0	2.833	34.967	273.0	2.611
2800.0	2.814	34.968	273.9	2.588
2850.0	2.791	34.968	273.2	2.560
2900.0	2.772	34.970	272.1	2.536
2919.0	2.774	34.969	272.4	2.536



Station 38

Station	: 39	Campagne	: OVIDE 02
Date	: 23-06-02	Navire	: N/O THALASSA
Profondeur	: 3273	Organisme	: IFREMER
Position	: N 55 30.20		
	W 26 42.97		

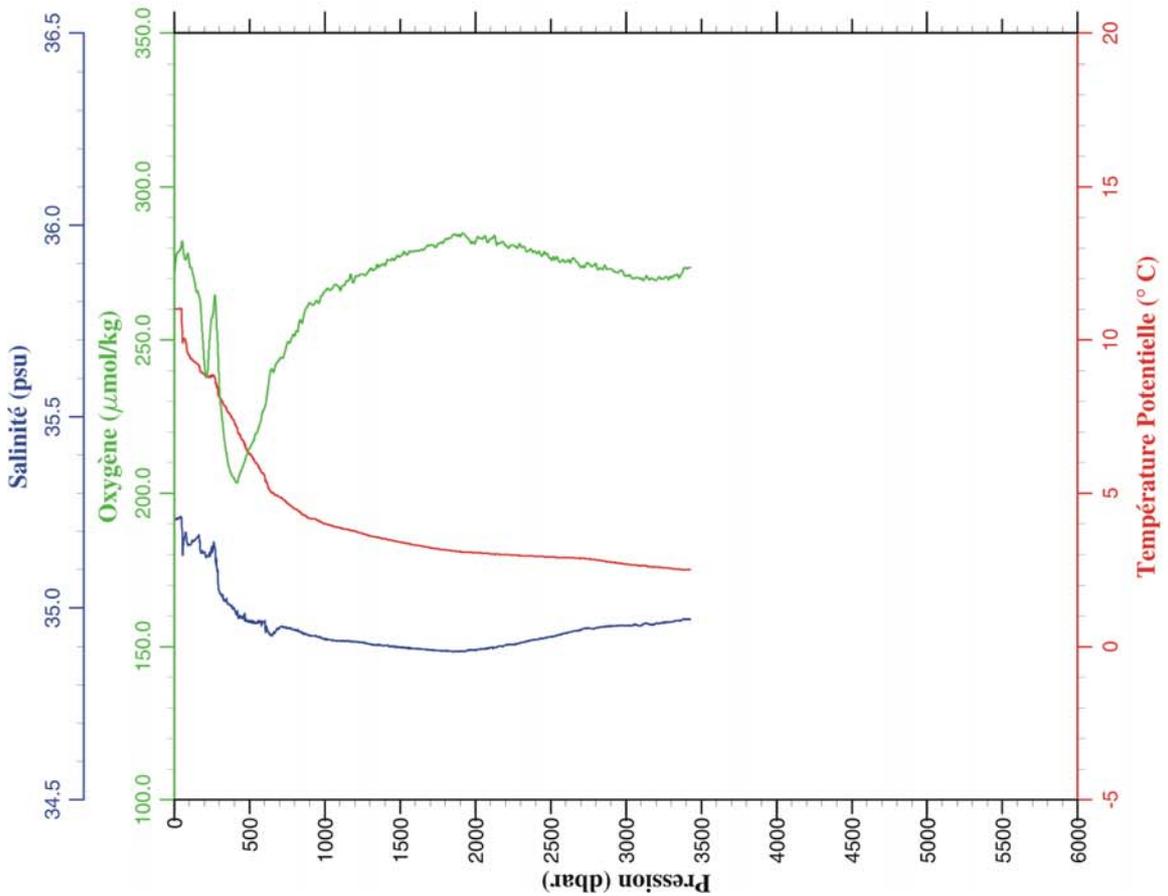
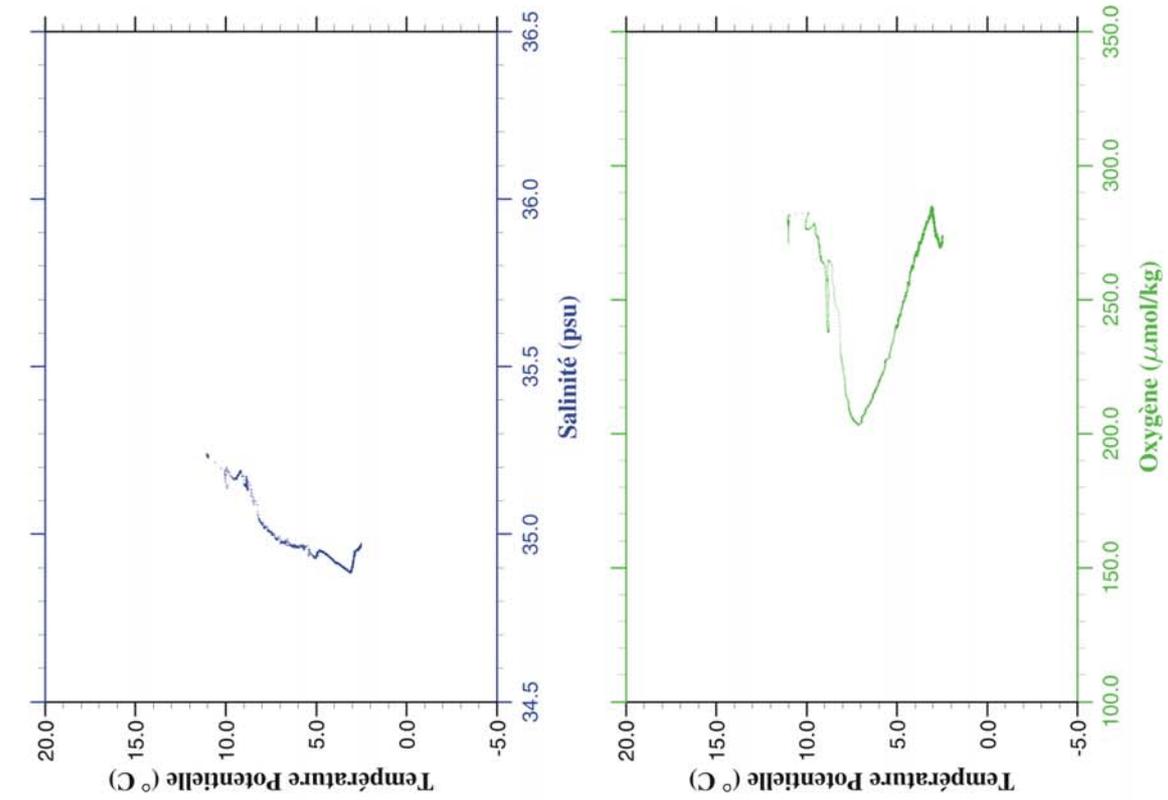
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	10.449	35.130	277.8	10.449	3050.0	2.779	34.954	266.1	2.528
10.0	10.457	35.130	279.7	10.456	3100.0	2.761	34.953	264.6	2.505
20.0	10.462	35.130	282.9	10.459	3150.0	2.754	34.955	265.4	2.493
30.0	10.462	35.129	282.8	10.459	3200.0	2.740	34.959	266.9	2.474
40.0	10.459	35.132	283.0	10.455	3250.0	2.759	34.966	268.3	2.487
50.0	10.251	35.169	280.6	10.245	3283.0	2.765	34.966	269.3	2.489
100.0	9.377	35.199	263.9	9.366					
150.0	9.286	35.193	266.7	9.270					
200.0	9.304	35.202	265.6	9.282					
250.0	9.244	35.189	263.7	9.217					
300.0	8.640	35.086	260.1	8.608					
350.0	8.075	35.035	231.6	8.040					
400.0	7.469	34.990	232.1	7.430					
450.0	7.411	35.040	214.8	7.367					
500.0	6.950	35.034	215.0	6.902					
550.0	6.549	35.041	211.6	6.498					
600.0	6.191	35.046	220.4	6.137					
650.0	5.688	35.018	227.4	5.631					
700.0	5.380	34.993	233.6	5.321					
750.0	4.945	34.959	240.6	4.884					
800.0	4.733	34.947	247.1	4.668					
850.0	4.577	34.946	251.0	4.509					
900.0	4.482	34.951	253.9	4.410					
950.0	4.323	34.941	257.1	4.248					
1000.0	4.185	34.930	261.1	4.108					
1050.0	4.082	34.925	263.0	4.000					
1100.0	4.002	34.925	266.6	3.917					
1150.0	3.944	34.924	265.8	3.856					
1200.0	3.880	34.921	266.7	3.787					
1250.0	3.782	34.913	266.0	3.686					
1300.0	3.714	34.909	272.5	3.615					
1350.0	3.655	34.905	273.9	3.551					
1400.0	3.619	34.903	275.3	3.512					
1450.0	3.592	34.907	274.2	3.481					
1500.0	3.500	34.899	276.8	3.386					
1550.0	3.460	34.896	277.6	3.342					
1600.0	3.423	34.895	277.7	3.301					
1650.0	3.389	34.895	280.4	3.263					
1700.0	3.348	34.893	280.1	3.218					
1750.0	3.306	34.890	281.6	3.172					
1800.0	3.276	34.889	281.8	3.138					
1850.0	3.245	34.889	282.6	3.103					
1900.0	3.219	34.887	282.7	3.073					
1950.0	3.204	34.890	282.7	3.053					
2000.0	3.189	34.893	282.5	3.034					
2050.0	3.180	34.895	283.2	3.020					
2100.0	3.204	34.907	280.9	3.039					
2150.0	3.182	34.909	280.3	3.013					
2200.0	3.167	34.914	279.5	2.993					
2250.0	3.155	34.918	278.5	2.977					
2300.0	3.146	34.922	278.3	2.963					
2350.0	3.173	34.933	277.7	2.985					
2400.0	3.121	34.936	276.0	2.929					
2450.0	3.103	34.940	275.0	2.906					
2500.0	3.067	34.941	273.6	2.866					
2550.0	3.049	34.943	273.6	2.843					
2600.0	3.023	34.947	272.8	2.813					
2650.0	2.988	34.948	271.8	2.773					
2700.0	2.957	34.949	271.5	2.738					
2750.0	2.927	34.951	269.9	2.703					
2800.0	2.894	34.952	268.5	2.666					
2850.0	2.872	34.952	268.1	2.639					
2900.0	2.845	34.952	267.6	2.608					
2950.0	2.821	34.952	267.3	2.580					
3000.0	2.790	34.952	266.3	2.543					



Station 39

Station : 40 Campagne : OVIDE 02
 Date : 24-06-02 Navire : N/O THALASSA
 Profondeur : 3389 Organisme : IFREMER
 Position : N 55 9.04
 W 26 24.91

PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	10.989	35.230	271.3	10.989	3050.0	2.918	34.956	270.3	2.664
10.0	11.010	35.233	276.0	11.009	3100.0	2.888	34.955	270.2	2.630
20.0	11.020	35.233	278.4	11.017	3150.0	2.876	34.959	269.9	2.612
30.0	11.016	35.233	279.0	11.012	3200.0	2.863	34.961	269.5	2.594
40.0	11.035	35.239	279.5	11.030	3250.0	2.846	34.963	270.0	2.572
50.0	10.989	35.236	281.4	10.983	3300.0	2.825	34.964	270.6	2.546
100.0	9.514	35.166	275.3	9.502	3350.0	2.805	34.967	270.5	2.521
150.0	9.251	35.184	265.8	9.234	3400.0	2.787	34.972	273.4	2.498
200.0	8.903	35.143	242.5	8.881	3427.0	2.790	34.971	273.6	2.498
250.0	8.873	35.160	257.3	8.846					
300.0	8.166	35.043	234.8	8.135					
350.0	7.720	35.014	212.0	7.685					
400.0	7.361	35.001	204.5	7.322					
450.0	6.793	34.978	208.0	6.751					
500.0	6.344	34.967	214.8	6.299					
550.0	6.000	34.963	219.7	5.951					
600.0	5.642	34.961	227.7	5.590					
650.0	5.076	34.928	240.3	5.023					
700.0	4.923	34.949	243.6	4.866					
750.0	4.738	34.948	248.9	4.678					
800.0	4.560	34.943	251.5	4.496					
850.0	4.378	34.935	255.5	4.312					
900.0	4.250	34.929	262.2	4.180					
950.0	4.194	34.925	262.8	4.120					
1000.0	4.083	34.918	265.9	4.006					
1050.0	4.013	34.916	266.8	3.932					
1100.0	3.957	34.914	266.5	3.873					
1150.0	3.910	34.914	269.3	3.822					
1200.0	3.857	34.913	270.1	3.765					
1250.0	3.781	34.911	271.4	3.685					
1300.0	3.706	34.906	273.2	3.607					
1350.0	3.665	34.904	274.5	3.562					
1400.0	3.622	34.902	274.3	3.515					
1450.0	3.565	34.900	276.7	3.454					
1500.0	3.528	34.898	277.1	3.414					
1550.0	3.480	34.896	277.9	3.362					
1600.0	3.430	34.894	279.0	3.308					
1650.0	3.396	34.893	279.3	3.270					
1700.0	3.349	34.891	281.0	3.219					
1750.0	3.319	34.890	281.3	3.185					
1800.0	3.290	34.889	282.9	3.151					
1850.0	3.262	34.887	284.3	3.120					
1900.0	3.236	34.888	283.7	3.089					
1950.0	3.228	34.890	283.2	3.077					
2000.0	3.220	34.891	281.8	3.065					
2050.0	3.206	34.892	283.1	3.046					
2100.0	3.192	34.896	283.1	3.028					
2150.0	3.181	34.899	281.6	3.012					
2200.0	3.173	34.904	280.8	2.999					
2250.0	3.158	34.906	280.9	2.979					
2300.0	3.151	34.910	280.9	2.968					
2350.0	3.146	34.915	279.1	2.958					
2400.0	3.142	34.918	278.9	2.949					
2450.0	3.132	34.920	278.1	2.935					
2500.0	3.118	34.926	276.6	2.916					
2550.0	3.113	34.930	276.3	2.906					
2600.0	3.113	34.936	275.4	2.901					
2650.0	3.110	34.940	276.7	2.893					
2700.0	3.093	34.943	273.6	2.871					
2750.0	3.084	34.947	275.0	2.858					
2800.0	3.058	34.949	274.9	2.827					
2850.0	3.027	34.951	273.5	2.791					
2900.0	2.989	34.953	273.2	2.749					
2950.0	2.964	34.954	272.1	2.720					
3000.0	2.935	34.955	271.0	2.686					



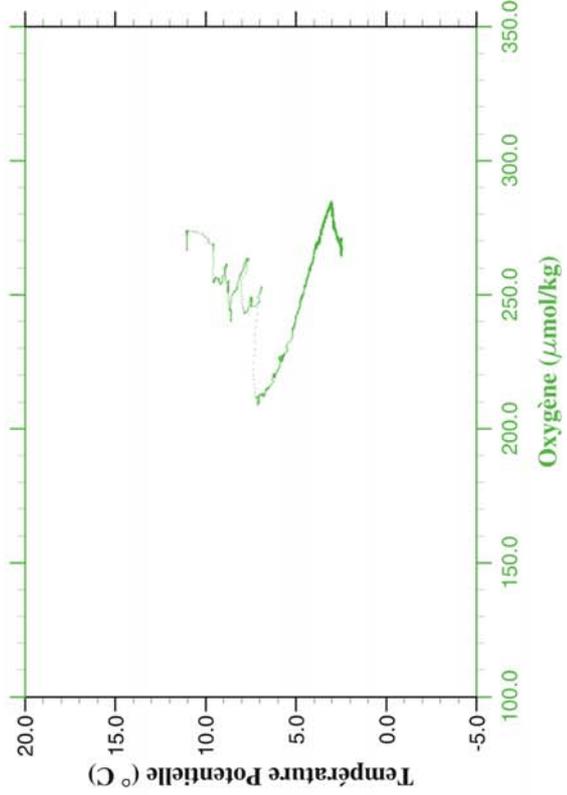
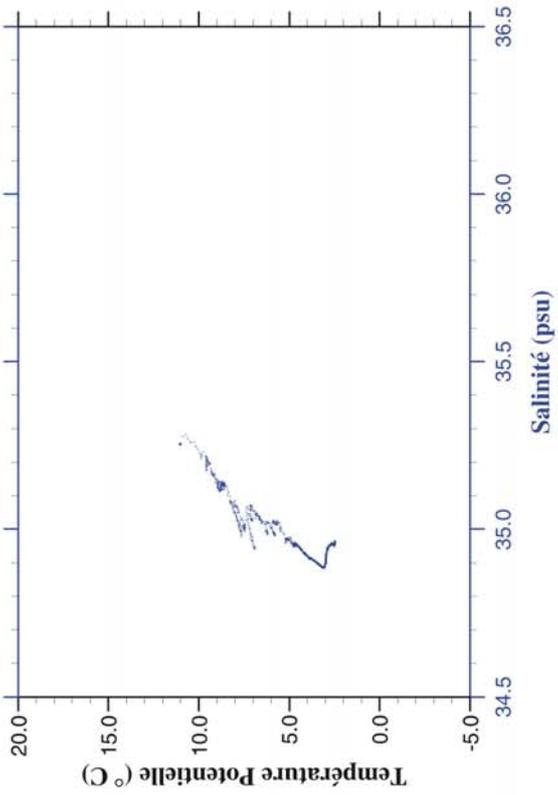
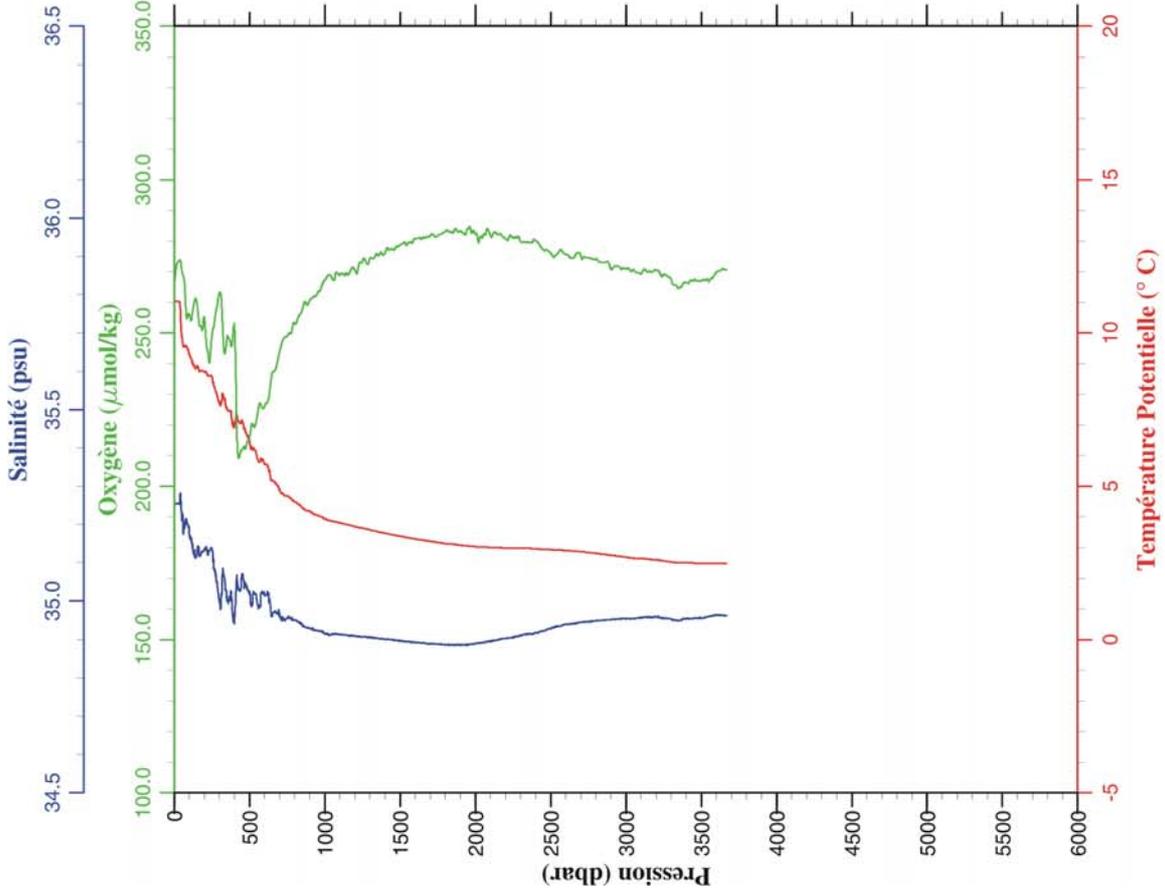
Station 40

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Station   : 41          Campagne  : OVIDE 02
Date      : 24-06-02   Navire    : N/O THALASSA
Profondeur : 3615      Organisme : IFREMER
Position  : N 54 45.82
           : W 26  7.33
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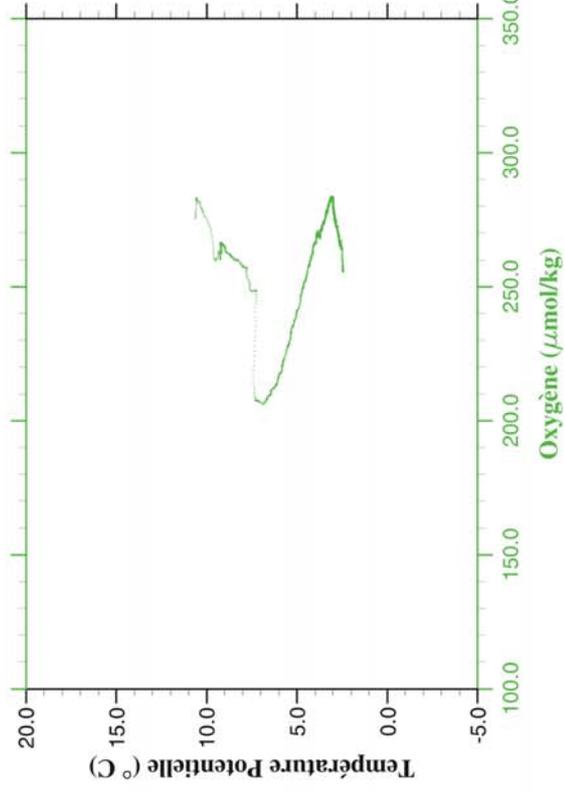
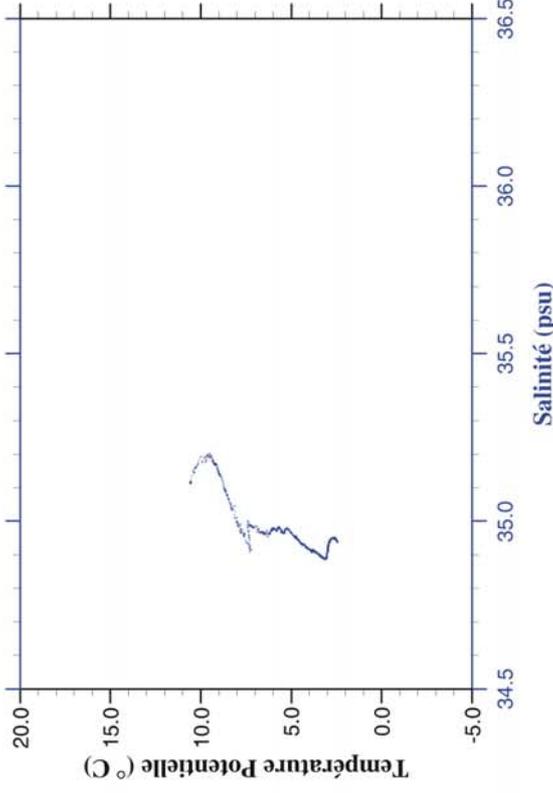
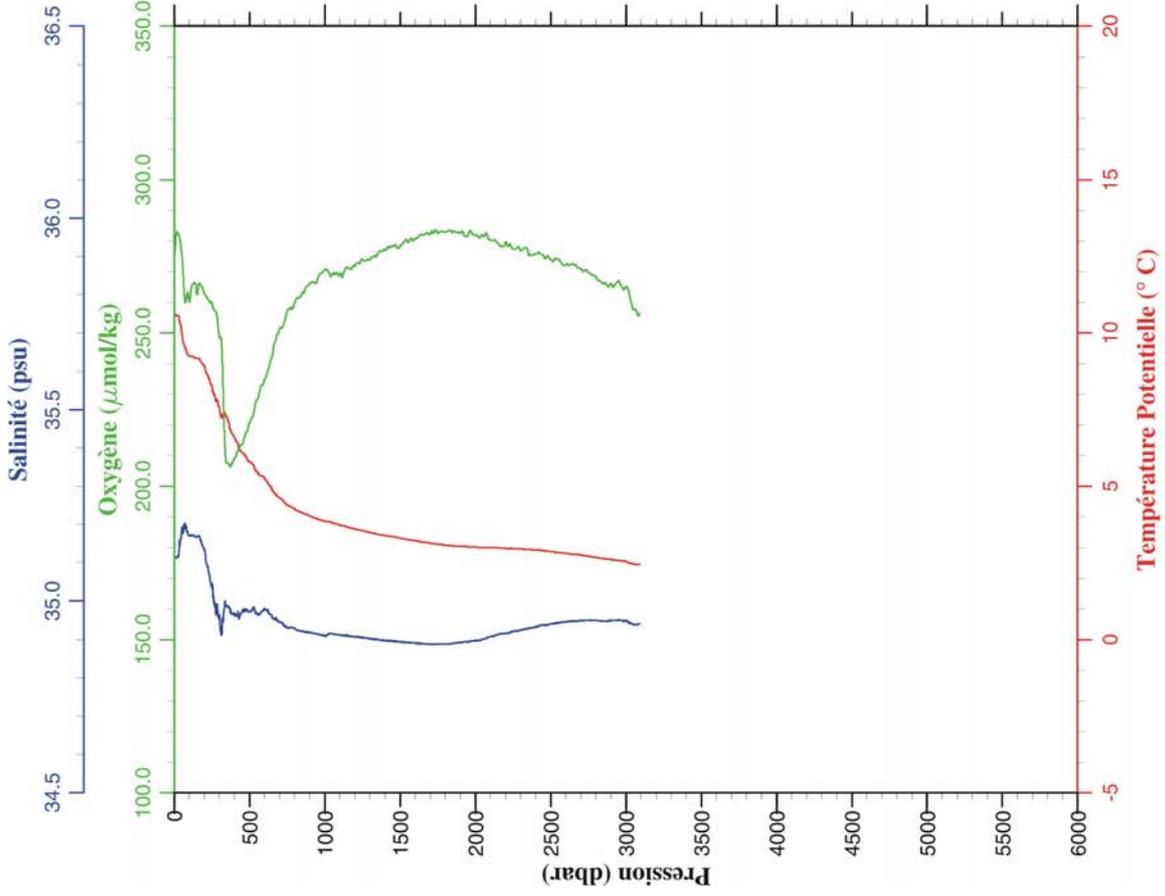
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	11.032	35.254	266.4	11.032	3050.0	2.908	34.955	270.7	2.654
10.0	11.039	35.254	270.0	11.037	3100.0	2.900	34.956	269.3	2.641
20.0	11.038	35.255	272.9	11.035	3150.0	2.888	34.959	270.1	2.624
30.0	11.031	35.255	273.6	11.027	3200.0	2.866	34.959	270.5	2.597
40.0	10.737	35.283	273.7	10.732	3250.0	2.835	34.955	269.2	2.561
50.0	9.906	35.223	270.9	9.900	3300.0	2.803	34.953	267.4	2.525
100.0	9.300	35.175	256.0	9.289	3350.0	2.782	34.949	264.5	2.499
150.0	8.920	35.128	259.9	8.904	3400.0	2.793	34.953	266.5	2.504
200.0	8.760	35.136	255.1	8.739	3450.0	2.790	34.955	267.2	2.496
250.0	8.602	35.137	248.7	8.576	3500.0	2.783	34.954	266.9	2.483
300.0	7.746	35.000	263.1	7.716	3550.0	2.784	34.959	266.8	2.479
350.0	7.530	35.008	248.5	7.496	3600.0	2.798	34.964	269.9	2.487
400.0	6.957	34.941	252.2	6.919	3650.0	2.799	34.964	270.9	2.482
450.0	7.206	35.070	211.8	7.162	3668.0	2.799	34.963	270.6	2.480
500.0	6.520	35.026	215.8	6.474					
550.0	6.012	35.005	222.5	5.963					
600.0	5.786	35.024	226.0	5.734					
650.0	5.225	34.961	236.8	5.170					
700.0	4.974	34.961	244.0	4.916					
750.0	4.748	34.956	249.0	4.687					
800.0	4.573	34.951	253.2	4.509					
850.0	4.364	34.939	257.6	4.298					
900.0	4.247	34.930	260.8	4.177					
950.0	4.126	34.923	262.9	4.053					
1000.0	4.014	34.915	267.4	3.938					
1050.0	3.943	34.915	267.8	3.863					
1100.0	3.883	34.912	268.8	3.800					
1150.0	3.843	34.911	269.0	3.755					
1200.0	3.772	34.909	270.4	3.680					
1250.0	3.725	34.907	273.4	3.629					
1300.0	3.672	34.905	274.5	3.574					
1350.0	3.621	34.903	275.4	3.518					
1400.0	3.576	34.899	276.1	3.470					
1450.0	3.528	34.899	277.4	3.418					
1500.0	3.486	34.897	278.8	3.372					
1550.0	3.446	34.894	279.0	3.328					
1600.0	3.402	34.891	280.8	3.280					
1650.0	3.371	34.891	281.1	3.245					
1700.0	3.336	34.889	281.7	3.205					
1750.0	3.301	34.889	281.8	3.167					
1800.0	3.266	34.887	283.0	3.128					
1850.0	3.251	34.886	282.6	3.109					
1900.0	3.223	34.886	283.3	3.076					
1950.0	3.202	34.886	284.0	3.052					
2000.0	3.183	34.890	282.3	3.028					
2050.0	3.176	34.892	281.5	3.016					
2100.0	3.171	34.896	281.8	3.007					
2150.0	3.162	34.899	282.1	2.993					
2200.0	3.161	34.903	280.8	2.988					
2250.0	3.162	34.904	281.1	2.983					
2300.0	3.161	34.910	279.9	2.978					
2350.0	3.161	34.915	279.8	2.973					
2400.0	3.151	34.918	280.1	2.958					
2450.0	3.138	34.922	277.1	2.941					
2500.0	3.134	34.928	276.1	2.932					
2550.0	3.128	34.934	276.2	2.921					
2600.0	3.109	34.940	275.7	2.898					
2650.0	3.102	34.941	274.4	2.885					
2700.0	3.088	34.945	275.2	2.866					
2750.0	3.062	34.947	274.7	2.836					
2800.0	3.043	34.949	274.2	2.812					
2850.0	3.016	34.951	273.0	2.781					
2900.0	2.985	34.952	270.8	2.745					
2950.0	2.961	34.953	271.8	2.716					
3000.0	2.936	34.954	271.0	2.687					



Station 41

Station	: 42	Campagne	: OVIDE 02
Date	: 24-06-02	Navire	: N/O THALASSA
Profondeur	: 3058	Organisme	: IFREMER
Position	: N 54 23.27		
	W 25 49.74		

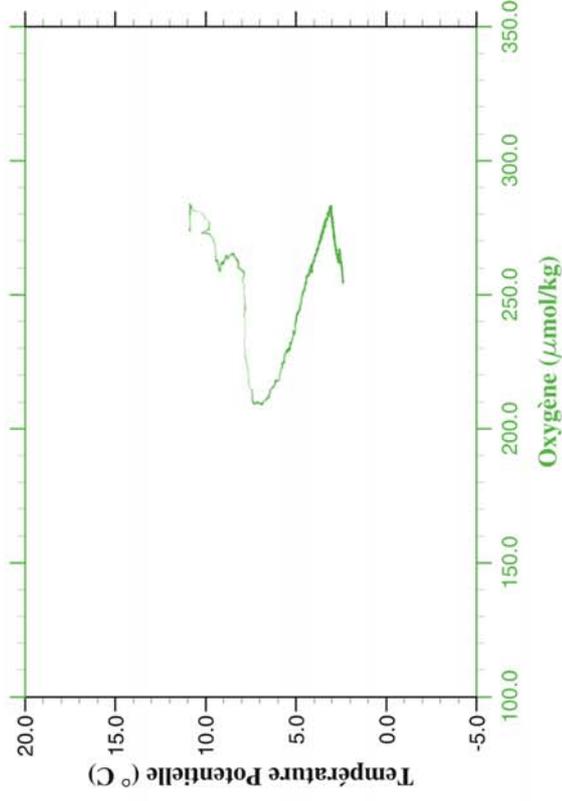
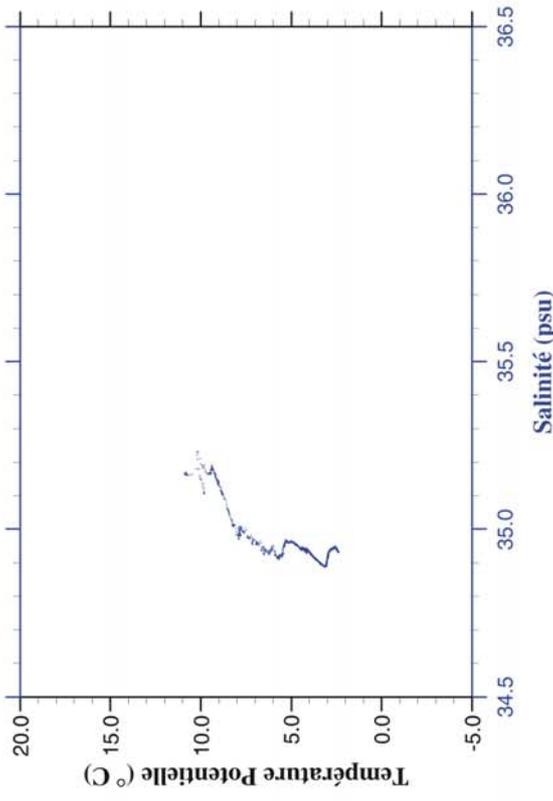
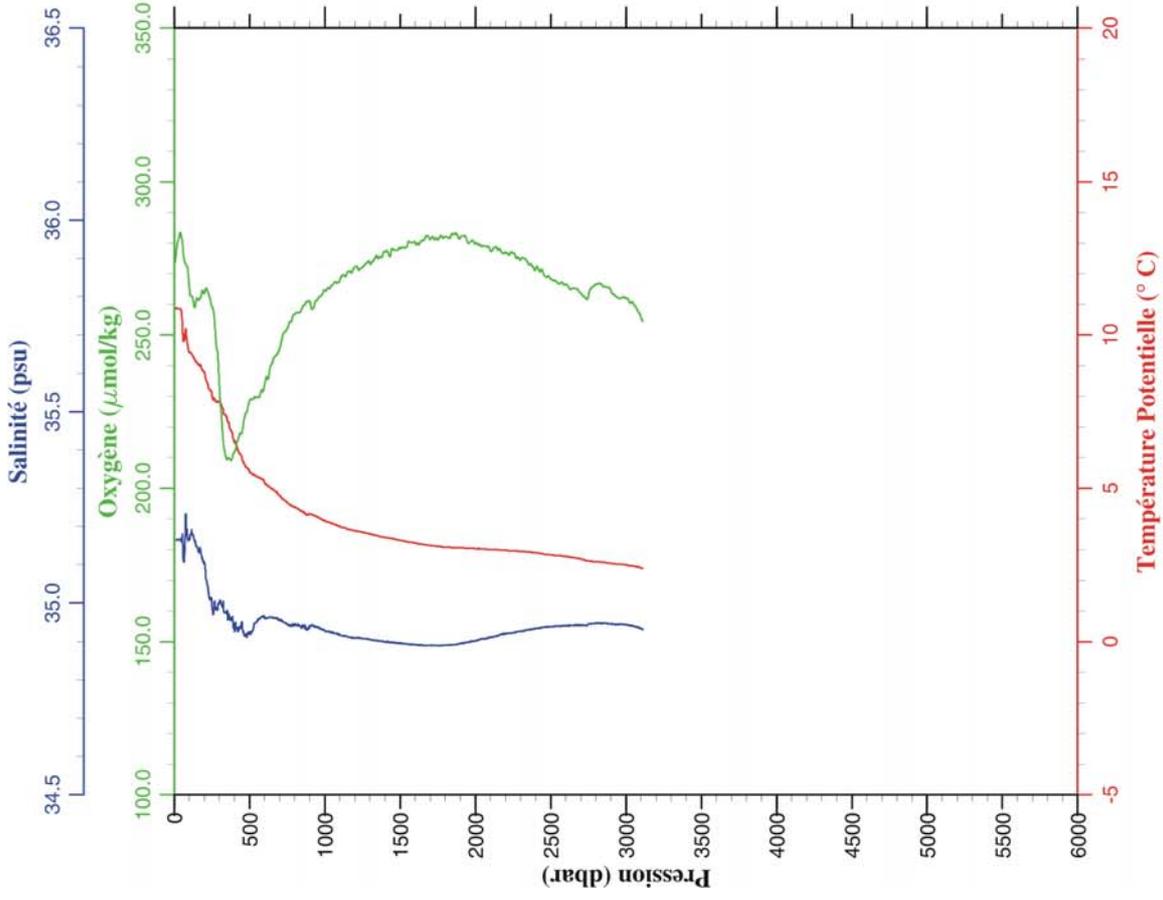
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	10.581	35.114	275.5	10.581	3050.0	2.714	34.939	257.6	2.464
10.0	10.576	35.115	280.2	10.574	3091.0	2.703	34.941	256.4	2.449
20.0	10.580	35.114	283.0	10.578					
30.0	10.545	35.120	282.1	10.541					
40.0	10.298	35.161	279.6	10.293					
50.0	10.090	35.181	276.1	10.084					
100.0	9.259	35.170	260.1	9.248					
150.0	9.194	35.167	262.6	9.177					
200.0	8.949	35.137	262.9	8.927					
250.0	8.286	35.036	259.9	8.260					
300.0	7.617	34.965	248.9	7.587					
350.0	7.302	34.987	207.4	7.268					
400.0	6.618	34.965	209.3	6.581					
450.0	6.156	34.971	213.5	6.116					
500.0	5.850	34.972	220.6	5.806					
550.0	5.534	34.967	228.2	5.487					
600.0	5.294	34.978	235.0	5.244					
650.0	4.935	34.958	242.3	4.883					
700.0	4.671	34.945	251.4	4.615					
750.0	4.437	34.930	257.3	4.378					
800.0	4.327	34.930	259.8	4.265					
850.0	4.201	34.922	263.0	4.136					
900.0	4.097	34.918	266.2	4.028					
950.0	4.006	34.915	267.2	3.933					
1000.0	3.928	34.909	270.7	3.852					
1050.0	3.892	34.915	269.3	3.813					
1100.0	3.817	34.911	269.2	3.734					
1150.0	3.758	34.911	271.4	3.671					
1200.0	3.699	34.907	271.8	3.609					
1250.0	3.649	34.905	274.0	3.555					
1300.0	3.592	34.901	273.8	3.494					
1350.0	3.533	34.900	275.7	3.431					
1400.0	3.494	34.898	277.1	3.388					
1450.0	3.463	34.896	278.3	3.353					
1500.0	3.424	34.894	278.2	3.310					
1550.0	3.382	34.892	279.6	3.265					
1600.0	3.343	34.891	280.9	3.222					
1650.0	3.304	34.889	282.0	3.179					
1700.0	3.274	34.888	282.2	3.145					
1750.0	3.242	34.888	282.6	3.109					
1800.0	3.219	34.888	283.0	3.082					
1850.0	3.197	34.889	283.1	3.055					
1900.0	3.182	34.892	282.5	3.036					
1950.0	3.178	34.894	281.9	3.027					
2000.0	3.174	34.896	282.1	3.019					
2050.0	3.164	34.900	281.8	3.005					
2100.0	3.165	34.908	280.5	3.001					
2150.0	3.161	34.913	279.3	2.992					
2200.0	3.152	34.916	279.6	2.978					
2250.0	3.146	34.921	277.4	2.968					
2300.0	3.139	34.924	276.9	2.956					
2350.0	3.123	34.928	276.3	2.936					
2400.0	3.112	34.933	275.8	2.920					
2450.0	3.097	34.938	275.5	2.900					
2500.0	3.072	34.941	274.0	2.870					
2550.0	3.045	34.943	274.1	2.839					
2600.0	3.024	34.946	272.2	2.814					
2650.0	2.994	34.948	272.5	2.779					
2700.0	2.971	34.949	270.9	2.752					
2750.0	2.944	34.950	269.7	2.720					
2800.0	2.905	34.950	268.3	2.677					
2850.0	2.871	34.948	265.9	2.638					
2900.0	2.852	34.950	266.2	2.615					
2950.0	2.823	34.951	267.1	2.581					
3000.0	2.794	34.951	265.2	2.547					



Station 42

Station	: 43	Campagne	: OVIDE 02
Date	: 24-06-02	Navire	: N/O THALASSA
Profondeur	: 3079	Organisme	: IFREMER
Position	: N 54 0.75		
	W 25 32.16		

PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	10.865	35.165	274.0	10.865	3050.0	2.708	34.941	260.2	2.459
10.0	10.875	35.165	275.1	10.873	3100.0	2.650	34.934	255.7	2.396
20.0	10.880	35.165	279.9	10.877	3112.0	2.636	34.931	254.4	2.382
30.0	10.861	35.165	281.6	10.857					
40.0	10.857	35.165	283.6	10.852					
50.0	10.737	35.164	281.7	10.731					
100.0	9.444	35.167	265.6	9.433					
150.0	9.121	35.147	262.1	9.104					
200.0	8.821	35.106	263.5	8.800					
250.0	8.087	35.003	259.4	8.061					
300.0	7.865	34.998	233.6	7.835					
350.0	7.349	34.972	209.3	7.315					
400.0	6.528	34.927	211.8	6.491					
450.0	6.035	34.952	218.0	5.995					
500.0	5.578	34.918	228.5	5.535					
550.0	5.410	34.953	229.6	5.363					
600.0	5.254	34.962	233.7	5.204					
650.0	5.027	34.962	240.8	4.973					
700.0	4.811	34.958	245.6	4.755					
750.0	4.601	34.945	252.0	4.542					
800.0	4.452	34.942	256.8	4.390					
850.0	4.320	34.939	259.0	4.254					
900.0	4.231	34.942	260.9	4.161					
950.0	4.139	34.937	261.6	4.066					
1000.0	4.020	34.928	264.6	3.944					
1050.0	3.927	34.923	266.3	3.847					
1100.0	3.839	34.917	267.6	3.755					
1150.0	3.753	34.912	270.5	3.666					
1200.0	3.697	34.909	272.1	3.606					
1250.0	3.657	34.907	272.2	3.563					
1300.0	3.608	34.905	273.3	3.509					
1350.0	3.552	34.903	275.5	3.450					
1400.0	3.503	34.899	277.0	3.397					
1450.0	3.464	34.898	278.2	3.354					
1500.0	3.414	34.896	278.3	3.300					
1550.0	3.370	34.894	279.6	3.253					
1600.0	3.339	34.893	280.2	3.218					
1650.0	3.292	34.890	280.9	3.167					
1700.0	3.261	34.889	281.2	3.132					
1750.0	3.239	34.889	281.1	3.106					
1800.0	3.218	34.890	282.2	3.080					
1850.0	3.201	34.892	283.2	3.059					
1900.0	3.205	34.894	281.8	3.059					
1950.0	3.194	34.898	280.2	3.043					
2000.0	3.184	34.902	279.9	3.029					
2050.0	3.175	34.907	279.2	3.015					
2100.0	3.172	34.911	277.5	3.008					
2150.0	3.160	34.914	277.7	2.991					
2200.0	3.147	34.921	277.1	2.974					
2250.0	3.139	34.923	276.9	2.961					
2300.0	3.130	34.927	274.6	2.947					
2350.0	3.108	34.931	273.5	2.921					
2400.0	3.091	34.934	271.4	2.899					
2450.0	3.051	34.937	270.3	2.855					
2500.0	3.023	34.939	268.3	2.823					
2550.0	3.006	34.940	266.9	2.801					
2600.0	2.991	34.942	266.5	2.782					
2650.0	2.955	34.942	265.2	2.741					
2700.0	2.914	34.942	263.6	2.696					
2750.0	2.853	34.945	262.7	2.631					
2800.0	2.831	34.949	266.5	2.605					
2850.0	2.817	34.947	265.8	2.585					
2900.0	2.783	34.946	264.5	2.548					
2950.0	2.766	34.944	262.1	2.525					
3000.0	2.745	34.944	262.2	2.499					



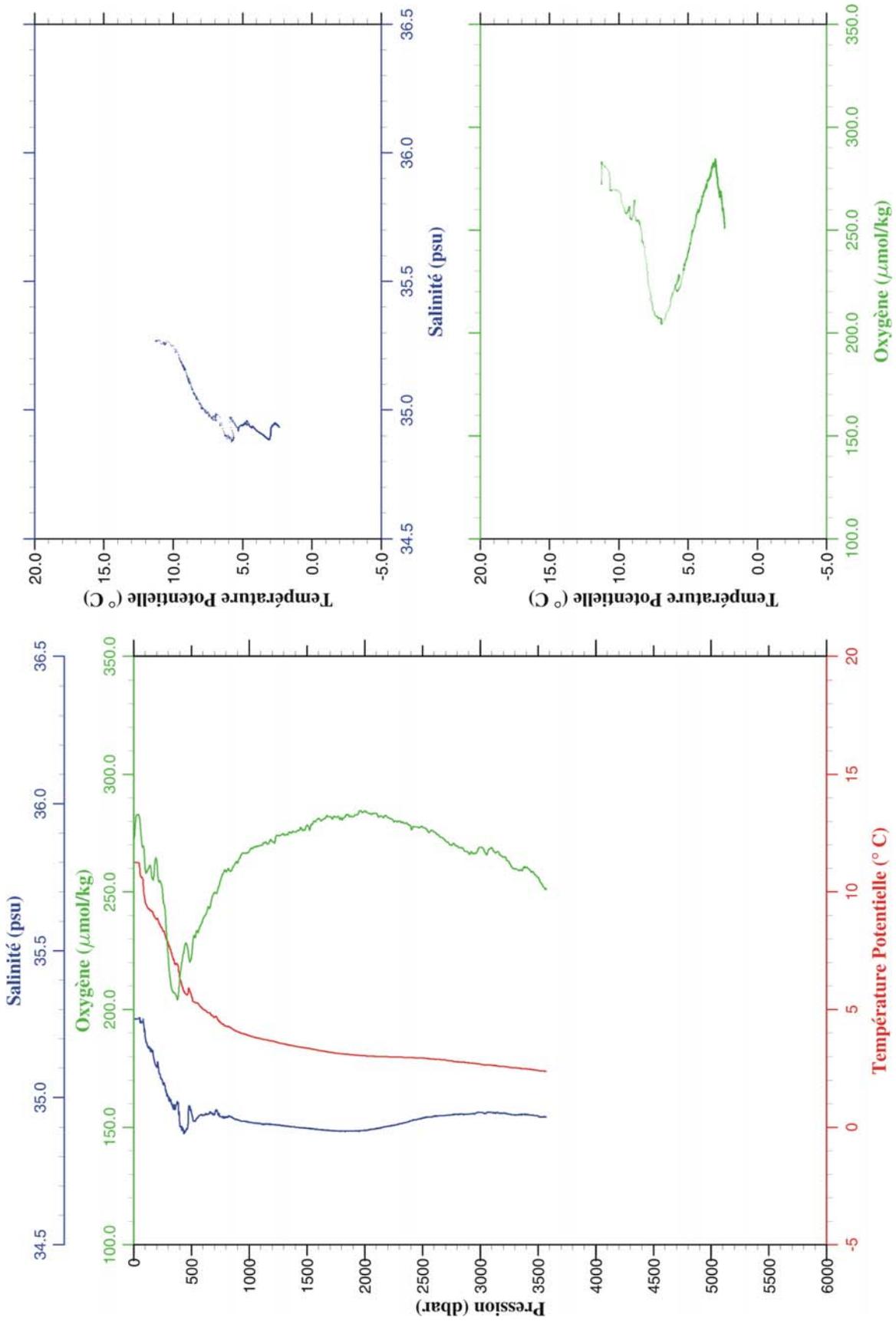
Station 43

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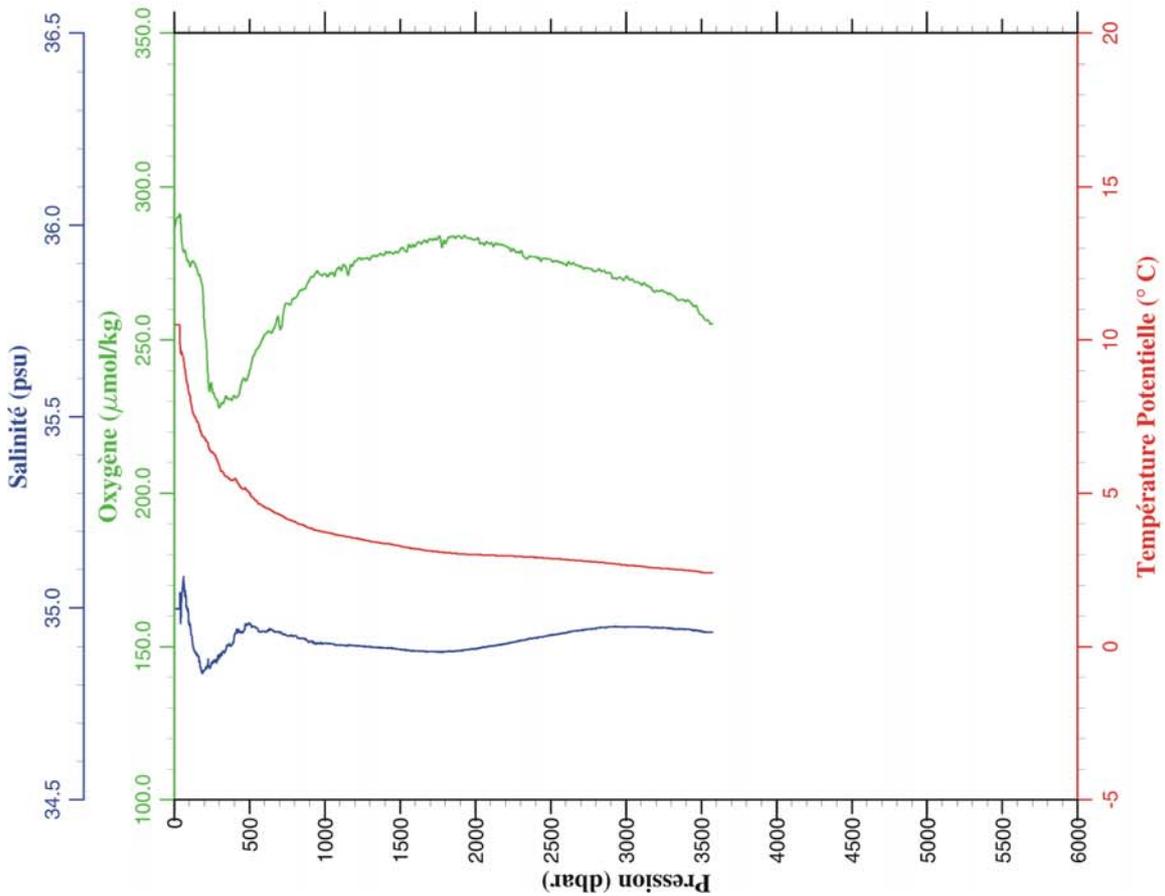
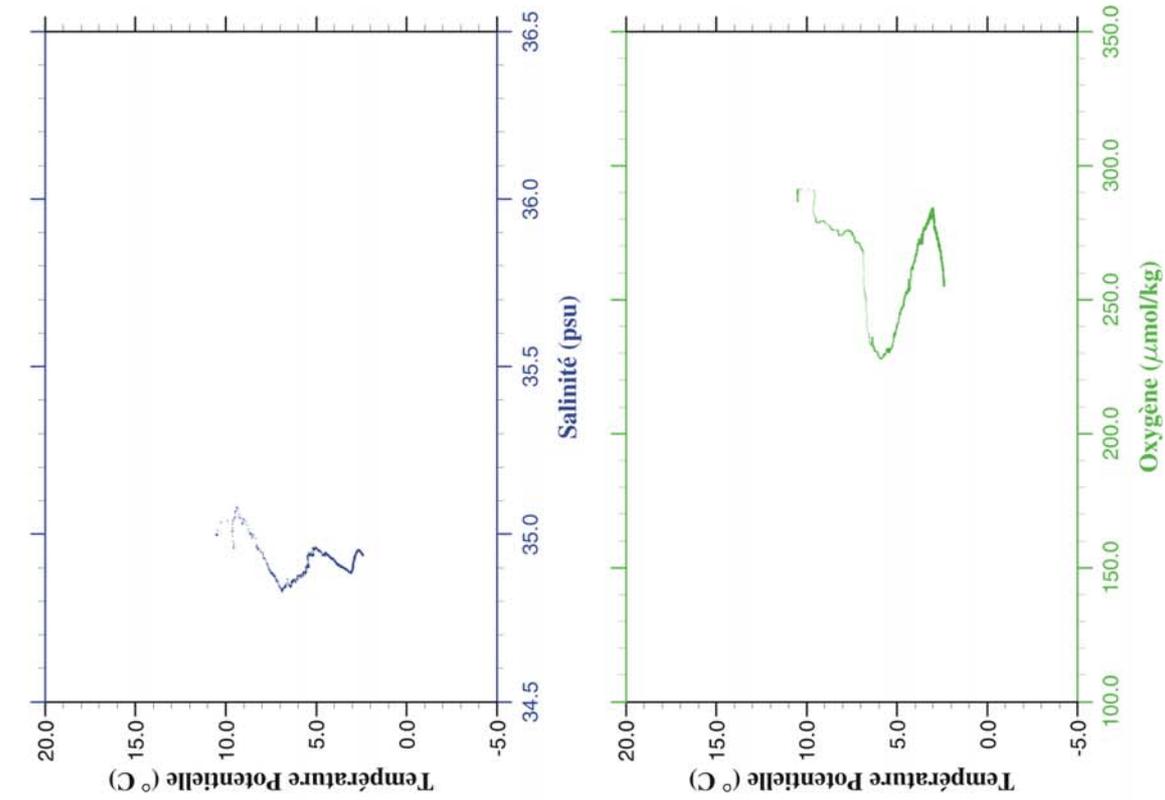
Station   : 44          Campagne  : OVIDE 02
Date      : 24-06-02   Navire    : N/O THALASSA
Profondeur : 3490      Organisme : IFREMER
Position  : N 53 38.55
           : W 25 14.49

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PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	11.253	35.268	272.4	11.253	3050.0	2.894	34.947	266.2	2.640
10.0	11.251	35.267	275.3	11.250	3100.0	2.893	34.950	268.8	2.634
20.0	11.252	35.267	281.9	11.250	3150.0	2.873	34.950	267.1	2.609
30.0	11.252	35.268	282.7	11.248	3200.0	2.853	34.948	264.7	2.585
40.0	11.247	35.268	282.9	11.242	3250.0	2.820	34.944	262.6	2.547
50.0	11.178	35.270	281.9	11.172	3300.0	2.802	34.941	259.9	2.524
100.0	9.583	35.206	259.7	9.571	3350.0	2.783	34.943	259.5	2.500
150.0	9.235	35.166	259.7	9.218	3400.0	2.764	34.943	260.6	2.476
200.0	8.866	35.108	262.9	8.845	3450.0	2.740	34.940	258.5	2.447
250.0	8.433	35.056	250.3	8.406	3500.0	2.706	34.938	256.2	2.409
300.0	7.837	35.004	221.9	7.807	3550.0	2.682	34.935	251.8	2.379
350.0	7.122	34.976	207.1	7.088	3571.0	2.675	34.935	251.4	2.370
400.0	6.316	34.906	213.4	6.280					
450.0	5.711	34.886	228.2	5.673					
500.0	5.642	34.949	222.1	5.599					
550.0	5.316	34.930	233.2	5.270					
600.0	5.077	34.940	238.3	5.028					
650.0	4.906	34.944	243.4	4.854					
700.0	4.727	34.943	249.8	4.671					
750.0	4.510	34.936	254.7	4.452					
800.0	4.357	34.933	258.5	4.295					
850.0	4.261	34.935	259.4	4.195					
900.0	4.128	34.925	262.2	4.059					
950.0	4.040	34.920	266.5	3.968					
1000.0	3.963	34.917	267.4	3.887					
1050.0	3.892	34.913	269.0	3.812					
1100.0	3.849	34.913	269.8	3.766					
1150.0	3.798	34.911	270.9	3.710					
1200.0	3.754	34.909	271.4	3.663					
1250.0	3.690	34.906	273.8	3.595					
1300.0	3.635	34.905	274.4	3.536					
1350.0	3.590	34.902	275.3	3.487					
1400.0	3.545	34.900	275.4	3.438					
1450.0	3.505	34.898	277.4	3.395					
1500.0	3.473	34.896	278.2	3.359					
1550.0	3.436	34.893	278.8	3.318					
1600.0	3.387	34.892	281.2	3.265					
1650.0	3.346	34.890	281.2	3.220					
1700.0	3.313	34.889	281.9	3.183					
1750.0	3.278	34.887	281.8	3.145					
1800.0	3.258	34.887	281.2	3.120					
1850.0	3.239	34.886	282.8	3.097					
1900.0	3.219	34.887	281.9	3.073					
1950.0	3.201	34.885	283.9	3.050					
2000.0	3.187	34.889	284.3	3.032					
2050.0	3.176	34.892	283.2	3.016					
2100.0	3.171	34.896	283.4	3.006					
2150.0	3.166	34.899	282.2	2.997					
2200.0	3.165	34.902	281.6	2.991					
2250.0	3.162	34.907	280.0	2.983					
2300.0	3.159	34.910	280.2	2.976					
2350.0	3.154	34.916	279.2	2.966					
2400.0	3.147	34.921	277.5	2.954					
2450.0	3.145	34.925	277.7	2.948					
2500.0	3.138	34.931	277.7	2.935					
2550.0	3.125	34.935	275.6	2.918					
2600.0	3.106	34.936	275.6	2.894					
2650.0	3.088	34.939	273.5	2.872					
2700.0	3.075	34.938	271.7	2.853					
2750.0	3.041	34.942	269.8	2.816					
2800.0	3.005	34.943	269.5	2.775					
2850.0	2.997	34.944	268.6	2.762					
2900.0	2.973	34.944	266.6	2.733					
2950.0	2.949	34.945	266.3	2.705					
3000.0	2.925	34.951	269.0	2.676					



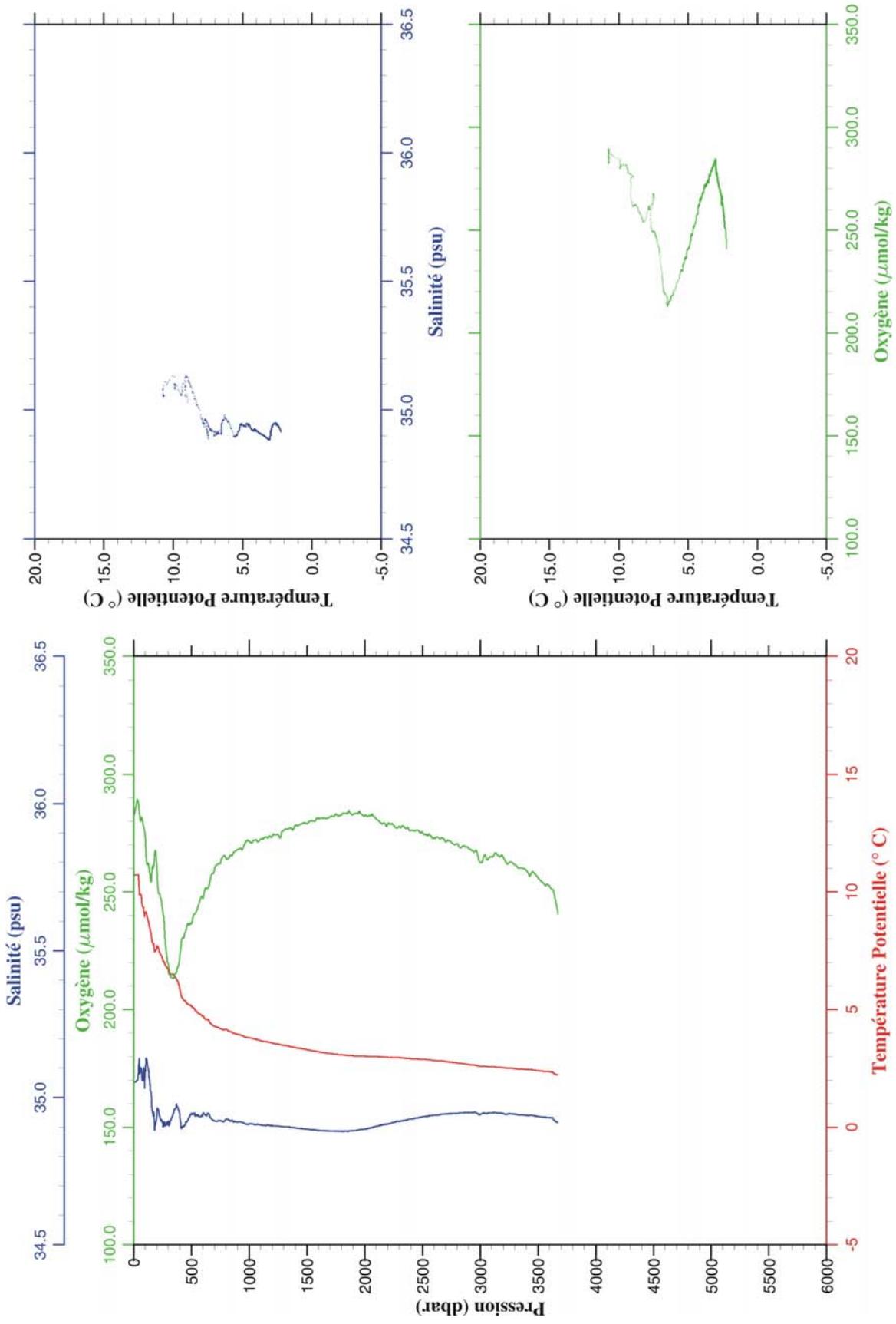
Station 44



Station 45

Station	: 46	Campagne	: OVIDE 02
Date	: 25-06-02	Navire	: N/O THALASSA
Profondeur	: 3629	Organisme	: IFREMER
Position	: N 52 53.27		
	W 24 39.32		

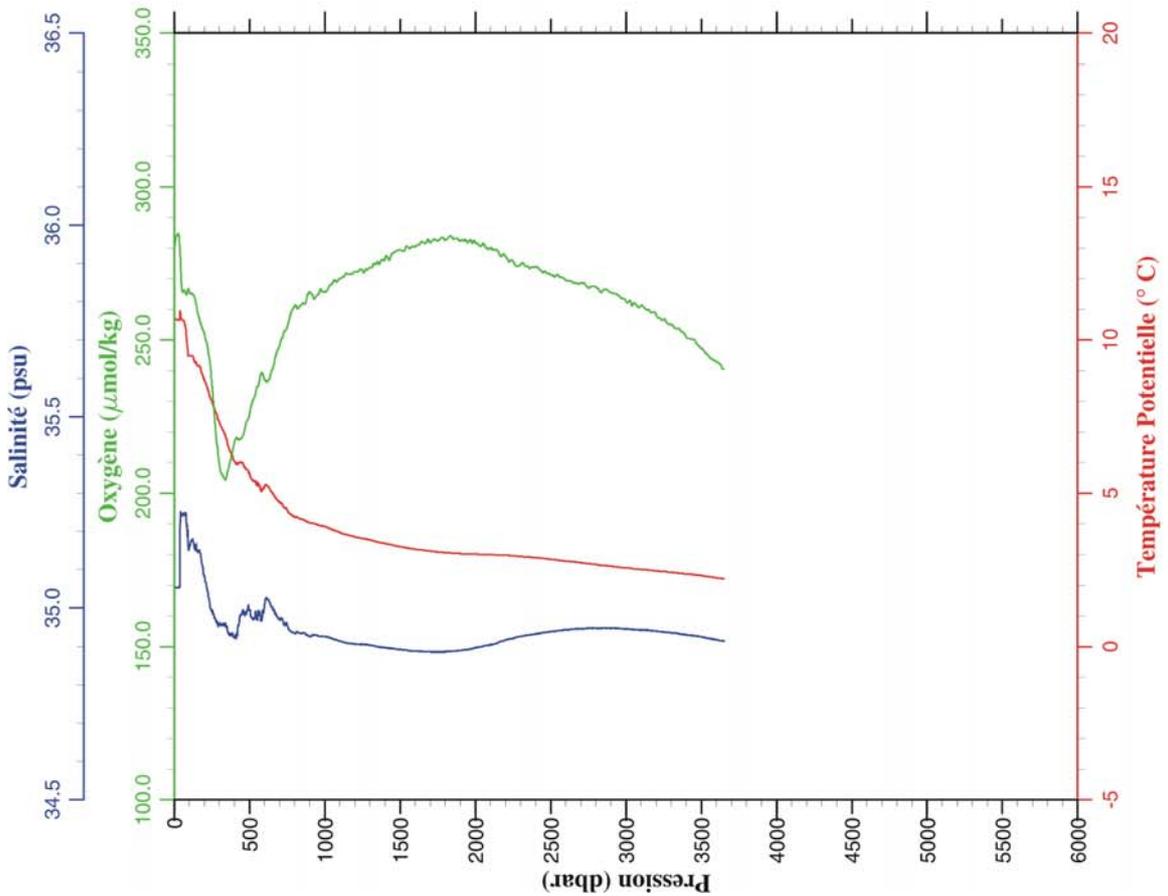
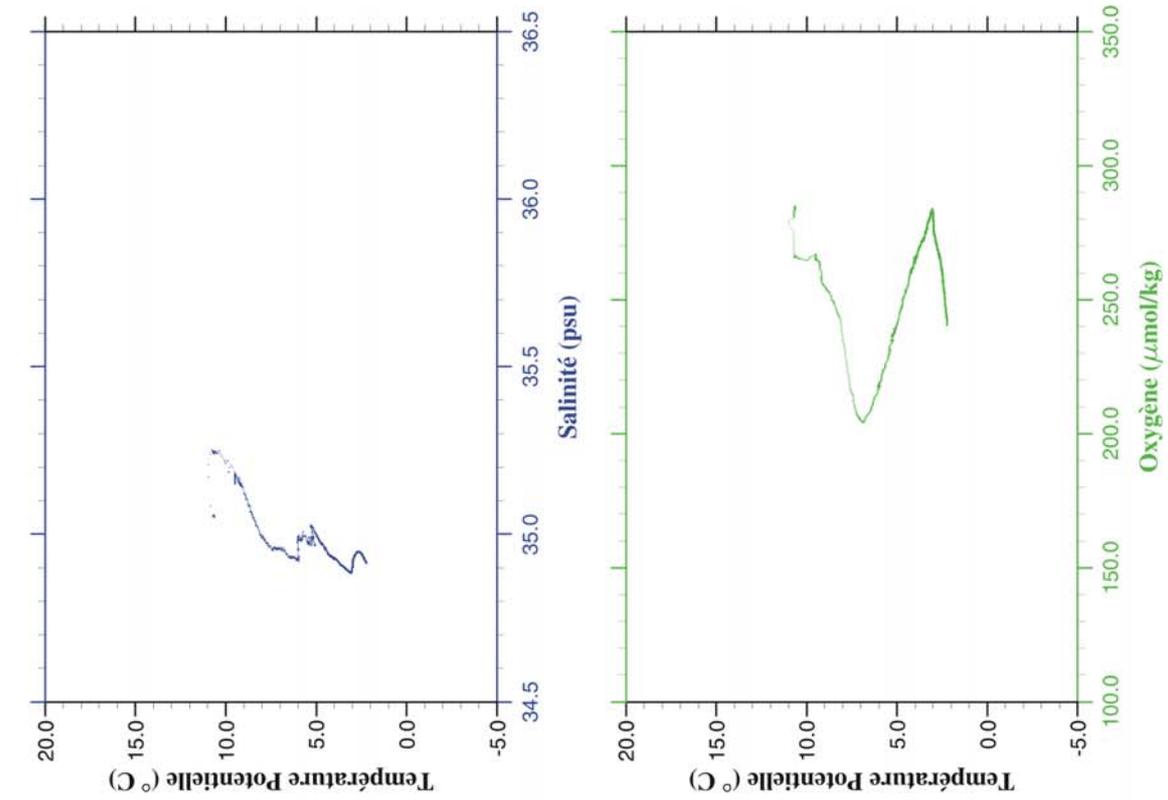
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	10.718	35.054	282.5	10.718	3050.0	2.830	34.946	264.7	2.578
10.0	10.721	35.055	284.0	10.720	3100.0	2.823	34.948	264.9	2.566
20.0	10.720	35.056	286.0	10.717	3150.0	2.807	34.948	265.7	2.545
30.0	10.724	35.060	289.1	10.720	3200.0	2.791	34.946	264.7	2.524
40.0	10.734	35.081	287.8	10.729	3250.0	2.780	34.946	262.5	2.507
50.0	9.910	35.129	284.3	9.904	3300.0	2.768	34.944	261.5	2.491
100.0	9.139	35.097	273.4	9.128	3350.0	2.748	34.943	260.2	2.466
150.0	8.257	35.019	254.1	8.242	3400.0	2.738	34.941	259.1	2.451
200.0	7.638	34.939	260.9	7.619	3450.0	2.724	34.940	258.6	2.432
250.0	7.185	34.920	242.3	7.161	3500.0	2.697	34.937	256.1	2.400
300.0	6.725	34.917	219.2	6.697	3550.0	2.677	34.933	253.6	2.374
350.0	6.474	34.961	213.8	6.442	3600.0	2.667	34.933	252.5	2.359
400.0	5.890	34.933	222.9	5.856	3650.0	2.561	34.920	246.9	2.250
450.0	5.408	34.915	233.1	5.370	3674.0	2.539	34.916	240.6	2.227
500.0	5.203	34.943	236.4	5.162					
550.0	4.929	34.939	242.6	4.885					
600.0	4.776	34.947	247.2	4.728					
650.0	4.590	34.944	252.3	4.539					
700.0	4.339	34.921	259.7	4.285					
750.0	4.242	34.922	262.0	4.185					
800.0	4.213	34.928	264.3	4.152					
850.0	4.107	34.923	265.3	4.042					
900.0	4.011	34.917	268.1	3.943					
950.0	3.936	34.914	269.2	3.864					
1000.0	3.862	34.910	271.6	3.786					
1050.0	3.816	34.909	272.0	3.737					
1100.0	3.762	34.907	272.5	3.679					
1150.0	3.722	34.906	273.4	3.636					
1200.0	3.666	34.905	273.7	3.576					
1250.0	3.626	34.904	274.4	3.532					
1300.0	3.576	34.901	276.2	3.478					
1350.0	3.535	34.900	277.2	3.434					
1400.0	3.488	34.897	278.1	3.383					
1450.0	3.449	34.895	278.8	3.339					
1500.0	3.403	34.893	279.0	3.290					
1550.0	3.362	34.891	280.1	3.245					
1600.0	3.322	34.890	281.2	3.201					
1650.0	3.289	34.887	281.3	3.164					
1700.0	3.261	34.887	282.0	3.132					
1750.0	3.228	34.887	283.1	3.094					
1800.0	3.214	34.886	282.8	3.077					
1850.0	3.188	34.886	283.2	3.046					
1900.0	3.179	34.888	283.1	3.033					
1950.0	3.170	34.891	284.1	3.020					
2000.0	3.168	34.894	282.3	3.013					
2050.0	3.163	34.897	282.4	3.004					
2100.0	3.158	34.902	281.0	2.994					
2150.0	3.155	34.908	278.9	2.986					
2200.0	3.142	34.910	279.0	2.969					
2250.0	3.146	34.916	278.4	2.968					
2300.0	3.134	34.919	277.9	2.951					
2350.0	3.114	34.923	277.2	2.927					
2400.0	3.100	34.928	276.0	2.909					
2450.0	3.089	34.931	276.2	2.893					
2500.0	3.083	34.935	275.3	2.881					
2550.0	3.068	34.938	274.2	2.862					
2600.0	3.045	34.941	273.0	2.835					
2650.0	3.034	34.942	272.7	2.819					
2700.0	3.009	34.945	271.2	2.789					
2750.0	2.980	34.946	271.1	2.756					
2800.0	2.955	34.948	270.5	2.726					
2850.0	2.929	34.949	269.4	2.695					
2900.0	2.901	34.948	268.4	2.662					
2950.0	2.882	34.951	266.9	2.639					
3000.0	2.830	34.943	262.6	2.583					



Station 46

Station : 47 Campagne : OVIDE 02
 Date : 25-06-02 Navire : N/O THALASSA
 Profondeur : 3606 Organisme : IFREMER
 Position : N 52 31.19
 W 24 21.85

PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	10.691	35.054	280.6	10.691	3050.0	2.791	34.944	262.0	2.539
10.0	10.684	35.054	283.1	10.683	3100.0	2.767	34.943	261.3	2.511
20.0	10.667	35.054	284.3	10.664	3150.0	2.755	34.943	260.0	2.494
30.0	10.642	35.052	284.5	10.639	3200.0	2.731	34.940	258.3	2.466
40.0	10.855	35.239	277.0	10.850	3250.0	2.718	34.939	256.8	2.447
50.0	10.690	35.244	267.3	10.684	3300.0	2.695	34.936	255.2	2.420
100.0	9.498	35.158	265.7	9.487	3350.0	2.675	34.934	253.8	2.394
150.0	9.194	35.149	260.4	9.178	3400.0	2.650	34.930	251.0	2.365
200.0	8.730	35.083	252.2	8.709	3450.0	2.639	34.928	250.2	2.349
250.0	8.027	34.995	235.8	8.001	3500.0	2.609	34.925	247.4	2.314
300.0	7.350	34.960	209.6	7.321	3550.0	2.578	34.920	244.7	2.278
350.0	6.753	34.954	206.1	6.721	3600.0	2.543	34.917	242.9	2.239
400.0	6.070	34.924	216.6	6.035	3650.0	2.523	34.914	240.6	2.214
450.0	6.051	34.988	218.2	6.011	3651.0	2.523	34.914	240.6	2.213
500.0	5.695	34.994	225.7	5.652					
550.0	5.294	34.970	234.7	5.248					
600.0	5.268	35.009	237.1	5.218					
650.0	5.067	35.003	240.4	5.014					
700.0	4.768	34.972	248.2	4.712					
750.0	4.513	34.956	254.1	4.454					
800.0	4.278	34.935	261.1	4.216					
850.0	4.214	34.936	261.9	4.148					
900.0	4.099	34.927	265.8	4.030					
950.0	4.049	34.929	264.7	3.977					
1000.0	3.992	34.926	265.8	3.915					
1050.0	3.891	34.921	268.4	3.812					
1100.0	3.799	34.915	270.1	3.716					
1150.0	3.727	34.909	271.5	3.640					
1200.0	3.664	34.907	272.2	3.574					
1250.0	3.618	34.905	272.7	3.524					
1300.0	3.572	34.903	273.6	3.474					
1350.0	3.509	34.899	275.7	3.407					
1400.0	3.465	34.897	276.6	3.360					
1450.0	3.421	34.894	278.3	3.312					
1500.0	3.372	34.891	279.3	3.259					
1550.0	3.331	34.890	280.4	3.215					
1600.0	3.296	34.888	280.4	3.175					
1650.0	3.269	34.887	281.9	3.144					
1700.0	3.239	34.886	281.7	3.110					
1750.0	3.219	34.886	282.4	3.086					
1800.0	3.203	34.886	282.6	3.066					
1850.0	3.187	34.888	283.1	3.046					
1900.0	3.175	34.890	282.4	3.029					
1950.0	3.171	34.891	281.8	3.021					
2000.0	3.166	34.896	281.7	3.011					
2050.0	3.161	34.900	281.6	3.002					
2100.0	3.157	34.905	280.1	2.993					
2150.0	3.156	34.910	279.1	2.987					
2200.0	3.148	34.917	277.2	2.974					
2250.0	3.138	34.921	275.8	2.960					
2300.0	3.118	34.926	274.6	2.935					
2350.0	3.106	34.929	274.0	2.919					
2400.0	3.088	34.933	273.9	2.896					
2450.0	3.071	34.936	272.1	2.875					
2500.0	3.047	34.938	271.3	2.846					
2550.0	3.023	34.942	271.3	2.817					
2600.0	2.995	34.944	269.5	2.785					
2650.0	2.976	34.945	268.7	2.762					
2700.0	2.953	34.946	268.6	2.734					
2750.0	2.927	34.947	266.9	2.703					
2800.0	2.904	34.948	267.3	2.676					
2850.0	2.879	34.948	266.4	2.647					
2900.0	2.856	34.947	265.6	2.619					
2950.0	2.831	34.948	264.6	2.589					
3000.0	2.813	34.946	262.6	2.567					



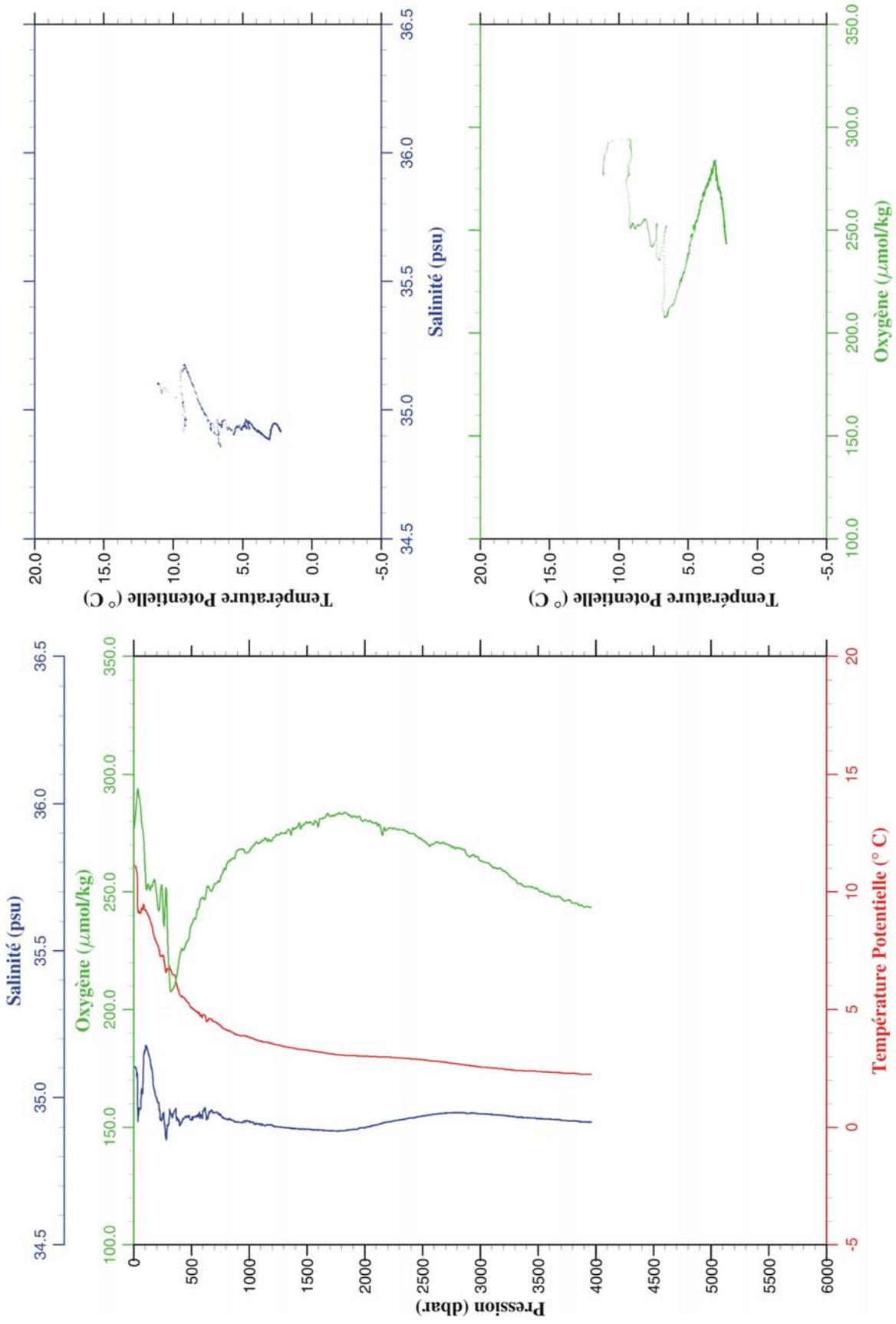
Station 47

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Station      : 48          Campagne   : OVIDE 02
Date        : 25-06-02   Navire    : N/O THALASSA
Profondeur  : 3910       Organisme : IFREMER
Position    : N 52 8.73
              W 24 4.25

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PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	11.110	35.104	277.0	11.110	3050.0	2.793	34.944	262.4	2.542
10.0	11.114	35.104	279.4	11.113	3100.0	2.774	34.943	260.9	2.518
20.0	11.052	35.100	285.1	11.050	3150.0	2.757	34.942	259.7	2.495
30.0	10.783	35.067	291.9	10.779	3200.0	2.740	34.940	258.9	2.473
40.0	9.139	34.939	292.6	9.135	3250.0	2.714	34.938	257.1	2.444
50.0	9.150	34.965	290.0	9.145	3300.0	2.690	34.935	255.4	2.415
100.0	9.227	35.160	258.8	9.216	3350.0	2.683	34.934	253.7	2.402
150.0	8.684	35.106	252.1	8.668	3400.0	2.676	34.932	252.2	2.390
200.0	7.834	34.993	248.6	7.814	3450.0	2.670	34.931	252.1	2.379
250.0	7.318	34.935	248.6	7.294	3500.0	2.663	34.928	251.1	2.366
300.0	6.732	34.907	223.0	6.704	3550.0	2.651	34.928	249.8	2.349
350.0	6.489	34.954	209.6	6.458	3600.0	2.644	34.927	248.7	2.337
400.0	5.647	34.905	223.2	5.613	3650.0	2.639	34.925	248.0	2.327
450.0	5.457	34.935	227.4	5.419	3700.0	2.620	34.924	247.5	2.303
500.0	5.108	34.923	235.9	5.067	3750.0	2.615	34.921	246.3	2.292
550.0	4.953	34.941	242.2	4.908	3800.0	2.609	34.922	245.3	2.281
600.0	4.823	34.954	247.6	4.775	3850.0	2.595	34.919	244.5	2.261
650.0	4.662	34.946	252.0	4.611	3900.0	2.586	34.918	243.5	2.247
700.0	4.533	34.950	253.3	4.478	3950.0	2.590	34.918	243.5	2.245
750.0	4.393	34.944	255.3	4.335	3962.0	2.592	34.918	243.6	2.245
800.0	4.204	34.927	260.1	4.143					
850.0	4.102	34.924	264.2	4.037					
900.0	3.989	34.917	267.6	3.920					
950.0	3.955	34.916	268.2	3.883					
1000.0	3.890	34.917	267.1	3.814					
1050.0	3.806	34.913	270.5	3.727					
1100.0	3.737	34.910	271.1	3.655					
1150.0	3.699	34.908	272.2	3.612					
1200.0	3.639	34.906	272.3	3.549					
1250.0	3.589	34.901	274.2	3.495					
1300.0	3.527	34.899	275.0	3.430					
1350.0	3.489	34.896	276.2	3.387					
1400.0	3.444	34.895	277.2	3.339					
1450.0	3.414	34.894	277.0	3.305					
1500.0	3.389	34.893	279.6	3.276					
1550.0	3.352	34.891	278.8	3.235					
1600.0	3.324	34.890	277.8	3.203					
1650.0	3.289	34.889	281.6	3.164					
1700.0	3.251	34.887	282.2	3.122					
1750.0	3.216	34.887	282.9	3.083					
1800.0	3.201	34.887	283.0	3.064					
1850.0	3.187	34.891	283.2	3.045					
1900.0	3.182	34.892	282.2	3.036					
1950.0	3.179	34.896	282.2	3.029					
2000.0	3.164	34.899	280.9	3.009					
2050.0	3.164	34.902	280.3	3.004					
2100.0	3.157	34.907	279.5	2.993					
2150.0	3.155	34.914	274.5	2.986					
2200.0	3.148	34.918	276.9	2.974					
2250.0	3.139	34.921	276.9	2.961					
2300.0	3.122	34.924	276.4	2.939					
2350.0	3.112	34.926	276.0	2.925					
2400.0	3.098	34.932	274.8	2.906					
2450.0	3.084	34.934	273.6	2.888					
2500.0	3.062	34.938	272.1	2.861					
2550.0	3.040	34.941	270.2	2.834					
2600.0	3.018	34.944	270.3	2.808					
2650.0	3.001	34.946	270.8	2.786					
2700.0	2.975	34.948	270.3	2.755					
2750.0	2.946	34.949	269.2	2.722					
2800.0	2.919	34.949	268.9	2.690					
2850.0	2.892	34.949	268.0	2.659					
2900.0	2.858	34.946	265.2	2.621					
2950.0	2.832	34.947	265.6	2.590					
3000.0	2.803	34.945	263.3	2.556					



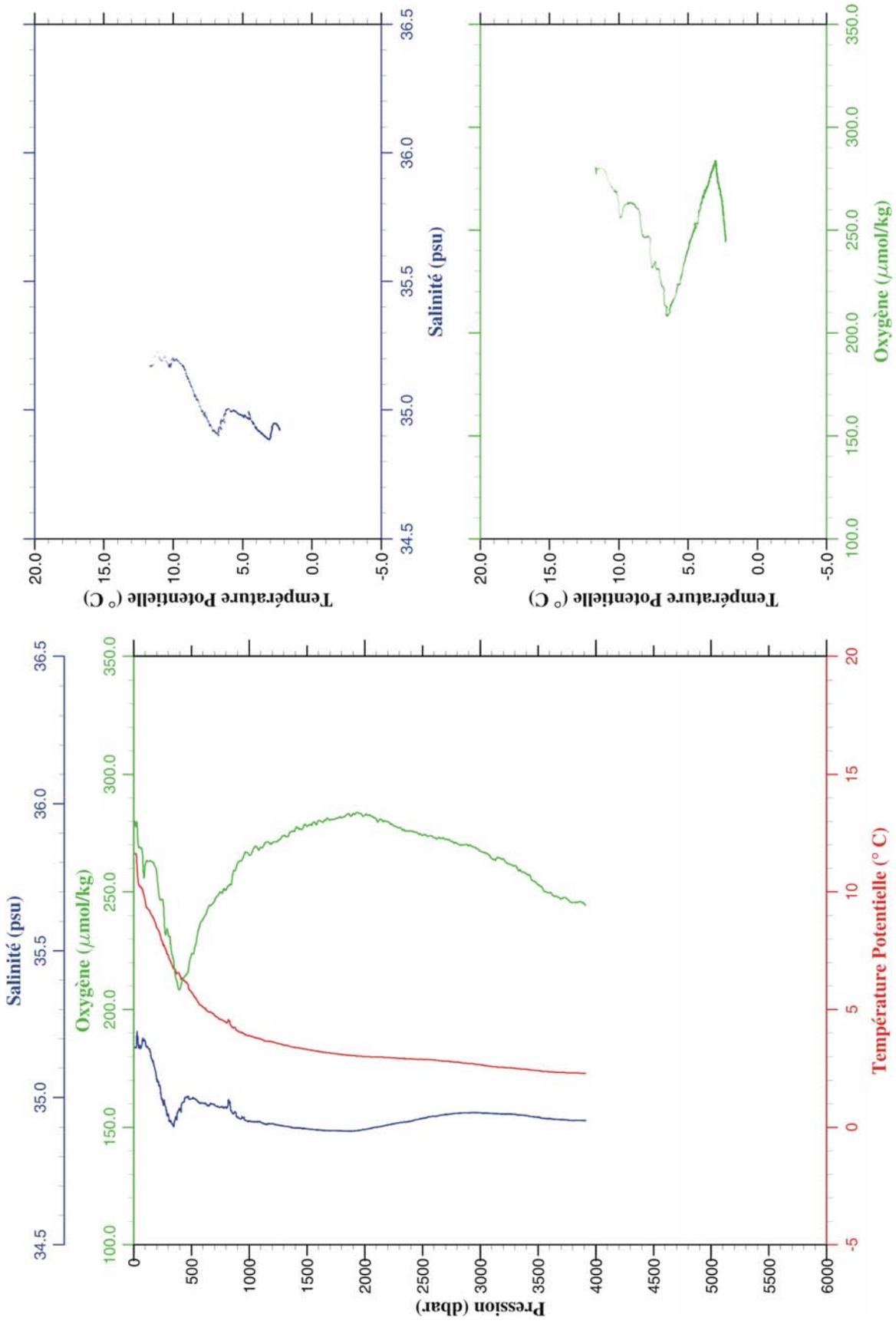
Station 48

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Station      : 49          Campagne   : OVIDE 02
Date        : 26-06-02   Navire    : N/O THALASSA
Profondeur  : 3860       Organisme : IFREMER
Position    : N 51 46.35
              W 23 46.63

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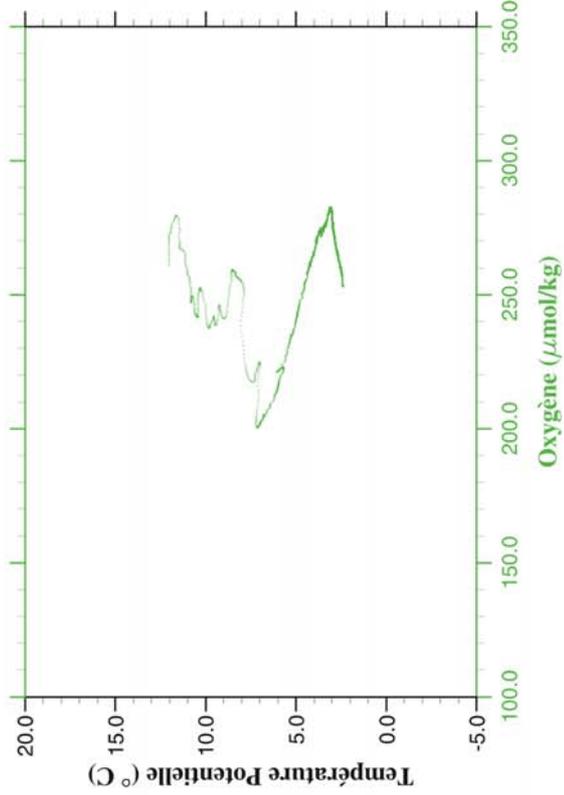
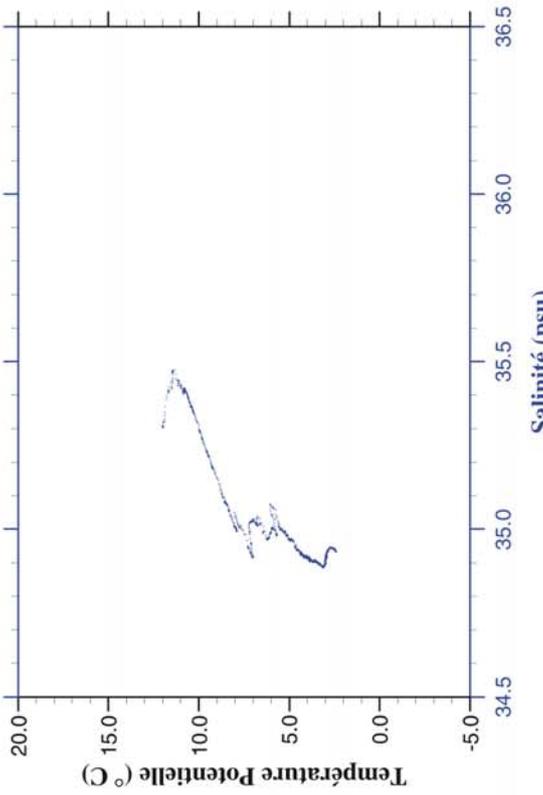
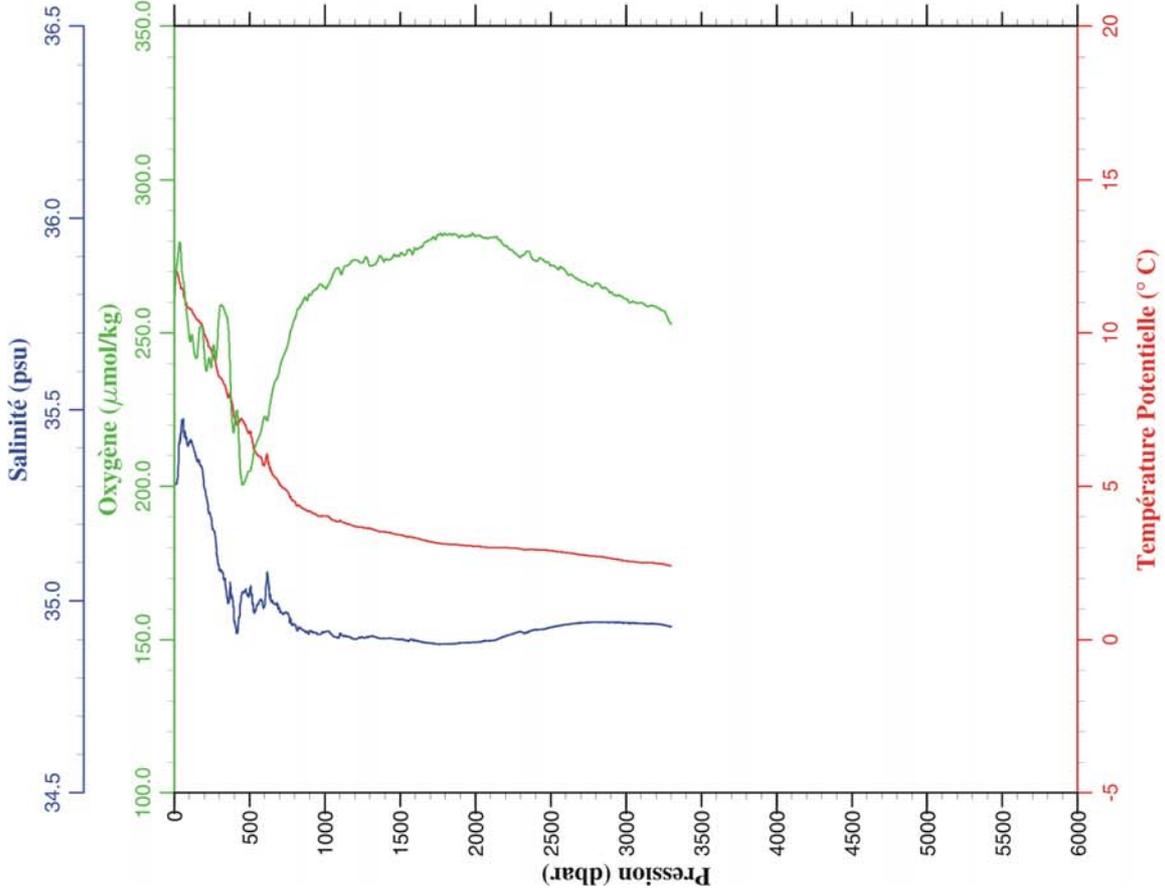
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	11.638	35.171	279.4	11.638	3050.0	2.866	34.947	266.7	2.613
10.0	11.641	35.171	279.8	11.640	3100.0	2.834	34.947	264.2	2.577
20.0	11.610	35.170	278.2	11.607	3150.0	2.816	34.946	264.7	2.554
30.0	10.968	35.199	278.4	10.964	3200.0	2.808	34.945	264.2	2.541
40.0	10.397	35.180	269.9	10.392	3250.0	2.793	34.945	261.9	2.520
50.0	10.274	35.170	268.8	10.268	3300.0	2.780	34.944	261.1	2.502
100.0	9.633	35.193	261.3	9.622	3350.0	2.757	34.941	259.2	2.475
150.0	9.086	35.143	263.1	9.069	3400.0	2.744	34.939	257.8	2.456
200.0	8.492	35.058	257.9	8.471	3450.0	2.717	34.935	254.8	2.425
250.0	7.887	34.997	246.7	7.862	3500.0	2.704	34.933	253.1	2.406
300.0	7.345	34.943	231.6	7.316	3550.0	2.667	34.930	250.5	2.365
350.0	6.794	34.918	218.8	6.762	3600.0	2.663	34.929	249.7	2.355
400.0	6.482	34.958	208.6	6.446	3650.0	2.648	34.927	248.2	2.335
450.0	6.200	35.000	214.4	6.160	3700.0	2.644	34.925	247.0	2.326
500.0	5.786	34.996	223.3	5.742	3750.0	2.634	34.925	247.1	2.310
550.0	5.421	34.989	230.9	5.374	3800.0	2.629	34.923	245.5	2.300
600.0	5.153	34.981	238.3	5.104	3850.0	2.633	34.923	245.7	2.298
650.0	4.947	34.975	243.9	4.894	3900.0	2.633	34.923	245.0	2.293
700.0	4.822	34.976	246.1	4.765	3914.0	2.636	34.922	244.4	2.293
750.0	4.636	34.966	250.1	4.577					
800.0	4.531	34.968	250.8	4.468					
850.0	4.342	34.952	254.4	4.276					
900.0	4.152	34.933	262.4	4.082					
950.0	4.065	34.930	264.9	3.993					
1000.0	3.961	34.921	265.8	3.885					
1050.0	3.883	34.917	269.2	3.803					
1100.0	3.830	34.917	268.9	3.747					
1150.0	3.739	34.910	271.2	3.653					
1200.0	3.719	34.911	270.8	3.628					
1250.0	3.647	34.907	271.8	3.553					
1300.0	3.584	34.903	273.9	3.486					
1350.0	3.539	34.901	275.1	3.437					
1400.0	3.483	34.897	276.8	3.378					
1450.0	3.457	34.896	276.5	3.347					
1500.0	3.415	34.894	277.8	3.302					
1550.0	3.373	34.893	279.2	3.256					
1600.0	3.341	34.891	280.3	3.220					
1650.0	3.300	34.889	280.3	3.174					
1700.0	3.277	34.888	280.5	3.147					
1750.0	3.251	34.888	281.1	3.118					
1800.0	3.224	34.887	281.6	3.087					
1850.0	3.203	34.887	283.0	3.061					
1900.0	3.185	34.887	283.3	3.039					
1950.0	3.167	34.889	283.3	3.016					
2000.0	3.156	34.892	282.6	3.001					
2050.0	3.149	34.896	282.5	2.990					
2100.0	3.147	34.899	281.1	2.983					
2150.0	3.143	34.902	280.5	2.974					
2200.0	3.134	34.907	279.9	2.960					
2250.0	3.119	34.911	278.2	2.941					
2300.0	3.105	34.914	277.5	2.923					
2350.0	3.098	34.917	275.8	2.911					
2400.0	3.090	34.920	275.8	2.898					
2450.0	3.082	34.926	275.3	2.886					
2500.0	3.078	34.930	274.0	2.877					
2550.0	3.076	34.935	273.7	2.870					
2600.0	3.065	34.937	273.1	2.854					
2650.0	3.039	34.940	272.9	2.823					
2700.0	3.019	34.943	272.4	2.799					
2750.0	3.004	34.945	271.4	2.779					
2800.0	2.990	34.947	270.6	2.761					
2850.0	2.962	34.948	269.8	2.728					
2900.0	2.948	34.947	269.5	2.708					
2950.0	2.926	34.949	269.0	2.682					
3000.0	2.905	34.949	267.3	2.656					



Station 49

Station	: 50	Campagne	: OVIDE 02
Date	: 26-06-02	Navire	: N/O THALASSA
Profondeur	: 3264	Organisme	: IFREMER
Position	: N 51 23.98		
	W 23 29.05		

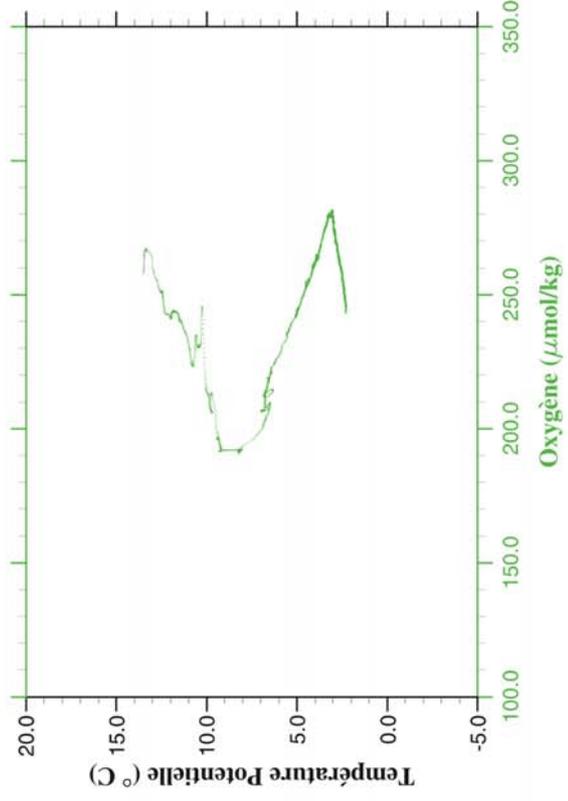
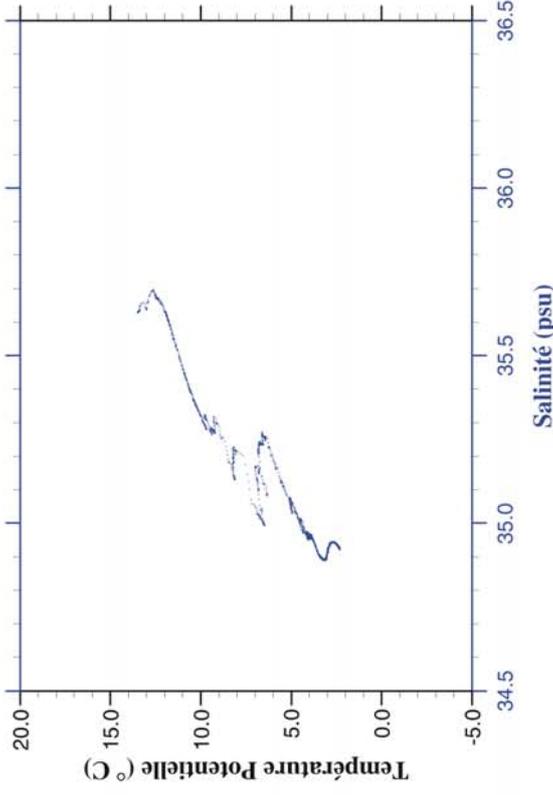
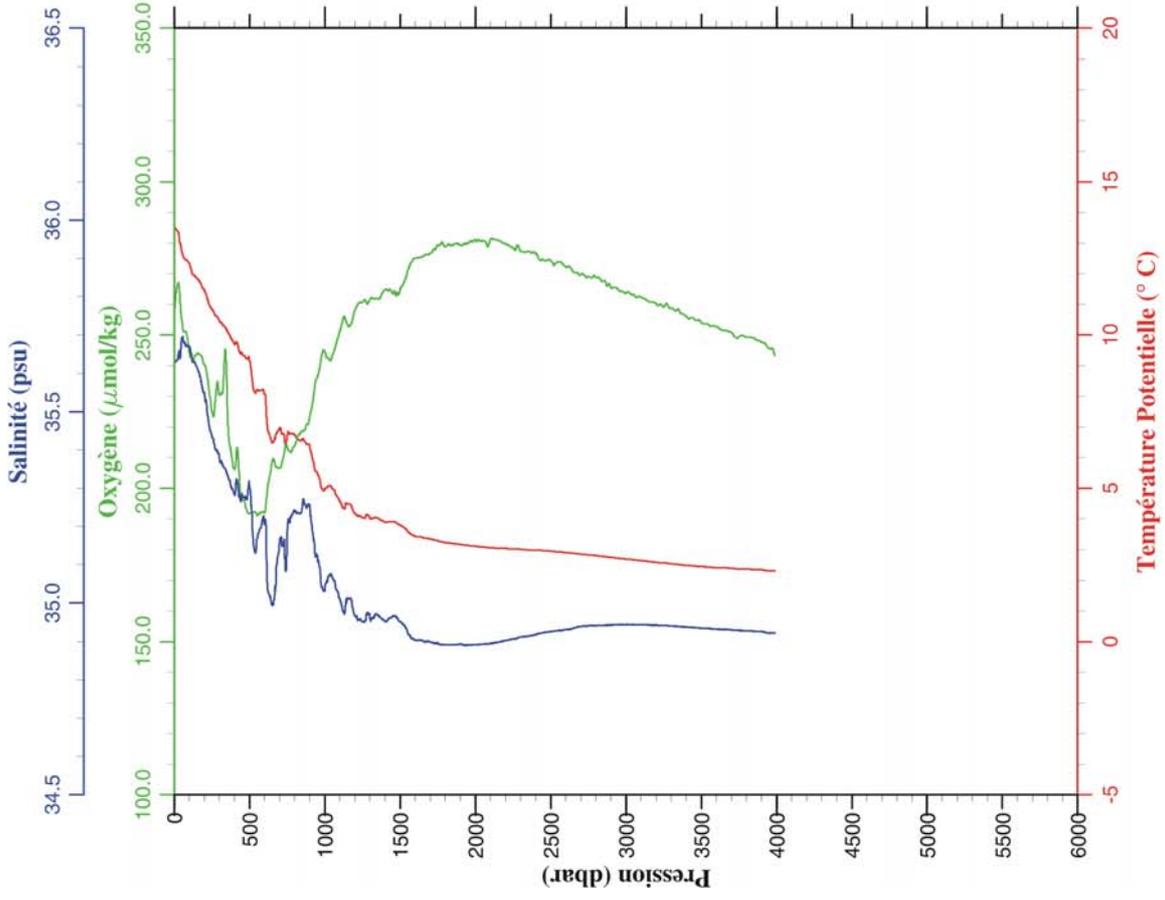
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	12.005	35.307	260.8	12.005	3050.0	2.789	34.943	260.3	2.537
10.0	12.004	35.306	267.7	12.003	3100.0	2.768	34.942	259.9	2.512
20.0	11.969	35.317	273.0	11.966	3150.0	2.760	34.941	258.7	2.498
30.0	11.757	35.398	277.7	11.754	3200.0	2.754	34.941	258.5	2.488
40.0	11.568	35.438	279.2	11.563	3250.0	2.723	34.938	257.4	2.452
50.0	11.474	35.466	271.7	11.468	3300.0	2.684	34.934	252.9	2.408
100.0	10.817	35.415	248.5	10.804					
150.0	10.450	35.367	241.7	10.433					
200.0	9.998	35.295	243.4	9.974					
250.0	9.382	35.204	239.9	9.354					
300.0	8.599	35.081	256.8	8.567					
350.0	8.067	35.009	255.3	8.031					
400.0	7.306	34.944	219.4	7.267					
450.0	7.221	35.021	200.9	7.177					
500.0	6.834	35.024	204.9	6.787					
550.0	6.087	34.988	214.6	6.038					
600.0	5.746	34.986	222.8	5.694					
650.0	5.480	35.003	230.5	5.425					
700.0	5.095	34.975	238.2	5.037					
750.0	4.899	34.968	245.4	4.838					
800.0	4.568	34.939	254.6	4.505					
850.0	4.352	34.926	259.8	4.286					
900.0	4.254	34.923	262.4	4.185					
950.0	4.115	34.914	264.7	4.042					
1000.0	4.105	34.920	264.9	4.028					
1050.0	3.983	34.910	268.6	3.903					
1100.0	3.962	34.912	270.5	3.878					
1150.0	3.867	34.908	272.1	3.779					
1200.0	3.780	34.901	273.8	3.689					
1250.0	3.749	34.906	272.9	3.653					
1300.0	3.723	34.909	271.8	3.624					
1350.0	3.647	34.905	273.5	3.544					
1400.0	3.614	34.902	273.9	3.507					
1450.0	3.579	34.903	274.7	3.468					
1500.0	3.529	34.900	275.6	3.414					
1550.0	3.465	34.896	277.0	3.347					
1600.0	3.436	34.898	277.8	3.313					
1650.0	3.376	34.893	278.3	3.250					
1700.0	3.321	34.890	280.3	3.191					
1750.0	3.276	34.888	282.1	3.142					
1800.0	3.256	34.889	282.5	3.118					
1850.0	3.241	34.888	282.1	3.099					
1900.0	3.230	34.891	281.5	3.083					
1950.0	3.207	34.892	281.6	3.057					
2000.0	3.195	34.893	281.5	3.040					
2050.0	3.185	34.895	281.3	3.025					
2100.0	3.166	34.897	281.2	3.002					
2150.0	3.167	34.901	280.7	2.998					
2200.0	3.171	34.909	278.4	2.997					
2250.0	3.161	34.914	276.8	2.983					
2300.0	3.149	34.921	274.8	2.966					
2350.0	3.125	34.919	276.6	2.938					
2400.0	3.121	34.926	273.5	2.929					
2450.0	3.119	34.927	273.9	2.922					
2500.0	3.101	34.931	272.0	2.900					
2550.0	3.071	34.935	270.7	2.865					
2600.0	3.047	34.938	270.1	2.836					
2650.0	3.022	34.941	268.6	2.806					
2700.0	2.988	34.943	267.1	2.768					
2750.0	2.959	34.944	265.6	2.735					
2800.0	2.944	34.945	266.4	2.716					
2850.0	2.919	34.945	264.6	2.686					
2900.0	2.883	34.945	263.4	2.645					
2950.0	2.852	34.944	262.3	2.610					
3000.0	2.804	34.944	261.2	2.557					



Station 50

Station : 51 Campagne : OVIDE 02
 Date : 26-06-02 Navire : N/O THALASSA
 Profondeur : 3925 Organisme : IFREMER
 Position : N 51 1.66
 W 23 11.49

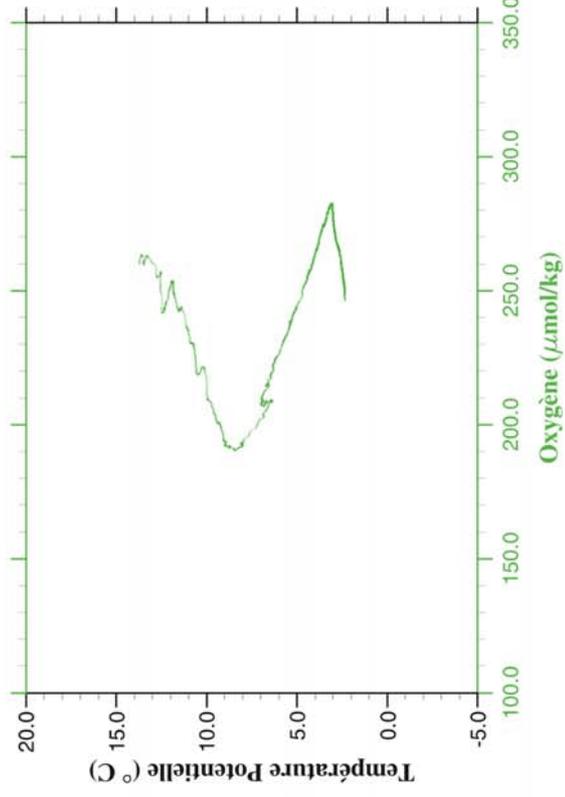
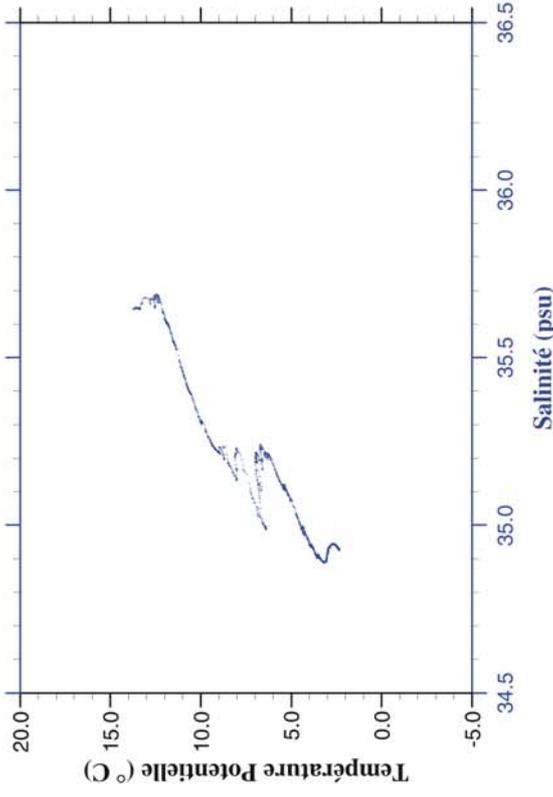
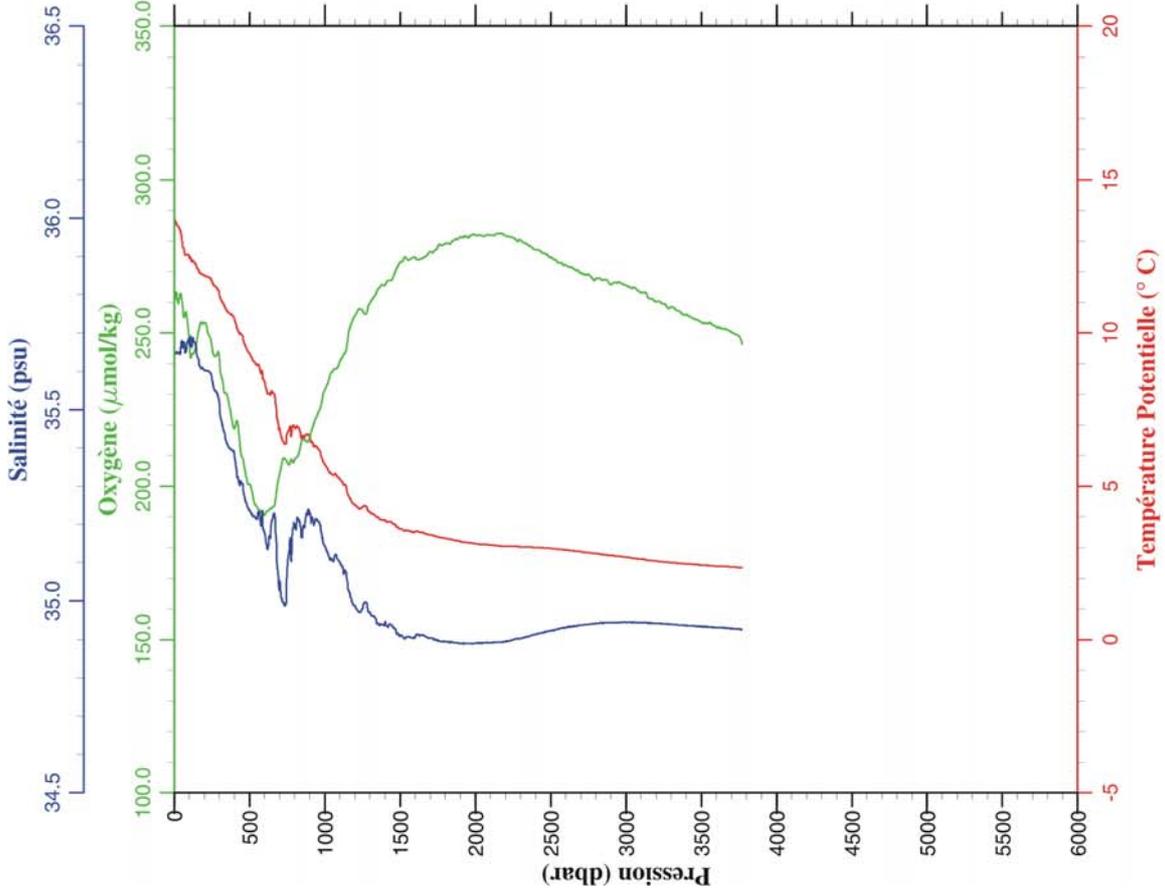
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	13.493	35.629	257.7	13.493	3050.0	2.917	34.944	263.2	2.663
10.0	13.460	35.631	262.7	13.459	3100.0	2.898	34.944	262.3	2.639
20.0	13.414	35.634	266.1	13.411	3150.0	2.875	34.943	261.0	2.611
30.0	13.321	35.652	266.8	13.317	3200.0	2.853	34.942	260.3	2.584
40.0	12.997	35.643	259.8	12.991	3250.0	2.835	34.942	259.2	2.562
50.0	12.743	35.691	255.4	12.736	3300.0	2.813	34.941	258.8	2.535
100.0	12.352	35.670	244.4	12.339	3350.0	2.792	34.939	258.4	2.508
150.0	11.887	35.617	243.9	11.868	3400.0	2.777	34.938	256.2	2.489
200.0	11.504	35.550	240.3	11.478	3450.0	2.756	34.937	255.4	2.462
250.0	10.866	35.435	224.9	10.835	3500.0	2.740	34.935	254.0	2.441
300.0	10.492	35.381	230.2	10.455	3550.0	2.733	34.933	253.4	2.429
350.0	10.196	35.339	232.0	10.154	3600.0	2.723	34.932	252.7	2.414
400.0	9.749	35.282	206.1	9.702	3650.0	2.718	34.932	251.5	2.403
450.0	9.452	35.283	196.1	9.400	3700.0	2.705	34.931	250.9	2.385
500.0	9.221	35.302	191.8	9.165	3750.0	2.692	34.929	249.4	2.367
550.0	8.270	35.168	191.3	8.211	3800.0	2.691	34.928	249.3	2.360
600.0	8.139	35.212	191.9	8.075	3850.0	2.688	34.926	249.1	2.352
650.0	6.542	34.994	208.7	6.481	3900.0	2.681	34.926	247.8	2.340
700.0	7.050	35.163	206.4	6.982	3950.0	2.652	34.922	245.6	2.305
750.0	6.772	35.162	213.6	6.700	3989.0	2.652	34.922	243.3	2.301
800.0	6.821	35.242	214.0	6.744					
850.0	6.682	35.249	218.7	6.600					
900.0	6.453	35.257	223.4	6.368					
950.0	5.577	35.121	236.2	5.493					
1000.0	5.034	35.031	244.7	4.950					
1050.0	5.088	35.067	243.3	4.999					
1100.0	4.672	35.013	251.2	4.581					
1150.0	4.593	35.013	253.5	4.498					
1200.0	4.273	34.966	258.2	4.177					
1250.0	4.154	34.952	260.7	4.054					
1300.0	4.116	34.959	261.6	4.013					
1350.0	4.141	34.969	261.8	4.033					
1400.0	4.007	34.953	264.9	3.896					
1450.0	4.035	34.966	263.5	3.919					
1500.0	3.911	34.951	264.8	3.792					
1550.0	3.711	34.924	270.9	3.589					
1600.0	3.560	34.904	275.0	3.436					
1650.0	3.525	34.903	275.6	3.397					
1700.0	3.479	34.899	276.7	3.347					
1750.0	3.422	34.897	279.4	3.287					
1800.0	3.367	34.891	278.7	3.227					
1850.0	3.335	34.891	279.2	3.192					
1900.0	3.313	34.893	279.4	3.165					
1950.0	3.281	34.891	280.1	3.129					
2000.0	3.265	34.891	281.0	3.109					
2050.0	3.241	34.893	280.9	3.080					
2100.0	3.222	34.895	281.1	3.057					
2150.0	3.215	34.898	280.8	3.045					
2200.0	3.207	34.902	279.7	3.032					
2250.0	3.200	34.907	278.3	3.021					
2300.0	3.190	34.912	277.4	3.007					
2350.0	3.177	34.914	277.3	2.988					
2400.0	3.172	34.917	276.5	2.979					
2450.0	3.164	34.923	274.5	2.967					
2500.0	3.150	34.925	274.2	2.948					
2550.0	3.132	34.929	273.9	2.925					
2600.0	3.108	34.931	272.3	2.896					
2650.0	3.100	34.934	270.6	2.883					
2700.0	3.072	34.939	269.7	2.851					
2750.0	3.054	34.941	269.1	2.828					
2800.0	3.037	34.941	268.8	2.806					
2850.0	3.008	34.942	267.6	2.773					
2900.0	2.984	34.943	265.3	2.744					
2950.0	2.960	34.944	264.9	2.716					
3000.0	2.941	34.944	263.7	2.691					



Station 51

Station : 52 Campagne : OVIDE 02
 Date : 27-06-02 Navire : N/O THALASSA
 Profondeur : 3716 Organisme : IFREMER
 Position : N 50 38.57
 W 22 53.90

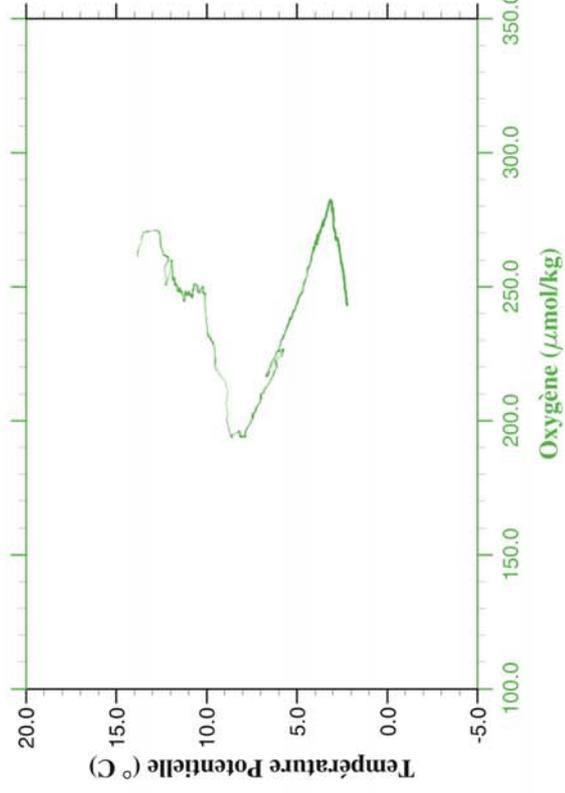
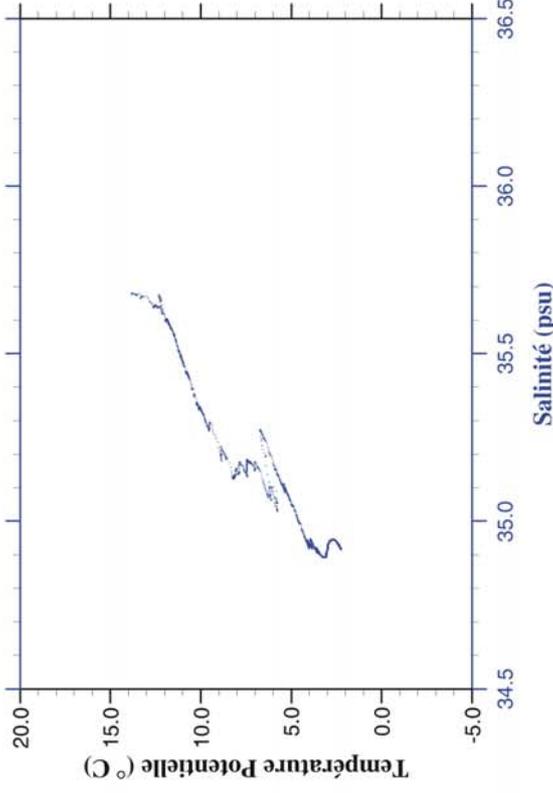
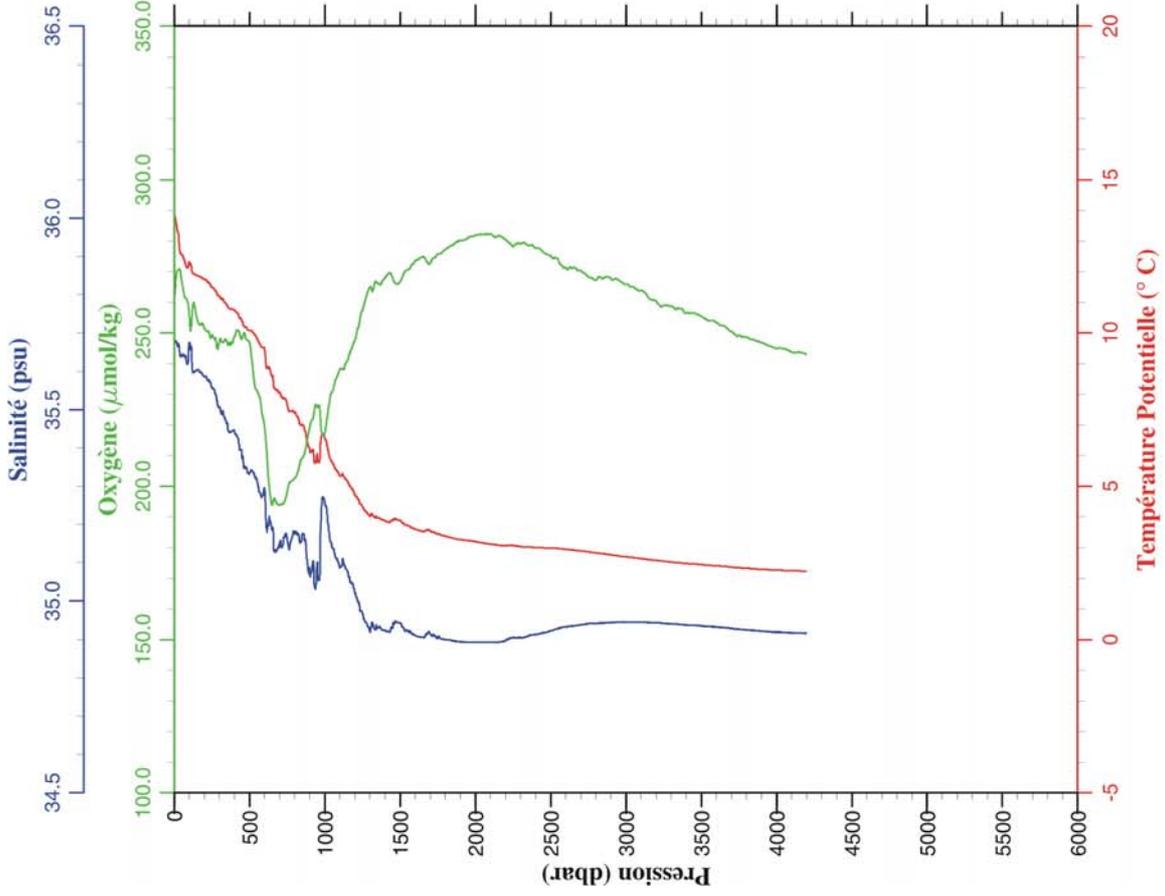
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	13.712	35.646	260.0	13.711	3050.0	2.908	34.945	264.9	2.654
10.0	13.629	35.647	263.2	13.627	3100.0	2.879	34.944	263.2	2.620
20.0	13.510	35.647	261.1	13.507	3150.0	2.844	34.943	261.4	2.581
30.0	13.466	35.647	260.3	13.462	3200.0	2.825	34.942	260.2	2.557
40.0	13.352	35.646	262.9	13.347	3250.0	2.806	34.940	259.6	2.533
50.0	13.118	35.678	261.5	13.111	3300.0	2.786	34.939	258.6	2.509
100.0	12.491	35.673	247.4	12.477	3350.0	2.769	34.938	257.2	2.486
150.0	12.142	35.643	247.4	12.122	3400.0	2.756	34.936	255.9	2.468
200.0	11.906	35.603	253.4	11.880	3450.0	2.743	34.935	254.7	2.449
250.0	11.724	35.582	245.9	11.692	3500.0	2.724	34.934	253.6	2.426
300.0	11.299	35.522	241.8	11.261	3550.0	2.720	34.933	253.2	2.416
350.0	10.768	35.411	230.0	10.725	3600.0	2.702	34.930	251.9	2.393
400.0	10.503	35.379	218.8	10.454	3650.0	2.696	34.930	251.3	2.382
450.0	9.989	35.307	209.5	9.936	3700.0	2.686	34.927	250.3	2.366
500.0	9.396	35.237	200.8	9.340	3750.0	2.679	34.927	248.9	2.354
550.0	9.009	35.213	193.3	8.947	3772.0	2.670	34.926	246.4	2.343
600.0	8.472	35.177	190.5	8.407					
650.0	8.170	35.213	193.0	8.102					
700.0	6.963	35.047	203.9	6.895					
750.0	6.806	35.083	207.9	6.734					
800.0	6.978	35.198	208.8	6.900					
850.0	6.647	35.167	215.0	6.566					
900.0	6.688	35.228	216.1	6.602					
950.0	6.340	35.213	223.2	6.250					
1000.0	5.821	35.144	231.4	5.730					
1050.0	5.463	35.106	237.4	5.370					
1100.0	5.344	35.103	240.7	5.248					
1150.0	4.859	35.049	247.0	4.763					
1200.0	4.510	34.988	255.7	4.411					
1250.0	4.413	34.981	257.4	4.311					
1300.0	4.273	34.970	259.8	4.168					
1350.0	4.097	34.942	264.1	3.990					
1400.0	4.028	34.942	265.7	3.917					
1450.0	3.901	34.934	267.8	3.786					
1500.0	3.734	34.909	273.1	3.617					
1550.0	3.677	34.906	274.0	3.556					
1600.0	3.631	34.904	274.8	3.506					
1650.0	3.616	34.911	274.4	3.487					
1700.0	3.543	34.904	276.7	3.410					
1750.0	3.480	34.897	278.2	3.343					
1800.0	3.439	34.894	279.2	3.298					
1850.0	3.395	34.892	280.1	3.251					
1900.0	3.345	34.891	281.4	3.197					
1950.0	3.311	34.890	281.1	3.159					
2000.0	3.281	34.889	282.0	3.125					
2050.0	3.264	34.891	281.7	3.103					
2100.0	3.247	34.892	281.9	3.082					
2150.0	3.230	34.893	282.5	3.061					
2200.0	3.218	34.894	281.7	3.043					
2250.0	3.220	34.900	281.1	3.041					
2300.0	3.210	34.903	280.3	3.026					
2350.0	3.203	34.908	278.7	3.014					
2400.0	3.197	34.913	277.2	3.003					
2450.0	3.186	34.918	276.2	2.988					
2500.0	3.174	34.923	274.7	2.971					
2550.0	3.156	34.927	272.9	2.948					
2600.0	3.133	34.931	272.2	2.920					
2650.0	3.108	34.934	271.1	2.891					
2700.0	3.083	34.937	269.6	2.862					
2750.0	3.060	34.939	269.2	2.834					
2800.0	3.032	34.941	267.6	2.801					
2850.0	3.006	34.943	267.2	2.771					
2900.0	2.982	34.944	265.8	2.742					
2950.0	2.962	34.944	266.6	2.717					
3000.0	2.938	34.944	265.6	2.688					



Station 52

Station : 53 Campagne : OVIDE 02
 Date : 27-06-02 Navire : N/O THALASSA
 Profondeur : 4121 Organisme : IFREMER
 Position : N 50 16.74
 W 22 36.36

PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	13.831	35.679	261.5	13.831	3050.0	2.925	34.945	265.0	2.671
10.0	13.622	35.677	266.4	13.620	3100.0	2.897	34.945	263.9	2.638
20.0	13.342	35.667	270.5	13.339	3150.0	2.870	34.944	261.5	2.606
30.0	13.102	35.670	270.8	13.098	3200.0	2.850	34.944	260.4	2.582
40.0	12.627	35.641	270.2	12.621	3250.0	2.826	34.942	259.0	2.552
50.0	12.571	35.640	267.1	12.564	3300.0	2.803	34.941	258.8	2.525
100.0	12.329	35.676	255.7	12.316	3350.0	2.785	34.940	258.2	2.502
150.0	11.910	35.604	254.9	11.890	3400.0	2.767	34.938	256.4	2.478
200.0	11.776	35.586	251.5	11.750	3450.0	2.754	34.937	256.5	2.460
250.0	11.531	35.558	249.4	11.499	3500.0	2.740	34.936	255.5	2.442
300.0	11.250	35.507	247.1	11.212	3550.0	2.725	34.933	253.9	2.421
350.0	10.968	35.463	247.1	10.925	3600.0	2.716	34.933	253.4	2.407
400.0	10.791	35.443	249.0	10.742	3650.0	2.701	34.931	252.3	2.387
450.0	10.417	35.374	248.0	10.363	3700.0	2.681	34.929	250.5	2.362
500.0	10.144	35.333	246.9	10.084	3750.0	2.666	34.927	249.3	2.342
550.0	9.894	35.317	231.2	9.829	3800.0	2.653	34.925	248.6	2.324
600.0	9.553	35.293	219.4	9.483	3850.0	2.642	34.923	247.9	2.307
650.0	8.663	35.187	193.8	8.592	3900.0	2.629	34.922	246.8	2.289
700.0	8.130	35.152	193.9	8.056	3950.0	2.623	34.920	245.8	2.277
750.0	7.737	35.164	198.2	7.660	4000.0	2.616	34.920	244.9	2.264
800.0	7.488	35.175	202.7	7.406	4050.0	2.612	34.918	244.9	2.254
850.0	7.103	35.176	209.1	7.019	4100.0	2.609	34.917	243.7	2.246
900.0	6.234	35.075	219.3	6.151	4150.0	2.608	34.917	243.8	2.239
950.0	6.146	35.102	225.7	6.058	4199.0	2.605	34.917	242.9	2.231
1000.0	6.669	35.259	217.3	6.572					
1050.0	5.859	35.142	230.9	5.763					
1100.0	5.438	35.087	238.1	5.341					
1150.0	5.263	35.078	241.1	5.162					
1200.0	4.823	35.018	247.7	4.721					
1250.0	4.445	34.966	257.4	4.343					
1300.0	4.123	34.919	265.0	4.020					
1350.0	4.078	34.930	266.3	3.970					
1400.0	3.989	34.923	268.0	3.878					
1450.0	3.989	34.932	268.0	3.873					
1500.0	4.008	34.943	266.7	3.887					
1550.0	3.847	34.924	270.6	3.724					
1600.0	3.725	34.910	273.5	3.599					
1650.0	3.660	34.905	274.9	3.530					
1700.0	3.681	34.916	272.8	3.546					
1750.0	3.578	34.905	275.8	3.440					
1800.0	3.513	34.899	277.3	3.371					
1850.0	3.451	34.897	278.7	3.306					
1900.0	3.403	34.894	280.3	3.254					
1950.0	3.383	34.893	281.0	3.229					
2000.0	3.350	34.893	281.8	3.192					
2050.0	3.310	34.893	282.1	3.148					
2100.0	3.277	34.892	282.3	3.112					
2150.0	3.250	34.893	281.6	3.080					
2200.0	3.232	34.896	280.5	3.058					
2250.0	3.250	34.905	278.2	3.070					
2300.0	3.219	34.905	279.2	3.035					
2350.0	3.203	34.908	278.6	3.015					
2400.0	3.198	34.912	277.7	3.005					
2450.0	3.190	34.918	276.4	2.991					
2500.0	3.185	34.923	275.2	2.982					
2550.0	3.173	34.929	274.0	2.965					
2600.0	3.155	34.933	271.4	2.943					
2650.0	3.133	34.935	271.3	2.916					
2700.0	3.111	34.938	270.5	2.889					
2750.0	3.093	34.941	268.3	2.866					
2800.0	3.060	34.942	267.2	2.829					
2850.0	3.031	34.943	267.9	2.795					
2900.0	3.000	34.944	267.8	2.760					
2950.0	2.972	34.945	267.4	2.727					
3000.0	2.949	34.946	265.9	2.699					



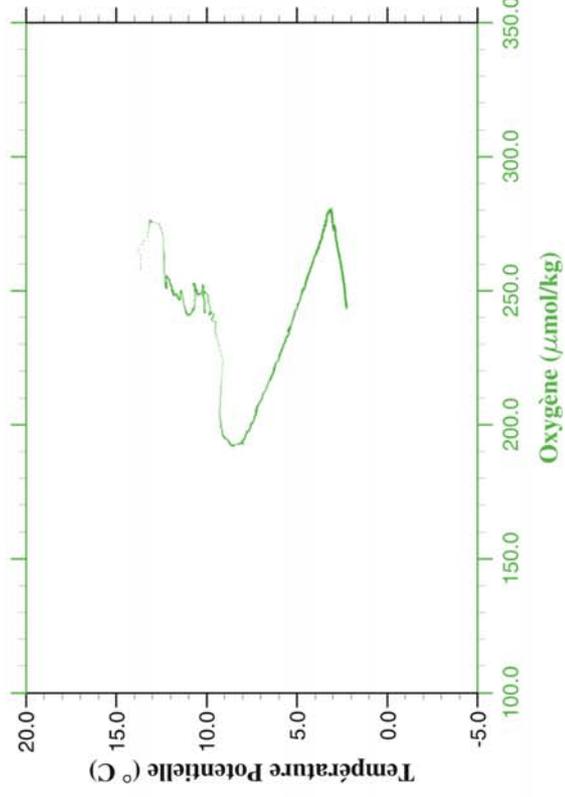
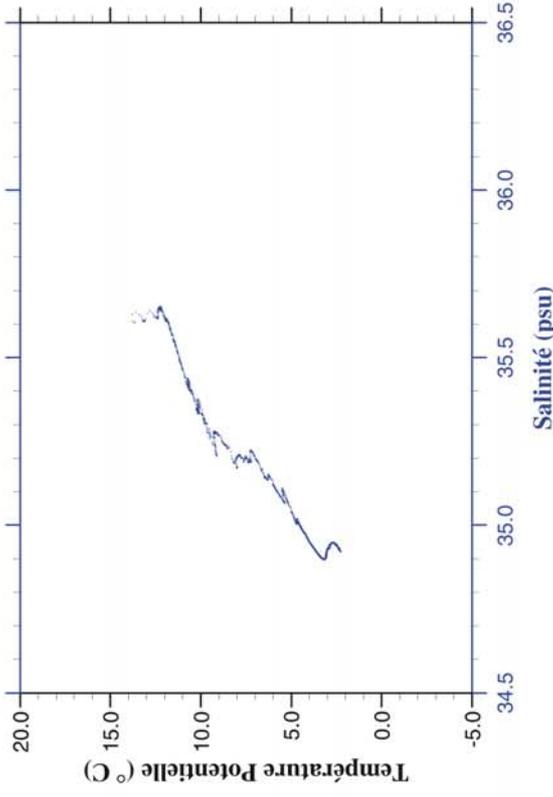
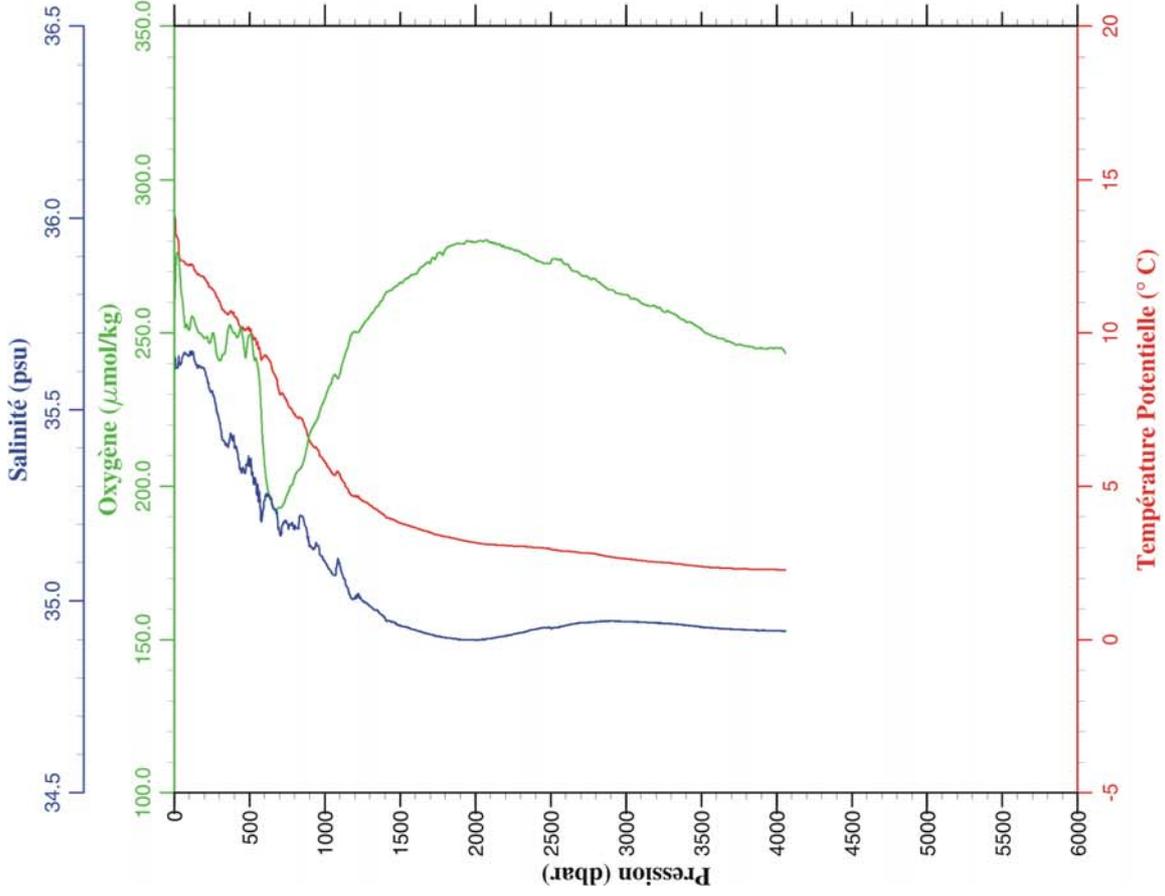
Station 53

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Station   : 54          Campagne  : OVIDE 02
Date      : 27-06-02  Navire    : N/O THALASSA
Profondeur : 3993      Organisme : IFREMER
Position  : N 49 54.34
           : W 22 18.77
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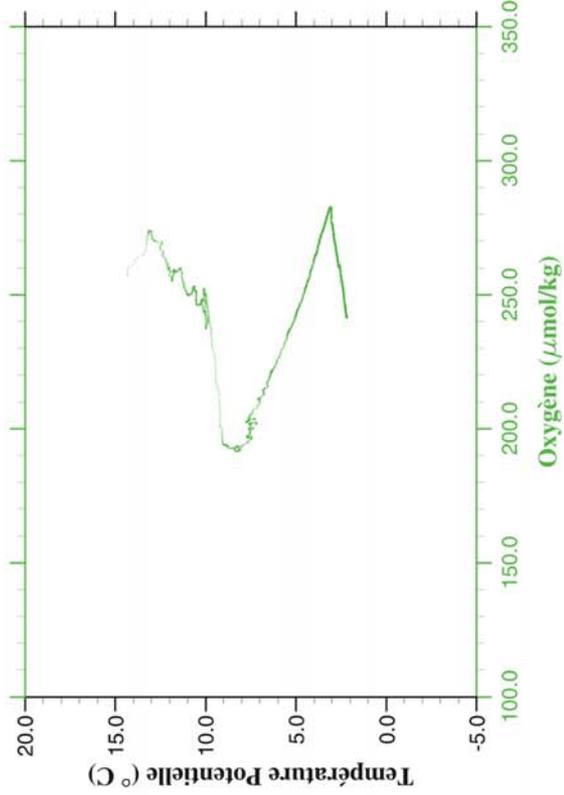
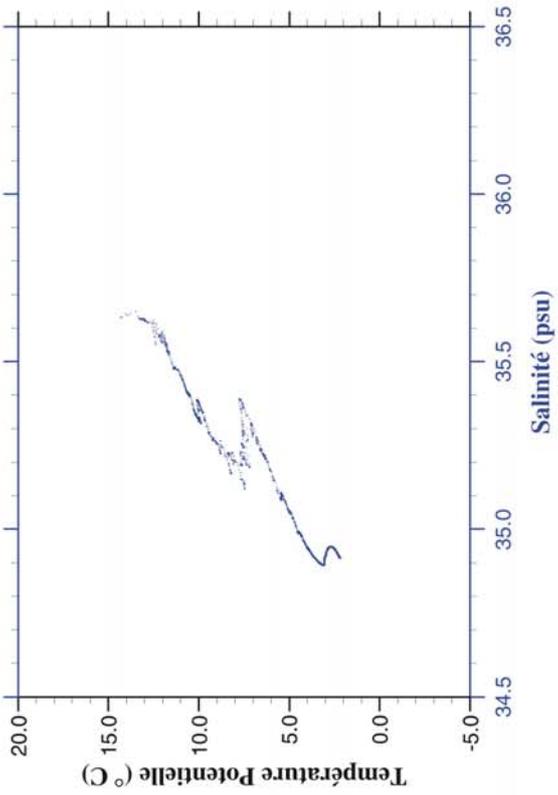
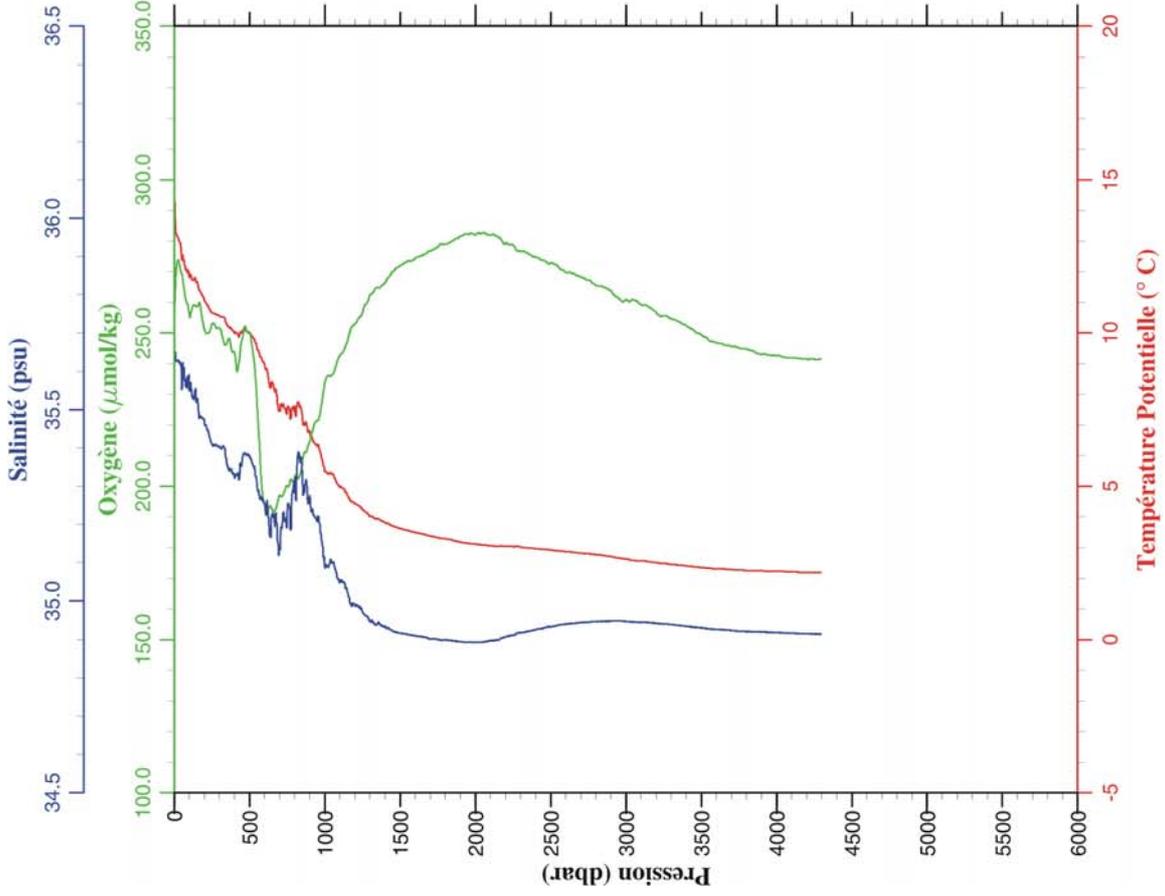
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	13.660	35.605	258.1	13.659	3050.0	2.857	34.946	261.3	2.604
10.0	13.289	35.624	270.3	13.287	3100.0	2.835	34.946	259.9	2.578
20.0	13.127	35.609	276.1	13.124	3150.0	2.811	34.943	258.8	2.548
30.0	12.674	35.633	274.9	12.670	3200.0	2.797	34.943	258.6	2.529
40.0	12.395	35.617	267.4	12.389	3250.0	2.783	34.942	257.0	2.511
50.0	12.369	35.626	262.6	12.362	3300.0	2.769	34.941	256.6	2.492
100.0	12.227	35.641	251.1	12.214	3350.0	2.745	34.939	255.2	2.463
150.0	11.972	35.616	251.6	11.952	3400.0	2.717	34.937	253.6	2.430
200.0	11.833	35.607	248.4	11.807	3450.0	2.698	34.935	252.9	2.407
250.0	11.495	35.548	248.8	11.463	3500.0	2.674	34.933	251.4	2.378
300.0	11.070	35.469	241.1	11.032	3550.0	2.660	34.931	249.7	2.358
350.0	10.670	35.406	248.3	10.627	3600.0	2.652	34.929	248.7	2.345
400.0	10.577	35.401	250.1	10.528	3650.0	2.641	34.928	248.1	2.329
450.0	10.234	35.340	250.2	10.180	3700.0	2.640	34.927	246.9	2.322
500.0	10.133	35.351	249.5	10.073	3750.0	2.631	34.926	246.3	2.307
550.0	9.706	35.278	240.3	9.642	3800.0	2.629	34.925	245.7	2.300
600.0	9.317	35.262	207.2	9.249	3850.0	2.626	34.924	245.2	2.291
650.0	8.897	35.250	194.3	8.825	3900.0	2.625	34.924	245.0	2.284
700.0	8.078	35.175	193.1	8.005	3950.0	2.628	34.923	245.1	2.282
750.0	7.834	35.202	197.3	7.756	4000.0	2.629	34.923	245.1	2.277
800.0	7.432	35.188	202.9	7.351	4050.0	2.625	34.922	244.2	2.268
850.0	7.284	35.222	206.8	7.199	4059.0	2.626	34.922	243.4	2.267
900.0	6.556	35.144	217.3	6.470					
950.0	6.296	35.145	221.9	6.207					
1000.0	5.894	35.105	228.5	5.803					
1050.0	5.520	35.073	234.9	5.427					
1100.0	5.472	35.095	236.5	5.375					
1150.0	5.027	35.034	245.1	4.929					
1200.0	4.765	35.007	250.4	4.665					
1250.0	4.635	35.002	252.3	4.531					
1300.0	4.491	34.986	255.6	4.384					
1350.0	4.340	34.976	258.8	4.230					
1400.0	4.142	34.955	262.7	4.030					
1450.0	4.031	34.945	264.4	3.915					
1500.0	3.924	34.937	266.5	3.805					
1550.0	3.846	34.931	267.9	3.723					
1600.0	3.778	34.925	269.3	3.651					
1650.0	3.692	34.918	271.8	3.562					
1700.0	3.627	34.914	272.7	3.493					
1750.0	3.556	34.908	276.0	3.418					
1800.0	3.500	34.904	277.3	3.359					
1850.0	3.455	34.902	278.8	3.310					
1900.0	3.401	34.900	279.2	3.252					
1950.0	3.358	34.899	280.0	3.204					
2000.0	3.314	34.898	279.7	3.157					
2050.0	3.280	34.900	279.9	3.119					
2100.0	3.266	34.903	279.6	3.100					
2150.0	3.255	34.906	278.9	3.085					
2200.0	3.243	34.909	277.8	3.068					
2250.0	3.229	34.913	277.2	3.049					
2300.0	3.225	34.918	276.4	3.040					
2350.0	3.216	34.922	275.3	3.027					
2400.0	3.199	34.927	273.8	3.006					
2450.0	3.183	34.931	272.8	2.985					
2500.0	3.144	34.929	273.0	2.942					
2550.0	3.114	34.932	274.0	2.907					
2600.0	3.096	34.936	272.5	2.885					
2650.0	3.078	34.941	270.3	2.862					
2700.0	3.050	34.944	268.9	2.829					
2750.0	3.043	34.944	268.2	2.817					
2800.0	3.021	34.946	267.5	2.791					
2850.0	2.971	34.948	265.5	2.736					
2900.0	2.931	34.948	264.2	2.692					
2950.0	2.903	34.948	263.0	2.660					
3000.0	2.880	34.947	262.5	2.632					



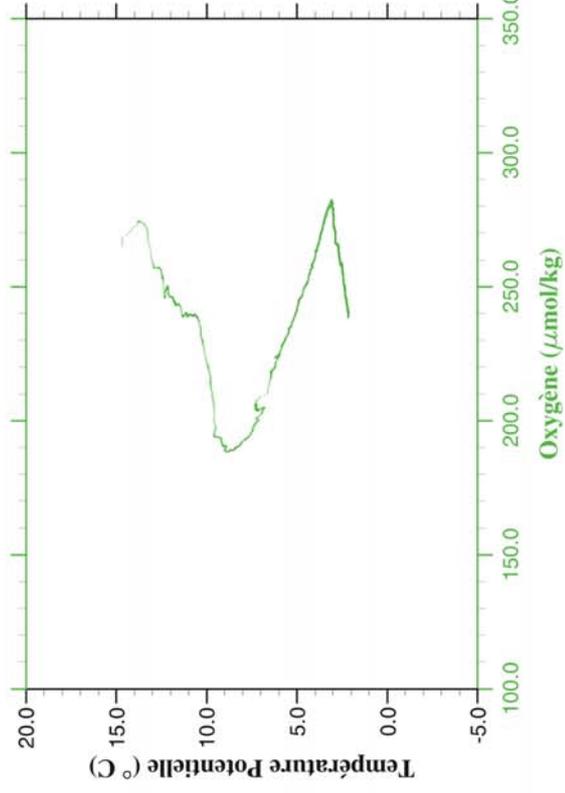
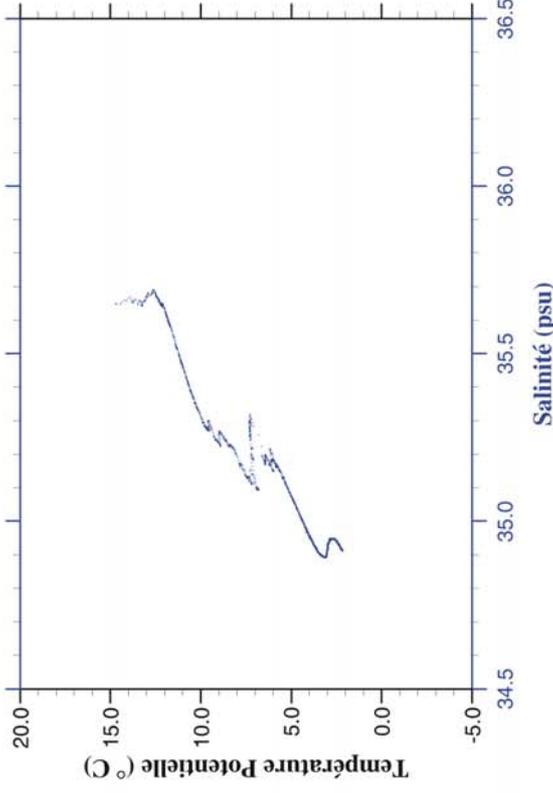
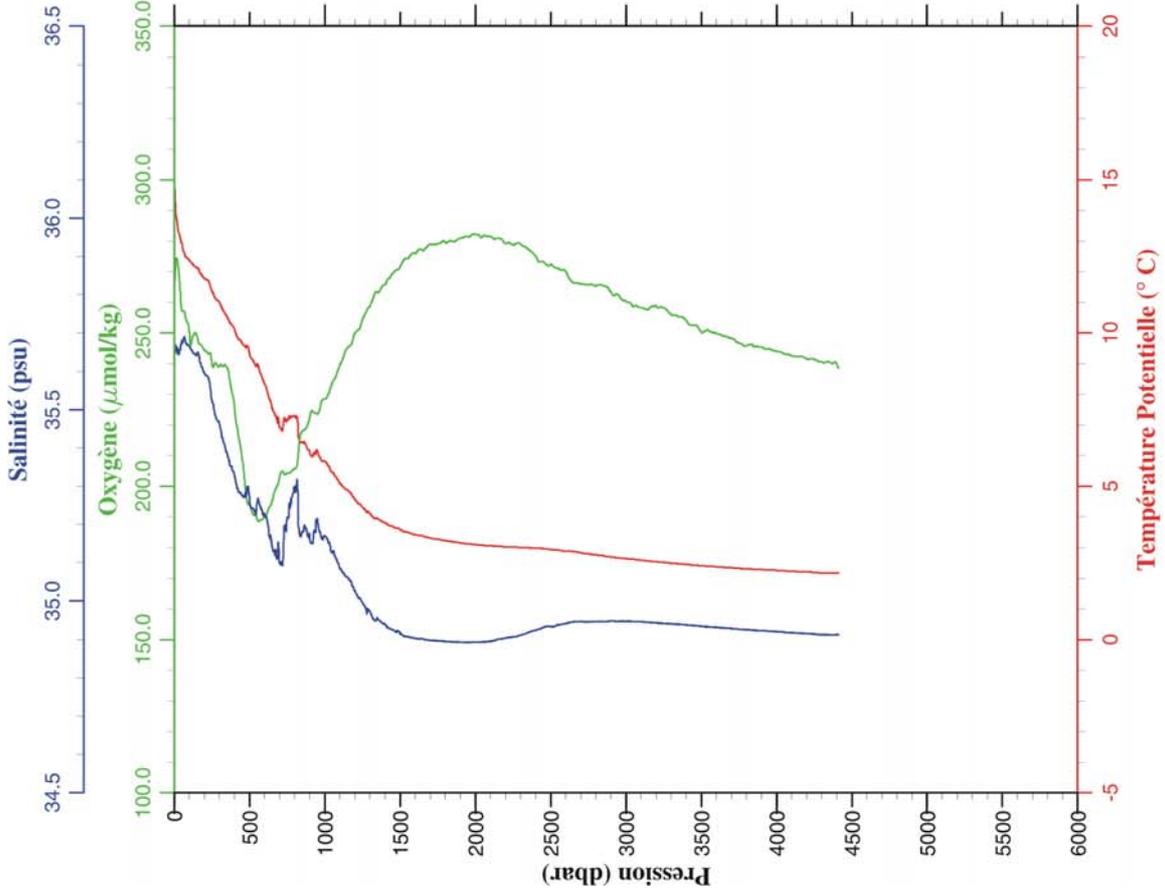
Station 54

Station : 55 Campagne : OVIDE 02
 Date : 27-06-02 Navire : N/O THALASSA
 Profondeur : 4195 Organisme : IFREMER
 Position : N 49 31.88
 W 22 1.17

PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	14.312	35.633	257.2	14.312	3050.0	2.839	34.946	260.9	2.586
10.0	13.321	35.629	267.2	13.319	3100.0	2.819	34.945	259.3	2.562
20.0	13.164	35.626	273.2	13.161	3150.0	2.803	34.944	258.6	2.541
30.0	13.031	35.628	273.6	13.027	3200.0	2.767	34.942	256.7	2.500
40.0	12.935	35.622	270.9	12.930	3250.0	2.753	34.940	255.6	2.481
50.0	12.415	35.574	269.6	12.408	3300.0	2.731	34.939	254.7	2.454
100.0	11.876	35.549	256.0	11.863	3350.0	2.714	34.937	253.8	2.432
150.0	11.693	35.529	258.6	11.674	3400.0	2.685	34.934	252.5	2.399
200.0	11.101	35.470	251.3	11.076	3450.0	2.663	34.932	251.0	2.372
250.0	10.708	35.411	252.8	10.677	3500.0	2.645	34.929	249.4	2.349
300.0	10.607	35.405	251.6	10.570	3550.0	2.626	34.928	247.6	2.325
350.0	10.315	35.358	246.7	10.273	3600.0	2.615	34.927	246.9	2.309
400.0	10.045	35.324	243.8	9.998	3650.0	2.611	34.925	246.2	2.299
450.0	10.096	35.358	247.7	10.042	3700.0	2.599	34.923	245.6	2.282
500.0	10.052	35.376	250.2	9.992	3750.0	2.589	34.922	245.2	2.267
550.0	9.604	35.308	227.6	9.541	3800.0	2.582	34.920	244.8	2.254
600.0	9.052	35.255	194.0	8.985	3850.0	2.581	34.920	244.1	2.248
650.0	8.470	35.228	192.2	8.400	3900.0	2.579	34.919	243.0	2.240
700.0	7.555	35.137	197.1	7.484	3950.0	2.578	34.919	242.8	2.233
750.0	7.545	35.211	200.2	7.468	4000.0	2.577	34.918	242.6	2.226
800.0	7.652	35.296	202.5	7.570	4050.0	2.574	34.917	242.2	2.218
850.0	7.435	35.338	207.1	7.348	4100.0	2.570	34.917	241.9	2.208
900.0	6.886	35.274	214.6	6.798	4150.0	2.565	34.915	241.7	2.197
950.0	6.405	35.209	221.5	6.315	4200.0	2.566	34.915	241.5	2.193
1000.0	5.595	35.091	233.7	5.506	4250.0	2.566	34.915	241.5	2.186
1050.0	5.478	35.100	236.5	5.385	4295.0	2.571	34.914	241.6	2.186
1100.0	5.071	35.048	242.6	4.977					
1150.0	4.807	35.022	247.3	4.711					
1200.0	4.531	34.989	253.0	4.433					
1250.0	4.342	34.970	256.7	4.241					
1300.0	4.130	34.947	262.4	4.026					
1350.0	4.045	34.940	264.9	3.938					
1400.0	3.945	34.935	266.5	3.834					
1450.0	3.813	34.922	270.1	3.700					
1500.0	3.737	34.917	272.0	3.620					
1550.0	3.675	34.913	273.5	3.554					
1600.0	3.619	34.910	274.3	3.495					
1650.0	3.567	34.906	275.5	3.438					
1700.0	3.506	34.902	276.9	3.374					
1750.0	3.459	34.900	278.1	3.322					
1800.0	3.428	34.899	278.9	3.288					
1850.0	3.379	34.896	280.2	3.235					
1900.0	3.323	34.895	281.7	3.175					
1950.0	3.290	34.893	282.2	3.138					
2000.0	3.269	34.893	282.0	3.113					
2050.0	3.243	34.894	282.7	3.082					
2100.0	3.227	34.898	281.9	3.062					
2150.0	3.207	34.898	281.4	3.037					
2200.0	3.221	34.907	279.3	3.047					
2250.0	3.208	34.911	278.6	3.028					
2300.0	3.200	34.917	276.6	3.016					
2350.0	3.175	34.922	276.0	2.986					
2400.0	3.159	34.925	274.7	2.966					
2450.0	3.141	34.929	273.7	2.944					
2500.0	3.120	34.933	272.8	2.918					
2550.0	3.105	34.938	271.6	2.898					
2600.0	3.080	34.940	269.9	2.869					
2650.0	3.064	34.942	269.5	2.848					
2700.0	3.039	34.944	268.3	2.819					
2750.0	3.027	34.945	267.3	2.802					
2800.0	3.001	34.947	265.6	2.771					
2850.0	2.977	34.948	265.0	2.743					
2900.0	2.944	34.948	263.8	2.705					
2950.0	2.903	34.948	261.4	2.659					
3000.0	2.872	34.947	260.9	2.624					



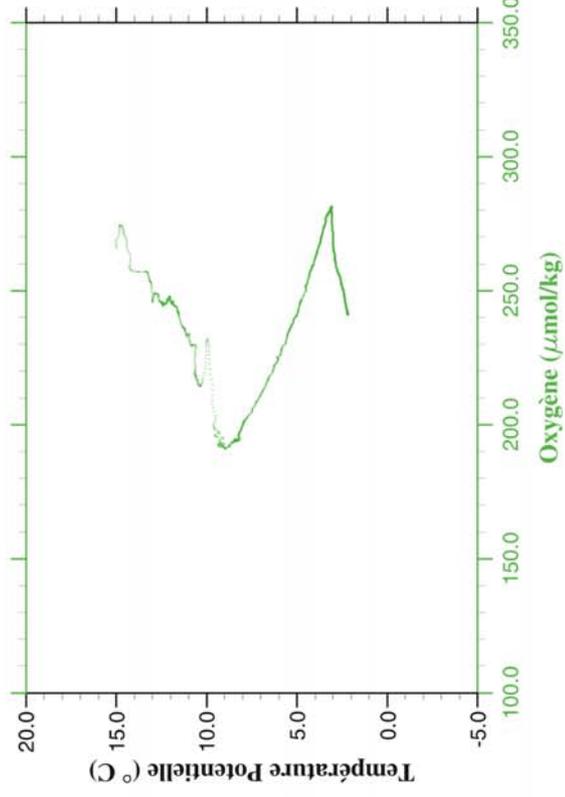
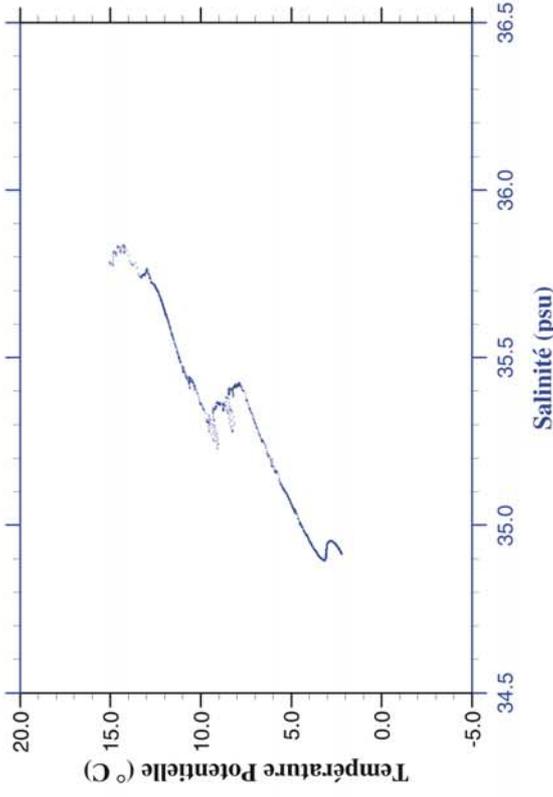
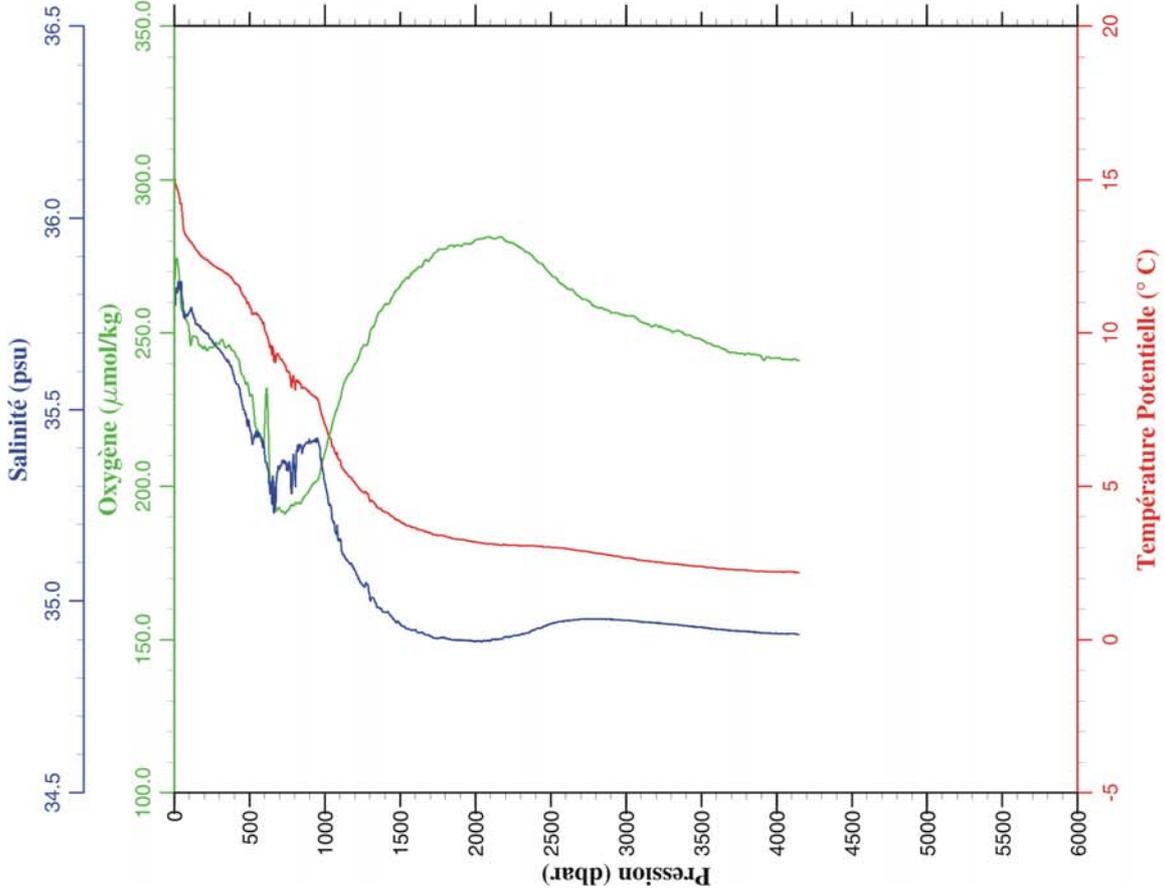
Station 55



Station 56

Station : 57 Campagne : OVIDE 02
 Date : 28-06-02 Navire : N/O THALASSA
 Profondeur : 4000 Organisme : IFREMER
 Position : N 48 47.12
 W 21 25.99

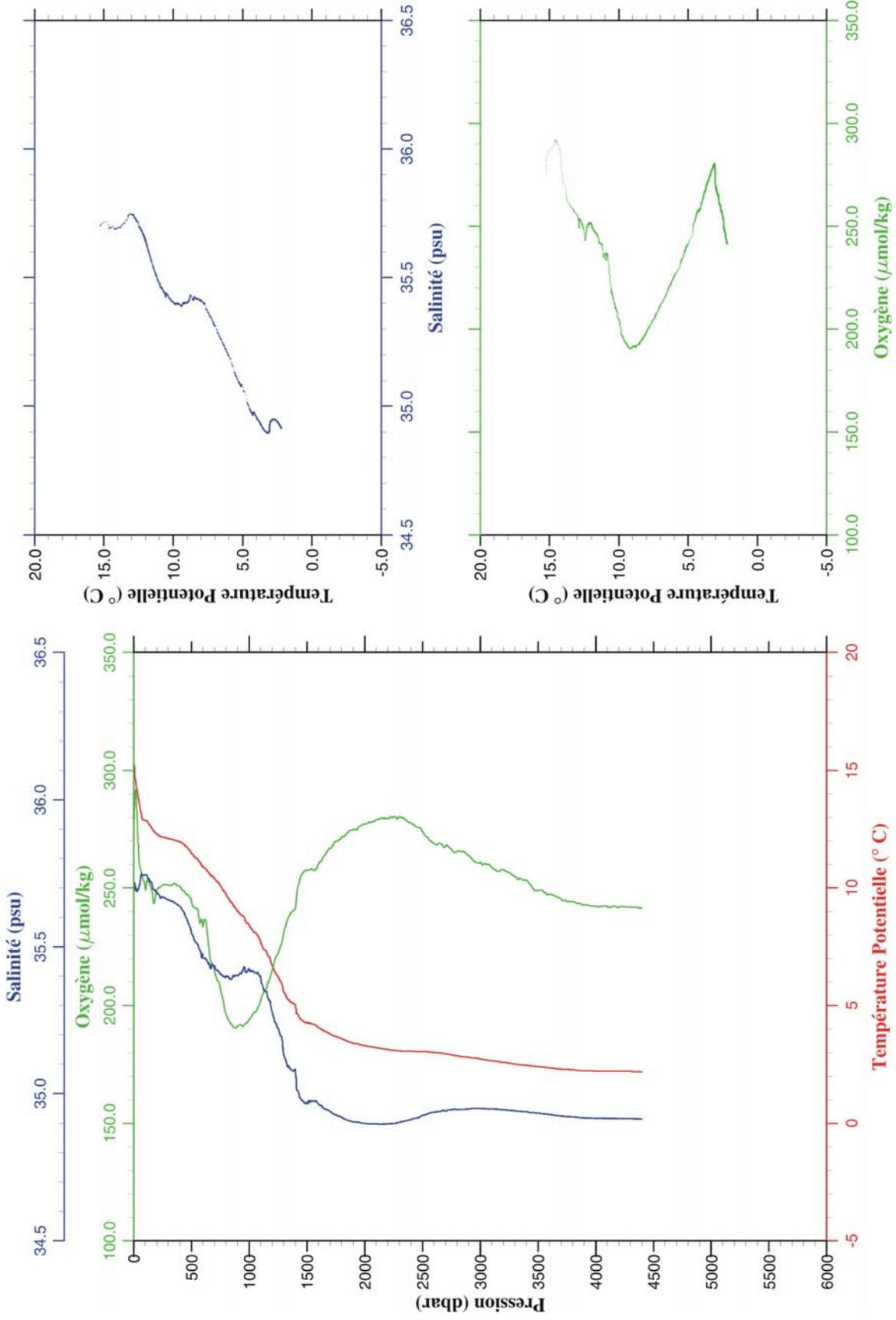
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	15.017	35.779	266.0	15.017	3050.0	2.889	34.948	255.6	2.635
10.0	14.832	35.791	272.3	14.830	3100.0	2.841	34.946	253.7	2.583
20.0	14.675	35.805	274.1	14.673	3150.0	2.820	34.945	252.8	2.557
30.0	14.510	35.828	270.1	14.506	3200.0	2.799	34.943	252.7	2.531
40.0	14.228	35.816	263.2	14.222	3250.0	2.772	34.941	251.7	2.500
50.0	14.181	35.827	257.6	14.174	3300.0	2.753	34.939	250.7	2.476
100.0	13.037	35.754	250.4	13.023	3350.0	2.735	34.937	250.8	2.453
150.0	12.711	35.723	248.6	12.690	3400.0	2.711	34.935	249.3	2.424
200.0	12.465	35.704	245.6	12.438	3450.0	2.687	34.934	248.5	2.396
250.0	12.292	35.683	245.3	12.258	3500.0	2.679	34.932	247.9	2.382
300.0	12.138	35.658	246.5	12.098	3550.0	2.651	34.929	246.7	2.349
350.0	11.991	35.631	245.3	11.945	3600.0	2.634	34.927	245.7	2.327
400.0	11.704	35.582	243.8	11.652	3650.0	2.619	34.925	244.8	2.307
450.0	11.358	35.516	236.3	11.301	3700.0	2.602	34.924	243.7	2.285
500.0	10.952	35.458	230.1	10.889	3750.0	2.593	34.922	243.3	2.270
550.0	10.658	35.432	218.6	10.590	3800.0	2.586	34.921	243.3	2.258
600.0	10.248	35.392	218.4	10.175	3850.0	2.571	34.919	243.1	2.238
650.0	9.366	35.252	196.8	9.292	3900.0	2.564	34.917	242.3	2.225
700.0	9.269	35.344	192.7	9.189	3950.0	2.553	34.917	242.2	2.209
750.0	8.839	35.349	192.1	8.755	4000.0	2.553	34.916	241.8	2.204
800.0	8.453	35.342	194.2	8.366	4050.0	2.554	34.915	241.5	2.198
850.0	8.289	35.387	195.5	8.197	4100.0	2.562	34.915	241.2	2.200
900.0	8.141	35.418	199.0	8.044	4148.0	2.557	34.914	241.0	2.189
950.0	7.980	35.425	201.8	7.879					
1000.0	7.119	35.309	210.9	7.019					
1050.0	6.416	35.214	220.3	6.316					
1100.0	5.960	35.162	228.0	5.859					
1150.0	5.486	35.105	235.9	5.384					
1200.0	5.226	35.080	239.9	5.121					
1250.0	4.927	35.043	245.5	4.820					
1300.0	4.623	35.004	250.1	4.514					
1350.0	4.422	34.983	255.8	4.311					
1400.0	4.278	34.971	259.3	4.163					
1450.0	4.121	34.956	261.8	4.004					
1500.0	3.977	34.942	265.3	3.857					
1550.0	3.841	34.927	268.1	3.718					
1600.0	3.779	34.925	270.4	3.652					
1650.0	3.692	34.917	272.3	3.562					
1700.0	3.601	34.908	274.2	3.467					
1750.0	3.539	34.903	277.1	3.402					
1800.0	3.515	34.904	277.4	3.374					
1850.0	3.443	34.899	278.6	3.298					
1900.0	3.415	34.898	278.5	3.266					
1950.0	3.374	34.897	279.1	3.221					
2000.0	3.333	34.895	280.5	3.176					
2050.0	3.303	34.897	280.8	3.141					
2100.0	3.276	34.897	281.2	3.111					
2150.0	3.261	34.900	281.2	3.091					
2200.0	3.267	34.907	280.0	3.092					
2250.0	3.258	34.909	279.4	3.078					
2300.0	3.248	34.913	277.9	3.064					
2350.0	3.253	34.917	276.3	3.063					
2400.0	3.242	34.927	274.0	3.047					
2450.0	3.226	34.933	272.3	3.027					
2500.0	3.214	34.941	269.3	3.010					
2550.0	3.204	34.947	267.0	2.996					
2600.0	3.179	34.949	265.0	2.966					
2650.0	3.145	34.951	263.9	2.928					
2700.0	3.114	34.953	261.5	2.892					
2750.0	3.089	34.954	260.5	2.863					
2800.0	3.047	34.953	258.6	2.816					
2850.0	3.016	34.953	257.9	2.781					
2900.0	2.981	34.952	256.7	2.741					
2950.0	2.956	34.951	256.5	2.711					
3000.0	2.912	34.950	255.6	2.663					



Station 57

Station : 58 Campagne : OVIDE 02
 Date : 28-06-02 Navire : N/O THALASSA
 Profondeur : 4314 Organisme : IFREMER
 Position : N 48 24.69
 W 21 8.48

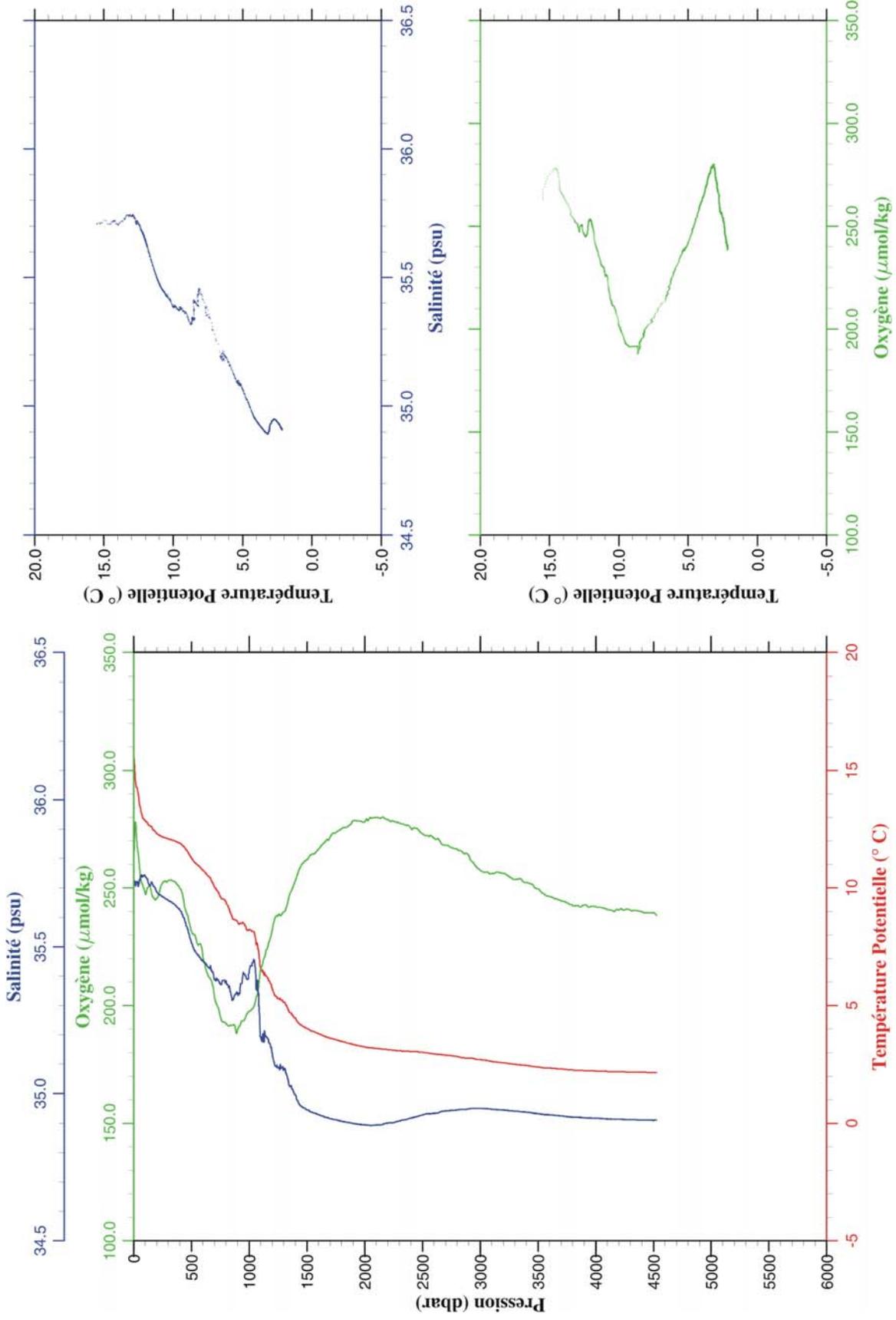
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	15.239	35.702	275.5	15.239	3050.0	2.937	34.949	260.1	2.683
10.0	14.909	35.718	287.4	14.907	3100.0	2.908	34.948	258.7	2.649
20.0	14.475	35.693	291.0	14.472	3150.0	2.886	34.947	257.3	2.622
30.0	14.162	35.689	279.9	14.157	3200.0	2.855	34.946	257.7	2.586
40.0	13.834	35.695	267.8	13.828	3250.0	2.822	34.944	256.6	2.549
50.0	13.593	35.710	260.8	13.586	3300.0	2.788	34.942	254.9	2.510
100.0	12.893	35.745	249.9	12.879	3350.0	2.762	34.940	254.1	2.479
150.0	12.623	35.720	250.1	12.603	3400.0	2.750	34.938	253.2	2.462
200.0	12.332	35.685	249.0	12.306	3450.0	2.724	34.936	250.3	2.432
250.0	12.202	35.669	251.2	12.169	3500.0	2.704	34.934	249.1	2.407
300.0	12.145	35.660	251.2	12.105	3550.0	2.686	34.932	248.2	2.383
350.0	12.090	35.652	251.9	12.044	3600.0	2.661	34.929	247.3	2.353
400.0	12.015	35.637	250.6	11.962	3650.0	2.634	34.926	246.6	2.321
450.0	11.831	35.601	247.5	11.772	3700.0	2.611	34.925	245.3	2.294
500.0	11.540	35.549	244.5	11.476	3750.0	2.604	34.922	244.3	2.281
550.0	11.315	35.510	241.3	11.245	3800.0	2.593	34.921	244.2	2.265
600.0	10.966	35.467	233.4	10.890	3850.0	2.577	34.919	243.5	2.243
650.0	10.725	35.439	225.2	10.644	3900.0	2.567	34.918	242.8	2.229
700.0	10.495	35.429	215.0	10.408	3950.0	2.565	34.917	242.5	2.220
750.0	10.186	35.407	207.6	10.096	4000.0	2.566	34.916	242.3	2.216
800.0	9.845	35.400	196.6	9.750	4050.0	2.570	34.916	242.3	2.214
850.0	9.469	35.389	191.9	9.370	4100.0	2.575	34.915	242.1	2.213
900.0	9.115	35.401	191.3	9.012	4150.0	2.578	34.916	242.2	2.210
950.0	8.903	35.425	191.4	8.795	4200.0	2.580	34.915	241.8	2.206
1000.0	8.530	35.419	194.0	8.420	4250.0	2.582	34.915	242.0	2.203
1050.0	8.210	35.412	197.1	8.096	4300.0	2.586	34.915	242.0	2.200
1100.0	7.837	35.401	202.1	7.720	4350.0	2.586	34.915	241.8	2.194
1150.0	7.422	35.349	207.4	7.302	4400.0	2.589	34.914	241.5	2.191
1200.0	6.812	35.276	215.2	6.692	4402.0	2.589	34.914	241.5	2.191
1250.0	6.357	35.223	222.1	6.237					
1300.0	5.707	35.132	231.1	5.588					
1350.0	5.328	35.090	238.4	5.207					
1400.0	5.121	35.084	241.4	4.998					
1450.0	4.511	34.978	255.3	4.390					
1500.0	4.412	34.970	257.5	4.287					
1550.0	4.334	34.975	257.8	4.205					
1600.0	4.194	34.965	260.1	4.063					
1650.0	4.053	34.949	263.7	3.918					
1700.0	3.920	34.939	266.9	3.783					
1750.0	3.826	34.928	269.9	3.685					
1800.0	3.730	34.920	271.6	3.585					
1850.0	3.633	34.910	273.3	3.485					
1900.0	3.555	34.904	274.8	3.404					
1950.0	3.507	34.903	275.9	3.351					
2000.0	3.454	34.899	277.3	3.295					
2050.0	3.417	34.898	277.8	3.253					
2100.0	3.374	34.897	278.9	3.206					
2150.0	3.340	34.897	279.7	3.168					
2200.0	3.307	34.897	279.4	3.131					
2250.0	3.281	34.898	280.3	3.100					
2300.0	3.259	34.903	280.3	3.074					
2350.0	3.252	34.907	279.2	3.063					
2400.0	3.255	34.910	277.6	3.060					
2450.0	3.247	34.917	275.9	3.047					
2500.0	3.238	34.926	274.1	3.034					
2550.0	3.239	34.933	271.3	3.030					
2600.0	3.221	34.937	268.9	3.007					
2650.0	3.203	34.940	269.0	2.985					
2700.0	3.170	34.942	267.7	2.947					
2750.0	3.132	34.946	266.6	2.905					
2800.0	3.089	34.946	265.5	2.857					
2850.0	3.062	34.947	265.6	2.826					
2900.0	3.045	34.948	263.8	2.804					
2950.0	3.019	34.950	261.2	2.773					
3000.0	2.980	34.950	260.8	2.729					



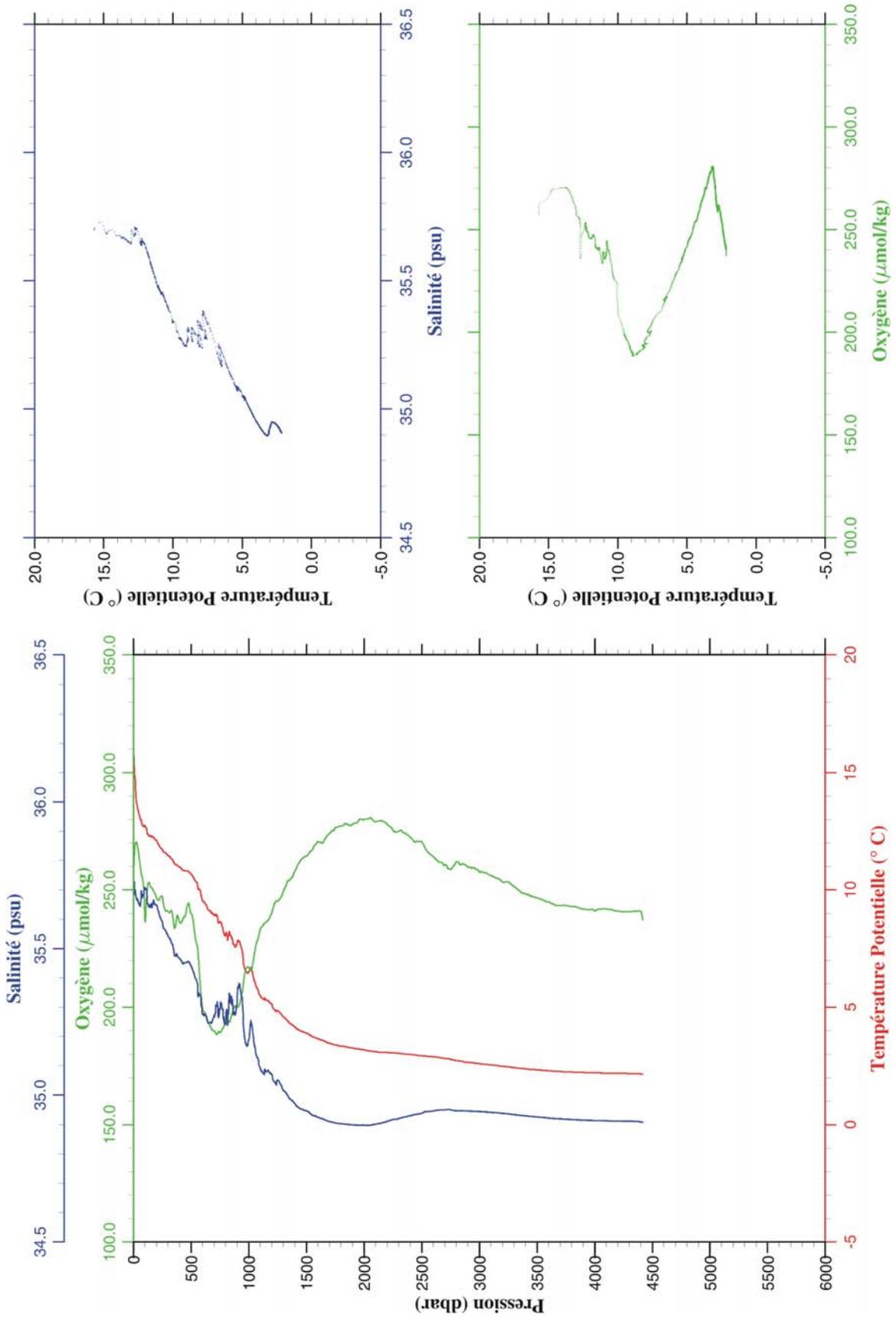
Station 58

Station : 59 Campagne : OVIDE 02
 Date : 28-06-02 Navire : N/O THALASSA
 Profondeur : 4435 Organisme : IFREMER
 Position : N 48 2.31
 W 20 50.88

PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	15.491	35.709	263.1	15.491	3050.0	2.928	34.949	256.7	2.673
10.0	15.126	35.714	274.1	15.125	3100.0	2.879	34.947	256.1	2.621
20.0	14.369	35.718	276.3	14.366	3150.0	2.857	34.946	256.8	2.594
30.0	14.259	35.719	268.1	14.254	3200.0	2.833	34.945	256.2	2.565
40.0	13.997	35.705	264.5	13.991	3250.0	2.806	34.943	254.9	2.533
50.0	13.628	35.721	259.5	13.621	3300.0	2.777	34.941	253.6	2.500
100.0	12.870	35.738	247.8	12.857	3350.0	2.758	34.939	254.0	2.475
150.0	12.657	35.717	249.0	12.637	3400.0	2.740	34.938	252.3	2.452
200.0	12.348	35.686	245.6	12.322	3450.0	2.707	34.935	251.5	2.415
250.0	12.207	35.671	252.1	12.173	3500.0	2.684	34.933	249.6	2.387
300.0	12.126	35.658	253.2	12.086	3550.0	2.657	34.929	247.6	2.355
350.0	12.059	35.645	252.8	12.012	3600.0	2.647	34.928	246.4	2.339
400.0	11.950	35.625	249.9	11.897	3650.0	2.634	34.926	245.4	2.322
450.0	11.720	35.582	240.4	11.661	3700.0	2.619	34.925	244.5	2.302
500.0	11.336	35.514	231.8	11.272	3750.0	2.605	34.923	243.8	2.282
550.0	11.055	35.474	226.5	10.985	3800.0	2.587	34.920	242.6	2.259
600.0	10.827	35.451	220.6	10.752	3850.0	2.582	34.920	242.5	2.249
650.0	10.571	35.429	212.1	10.490	3900.0	2.573	34.918	242.8	2.235
700.0	10.111	35.387	203.7	10.026	3950.0	2.570	34.918	242.0	2.225
750.0	9.719	35.372	195.4	9.630	4000.0	2.567	34.916	242.0	2.217
800.0	9.508	35.381	192.3	9.414	4050.0	2.568	34.915	241.7	2.212
850.0	8.906	35.327	191.6	8.810	4100.0	2.559	34.914	240.8	2.198
900.0	8.651	35.340	189.9	8.551	4150.0	2.560	34.913	240.2	2.192
950.0	8.608	35.412	193.5	8.502	4200.0	2.560	34.913	240.6	2.187
1000.0	8.315	35.411	197.6	8.206	4250.0	2.560	34.913	240.6	2.181
1050.0	8.105	35.436	201.0	7.992	4300.0	2.558	34.912	240.5	2.173
1100.0	6.703	35.192	215.6	6.596	4350.0	2.559	34.911	240.3	2.168
1150.0	6.354	35.193	223.8	6.244	4400.0	2.558	34.911	239.9	2.161
1200.0	5.813	35.134	232.2	5.703	4450.0	2.561	34.910	239.5	2.158
1250.0	5.413	35.088	238.2	5.302	4500.0	2.561	34.910	239.4	2.152
1300.0	5.252	35.080	239.8	5.137	4525.0	2.564	34.910	238.4	2.152
1350.0	4.832	35.025	247.1	4.716					
1400.0	4.579	34.996	253.2	4.462					
1450.0	4.295	34.958	259.5	4.176					
1500.0	4.146	34.945	262.2	4.024					
1550.0	4.032	34.936	264.4	3.907					
1600.0	3.938	34.930	266.5	3.810					
1650.0	3.826	34.922	269.3	3.694					
1700.0	3.750	34.916	271.6	3.614					
1750.0	3.690	34.911	273.6	3.551					
1800.0	3.611	34.907	275.2	3.468					
1850.0	3.552	34.902	276.0	3.405					
1900.0	3.497	34.899	278.6	3.347					
1950.0	3.441	34.896	278.4	3.287					
2000.0	3.401	34.894	278.0	3.242					
2050.0	3.359	34.892	279.9	3.196					
2100.0	3.345	34.894	279.9	3.178					
2150.0	3.316	34.894	280.0	3.145					
2200.0	3.301	34.900	278.9	3.125					
2250.0	3.277	34.902	278.3	3.097					
2300.0	3.263	34.907	277.5	3.078					
2350.0	3.253	34.912	276.8	3.063					
2400.0	3.240	34.918	275.5	3.046					
2450.0	3.232	34.922	275.4	3.033					
2500.0	3.216	34.928	273.0	3.012					
2550.0	3.196	34.932	272.1	2.988					
2600.0	3.158	34.934	271.2	2.946					
2650.0	3.131	34.938	270.0	2.914					
2700.0	3.113	34.942	268.1	2.891					
2750.0	3.091	34.943	267.1	2.864					
2800.0	3.068	34.945	266.5	2.836					
2850.0	3.014	34.947	265.1	2.779					
2900.0	2.998	34.949	263.8	2.758					
2950.0	2.981	34.950	260.0	2.736					
3000.0	2.954	34.950	257.5	2.704					



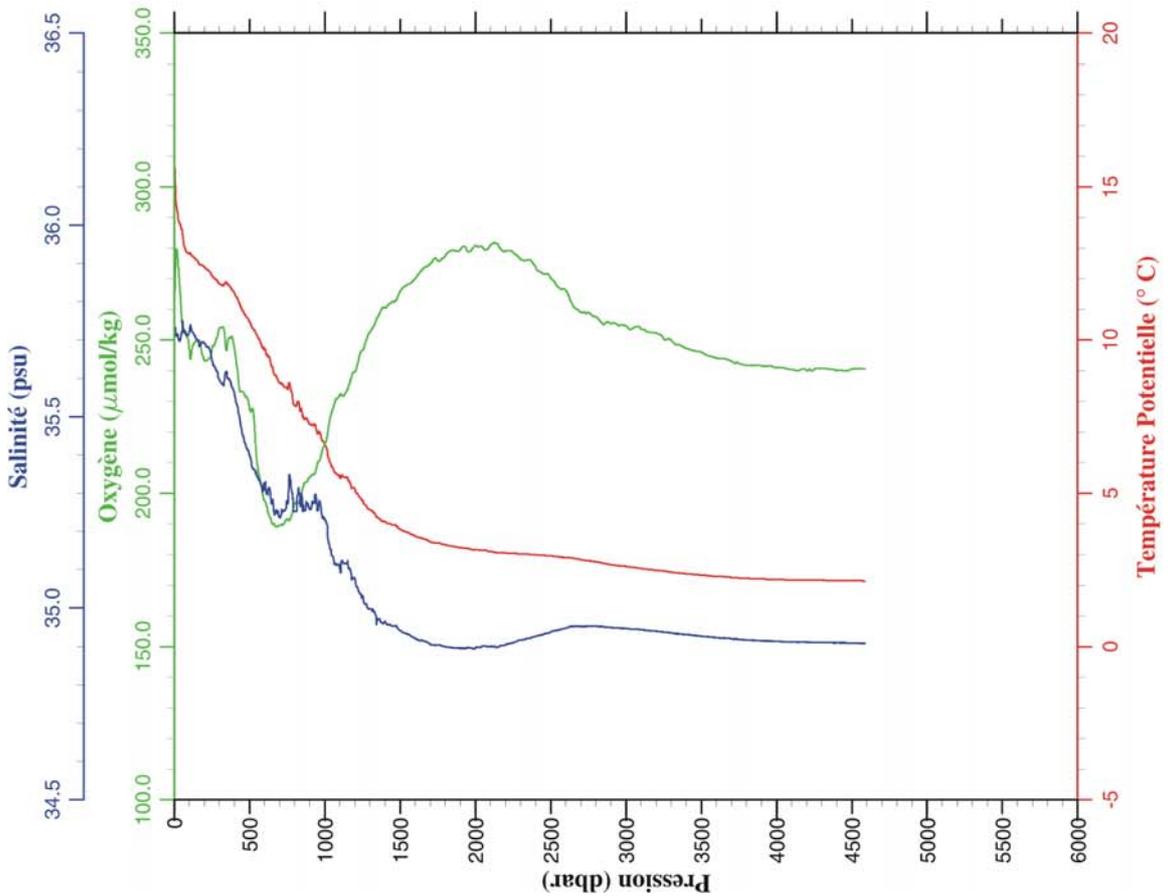
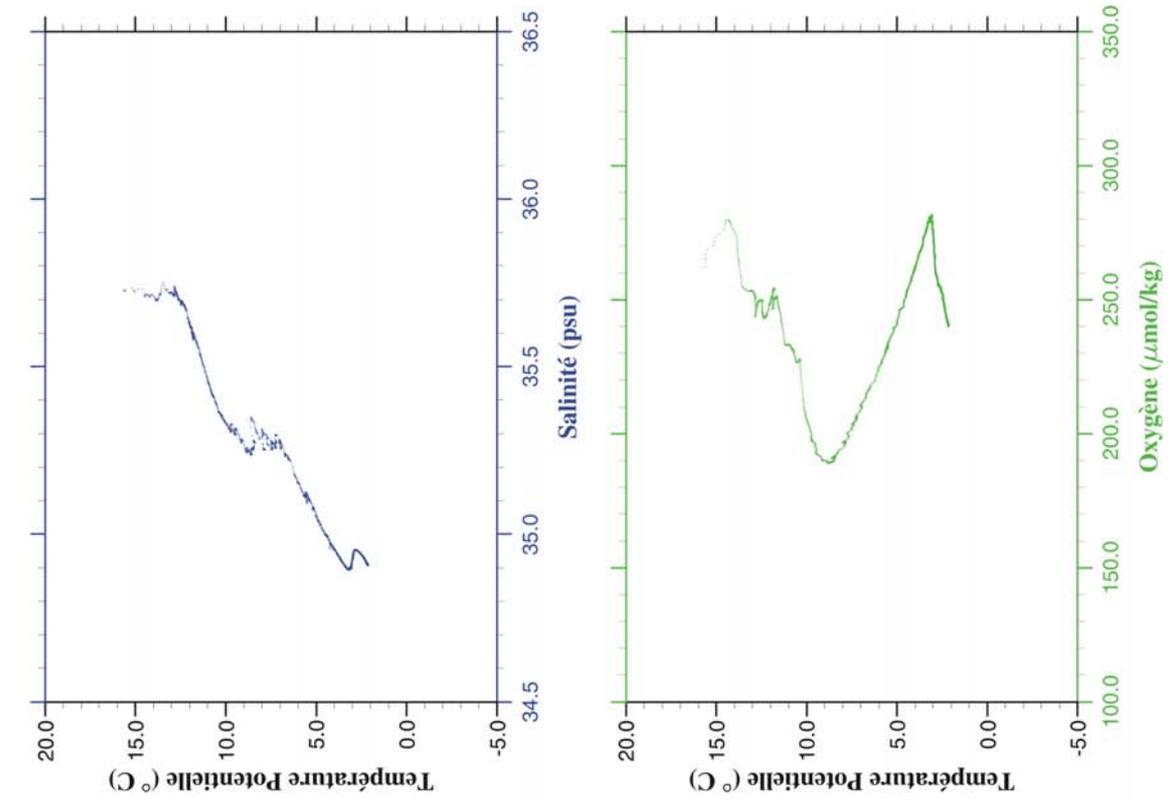
Station 59



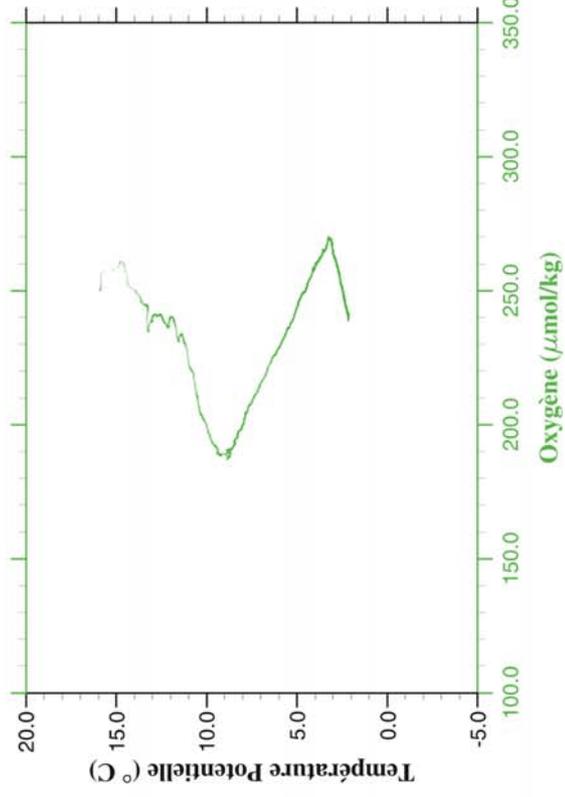
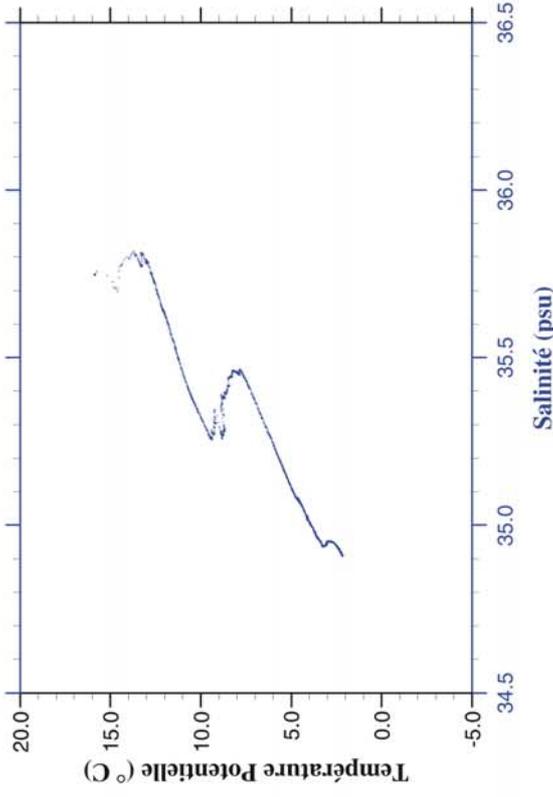
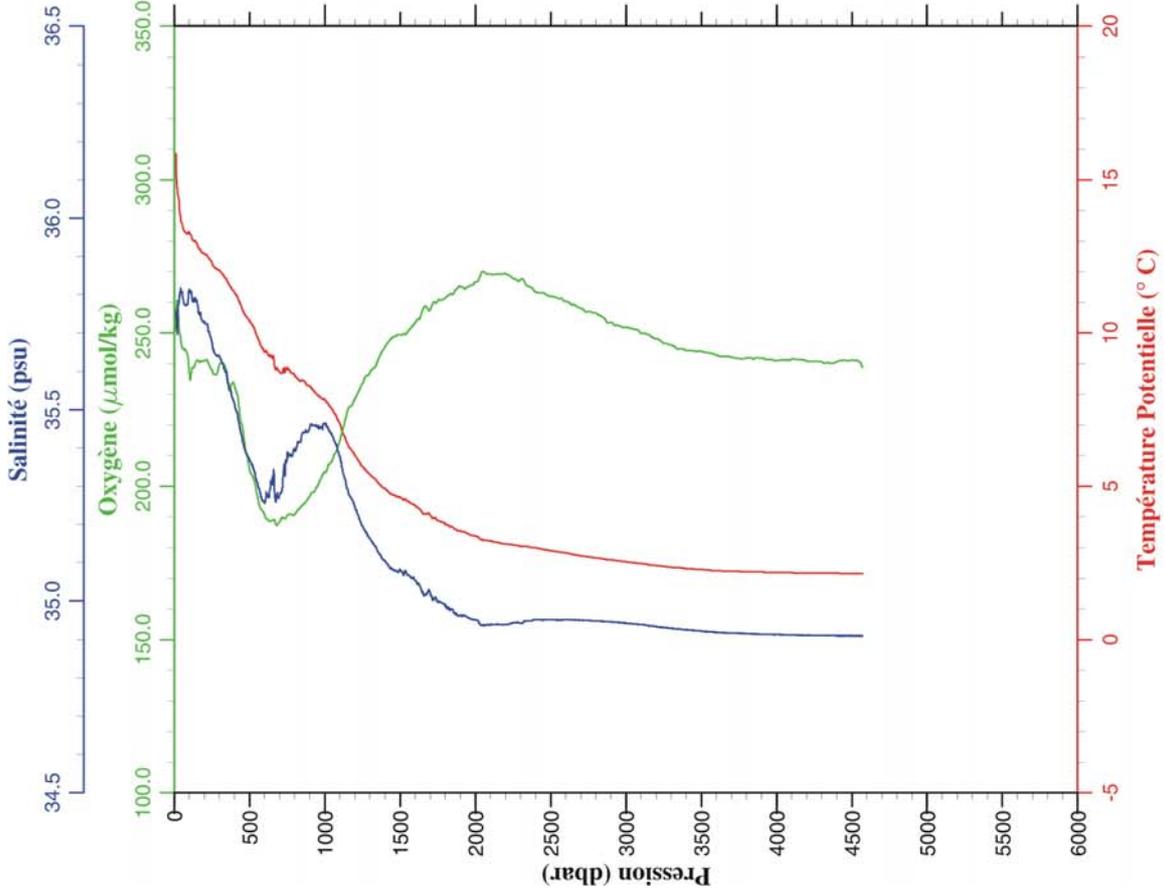
Station 60

Station	: 61	Campagne	: OVIDE 02
Date	: 29-06-02	Navire	: N/O THALASSA
Profondeur	: 4495	Organisme	: IFREMER
Position	: N 47 17.46		
	W 20 15.75		

PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	15.617	35.727	262.2	15.617	3050.0	2.832	34.946	254.0	2.579
10.0	14.587	35.731	275.9	14.586	3100.0	2.807	34.944	253.6	2.550
20.0	14.223	35.710	278.7	14.220	3150.0	2.775	34.942	252.6	2.514
30.0	13.856	35.698	271.9	13.852	3200.0	2.755	34.940	252.3	2.489
40.0	13.772	35.701	264.8	13.766	3250.0	2.731	34.938	250.5	2.460
50.0	13.620	35.718	257.3	13.613	3300.0	2.702	34.935	249.9	2.426
100.0	12.839	35.721	247.1	12.825	3350.0	2.677	34.933	248.6	2.397
150.0	12.635	35.702	249.8	12.615	3400.0	2.659	34.931	247.4	2.374
200.0	12.408	35.691	243.4	12.381	3450.0	2.642	34.929	246.6	2.351
250.0	12.136	35.646	246.6	12.103	3500.0	2.625	34.927	246.1	2.329
300.0	11.885	35.596	253.9	11.846	3550.0	2.610	34.925	244.9	2.309
350.0	11.891	35.612	247.1	11.845	3600.0	2.592	34.923	244.1	2.286
400.0	11.583	35.559	247.1	11.531	3650.0	2.587	34.923	244.0	2.276
450.0	11.042	35.458	233.3	10.985	3700.0	2.571	34.920	243.1	2.255
500.0	10.658	35.398	227.8	10.596	3750.0	2.558	34.918	242.4	2.237
550.0	10.214	35.344	210.3	10.148	3800.0	2.550	34.917	241.7	2.223
600.0	9.748	35.312	197.6	9.678	3850.0	2.546	34.916	241.8	2.214
650.0	9.215	35.280	190.1	9.141	3900.0	2.543	34.915	241.8	2.205
700.0	8.674	35.237	189.4	8.597	3950.0	2.539	34.914	241.5	2.196
750.0	8.503	35.278	191.7	8.422	4000.0	2.535	34.914	241.0	2.186
800.0	7.948	35.253	196.5	7.864	4050.0	2.533	34.913	240.9	2.178
850.0	7.708	35.288	201.1	7.620	4100.0	2.533	34.912	240.4	2.172
900.0	7.353	35.258	205.3	7.262	4150.0	2.536	34.911	240.1	2.170
950.0	7.043	35.254	209.6	6.949	4200.0	2.539	34.911	240.1	2.166
1000.0	6.674	35.230	216.2	6.577	4250.0	2.541	34.911	240.5	2.162
1050.0	5.938	35.135	226.9	5.842	4300.0	2.545	34.911	240.8	2.160
1100.0	5.615	35.103	232.2	5.517	4350.0	2.548	34.910	240.6	2.157
1150.0	5.627	35.121	233.9	5.523	4400.0	2.549	34.910	240.1	2.152
1200.0	5.233	35.078	239.7	5.128	4450.0	2.551	34.909	240.0	2.148
1250.0	4.892	35.032	246.7	4.786	4500.0	2.553	34.909	240.5	2.144
1300.0	4.575	34.998	252.5	4.467	4550.0	2.556	34.908	240.7	2.140
1350.0	4.313	34.971	257.4	4.203	4586.0	2.556	34.908	240.5	2.137
1400.0	4.189	34.964	260.4	4.076					
1450.0	4.092	34.953	262.6	3.975					
1500.0	3.952	34.942	265.8	3.832					
1550.0	3.847	34.933	268.2	3.724					
1600.0	3.728	34.921	270.0	3.602					
1650.0	3.657	34.915	273.2	3.527					
1700.0	3.547	34.905	274.9	3.415					
1750.0	3.510	34.904	275.9	3.373					
1800.0	3.455	34.899	277.5	3.314					
1850.0	3.408	34.897	279.4	3.264					
1900.0	3.371	34.896	279.6	3.222					
1950.0	3.346	34.897	278.8	3.193					
2000.0	3.316	34.897	280.9	3.159					
2050.0	3.303	34.901	280.1	3.142					
2100.0	3.265	34.900	280.9	3.099					
2150.0	3.228	34.898	281.2	3.058					
2200.0	3.226	34.904	278.9	3.051					
2250.0	3.217	34.909	278.5	3.038					
2300.0	3.211	34.917	276.3	3.027					
2350.0	3.200	34.921	276.2	3.011					
2400.0	3.184	34.926	273.9	2.991					
2450.0	3.177	34.932	271.7	2.978					
2500.0	3.158	34.937	270.3	2.956					
2550.0	3.136	34.943	267.3	2.928					
2600.0	3.117	34.948	266.3	2.905					
2650.0	3.101	34.952	261.2	2.884					
2700.0	3.054	34.952	259.1	2.833					
2750.0	3.022	34.953	258.9	2.797					
2800.0	2.993	34.953	257.5	2.763					
2850.0	2.949	34.952	255.1	2.714					
2900.0	2.906	34.949	255.3	2.668					
2950.0	2.879	34.948	254.7	2.636					
3000.0	2.859	34.947	254.6	2.611					



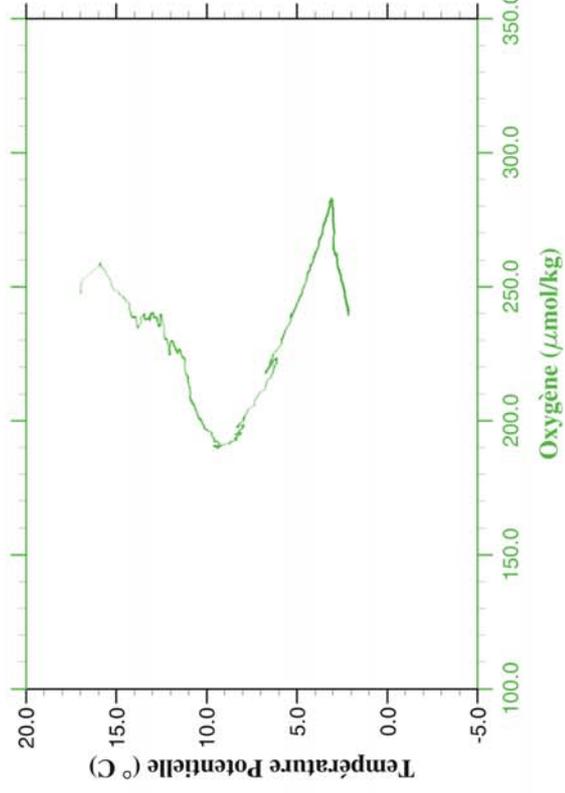
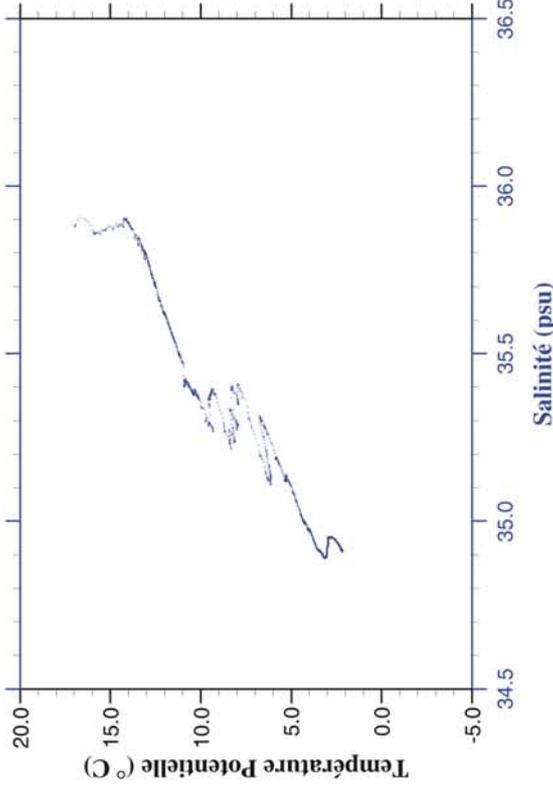
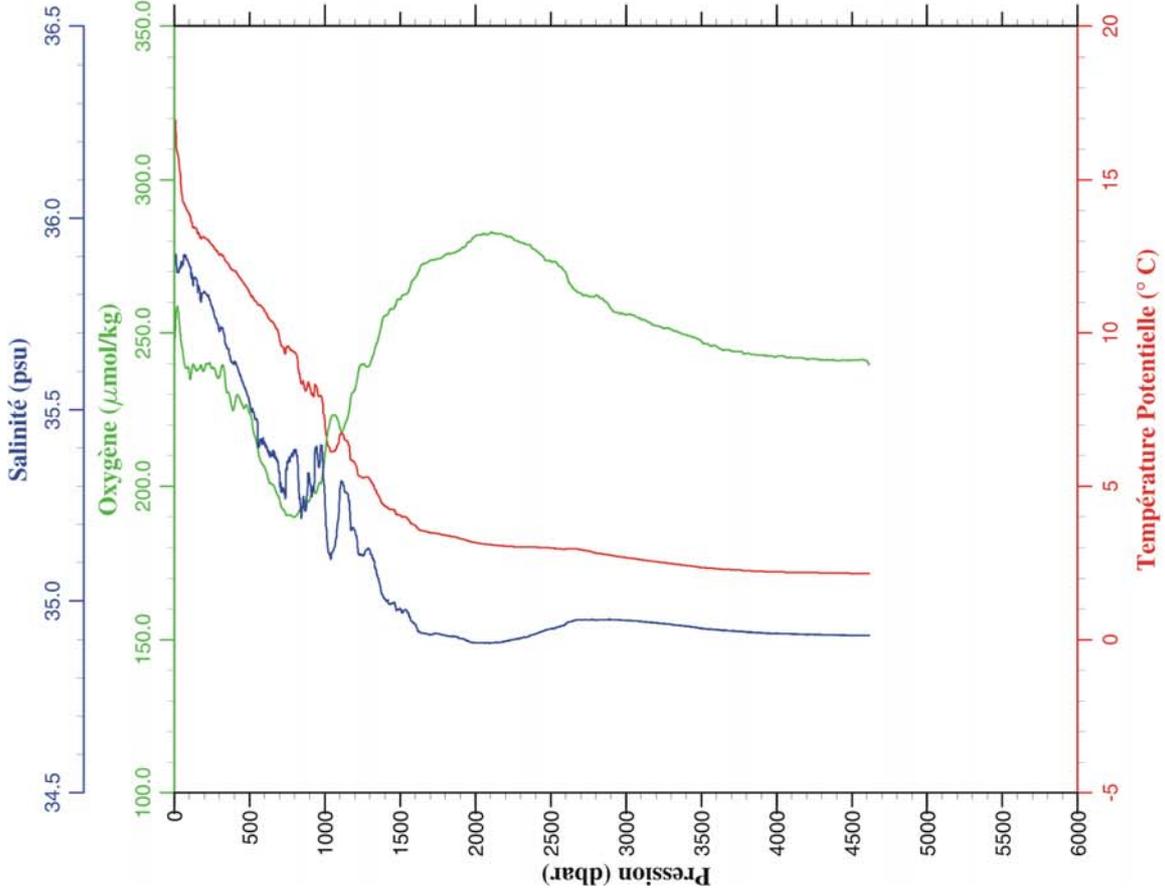
Station 61



Station 62

Station : 63 Campagne : OVIDE 02
 Date : 29-06-02 Navire : N/O THALASSA
 Profondeur : 4485 Organisme : IFREMER
 Position : N 46 32.57
 W 19 40.55

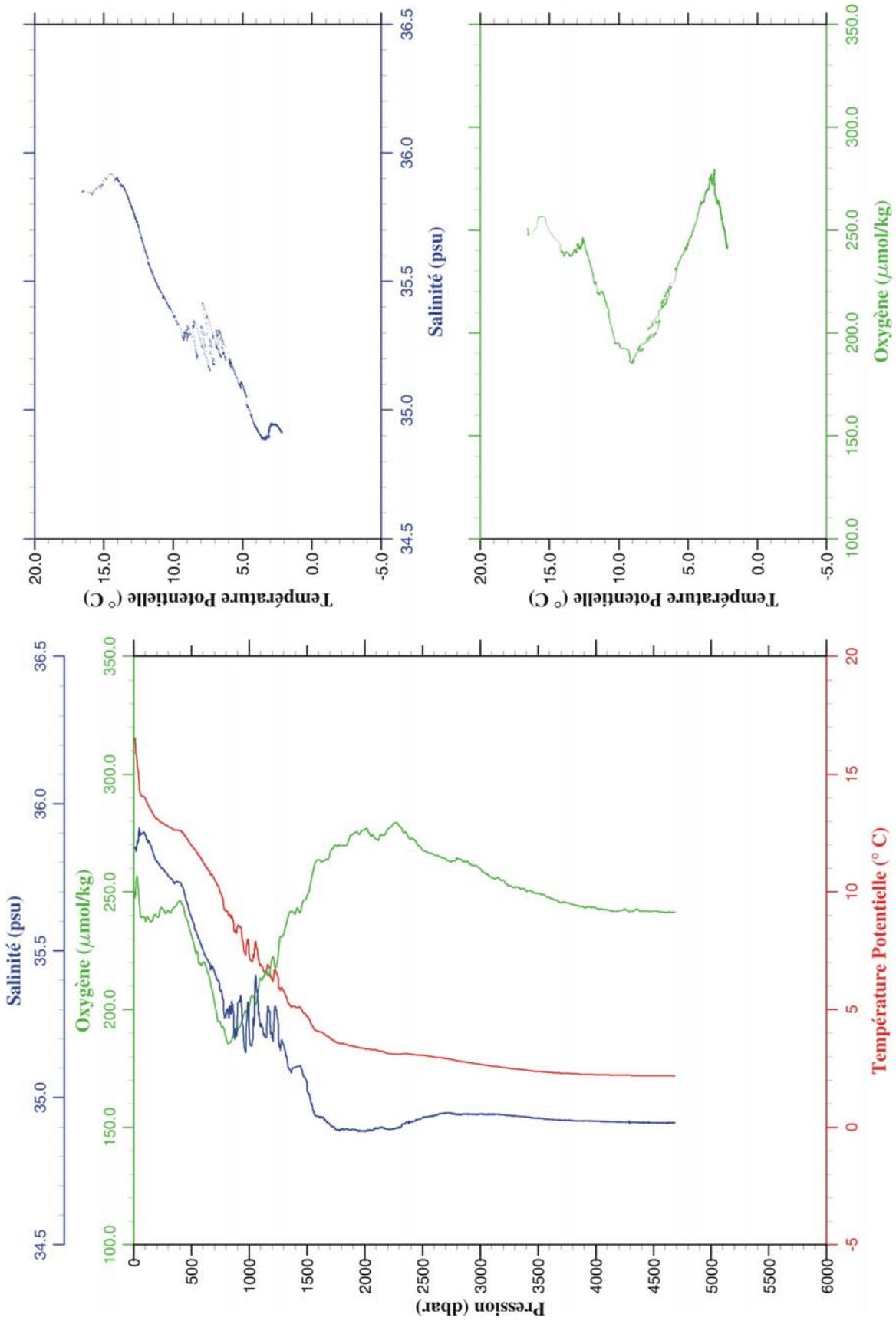
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	16.965	35.880	247.6	16.965	3050.0	2.894	34.949	255.9	2.640
10.0	16.818	35.899	252.9	16.816	3100.0	2.859	34.947	254.6	2.600
20.0	15.890	35.859	258.7	15.887	3150.0	2.829	34.945	253.5	2.566
30.0	15.594	35.861	255.5	15.590	3200.0	2.808	34.944	252.3	2.540
40.0	15.205	35.874	249.6	15.199	3250.0	2.777	34.941	251.6	2.505
50.0	14.586	35.878	246.0	14.578	3300.0	2.754	34.940	251.3	2.477
100.0	13.897	35.878	237.1	13.883	3350.0	2.722	34.937	250.3	2.441
150.0	13.395	35.838	237.7	13.374	3400.0	2.703	34.935	249.4	2.417
200.0	13.150	35.808	238.1	13.122	3450.0	2.678	34.932	248.6	2.386
250.0	12.929	35.771	238.5	12.894	3500.0	2.646	34.930	247.4	2.350
300.0	12.592	35.705	235.6	12.552	3550.0	2.630	34.927	246.1	2.329
350.0	12.344	35.659	230.5	12.297	3600.0	2.619	34.926	245.7	2.312
400.0	12.092	35.622	226.0	12.039	3650.0	2.604	34.925	244.4	2.292
450.0	11.763	35.574	226.7	11.704	3700.0	2.592	34.923	244.2	2.275
500.0	11.404	35.520	223.7	11.339	3750.0	2.586	34.921	243.9	2.264
550.0	11.049	35.475	213.5	10.979	3800.0	2.574	34.919	243.3	2.246
600.0	10.809	35.414	206.2	10.734	3850.0	2.566	34.918	243.0	2.233
650.0	10.451	35.380	200.6	10.372	3900.0	2.561	34.917	242.8	2.222
700.0	9.820	35.319	195.6	9.737	3950.0	2.556	34.916	242.4	2.212
750.0	9.657	35.362	190.5	9.569	4000.0	2.555	34.915	242.3	2.205
800.0	9.467	35.391	189.9	9.374	4050.0	2.554	34.915	242.4	2.199
850.0	8.478	35.240	193.3	8.385	4100.0	2.556	34.914	242.0	2.194
900.0	8.329	35.314	195.7	8.232	4150.0	2.557	34.914	241.9	2.190
950.0	8.255	35.383	199.0	8.152	4200.0	2.556	34.913	241.5	2.183
1000.0	7.269	35.278	209.6	7.167	4250.0	2.559	34.913	241.6	2.180
1050.0	6.233	35.128	223.1	6.134	4300.0	2.562	34.912	241.3	2.176
1100.0	6.769	35.285	219.2	6.661	4350.0	2.561	34.912	241.1	2.170
1150.0	6.568	35.281	222.2	6.456	4400.0	2.562	34.911	241.0	2.165
1200.0	5.854	35.181	231.6	5.743	4450.0	2.566	34.911	241.2	2.163
1250.0	5.395	35.123	239.6	5.284	4500.0	2.567	34.911	241.1	2.158
1300.0	5.347	35.134	239.9	5.231	4550.0	2.573	34.910	241.2	2.157
1350.0	4.863	35.065	247.1	4.747	4600.0	2.579	34.910	240.8	2.157
1400.0	4.477	35.006	255.6	4.361	4617.0	2.581	34.911	239.5	2.157
1450.0	4.364	34.995	257.8	4.244					
1500.0	4.173	34.979	261.0	4.051					
1550.0	4.070	34.971	263.0	3.945					
1600.0	3.848	34.939	268.1	3.720					
1650.0	3.673	34.917	272.5	3.543					
1700.0	3.614	34.913	273.7	3.480					
1750.0	3.593	34.915	274.2	3.455					
1800.0	3.541	34.910	275.4	3.399					
1850.0	3.504	34.908	275.9	3.358					
1900.0	3.443	34.903	277.2	3.293					
1950.0	3.373	34.896	279.5	3.220					
2000.0	3.319	34.891	281.7	3.161					
2050.0	3.282	34.891	282.4	3.121					
2100.0	3.259	34.891	282.7	3.093					
2150.0	3.239	34.892	282.4	3.069					
2200.0	3.221	34.895	281.8	3.046					
2250.0	3.209	34.900	280.9	3.030					
2300.0	3.207	34.903	279.6	3.023					
2350.0	3.203	34.907	278.8	3.015					
2400.0	3.206	34.914	277.1	3.012					
2450.0	3.200	34.922	275.0	3.002					
2500.0	3.191	34.928	273.5	2.987					
2550.0	3.168	34.932	272.1	2.960					
2600.0	3.165	34.940	269.8	2.952					
2650.0	3.182	34.949	264.5	2.964					
2700.0	3.147	34.951	263.1	2.924					
2750.0	3.112	34.952	262.0	2.884					
2800.0	3.053	34.951	262.4	2.822					
2850.0	3.024	34.951	260.9	2.789					
2900.0	2.989	34.952	258.0	2.749					
2950.0	2.951	34.951	256.5	2.706					
3000.0	2.918	34.950	256.0	2.669					



Station 63

Station : 64 Campagne : OVIDE 02
 Date : 29-06-02 Navire : N/O THALASSA
 Profondeur : 4583 Organisme : IFREMER
 Position : N 46 10.19
 W 19 23.06

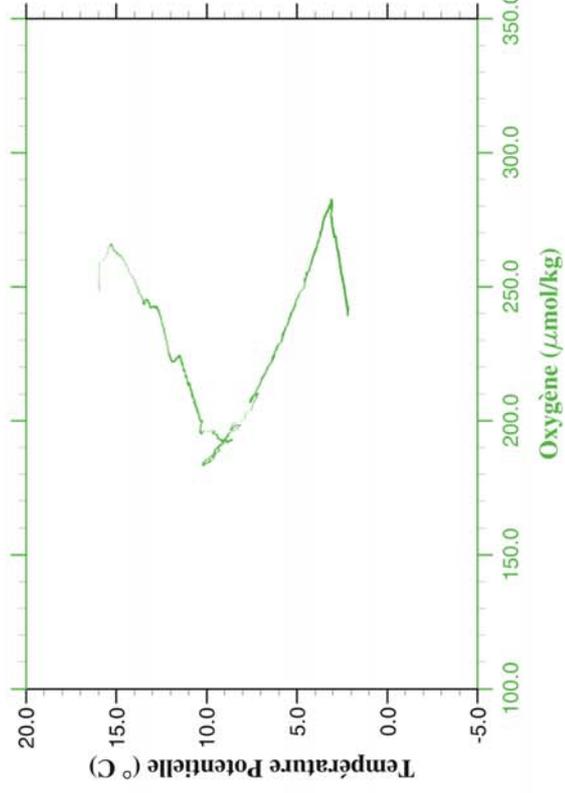
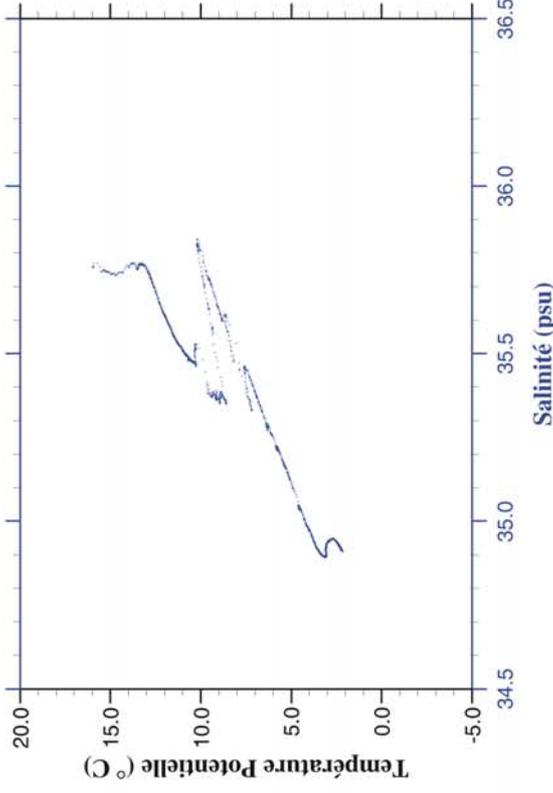
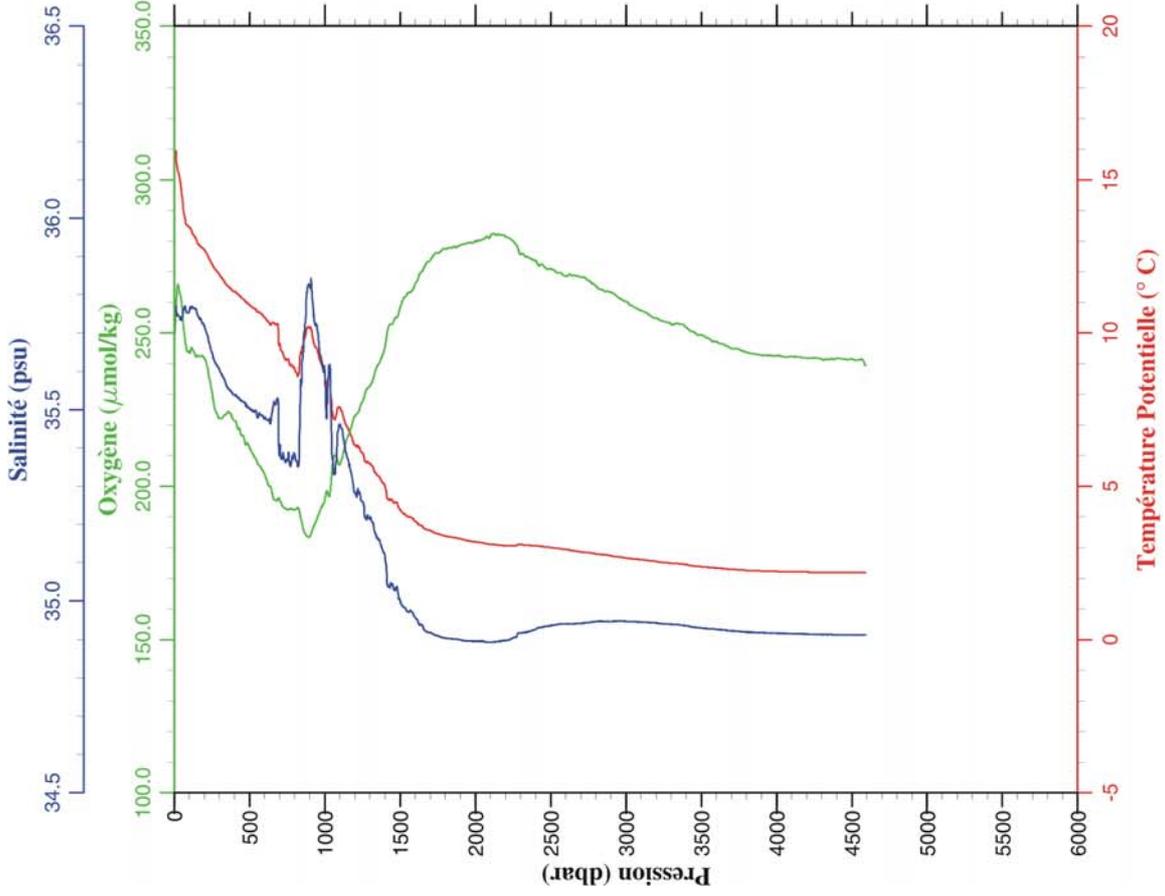
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	16.549	35.849	250.8	16.549	3050.0	2.886	34.944	257.8	2.633
10.0	16.545	35.849	248.0	16.543	3100.0	2.857	34.942	256.1	2.599
20.0	15.875	35.840	252.4	15.871	3150.0	2.840	34.943	256.2	2.577
30.0	15.481	35.864	256.5	15.476	3200.0	2.806	34.942	255.0	2.539
40.0	15.104	35.873	251.0	15.098	3250.0	2.773	34.939	252.5	2.501
50.0	14.512	35.919	245.3	14.505	3300.0	2.750	34.938	252.0	2.474
100.0	13.989	35.893	238.1	13.975	3350.0	2.728	34.936	251.2	2.446
150.0	13.517	35.858	237.2	13.496	3400.0	2.707	34.935	250.2	2.420
200.0	13.144	35.805	239.6	13.116	3450.0	2.679	34.932	250.1	2.388
250.0	12.971	35.781	242.8	12.936	3500.0	2.670	34.930	249.5	2.373
300.0	12.813	35.753	242.2	12.772	3550.0	2.651	34.929	248.8	2.350
350.0	12.680	35.731	243.4	12.632	3600.0	2.637	34.926	247.5	2.330
400.0	12.659	35.732	246.2	12.604	3650.0	2.621	34.925	246.6	2.309
450.0	12.384	35.676	239.3	12.323	3700.0	2.613	34.924	245.3	2.296
500.0	12.049	35.614	231.6	11.983	3750.0	2.609	34.923	245.3	2.286
550.0	11.738	35.554	224.9	11.666	3800.0	2.598	34.922	244.5	2.269
600.0	11.346	35.501	220.0	11.268	3850.0	2.591	34.921	244.0	2.257
650.0	10.982	35.460	214.5	10.900	3900.0	2.589	34.921	243.4	2.249
700.0	10.625	35.428	203.0	10.538	3950.0	2.585	34.920	243.6	2.240
750.0	10.048	35.363	194.5	9.958	4000.0	2.583	34.920	243.2	2.232
800.0	9.277	35.284	188.0	9.185	4050.0	2.581	34.919	242.7	2.224
850.0	9.071	35.328	186.9	8.975	4100.0	2.582	34.919	242.4	2.220
900.0	8.680	35.316	191.5	8.580	4150.0	2.583	34.919	241.8	2.214
950.0	7.839	35.218	197.3	7.739	4200.0	2.584	34.918	242.0	2.210
1000.0	7.466	35.224	200.0	7.363	4250.0	2.583	34.917	242.7	2.203
1050.0	7.828	35.357	203.0	7.716	4300.0	2.585	34.916	241.7	2.199
1100.0	7.000	35.247	213.4	6.890	4350.0	2.588	34.916	242.7	2.196
1150.0	6.653	35.207	216.5	6.541	4400.0	2.592	34.914	242.0	2.194
1200.0	6.390	35.205	222.0	6.275	4450.0	2.593	34.916	241.9	2.189
1250.0	6.484	35.260	222.4	6.363	4500.0	2.595	34.915	241.9	2.185
1300.0	5.905	35.180	232.1	5.783	4550.0	2.598	34.914	241.5	2.182
1350.0	5.313	35.096	241.1	5.193	4600.0	2.603	34.915	241.3	2.180
1400.0	5.215	35.104	240.8	5.090	4650.0	2.609	34.913	241.4	2.180
1450.0	5.148	35.100	242.7	5.020	4684.0	2.613	34.915	241.4	2.179
1500.0	4.837	35.054	248.1	4.707					
1550.0	4.412	34.965	257.9	4.282					
1600.0	4.198	34.935	263.7	4.066					
1650.0	4.094	34.928	263.3	3.959					
1700.0	3.917	34.908	266.5	3.780					
1750.0	3.753	34.891	269.9	3.613					
1800.0	3.707	34.893	269.8	3.563					
1850.0	3.651	34.894	270.3	3.503					
1900.0	3.592	34.894	274.8	3.440					
1950.0	3.539	34.886	274.5	3.384					
2000.0	3.499	34.888	276.4	3.340					
2050.0	3.469	34.891	273.9	3.305					
2100.0	3.449	34.896	272.4	3.280					
2150.0	3.391	34.899	274.0	3.219					
2200.0	3.315	34.892	276.6	3.138					
2250.0	3.283	34.893	279.2	3.103					
2300.0	3.280	34.899	278.0	3.095					
2350.0	3.303	34.911	275.5	3.113					
2400.0	3.291	34.918	272.4	3.096					
2450.0	3.268	34.924	270.8	3.068					
2500.0	3.271	34.932	267.8	3.066					
2550.0	3.235	34.938	266.7	3.025					
2600.0	3.193	34.937	265.8	2.979					
2650.0	3.176	34.945	265.0	2.958					
2700.0	3.146	34.948	264.1	2.923					
2750.0	3.104	34.947	262.8	2.877					
2800.0	3.049	34.942	264.5	2.818					
2850.0	3.014	34.945	262.9	2.779					
2900.0	2.988	34.944	262.5	2.748					
2950.0	2.953	34.943	261.2	2.709					
3000.0	2.920	34.944	259.9	2.671					



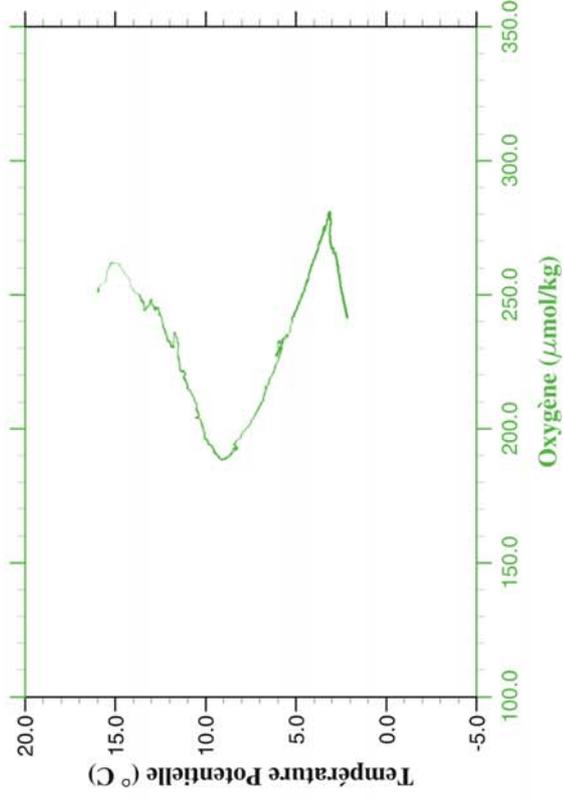
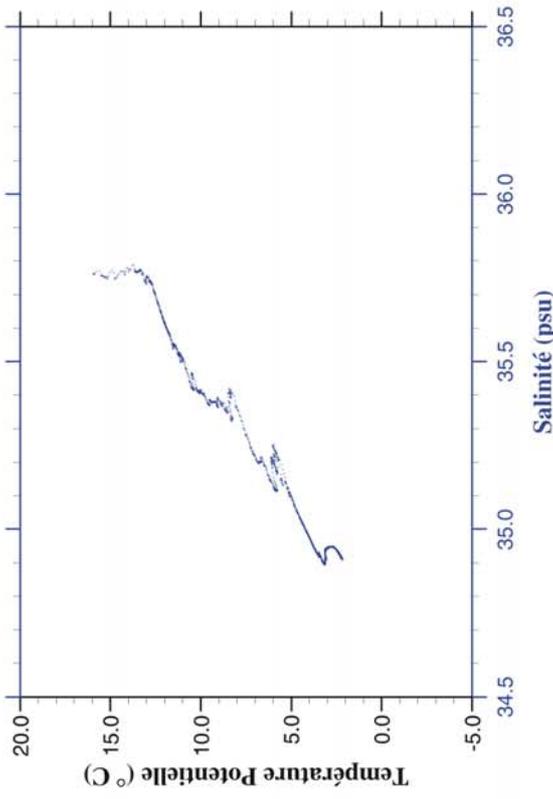
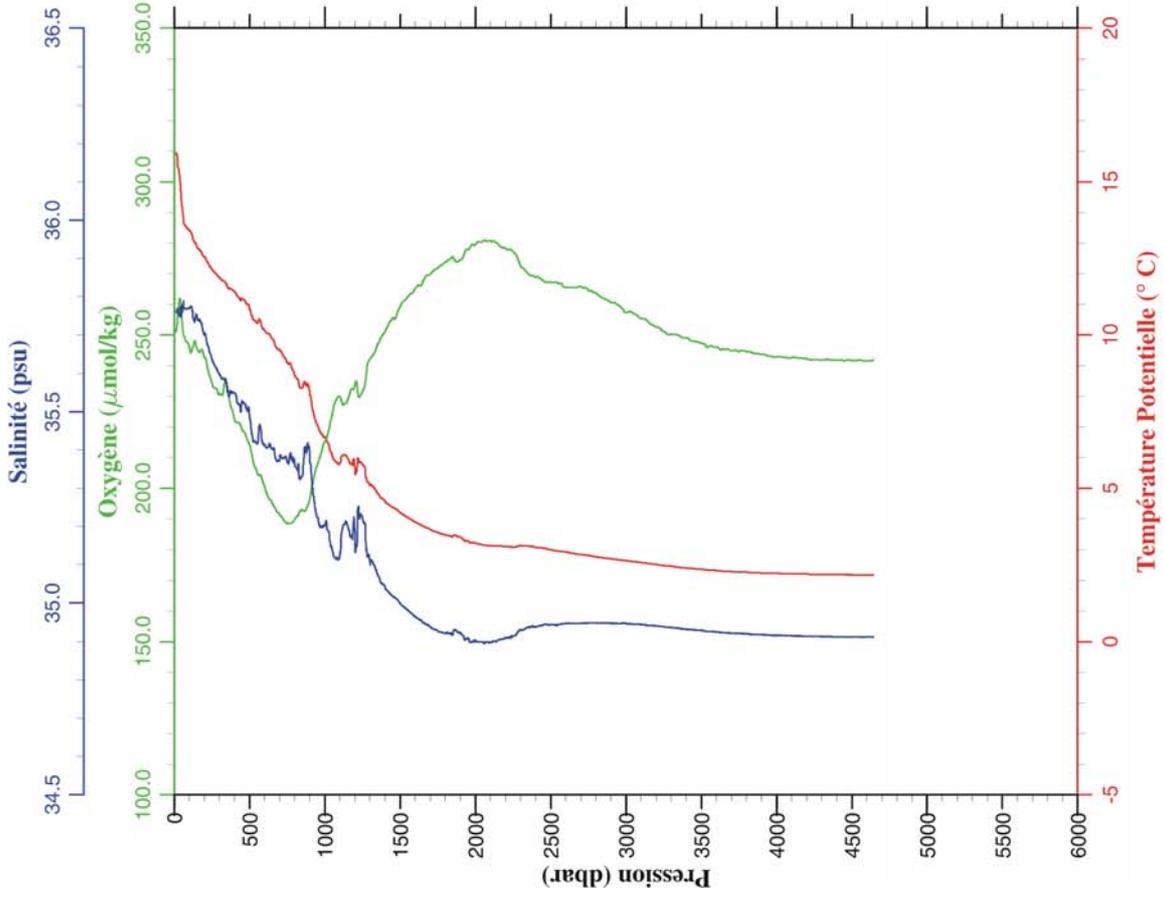
Station 64

Station : 65 Campagne : OVIDE 02
 Date : 30-06-02 Navire : N/O THALASSA
 Profondeur : 4494 Organisme : IFREMER
 Position : N 45 47.80
 W 19 5.46

PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	15.953	35.760	248.7	15.952	3050.0	2.882	34.946	258.6	2.628
10.0	15.955	35.760	255.6	15.953	3100.0	2.866	34.946	257.4	2.608
20.0	15.392	35.749	264.9	15.389	3150.0	2.839	34.944	256.0	2.576
30.0	15.210	35.744	264.8	15.205	3200.0	2.817	34.943	254.9	2.549
40.0	14.953	35.737	262.3	14.947	3250.0	2.781	34.941	253.8	2.509
50.0	14.589	35.740	259.6	14.582	3300.0	2.770	34.940	252.9	2.493
100.0	13.474	35.759	243.5	13.460	3350.0	2.757	34.938	253.0	2.475
150.0	13.010	35.755	242.5	12.990	3400.0	2.732	34.936	251.9	2.445
200.0	12.745	35.719	241.8	12.718	3450.0	2.691	34.932	250.4	2.399
250.0	12.300	35.649	231.1	12.267	3500.0	2.672	34.930	249.3	2.376
300.0	11.955	35.605	222.1	11.915	3550.0	2.655	34.928	248.3	2.353
350.0	11.601	35.560	223.9	11.556	3600.0	2.639	34.927	247.2	2.332
400.0	11.405	35.538	221.4	11.353	3650.0	2.626	34.925	246.3	2.314
450.0	11.197	35.522	216.5	11.140	3700.0	2.606	34.922	245.0	2.288
500.0	10.974	35.503	212.8	10.911	3750.0	2.597	34.921	244.7	2.274
550.0	10.750	35.481	207.9	10.681	3800.0	2.585	34.919	243.7	2.257
600.0	10.588	35.480	203.9	10.514	3850.0	2.581	34.918	243.2	2.247
650.0	10.403	35.493	197.7	10.324	3900.0	2.575	34.918	242.8	2.236
700.0	9.714	35.387	195.5	9.632	3950.0	2.573	34.917	242.6	2.228
750.0	9.208	35.369	192.4	9.122	4000.0	2.569	34.916	242.7	2.218
800.0	8.932	35.383	192.2	8.842	4050.0	2.570	34.916	242.3	2.214
850.0	9.627	35.633	187.7	9.526	4100.0	2.572	34.915	242.4	2.210
900.0	10.261	35.822	183.6	10.150	4150.0	2.572	34.914	242.1	2.204
950.0	9.563	35.709	189.7	9.451	4200.0	2.573	34.915	241.8	2.199
1000.0	8.861	35.600	195.5	8.747	4250.0	2.572	34.913	241.9	2.193
1050.0	7.542	35.371	206.2	7.432	4300.0	2.576	34.912	241.5	2.191
1100.0	7.698	35.462	207.2	7.582	4350.0	2.578	34.913	241.4	2.186
1150.0	7.034	35.373	216.0	6.918	4400.0	2.580	34.912	241.7	2.182
1200.0	6.464	35.282	223.0	6.348	4450.0	2.583	34.912	241.6	2.179
1250.0	6.211	35.260	227.5	6.092	4500.0	2.589	34.912	241.5	2.179
1300.0	5.859	35.213	232.7	5.738	4550.0	2.596	34.912	241.2	2.179
1350.0	5.466	35.165	239.3	5.345	4590.0	2.600	34.912	239.4	2.179
1400.0	5.096	35.113	245.6	4.973					
1450.0	4.670	35.046	253.1	4.547					
1500.0	4.361	35.002	258.2	4.236					
1550.0	4.135	34.973	263.0	4.009					
1600.0	3.989	34.958	266.1	3.860					
1650.0	3.824	34.935	270.4	3.693					
1700.0	3.693	34.918	273.7	3.559					
1750.0	3.585	34.910	276.2	3.447					
1800.0	3.518	34.904	277.5	3.377					
1850.0	3.477	34.901	277.8	3.332					
1900.0	3.434	34.899	278.7	3.284					
1950.0	3.375	34.896	279.3	3.222					
2000.0	3.341	34.895	280.1	3.184					
2050.0	3.314	34.896	280.6	3.152					
2100.0	3.271	34.893	281.6	3.105					
2150.0	3.255	34.895	282.3	3.084					
2200.0	3.240	34.898	281.5	3.065					
2250.0	3.235	34.904	280.0	3.056					
2300.0	3.285	34.916	275.6	3.099					
2350.0	3.262	34.921	274.9	3.072					
2400.0	3.251	34.927	273.8	3.056					
2450.0	3.227	34.933	272.1	3.028					
2500.0	3.207	34.936	271.0	3.003					
2550.0	3.182	34.939	269.6	2.974					
2600.0	3.151	34.940	268.6	2.938					
2650.0	3.109	34.941	268.8	2.892					
2700.0	3.080	34.943	268.2	2.859					
2750.0	3.063	34.944	267.1	2.837					
2800.0	3.023	34.947	265.4	2.792					
2850.0	3.003	34.947	263.9	2.767					
2900.0	2.972	34.947	263.3	2.732					
2950.0	2.937	34.948	261.5	2.693					
3000.0	2.910	34.948	260.3	2.661					



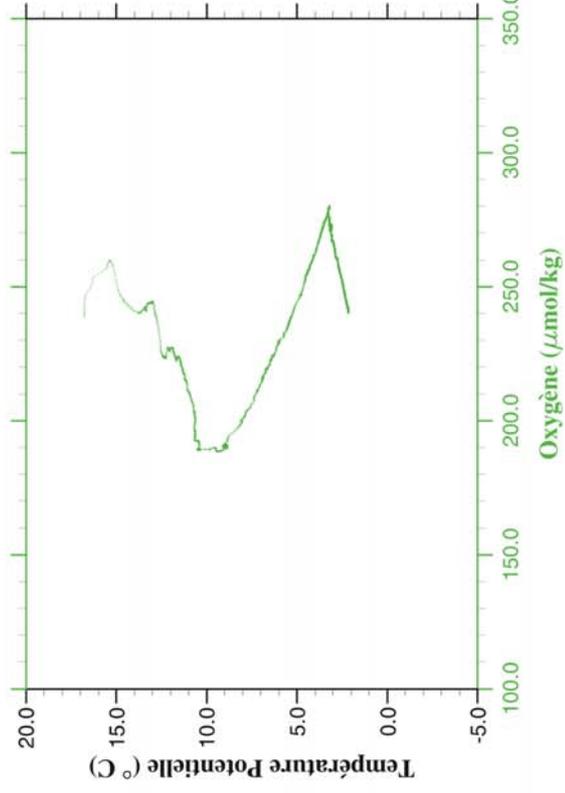
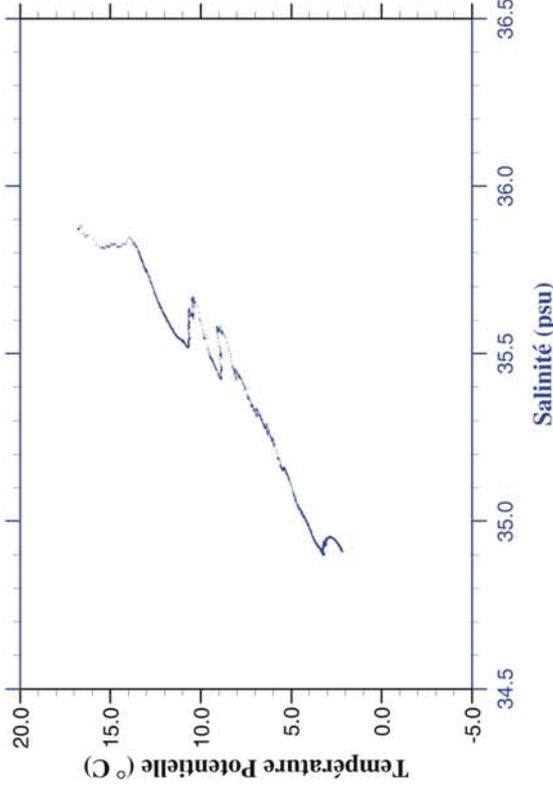
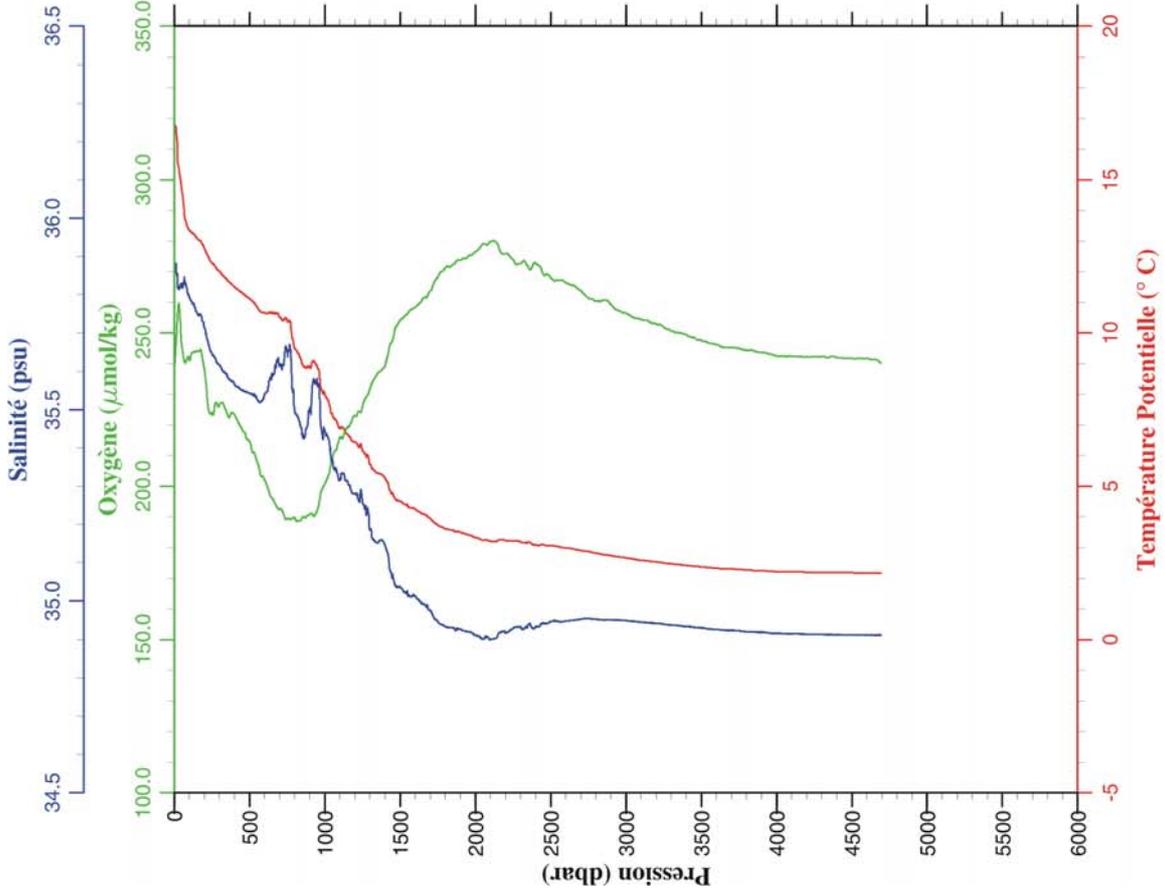
Station 65



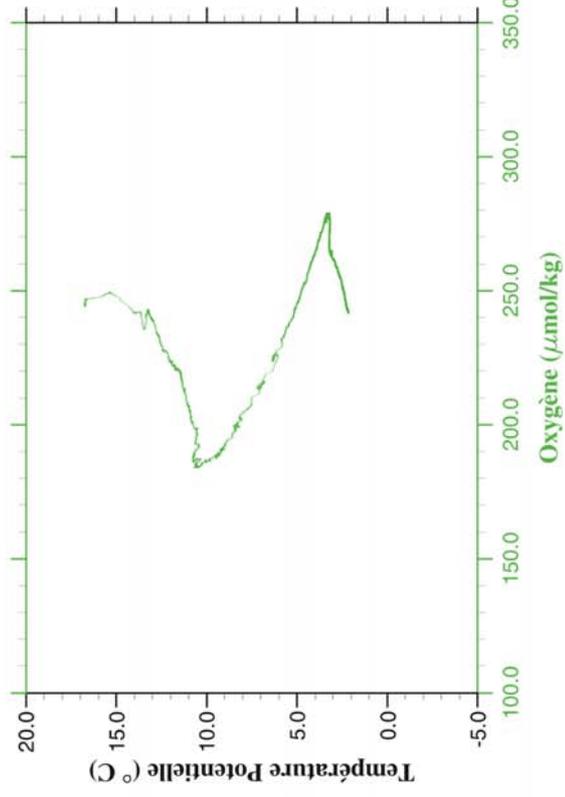
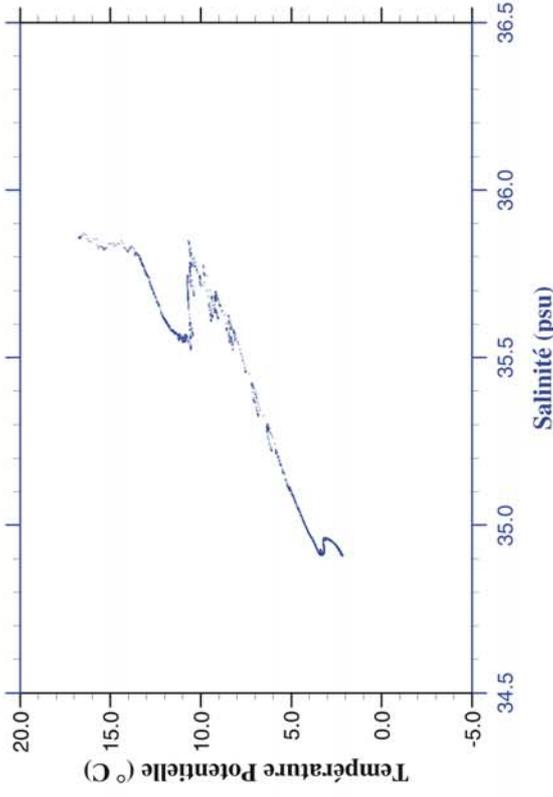
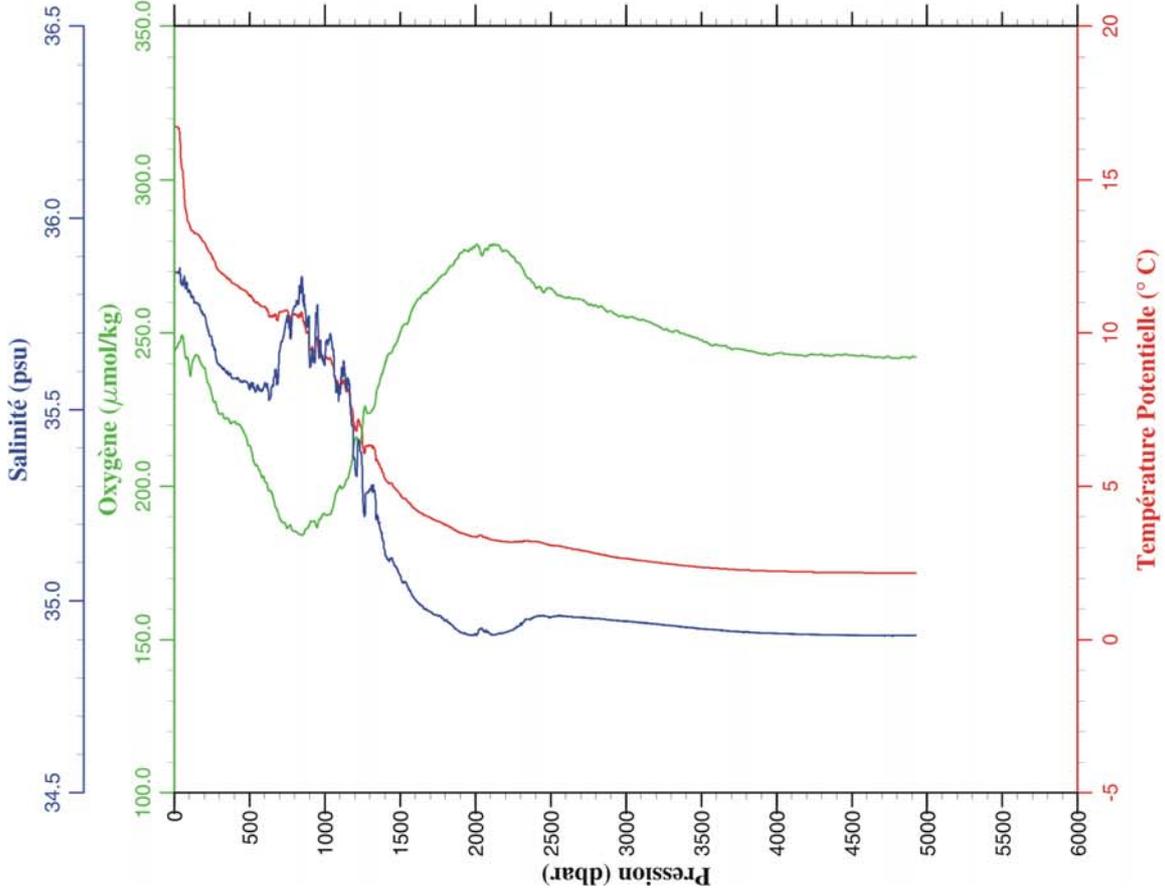
Station 66

Station : 67 Campagne : OVIDE 02
 Date : 30-06-02 Navire : N/O THALASSA
 Profondeur : 4515 Organisme : IFREMER
 Position : N 45 2.99
 W 18 30.25

PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	16.765	35.872	238.7	16.765	3050.0	2.875	34.947	255.0	2.622
10.0	16.751	35.872	244.7	16.749	3100.0	2.842	34.945	254.4	2.585
20.0	16.207	35.856	253.7	16.204	3150.0	2.823	34.944	253.8	2.560
30.0	15.391	35.816	259.8	15.386	3200.0	2.801	34.942	252.9	2.533
40.0	15.070	35.819	253.7	15.064	3250.0	2.770	34.940	252.0	2.497
50.0	14.707	35.826	246.1	14.699	3300.0	2.747	34.938	250.7	2.470
100.0	13.376	35.794	241.2	13.362	3350.0	2.726	34.936	250.1	2.444
150.0	13.116	35.754	244.1	13.095	3400.0	2.704	34.934	249.6	2.417
200.0	12.807	35.714	238.3	12.780	3450.0	2.682	34.932	248.6	2.390
250.0	12.327	35.648	224.1	12.294	3500.0	2.668	34.930	247.6	2.371
300.0	12.061	35.616	226.5	12.022	3550.0	2.651	34.928	246.7	2.349
350.0	11.783	35.590	223.9	11.737	3600.0	2.633	34.926	246.2	2.326
400.0	11.558	35.567	223.3	11.507	3650.0	2.619	34.924	245.4	2.307
450.0	11.374	35.551	218.7	11.316	3700.0	2.618	34.924	245.2	2.301
500.0	11.191	35.542	214.7	11.127	3750.0	2.609	34.923	245.0	2.286
550.0	10.924	35.529	208.2	10.855	3800.0	2.589	34.920	244.4	2.261
600.0	10.746	35.539	202.1	10.671	3850.0	2.589	34.920	244.1	2.255
650.0	10.756	35.595	196.1	10.675	3900.0	2.589	34.919	243.7	2.250
700.0	10.608	35.613	192.5	10.521	3950.0	2.572	34.917	243.2	2.228
750.0	10.502	35.656	189.4	10.409	4000.0	2.568	34.916	242.5	2.217
800.0	9.596	35.497	189.8	9.502	4050.0	2.567	34.916	242.4	2.211
850.0	9.078	35.431	189.7	8.981	4100.0	2.570	34.914	242.4	2.208
900.0	9.002	35.506	190.9	8.899	4150.0	2.573	34.915	242.3	2.205
950.0	8.983	35.579	192.2	8.874	4200.0	2.570	34.913	242.3	2.196
1000.0	8.130	35.448	200.7	8.023	4250.0	2.575	34.914	242.3	2.195
1050.0	7.482	35.372	209.2	7.373	4300.0	2.578	34.913	242.3	2.193
1100.0	6.996	35.318	215.9	6.885	4350.0	2.581	34.913	242.1	2.189
1150.0	6.822	35.313	219.3	6.708	4400.0	2.583	34.912	242.0	2.185
1200.0	6.559	35.281	223.1	6.442	4450.0	2.585	34.912	241.8	2.182
1250.0	6.285	35.259	225.9	6.165	4500.0	2.589	34.911	241.7	2.179
1300.0	5.831	35.185	231.9	5.711	4550.0	2.592	34.911	241.7	2.176
1350.0	5.554	35.152	236.7	5.432	4600.0	2.597	34.912	241.7	2.175
1400.0	5.388	35.147	239.4	5.262	4650.0	2.604	34.911	241.4	2.175
1450.0	4.907	35.065	247.6	4.781	4695.0	2.608	34.911	240.2	2.173
1500.0	4.636	35.037	254.1	4.508					
1550.0	4.468	35.018	256.3	4.337					
1600.0	4.393	35.013	258.4	4.259					
1650.0	4.235	34.994	261.1	4.098					
1700.0	4.083	34.976	263.7	3.943					
1750.0	3.871	34.947	268.3	3.729					
1800.0	3.757	34.933	271.2	3.612					
1850.0	3.714	34.930	272.3	3.565					
1900.0	3.655	34.927	273.9	3.503					
1950.0	3.572	34.919	275.0	3.416					
2000.0	3.486	34.912	276.5	3.327					
2050.0	3.401	34.902	279.1	3.238					
2100.0	3.374	34.901	279.9	3.207					
2150.0	3.400	34.912	278.8	3.227					
2200.0	3.391	34.917	275.8	3.214					
2250.0	3.405	34.929	274.0	3.223					
2300.0	3.378	34.931	272.6	3.191					
2350.0	3.371	34.938	271.8	3.179					
2400.0	3.289	34.934	272.9	3.094					
2450.0	3.296	34.943	269.3	3.096					
2500.0	3.266	34.946	268.1	3.061					
2550.0	3.239	34.948	267.2	3.029					
2600.0	3.201	34.948	266.4	2.987					
2650.0	3.175	34.950	265.6	2.957					
2700.0	3.128	34.953	263.9	2.906					
2750.0	3.100	34.955	261.4	2.873					
2800.0	3.049	34.953	260.3	2.818					
2850.0	3.003	34.951	260.8	2.767					
2900.0	2.976	34.951	259.3	2.736					
2950.0	2.949	34.951	257.2	2.704					
3000.0	2.918	34.949	256.5	2.669					



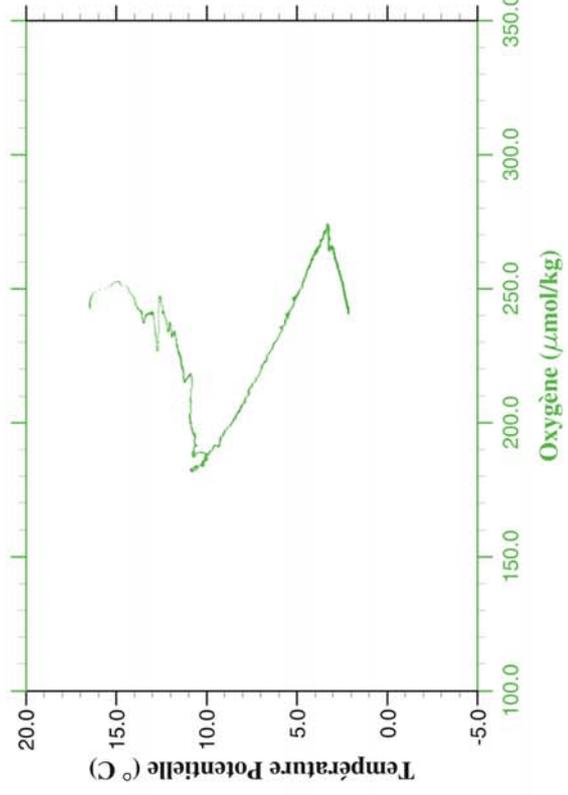
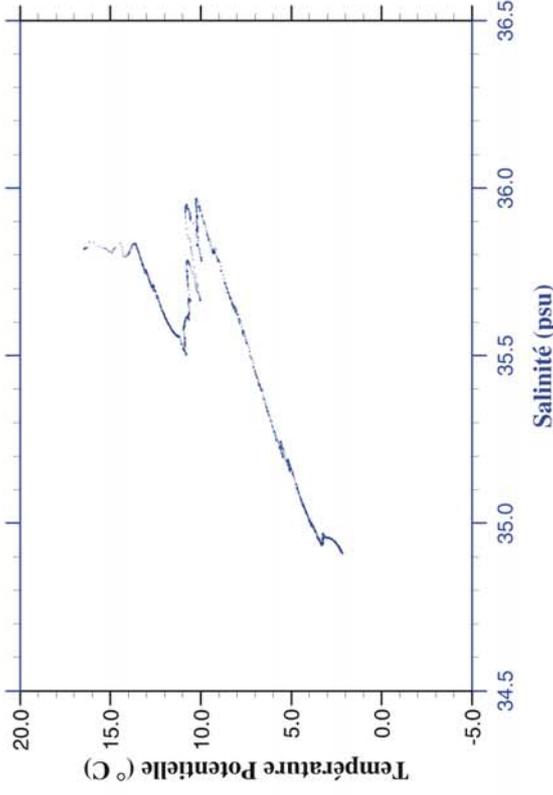
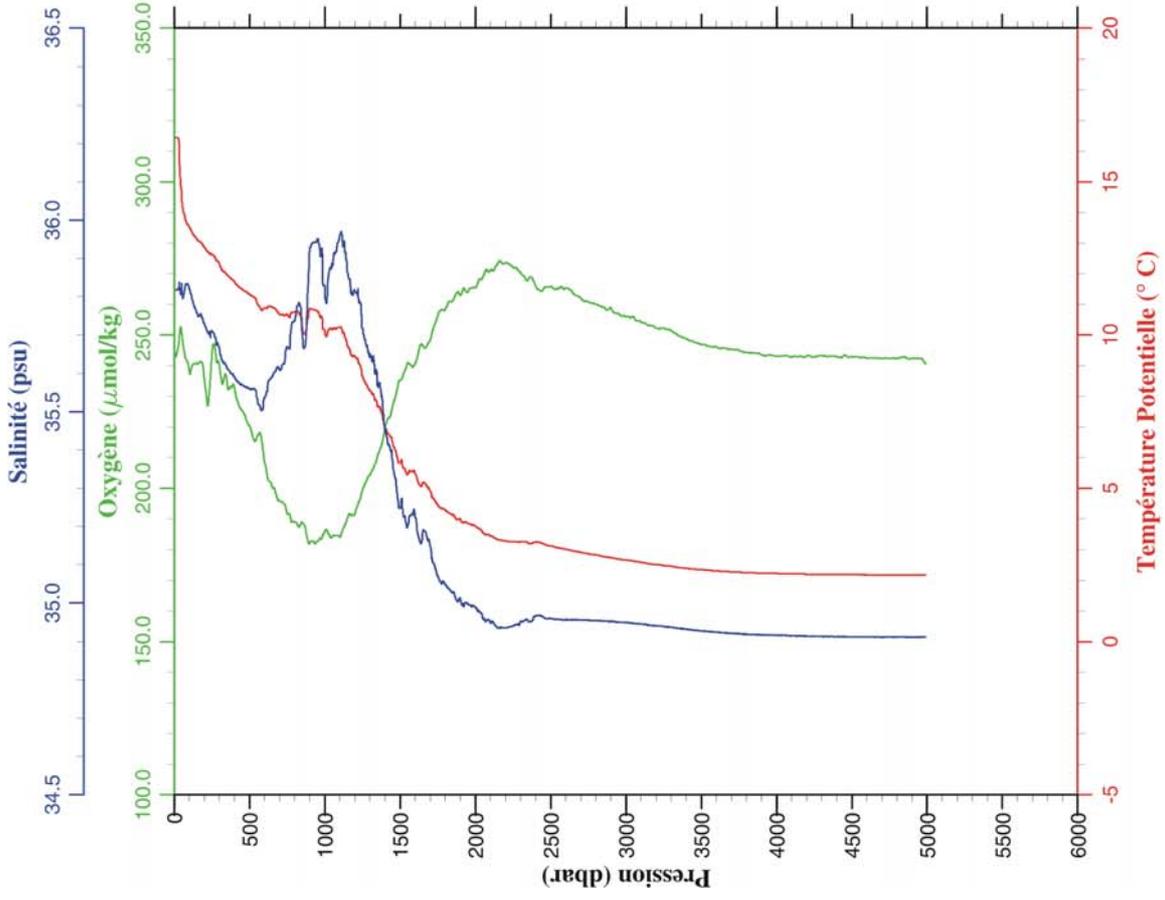
Station 67



Station 68

Station : 69 Campagne : OVIDE 02
 Date : 01-07-02 Navire : N/O THALASSA
 Profondeur : 4767 Organisme : IFREMER
 Position : N 44 22.59
 W 17 49.19

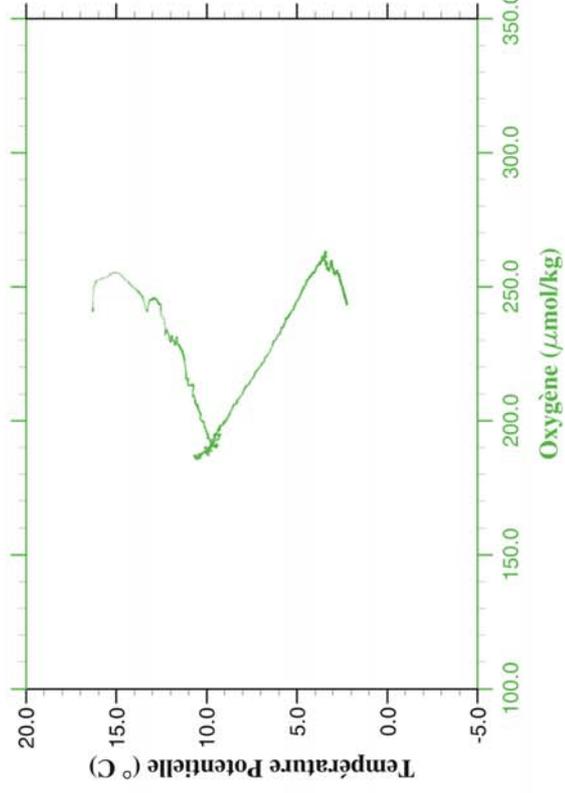
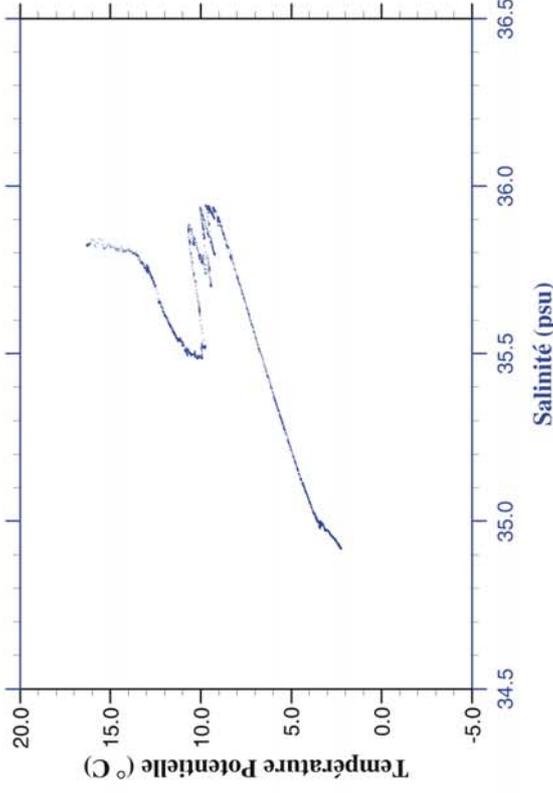
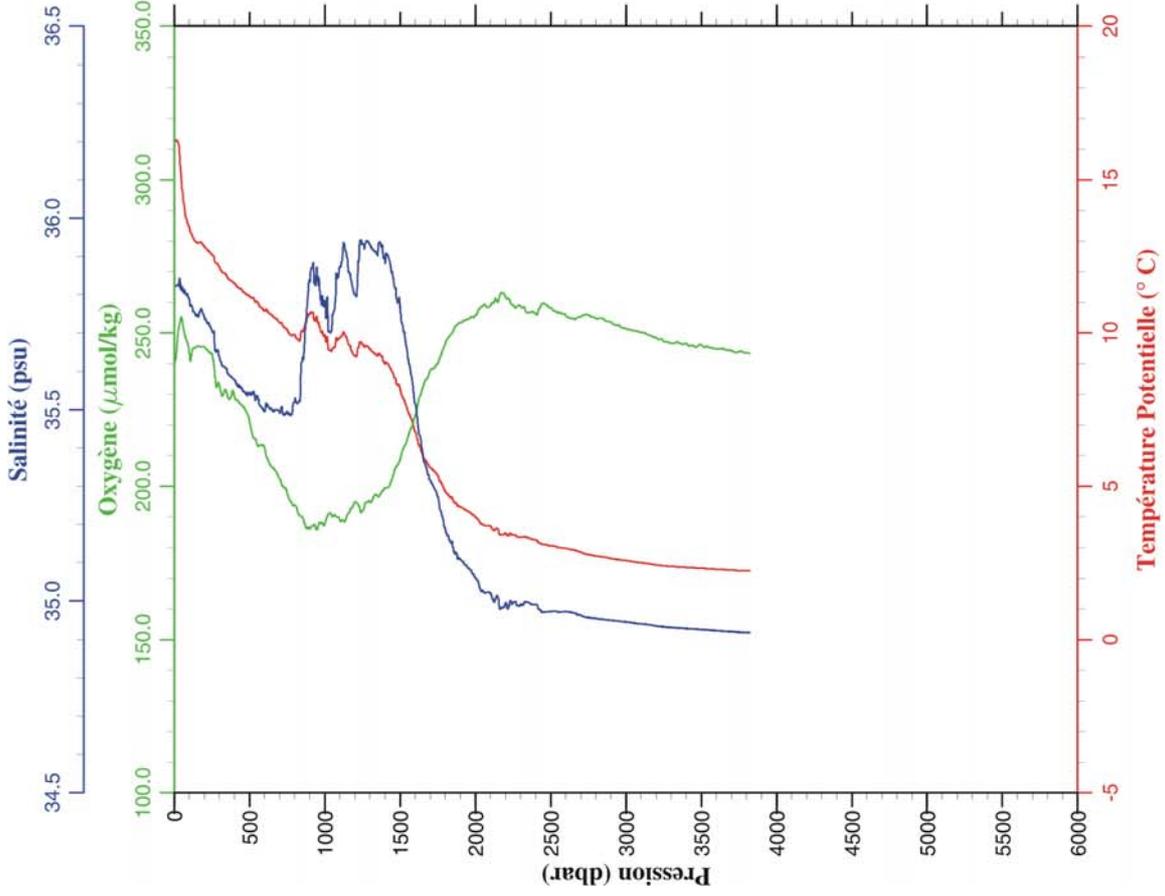
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	16.445	35.819	244.7	16.445	3050.0	2.874	34.948	255.9	2.620
10.0	16.447	35.818	242.9	16.445	3100.0	2.839	34.946	254.2	2.582
20.0	16.448	35.818	244.7	16.444	3150.0	2.805	34.943	253.1	2.543
30.0	16.341	35.821	247.5	16.336	3200.0	2.777	34.941	252.3	2.510
40.0	15.130	35.813	252.3	15.124	3250.0	2.751	34.939	252.2	2.480
50.0	14.470	35.835	250.8	14.463	3300.0	2.729	34.937	251.4	2.453
100.0	13.541	35.821	238.2	13.527	3350.0	2.695	34.934	249.8	2.414
150.0	13.159	35.758	240.8	13.138	3400.0	2.674	34.932	248.8	2.388
200.0	12.897	35.731	235.5	12.870	3450.0	2.655	34.930	247.7	2.364
250.0	12.679	35.711	243.1	12.645	3500.0	2.637	34.928	246.9	2.342
300.0	12.363	35.665	240.0	12.323	3550.0	2.623	34.926	246.3	2.322
350.0	12.014	35.614	234.5	11.967	3600.0	2.609	34.924	246.2	2.303
400.0	11.795	35.591	232.8	11.743	3650.0	2.598	34.923	245.7	2.287
450.0	11.551	35.570	225.3	11.493	3700.0	2.591	34.922	245.4	2.274
500.0	11.405	35.559	220.3	11.340	3750.0	2.584	34.921	245.0	2.262
550.0	11.127	35.535	216.8	11.058	3800.0	2.575	34.919	244.2	2.247
600.0	10.962	35.537	208.5	10.887	3850.0	2.573	34.918	244.1	2.240
650.0	10.993	35.591	200.5	10.910	3900.0	2.569	34.918	243.6	2.230
700.0	10.764	35.609	196.0	10.676	3950.0	2.571	34.916	243.5	2.227
750.0	10.743	35.670	191.8	10.649	4000.0	2.569	34.916	243.2	2.218
800.0	10.838	35.737	189.0	10.737	4050.0	2.570	34.916	243.4	2.214
850.0	10.371	35.705	188.9	10.266	4100.0	2.569	34.915	242.8	2.207
900.0	10.972	35.927	182.0	10.857	4150.0	2.568	34.915	243.1	2.200
950.0	10.906	35.951	182.7	10.785	4200.0	2.570	34.914	243.2	2.197
1000.0	10.275	35.828	185.9	10.151	4250.0	2.574	34.914	243.0	2.194
1050.0	10.308	35.884	184.2	10.177	4300.0	2.577	34.913	243.4	2.191
1100.0	10.403	35.959	184.1	10.265	4350.0	2.579	34.912	243.1	2.188
1150.0	9.783	35.863	190.3	9.643	4400.0	2.582	34.913	242.9	2.184
1200.0	9.449	35.814	191.8	9.306	4450.0	2.586	34.912	243.5	2.182
1250.0	8.807	35.716	199.4	8.663	4500.0	2.590	34.912	242.9	2.180
1300.0	8.346	35.646	204.4	8.201	4550.0	2.595	34.912	242.7	2.178
1350.0	7.806	35.569	210.5	7.661	4600.0	2.601	34.912	242.5	2.178
1400.0	7.129	35.451	219.8	6.984	4650.0	2.605	34.912	242.5	2.176
1450.0	6.631	35.371	226.6	6.486	4700.0	2.611	34.912	242.3	2.175
1500.0	5.966	35.248	235.5	5.823	4750.0	2.616	34.912	242.3	2.174
1550.0	5.606	35.200	241.0	5.462	4800.0	2.622	34.911	242.5	2.174
1600.0	5.624	35.224	240.7	5.475	4850.0	2.629	34.911	242.9	2.174
1650.0	5.341	35.187	246.6	5.190	4900.0	2.634	34.911	242.4	2.173
1700.0	5.062	35.147	248.4	4.909	4950.0	2.640	34.912	242.3	2.173
1750.0	4.610	35.071	256.2	4.459	4989.0	2.646	34.911	240.6	2.173
1800.0	4.436	35.049	258.5	4.282					
1850.0	4.289	35.027	261.2	4.132					
1900.0	4.159	35.013	262.9	3.999					
1950.0	4.016	34.997	264.0	3.853					
2000.0	3.940	34.990	265.6	3.773					
2050.0	3.711	34.959	268.9	3.543					
2100.0	3.597	34.948	271.2	3.426					
2150.0	3.500	34.935	273.4	3.326					
2200.0	3.455	34.935	273.5	3.277					
2250.0	3.438	34.941	272.2	3.255					
2300.0	3.451	34.952	270.3	3.263					
2350.0	3.412	34.955	268.1	3.220					
2400.0	3.444	34.967	266.1	3.246					
2450.0	3.392	34.964	264.8	3.190					
2500.0	3.320	34.960	265.8	3.114					
2550.0	3.269	34.957	265.3	3.059					
2600.0	3.228	34.957	265.3	3.013					
2650.0	3.171	34.957	263.5	2.953					
2700.0	3.132	34.957	262.0	2.909					
2750.0	3.089	34.956	260.9	2.862					
2800.0	3.057	34.954	260.0	2.825					
2850.0	3.007	34.953	259.2	2.772					
2900.0	2.977	34.952	258.9	2.737					
2950.0	2.933	34.951	257.1	2.689					
3000.0	2.908	34.949	256.0	2.659					



Station 69

Station : 70 Campagne : OVIDE 02
 Date : 01-07-02 Navire : N/O THALASSA
 Profondeur : 3754 Organisme : IFREMER
 Position : N 44 4.76
 W 17 25.57

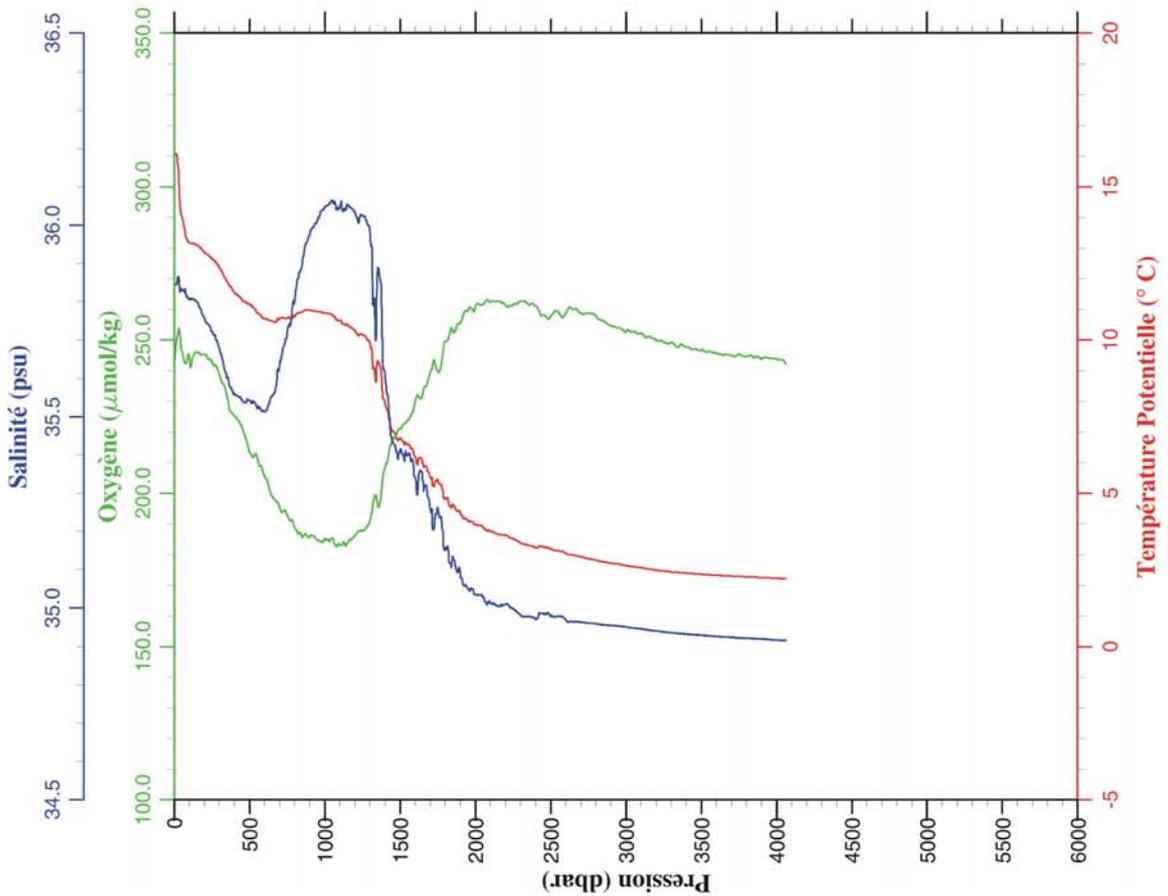
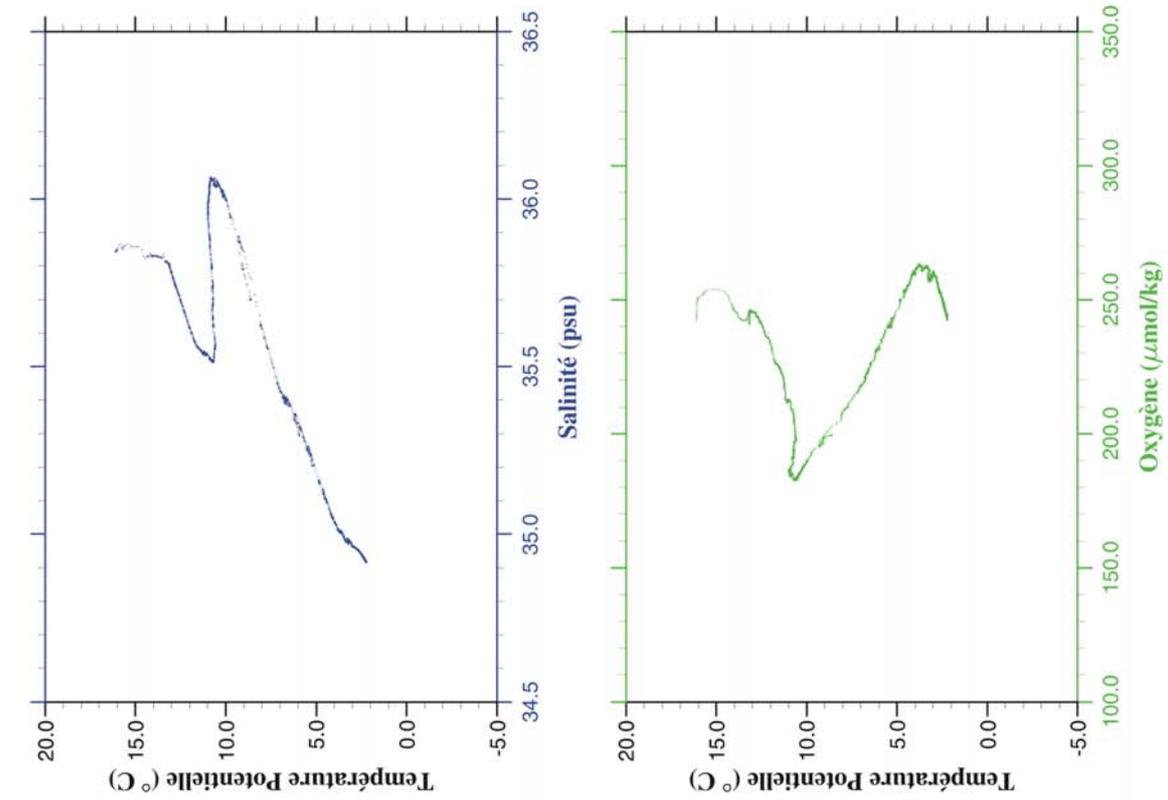
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	16.302	35.823	242.0	16.302	3050.0	2.791	34.943	250.9	2.539
10.0	16.299	35.823	241.3	16.298	3100.0	2.759	34.941	250.3	2.503
20.0	16.290	35.824	247.0	16.287	3150.0	2.737	34.938	249.3	2.476
30.0	16.153	35.825	251.8	16.148	3200.0	2.698	34.936	248.5	2.433
40.0	15.432	35.824	253.9	15.426	3250.0	2.677	34.933	247.3	2.407
50.0	14.875	35.819	255.1	14.867	3300.0	2.662	34.932	246.7	2.387
100.0	13.448	35.788	243.6	13.434	3350.0	2.649	34.930	246.9	2.369
150.0	12.977	35.748	245.7	12.956	3400.0	2.640	34.929	246.6	2.355
200.0	12.853	35.743	245.6	12.826	3450.0	2.632	34.927	245.8	2.341
250.0	12.601	35.710	243.4	12.567	3500.0	2.622	34.925	246.1	2.327
300.0	12.196	35.638	233.0	12.156	3550.0	2.611	34.925	245.4	2.311
350.0	11.885	35.604	230.1	11.839	3600.0	2.602	34.923	244.8	2.296
400.0	11.679	35.579	229.4	11.627	3650.0	2.590	34.922	244.8	2.279
450.0	11.471	35.557	226.3	11.413	3700.0	2.579	34.921	244.3	2.263
500.0	11.266	35.544	221.3	11.202	3750.0	2.574	34.918	244.0	2.252
550.0	11.091	35.535	213.7	11.022	3800.0	2.573	34.918	243.6	2.246
600.0	10.802	35.495	212.6	10.727	3822.0	2.571	34.919	243.3	2.241
650.0	10.654	35.499	206.2	10.573					
700.0	10.406	35.493	202.4	10.320					
750.0	10.190	35.494	197.9	10.099					
800.0	10.040	35.520	193.9	9.943					
850.0	10.182	35.627	190.2	10.078					
900.0	10.710	35.834	186.0	10.597					
950.0	10.512	35.847	185.9	10.393					
1000.0	10.053	35.785	187.5	9.931					
1050.0	9.614	35.726	190.1	9.489					
1100.0	9.991	35.873	189.1	9.856					
1150.0	9.883	35.890	190.8	9.743					
1200.0	9.402	35.800	194.9	9.260					
1250.0	9.778	35.932	192.0	9.626					
1300.0	9.644	35.928	195.0	9.486					
1350.0	9.409	35.902	196.7	9.248					
1400.0	9.163	35.883	199.4	8.998					
1450.0	8.869	35.851	202.8	8.700					
1500.0	8.356	35.770	208.7	8.187					
1550.0	7.627	35.641	215.7	7.459					
1600.0	6.964	35.516	223.0	6.799					
1650.0	6.173	35.385	232.2	6.012					
1700.0	5.775	35.315	237.8	5.613					
1750.0	5.515	35.274	240.2	5.351					
1800.0	4.994	35.187	246.6	4.832					
1850.0	4.724	35.141	250.3	4.560					
1900.0	4.489	35.108	253.4	4.324					
1950.0	4.348	35.087	254.6	4.180					
2000.0	4.169	35.060	255.8	3.998					
2050.0	3.926	35.026	258.9	3.755					
2100.0	3.874	35.021	258.9	3.698					
2150.0	3.779	35.009	260.0	3.600					
2200.0	3.651	34.996	261.8	3.469					
2250.0	3.600	34.995	259.2	3.414					
2300.0	3.533	34.991	258.7	3.344					
2350.0	3.517	34.996	256.7	3.322					
2400.0	3.454	34.991	256.4	3.256					
2450.0	3.297	34.971	259.7	3.097					
2500.0	3.259	34.973	258.2	3.055					
2550.0	3.214	34.972	256.5	3.005					
2600.0	3.192	34.974	255.9	2.978					
2650.0	3.136	34.970	254.7	2.919					
2700.0	3.071	34.963	255.3	2.850					
2750.0	2.998	34.957	255.9	2.773					
2800.0	2.955	34.955	254.8	2.726					
2850.0	2.920	34.953	254.7	2.686					
2900.0	2.882	34.950	253.7	2.644					
2950.0	2.845	34.948	252.6	2.602					
3000.0	2.823	34.946	251.4	2.576					



Station 70

Station : 71 Campagne : OVIDE 02
 Date : 01-07-02 Navire : N/O THALASSA
 Profondeur : 3984 Organisme : IFREMER
 Position : N 43 46.67
 W 17 1.87

PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	16.091	35.844	242.6	16.091	3050.0	2.858	34.948	252.7	2.605
10.0	16.077	35.844	247.6	16.075	3100.0	2.830	34.946	252.3	2.572
20.0	15.979	35.852	250.9	15.976	3150.0	2.788	34.943	251.2	2.526
30.0	15.245	35.861	253.8	15.241	3200.0	2.759	34.940	250.0	2.492
40.0	14.300	35.828	250.6	14.294	3250.0	2.734	34.938	249.4	2.463
50.0	14.063	35.829	246.5	14.055	3300.0	2.709	34.936	249.2	2.433
100.0	13.196	35.809	244.4	13.183	3350.0	2.698	34.933	247.7	2.417
150.0	13.131	35.801	246.0	13.110	3400.0	2.680	34.932	247.8	2.394
200.0	12.898	35.757	245.4	12.871	3450.0	2.666	34.931	247.0	2.375
250.0	12.701	35.724	242.9	12.667	3500.0	2.654	34.929	246.8	2.358
300.0	12.408	35.680	238.6	12.368	3550.0	2.641	34.928	246.3	2.339
350.0	11.957	35.600	231.7	11.910	3600.0	2.634	34.927	245.7	2.327
400.0	11.592	35.560	225.2	11.541	3650.0	2.623	34.925	245.1	2.311
450.0	11.377	35.543	221.6	11.319	3700.0	2.615	34.924	244.9	2.298
500.0	11.233	35.542	213.4	11.170	3750.0	2.608	34.922	245.4	2.285
550.0	10.960	35.522	211.8	10.891	3800.0	2.601	34.921	244.7	2.272
600.0	10.771	35.513	205.5	10.696	3850.0	2.595	34.921	244.2	2.261
650.0	10.693	35.554	198.9	10.612	3900.0	2.590	34.920	243.7	2.251
700.0	10.802	35.640	195.4	10.714	3950.0	2.586	34.918	244.2	2.241
750.0	10.816	35.723	192.8	10.722	4000.0	2.574	34.916	243.9	2.224
800.0	10.865	35.801	188.7	10.763	4050.0	2.570	34.916	243.1	2.214
850.0	11.026	35.897	185.6	10.917	4062.0	2.570	34.916	242.2	2.213
900.0	11.085	35.977	185.9	10.969					
950.0	11.054	36.013	184.6	10.931					
1000.0	11.006	36.048	185.2	10.877					
1050.0	10.964	36.065	185.4	10.828					
1100.0	10.777	36.048	183.2	10.636					
1150.0	10.650	36.053	183.7	10.504					
1200.0	10.463	36.034	186.3	10.311					
1250.0	10.326	36.024	187.8	10.168					
1300.0	10.059	35.979	190.9	9.898					
1350.0	9.426	35.870	196.4	9.264					
1400.0	8.107	35.612	208.5	7.952					
1450.0	7.199	35.437	217.8	7.048					
1500.0	6.955	35.415	221.0	6.801					
1550.0	6.748	35.403	223.8	6.590					
1600.0	6.349	35.340	229.6	6.191					
1650.0	6.152	35.333	232.5	5.991					
1700.0	5.671	35.256	239.6	5.510					
1750.0	5.604	35.262	239.8	5.439					
1800.0	5.000	35.156	249.7	4.838					
1850.0	4.799	35.135	253.0	4.635					
1900.0	4.481	35.087	255.6	4.316					
1950.0	4.279	35.051	259.7	4.112					
2000.0	4.143	35.036	260.8	3.973					
2050.0	4.073	35.029	261.6	3.899					
2100.0	3.938	35.013	262.4	3.761					
2150.0	3.835	35.004	262.7	3.655					
2200.0	3.813	35.011	261.4	3.629					
2250.0	3.700	34.997	261.4	3.512					
2300.0	3.571	34.982	262.7	3.380					
2350.0	3.501	34.978	261.9	3.307					
2400.0	3.417	34.971	261.1	3.220					
2450.0	3.457	34.986	258.1	3.253					
2500.0	3.386	34.980	257.8	3.179					
2550.0	3.335	34.979	259.2	3.124					
2600.0	3.253	34.970	258.6	3.038					
2650.0	3.200	34.965	259.9	2.981					
2700.0	3.146	34.963	258.8	2.923					
2750.0	3.097	34.961	258.7	2.870					
2800.0	3.049	34.959	258.0	2.817					
2850.0	2.992	34.957	256.2	2.757					
2900.0	2.964	34.955	254.7	2.724					
2950.0	2.934	34.953	254.1	2.690					
3000.0	2.894	34.951	252.6	2.645					



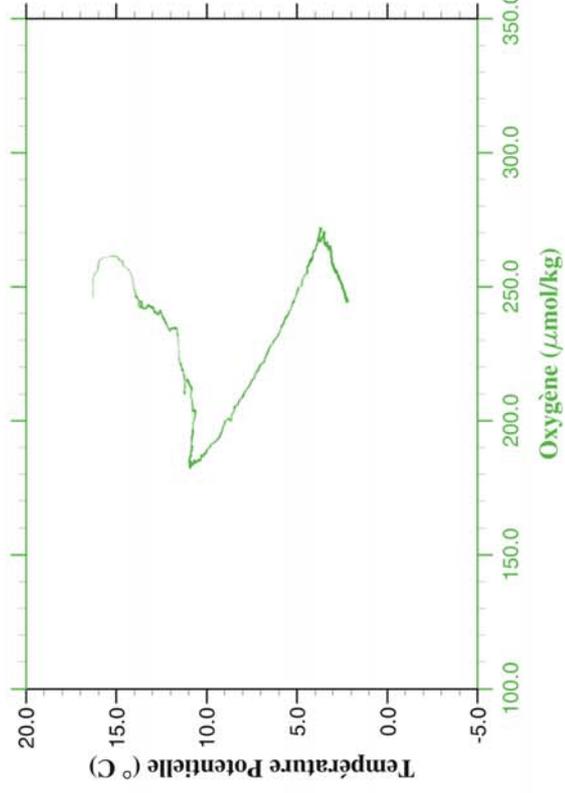
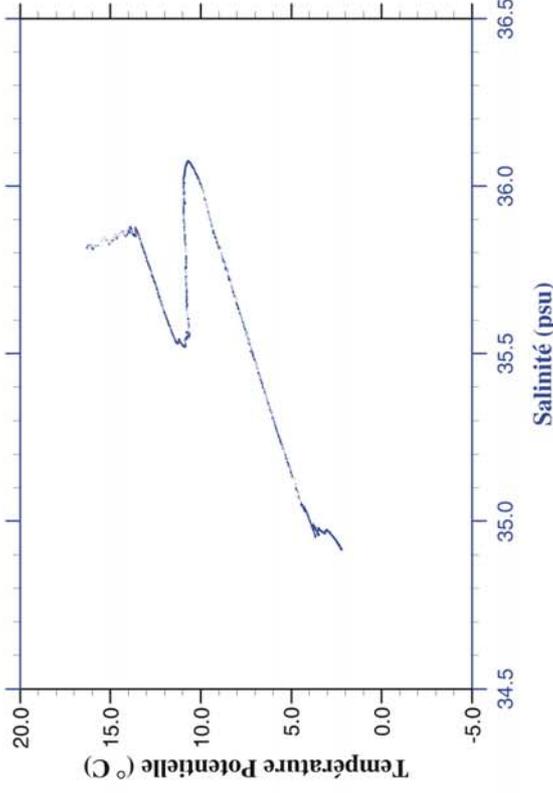
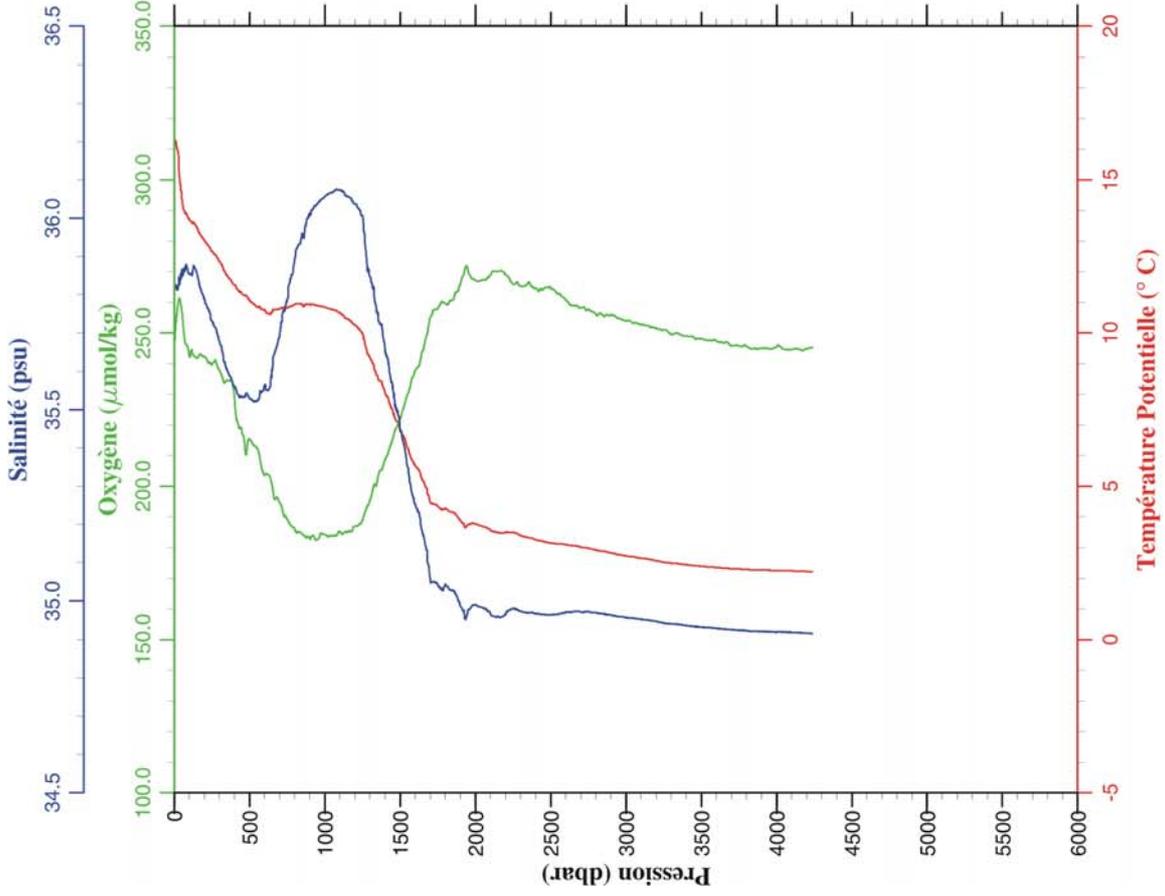
Station 71

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Station      : 72          Campagne   : OVIDE 02
Date        : 01-07-02   Navire    : N/O THALASSA
Profondeur  : 4149       Organisme : IFREMER
Position    : N 43 28.65
              W 16 38.51

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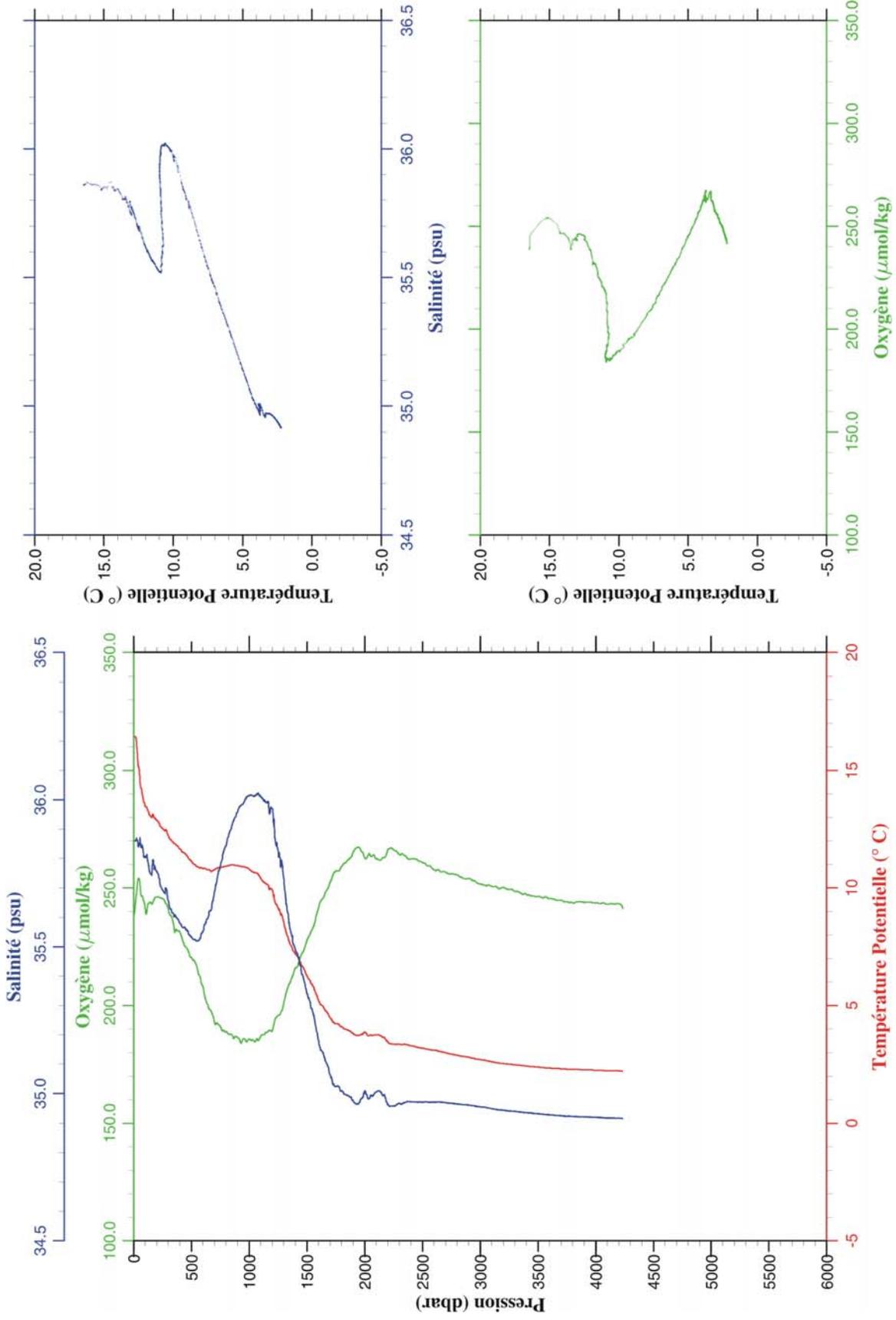
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	16.292	35.816	246.3	16.292	3050.0	2.955	34.956	253.3	2.700
10.0	16.294	35.817	252.4	16.292	3100.0	2.913	34.953	252.7	2.653
20.0	15.996	35.813	257.6	15.993	3150.0	2.884	34.950	252.4	2.620
30.0	15.501	35.837	261.0	15.497	3200.0	2.839	34.947	251.6	2.571
40.0	14.863	35.838	260.4	14.857	3250.0	2.796	34.943	251.0	2.523
50.0	14.583	35.851	257.7	14.576	3300.0	2.768	34.941	249.6	2.491
100.0	13.721	35.855	242.6	13.707	3350.0	2.753	34.940	249.8	2.470
150.0	13.475	35.857	241.8	13.454	3400.0	2.724	34.936	249.2	2.437
200.0	13.053	35.788	242.4	13.026	3450.0	2.703	34.934	248.7	2.411
250.0	12.715	35.731	239.7	12.681	3500.0	2.687	34.933	248.2	2.390
300.0	12.393	35.680	238.0	12.353	3550.0	2.676	34.931	247.6	2.373
350.0	11.918	35.604	234.6	11.872	3600.0	2.658	34.929	247.5	2.351
400.0	11.621	35.560	229.0	11.569	3650.0	2.643	34.926	246.8	2.330
450.0	11.332	35.533	217.6	11.275	3700.0	2.628	34.925	245.8	2.311
500.0	11.138	35.530	215.4	11.075	3750.0	2.623	34.924	245.8	2.299
550.0	10.916	35.521	212.4	10.847	3800.0	2.612	34.923	245.7	2.283
600.0	10.839	35.564	203.5	10.764	3850.0	2.607	34.922	245.0	2.273
650.0	10.770	35.603	200.2	10.689	3900.0	2.603	34.921	245.1	2.263
700.0	10.872	35.692	194.6	10.783	3950.0	2.603	34.920	244.9	2.257
750.0	10.913	35.786	189.1	10.818	4000.0	2.607	34.919	245.6	2.255
800.0	11.030	35.893	186.1	10.927	4050.0	2.606	34.920	244.7	2.249
850.0	11.056	35.960	184.4	10.946	4100.0	2.601	34.919	244.6	2.238
900.0	11.049	36.015	182.8	10.933	4150.0	2.597	34.918	244.7	2.229
950.0	11.019	36.038	182.6	10.896	4200.0	2.592	34.917	244.9	2.218
1000.0	10.974	36.057	184.3	10.845	4236.0	2.579	34.915	245.2	2.200
1050.0	10.906	36.067	184.0	10.771					
1100.0	10.802	36.073	185.2	10.661					
1150.0	10.607	36.057	184.9	10.460					
1200.0	10.423	36.036	186.9	10.271					
1250.0	10.161	36.008	188.8	10.005					
1300.0	9.361	35.846	195.4	9.207					
1350.0	8.766	35.756	202.1	8.611					
1400.0	8.177	35.650	208.7	8.021					
1450.0	7.651	35.556	215.3	7.495					
1500.0	6.971	35.445	221.9	6.817					
1550.0	6.423	35.352	230.0	6.270					
1600.0	5.834	35.253	237.7	5.682					
1650.0	5.352	35.176	244.2	5.201					
1700.0	4.593	35.054	255.1	4.446					
1750.0	4.505	35.045	258.1	4.355					
1800.0	4.427	35.043	259.7	4.273					
1850.0	4.311	35.028	260.7	4.154					
1900.0	4.037	34.988	266.1	3.879					
1950.0	3.915	34.976	270.5	3.753					
2000.0	3.942	34.990	267.2	3.775					
2050.0	3.857	34.983	267.4	3.687					
2100.0	3.731	34.968	269.0	3.558					
2150.0	3.677	34.961	270.2	3.500					
2200.0	3.675	34.965	269.0	3.493					
2250.0	3.677	34.980	266.0	3.490					
2300.0	3.582	34.974	265.3	3.392					
2350.0	3.517	34.970	266.5	3.322					
2400.0	3.450	34.967	264.7	3.251					
2450.0	3.405	34.966	264.2	3.203					
2500.0	3.356	34.964	264.6	3.150					
2550.0	3.333	34.966	262.8	3.122					
2600.0	3.319	34.971	260.9	3.103					
2650.0	3.279	34.972	259.1	3.058					
2700.0	3.245	34.972	258.3	3.020					
2750.0	3.209	34.973	257.7	2.980					
2800.0	3.156	34.970	256.1	2.922					
2850.0	3.115	34.967	255.6	2.877					
2900.0	3.069	34.963	255.8	2.828					
2950.0	3.010	34.960	254.8	2.765					
3000.0	2.972	34.956	253.9	2.722					



Station 72

Station	: 73	Campagne	: OVIDE 02
Date	: 05-07-02	Navire	: N/O THALASSA
Profondeur	: 4151	Organisme	: IFREMER
Position	: N 43 28.30		
	W 16 38.63		

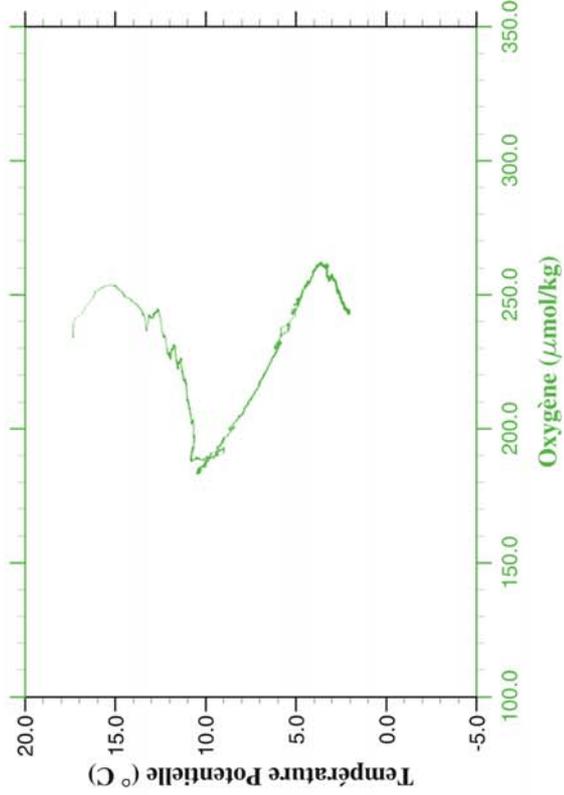
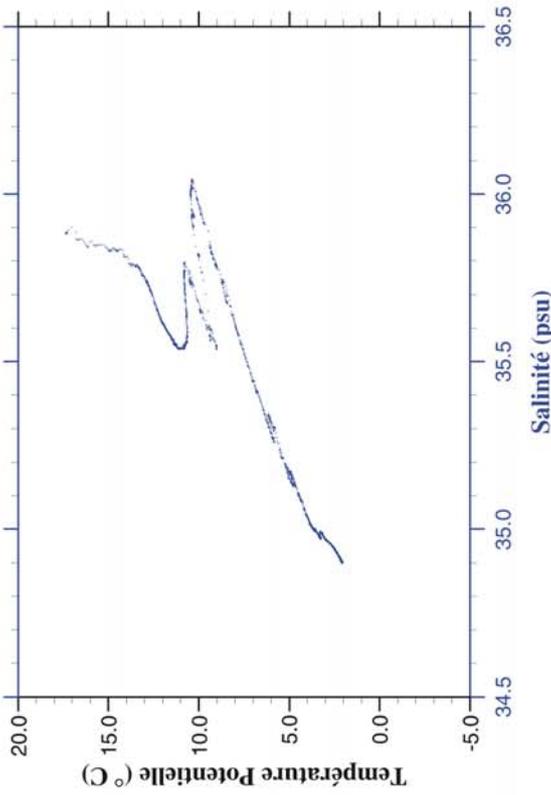
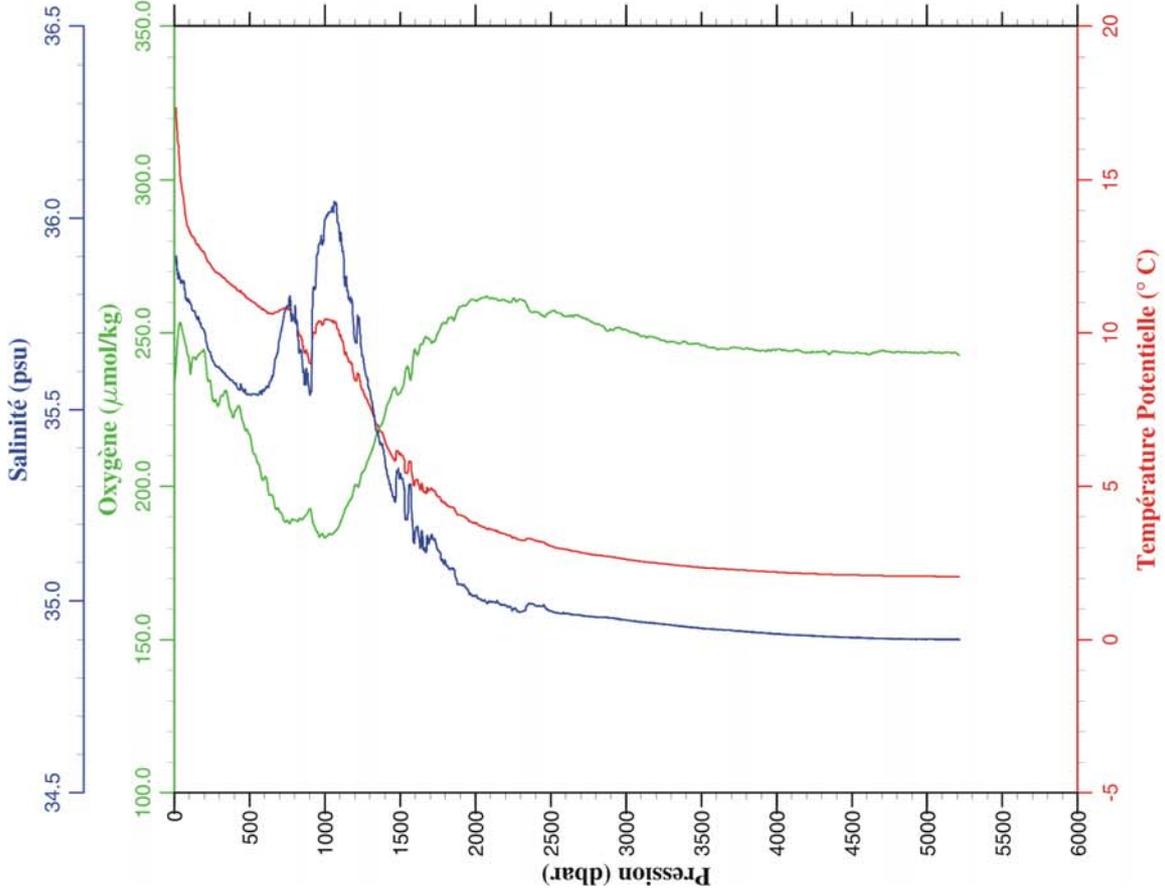
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	16.448	35.860	238.9	16.448	3050.0	2.921	34.953	251.0	2.667
10.0	16.441	35.860	240.3	16.439	3100.0	2.862	34.949	250.7	2.603
20.0	16.396	35.863	245.6	16.392	3150.0	2.824	34.946	250.1	2.562
30.0	15.835	35.860	250.6	15.830	3200.0	2.802	34.944	250.3	2.534
40.0	15.198	35.841	253.9	15.192	3250.0	2.776	34.942	249.4	2.504
50.0	14.974	35.849	253.7	14.967	3300.0	2.758	34.940	248.5	2.481
100.0	13.496	35.806	241.4	13.482	3350.0	2.737	34.938	247.8	2.455
150.0	13.049	35.749	243.7	13.028	3400.0	2.714	34.935	247.2	2.427
200.0	12.917	35.758	246.1	12.889	3450.0	2.699	34.934	246.8	2.407
250.0	12.565	35.693	245.5	12.531	3500.0	2.679	34.932	246.4	2.382
300.0	12.282	35.657	240.9	12.242	3550.0	2.661	34.930	245.9	2.359
350.0	11.931	35.602	232.9	11.885	3600.0	2.649	34.929	245.6	2.342
400.0	11.710	35.580	231.2	11.658	3650.0	2.638	34.926	245.0	2.325
450.0	11.482	35.559	224.9	11.424	3700.0	2.632	34.925	244.8	2.314
500.0	11.193	35.533	220.5	11.129	3750.0	2.620	34.923	244.1	2.297
550.0	10.977	35.521	216.1	10.908	3800.0	2.615	34.923	243.7	2.287
600.0	10.900	35.552	208.1	10.824	3850.0	2.613	34.922	244.2	2.279
650.0	10.866	35.607	198.7	10.785	3900.0	2.611	34.921	243.9	2.271
700.0	10.870	35.687	192.7	10.781	3950.0	2.608	34.920	243.9	2.263
750.0	10.955	35.773	191.2	10.859	4000.0	2.605	34.920	243.6	2.253
800.0	11.024	35.843	188.9	10.922	4050.0	2.599	34.918	243.5	2.242
850.0	11.088	35.912	187.7	10.979	4100.0	2.596	34.917	243.2	2.234
900.0	11.067	35.960	186.3	10.951	4150.0	2.596	34.917	243.3	2.227
950.0	11.026	35.988	185.8	10.904	4200.0	2.596	34.917	243.3	2.222
1000.0	10.926	36.014	185.8	10.797	4235.0	2.580	34.915	241.4	2.202
1050.0	10.792	36.015	184.5	10.657					
1100.0	10.562	36.011	186.8	10.423					
1150.0	10.314	35.992	188.5	10.171					
1200.0	10.074	35.969	189.2	9.926					
1250.0	9.315	35.830	195.7	9.167					
1300.0	8.688	35.733	200.9	8.539					
1350.0	7.817	35.570	209.3	7.671					
1400.0	7.350	35.489	216.1	7.203					
1450.0	6.891	35.418	221.5	6.743					
1500.0	6.406	35.341	227.7	6.258					
1550.0	6.000	35.279	232.7	5.852					
1600.0	5.392	35.184	241.4	5.245					
1650.0	5.012	35.125	246.6	4.865					
1700.0	4.637	35.064	252.4	4.490					
1750.0	4.380	35.024	257.1	4.232					
1800.0	4.256	35.011	259.2	4.105					
1850.0	4.117	34.994	261.7	3.962					
1900.0	3.972	34.978	265.3	3.815					
1950.0	3.890	34.969	267.3	3.729					
2000.0	4.042	35.009	262.9	3.874					
2050.0	3.921	34.994	263.8	3.749					
2100.0	3.927	35.006	262.4	3.750					
2150.0	3.855	34.998	262.4	3.675					
2200.0	3.630	34.963	266.3	3.449					
2250.0	3.549	34.958	266.3	3.364					
2300.0	3.541	34.967	264.2	3.352					
2350.0	3.542	34.971	263.7	3.347					
2400.0	3.490	34.973	262.4	3.291					
2450.0	3.431	34.972	262.1	3.228					
2500.0	3.397	34.971	260.8	3.190					
2550.0	3.348	34.971	259.4	3.137					
2600.0	3.321	34.972	257.8	3.105					
2650.0	3.267	34.972	257.2	3.047					
2700.0	3.219	34.970	256.7	2.995					
2750.0	3.164	34.967	256.0	2.936					
2800.0	3.117	34.966	255.6	2.884					
2850.0	3.072	34.962	254.1	2.835					
2900.0	3.041	34.961	254.0	2.800					
2950.0	2.994	34.959	253.1	2.749					
3000.0	2.953	34.956	251.7	2.704					



Station 73

Station : 74 Campagne : OVIDE 02
 Date : 05-07-02 Navire : N/O THALASSA
 Profondeur : 5083 Organisme : IFREMER
 Position : N 43 10.84
 W 16 14.71

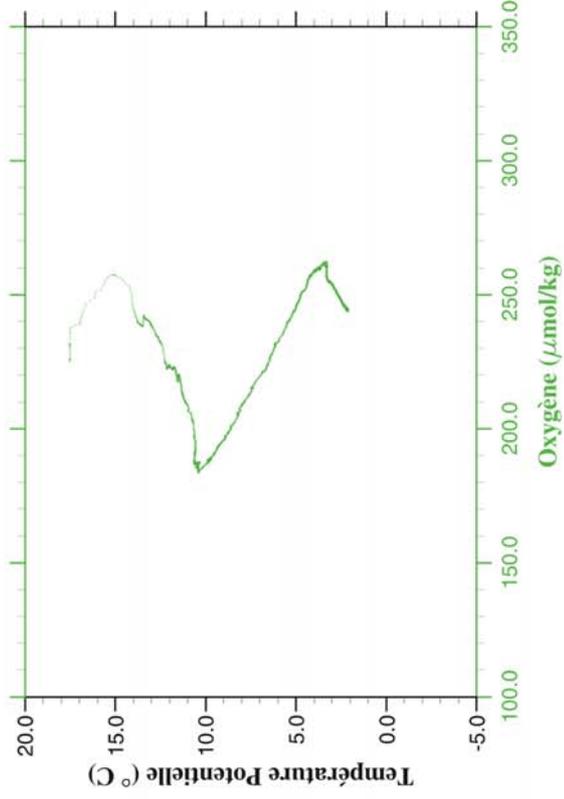
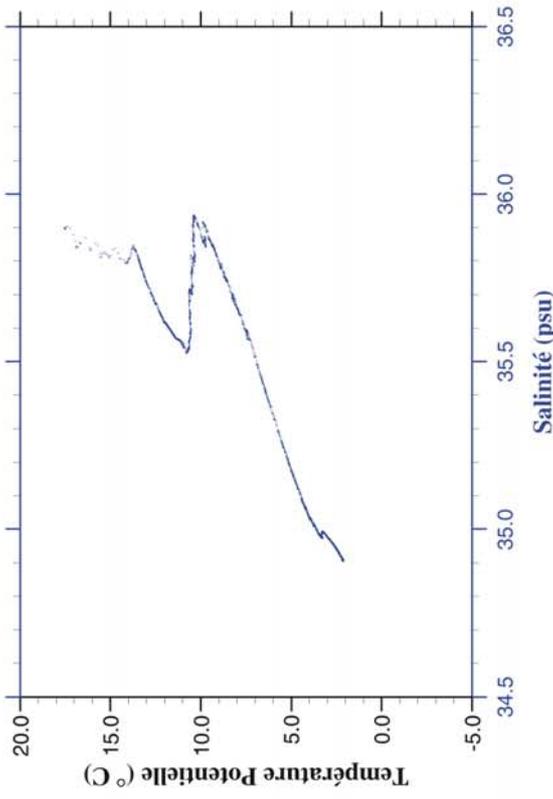
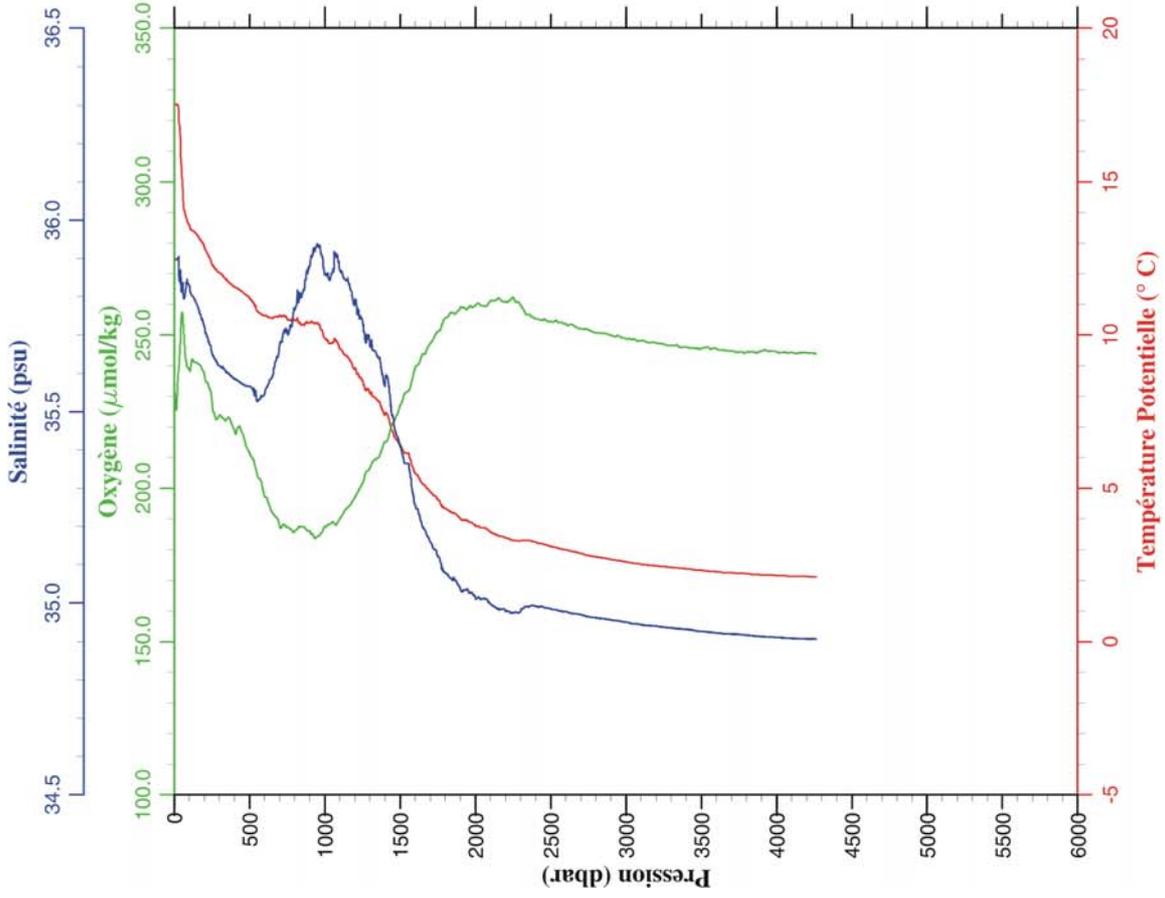
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	17.329	35.883	234.0	17.328	3050.0	2.835	34.948	250.2	2.583
10.0	17.342	35.884	238.4	17.341	3100.0	2.804	34.946	248.9	2.547
20.0	16.564	35.866	246.1	16.561	3150.0	2.778	34.943	248.8	2.517
30.0	15.922	35.859	251.9	15.917	3200.0	2.764	34.942	248.4	2.497
40.0	15.085	35.840	253.5	15.079	3250.0	2.741	34.940	247.6	2.469
50.0	14.784	35.837	251.9	14.776	3300.0	2.719	34.938	247.3	2.443
100.0	13.355	35.780	240.6	13.341	3350.0	2.698	34.936	246.5	2.417
150.0	12.911	35.739	241.9	12.890	3400.0	2.680	34.933	247.0	2.394
200.0	12.637	35.705	244.2	12.610	3450.0	2.661	34.931	246.6	2.370
250.0	12.177	35.634	230.0	12.144	3500.0	2.642	34.929	246.0	2.346
300.0	11.969	35.609	227.4	11.929	3550.0	2.632	34.928	245.3	2.330
350.0	11.734	35.586	230.2	11.689	3600.0	2.622	34.926	244.9	2.316
400.0	11.550	35.568	223.9	11.499	3650.0	2.611	34.925	244.9	2.300
450.0	11.374	35.556	221.8	11.316	3700.0	2.604	34.923	245.3	2.287
500.0	11.150	35.539	216.9	11.087	3750.0	2.592	34.923	245.2	2.270
550.0	10.984	35.539	208.1	10.914	3800.0	2.583	34.921	245.1	2.255
600.0	10.818	35.550	202.8	10.743	3850.0	2.574	34.919	244.5	2.241
650.0	10.712	35.588	197.0	10.631	3900.0	2.563	34.918	244.3	2.224
700.0	10.823	35.684	191.6	10.734	3950.0	2.553	34.916	244.6	2.209
750.0	10.889	35.770	188.9	10.794	4000.0	2.548	34.915	244.6	2.198
800.0	10.542	35.735	189.0	10.442	4050.0	2.537	34.913	244.6	2.182
850.0	9.884	35.628	189.2	9.782	4100.0	2.531	34.912	244.1	2.171
900.0	9.115	35.540	192.7	9.012	4150.0	2.526	34.911	244.3	2.160
950.0	10.430	35.905	185.2	10.312	4200.0	2.526	34.910	243.6	2.154
1000.0	10.575	35.993	183.2	10.449	4250.0	2.520	34.910	243.7	2.142
1050.0	10.522	36.026	184.4	10.390	4300.0	2.517	34.908	244.0	2.133
1100.0	10.030	35.945	187.7	9.895	4350.0	2.516	34.907	243.0	2.126
1150.0	9.342	35.808	193.7	9.206	4400.0	2.510	34.906	243.9	2.114
1200.0	8.607	35.681	200.3	8.471	4450.0	2.511	34.906	243.7	2.110
1250.0	8.285	35.639	204.6	8.146	4500.0	2.511	34.905	243.4	2.104
1300.0	7.756	35.549	210.1	7.616	4550.0	2.513	34.905	243.5	2.099
1350.0	7.140	35.445	217.4	7.001	4600.0	2.511	34.904	243.2	2.092
1400.0	6.604	35.365	223.8	6.465	4650.0	2.510	34.903	243.7	2.084
1450.0	6.066	35.274	231.1	5.928	4700.0	2.512	34.902	244.2	2.080
1500.0	6.227	35.334	230.4	6.081	4750.0	2.513	34.903	243.9	2.075
1550.0	5.583	35.217	239.1	5.439	4800.0	2.516	34.902	244.0	2.072
1600.0	5.269	35.170	244.5	5.124	4850.0	2.518	34.902	243.8	2.067
1650.0	5.071	35.162	246.5	4.923	4900.0	2.523	34.901	243.6	2.065
1700.0	5.054	35.163	247.6	4.902	4950.0	2.527	34.901	243.6	2.063
1750.0	4.828	35.134	249.9	4.674	5000.0	2.532	34.900	243.5	2.061
1800.0	4.611	35.103	253.1	4.454	5050.0	2.537	34.900	243.7	2.060
1850.0	4.471	35.086	254.7	4.312	5100.0	2.542	34.900	243.4	2.058
1900.0	4.223	35.045	258.6	4.062	5150.0	2.547	34.900	243.8	2.057
1950.0	4.086	35.029	259.8	3.922	5200.0	2.554	34.900	243.2	2.057
2000.0	3.974	35.015	260.7	3.806	5215.0	2.556	34.900	242.7	2.057
2050.0	3.843	35.000	261.5	3.673					
2100.0	3.768	34.998	261.3	3.594					
2150.0	3.691	34.997	260.7	3.513					
2200.0	3.613	34.989	260.6	3.432					
2250.0	3.510	34.978	261.2	3.325					
2300.0	3.434	34.972	261.0	3.246					
2350.0	3.488	34.992	258.3	3.294					
2400.0	3.416	34.988	257.0	3.218					
2450.0	3.384	34.988	255.6	3.182					
2500.0	3.258	34.974	256.8	3.053					
2550.0	3.191	34.970	256.6	2.982					
2600.0	3.154	34.968	255.4	2.941					
2650.0	3.102	34.965	255.3	2.885					
2700.0	3.062	34.963	255.3	2.841					
2750.0	3.014	34.960	254.3	2.788					
2800.0	2.984	34.958	253.0	2.754					
2850.0	2.965	34.957	252.2	2.730					
2900.0	2.937	34.956	251.3	2.698					
2950.0	2.899	34.953	251.9	2.656					
3000.0	2.866	34.951	251.0	2.619					



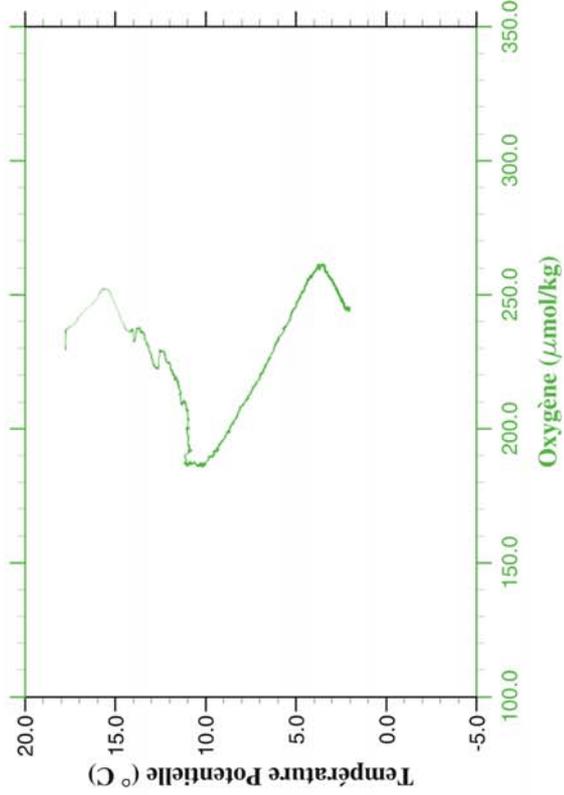
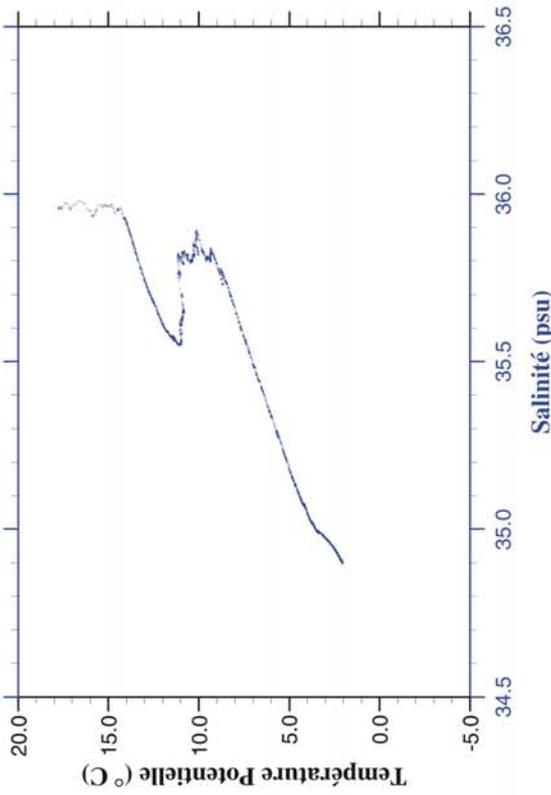
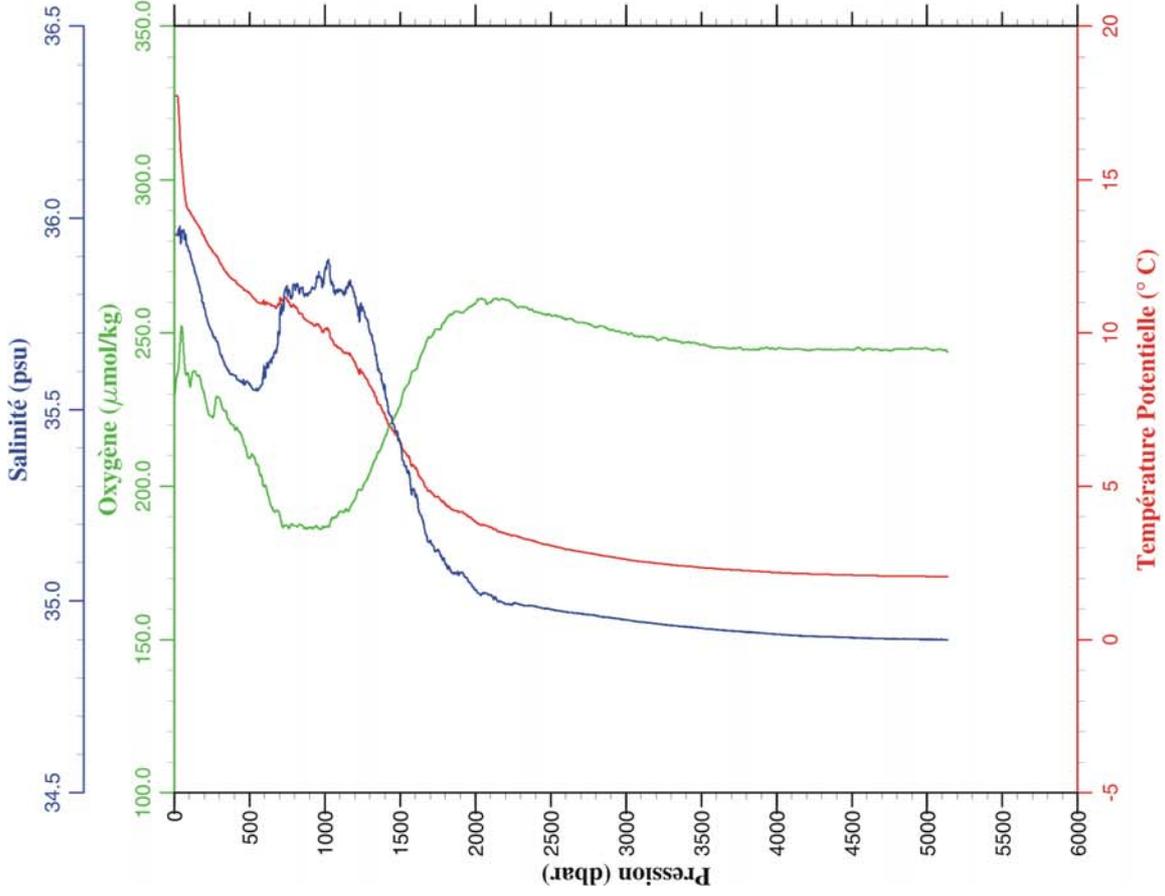
Station 74

Station : 75 Campagne : OVIDE 02
 Date : 05-07-02 Navire : N/O THALASSA
 Profondeur : 4172 Organisme : IFREMER
 Position : N 42 52.91
 W 15 51.12

PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	17.524	35.898	231.7	17.524	3050.0	2.809	34.947	248.8	2.557
10.0	17.523	35.898	227.1	17.521	3100.0	2.782	34.944	248.1	2.526
20.0	17.524	35.898	230.6	17.521	3150.0	2.754	34.942	247.5	2.493
30.0	17.034	35.880	239.1	17.029	3200.0	2.734	34.939	247.4	2.468
40.0	16.393	35.870	247.8	16.387	3250.0	2.715	34.937	247.0	2.444
50.0	15.347	35.826	256.8	15.339	3300.0	2.695	34.936	246.8	2.419
100.0	13.609	35.829	238.7	13.594	3350.0	2.676	34.934	246.2	2.396
150.0	13.304	35.779	240.9	13.283	3400.0	2.658	34.931	246.0	2.373
200.0	12.907	35.722	237.2	12.879	3450.0	2.634	34.929	245.9	2.343
250.0	12.353	35.653	228.9	12.320	3500.0	2.614	34.926	245.6	2.319
300.0	12.079	35.620	223.7	12.040	3550.0	2.597	34.925	245.8	2.296
350.0	11.831	35.603	222.7	11.785	3600.0	2.575	34.922	245.5	2.270
400.0	11.629	35.586	218.9	11.577	3650.0	2.562	34.920	245.0	2.251
450.0	11.476	35.573	218.2	11.419	3700.0	2.558	34.919	244.8	2.242
500.0	11.289	35.567	211.6	11.225	3750.0	2.552	34.918	244.5	2.231
550.0	10.851	35.527	204.9	10.783	3800.0	2.536	34.917	244.5	2.209
600.0	10.705	35.544	197.3	10.630	3850.0	2.520	34.914	244.5	2.188
650.0	10.638	35.591	192.1	10.557	3900.0	2.513	34.913	244.8	2.176
700.0	10.723	35.671	187.7	10.635	3950.0	2.510	34.912	244.6	2.167
750.0	10.615	35.707	187.4	10.521	4000.0	2.503	34.911	244.5	2.155
800.0	10.576	35.765	185.9	10.476	4050.0	2.497	34.909	244.4	2.143
850.0	10.443	35.808	187.5	10.337	4100.0	2.493	34.908	244.4	2.133
900.0	10.507	35.882	186.1	10.395	4150.0	2.492	34.907	244.2	2.127
950.0	10.524	35.937	184.4	10.405	4200.0	2.491	34.906	244.2	2.120
1000.0	10.013	35.857	187.6	9.891	4250.0	2.493	34.907	244.0	2.116
1050.0	9.876	35.863	189.0	9.748	4263.0	2.493	34.906	243.6	2.114
1100.0	9.696	35.869	190.1	9.564					
1150.0	9.458	35.848	193.6	9.321					
1200.0	9.064	35.785	197.1	8.924					
1250.0	8.657	35.740	201.6	8.515					
1300.0	8.227	35.671	206.6	8.083					
1350.0	8.024	35.644	210.0	7.876					
1400.0	7.571	35.570	215.2	7.422					
1450.0	7.018	35.489	221.2	6.869					
1500.0	6.567	35.411	227.1	6.417					
1550.0	6.298	35.365	231.5	6.146					
1600.0	5.648	35.257	239.2	5.498					
1650.0	5.285	35.198	243.8	5.135					
1700.0	5.027	35.159	247.3	4.875					
1750.0	4.780	35.122	251.2	4.626					
1800.0	4.499	35.080	255.4	4.344					
1850.0	4.342	35.060	257.3	4.185					
1900.0	4.159	35.036	258.9	3.998					
1950.0	4.101	35.033	258.7	3.937					
2000.0	3.926	35.013	259.7	3.759					
2050.0	3.881	35.012	259.6	3.710					
2100.0	3.757	34.998	261.0	3.583					
2150.0	3.634	34.984	262.0	3.457					
2200.0	3.552	34.979	261.0	3.372					
2250.0	3.489	34.974	262.3	3.304					
2300.0	3.468	34.977	259.9	3.280					
2350.0	3.484	34.991	256.7	3.290					
2400.0	3.433	34.992	255.2	3.235					
2450.0	3.385	34.990	255.0	3.183					
2500.0	3.311	34.985	254.5	3.105					
2550.0	3.250	34.982	254.0	3.041					
2600.0	3.204	34.978	253.8	2.990					
2650.0	3.151	34.973	253.2	2.933					
2700.0	3.100	34.971	252.0	2.878					
2750.0	3.027	34.964	251.7	2.802					
2800.0	2.991	34.961	250.7	2.761					
2850.0	2.960	34.960	250.6	2.726					
2900.0	2.915	34.957	249.9	2.677					
2950.0	2.885	34.954	249.8	2.641					
3000.0	2.848	34.951	248.8	2.601					



Station 75



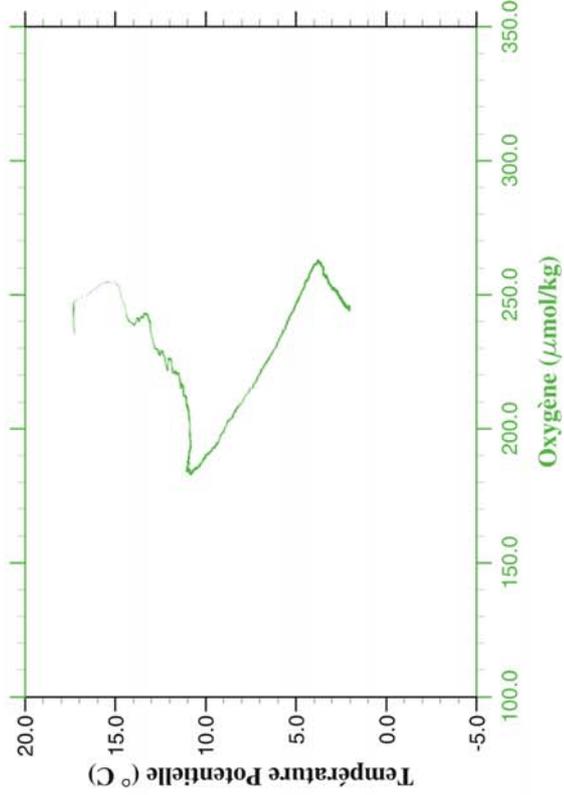
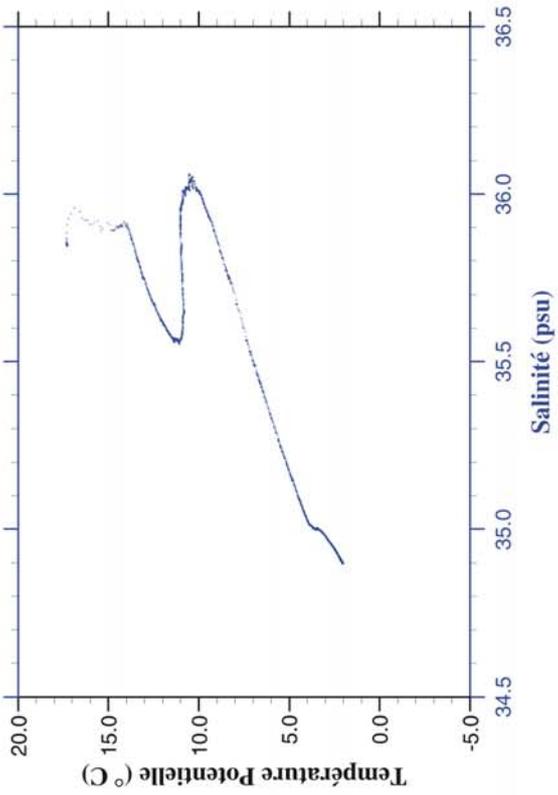
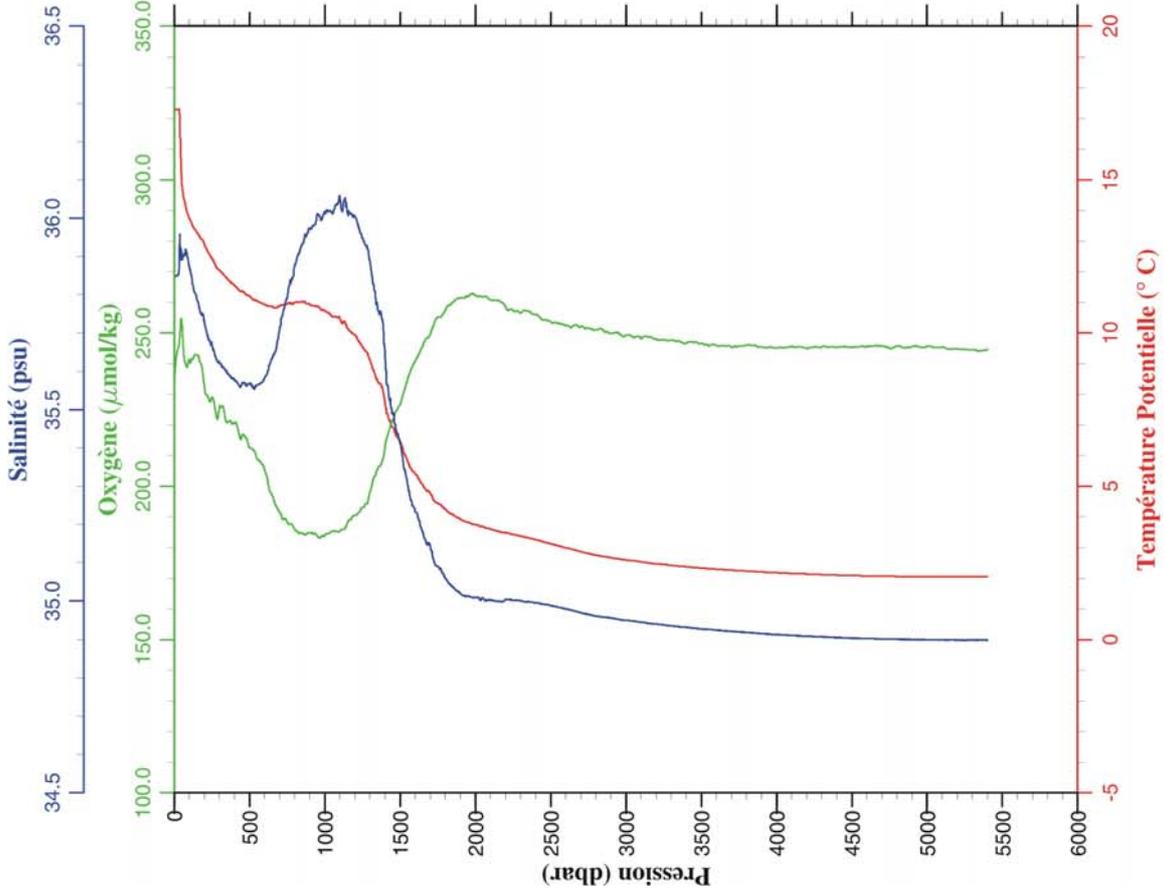
Station 76

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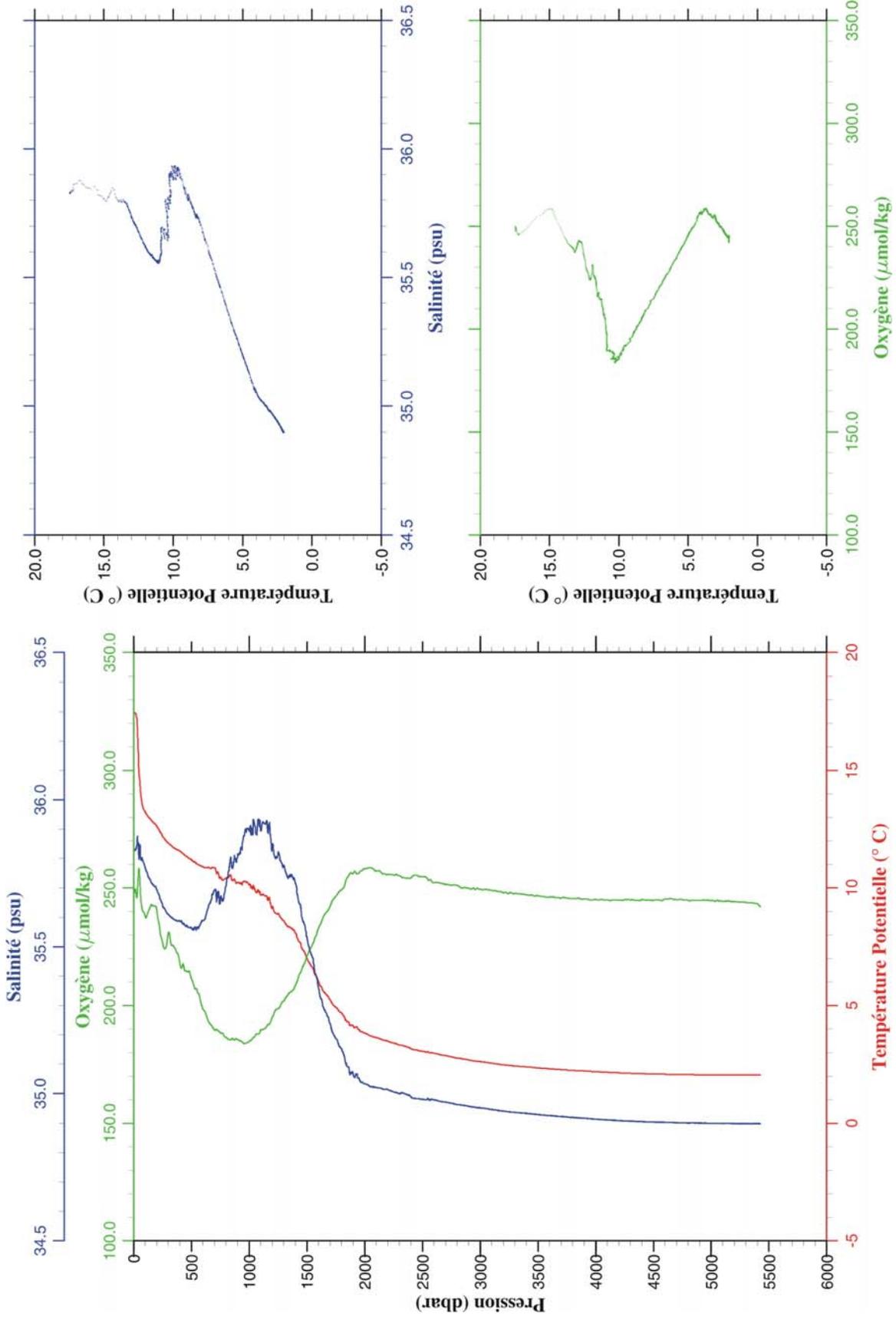
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Station   : 77          Campagne  : OVIDE 02
Date      : 06-07-02  Navire    : N/O THALASSA
Profondeur : 5243      Organisme : IFREMER
Position  : N 42 16.89
           : W 15  4.02
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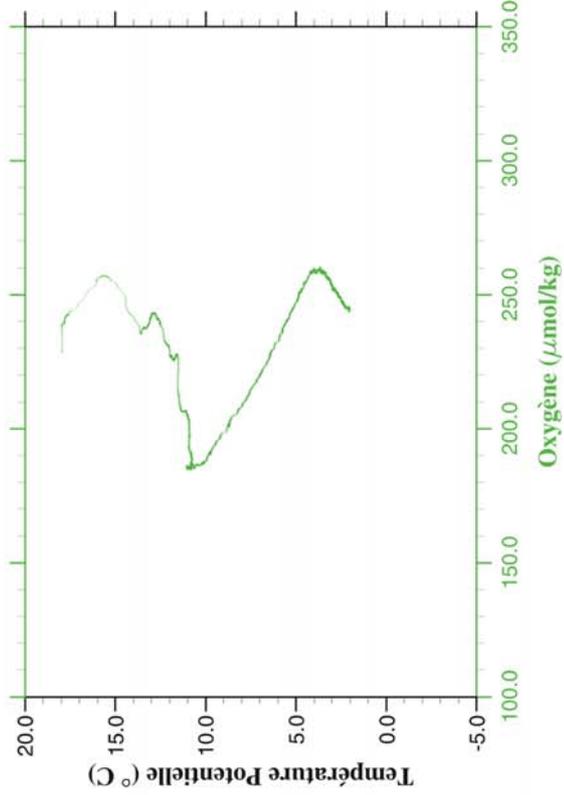
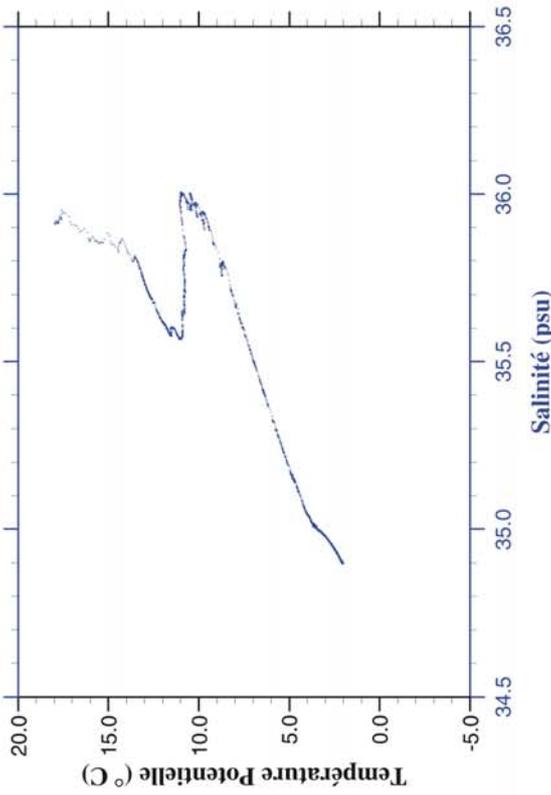
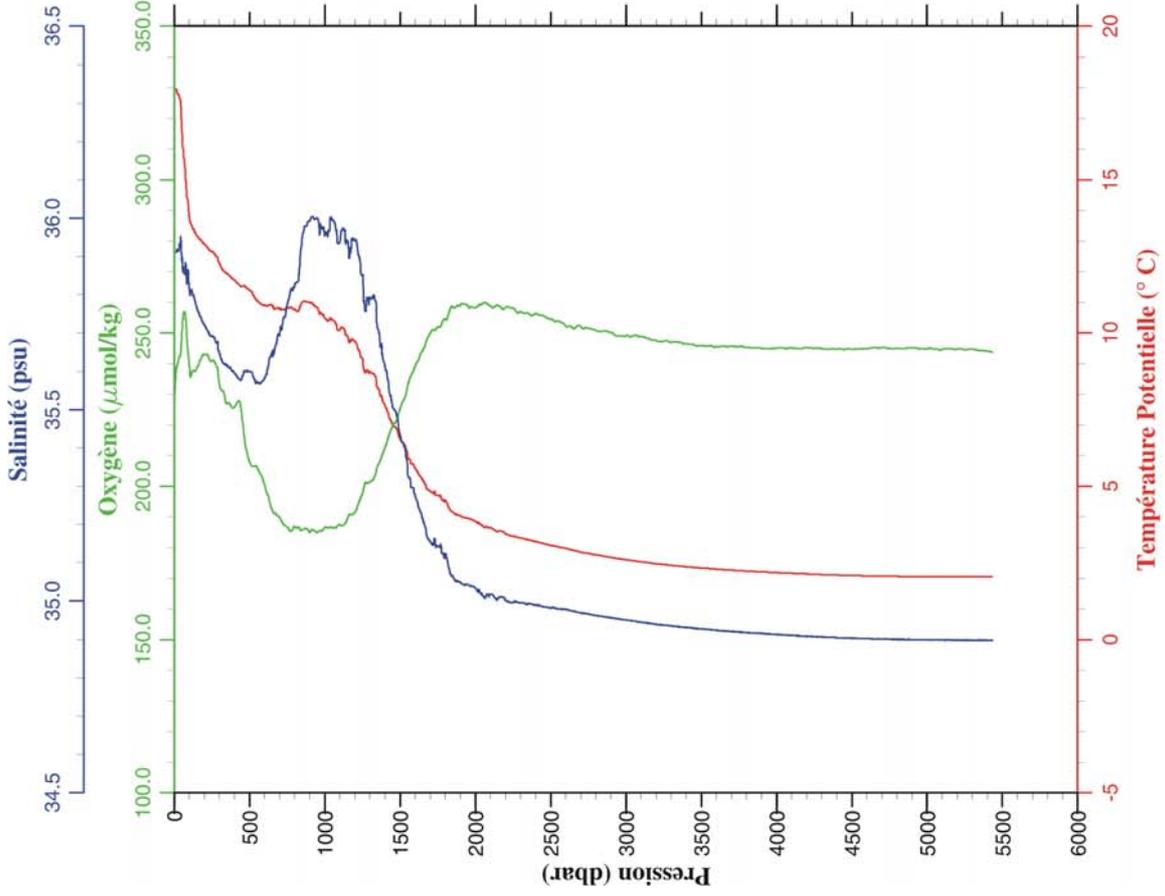
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	17.283	35.846	235.6	17.283	3050.0	2.822	34.948	248.5	2.569
10.0	17.297	35.850	240.3	17.296	3100.0	2.793	34.945	248.2	2.536
20.0	17.301	35.850	243.9	17.298	3150.0	2.758	34.942	248.7	2.497
30.0	17.314	35.858	245.8	17.309	3200.0	2.738	34.940	248.0	2.472
40.0	16.317	35.922	251.3	16.311	3250.0	2.718	34.938	248.0	2.447
50.0	14.921	35.907	254.1	14.914	3300.0	2.696	34.936	247.7	2.420
100.0	13.762	35.872	241.2	13.747	3350.0	2.675	34.933	247.5	2.394
150.0	13.305	35.789	242.9	13.284	3400.0	2.660	34.932	246.6	2.374
200.0	12.940	35.730	232.6	12.912	3450.0	2.639	34.929	247.0	2.349
250.0	12.482	35.674	229.0	12.448	3500.0	2.625	34.928	246.7	2.329
300.0	12.085	35.622	225.7	12.045	3550.0	2.611	34.926	245.8	2.311
350.0	11.828	35.597	220.8	11.782	3600.0	2.603	34.924	245.9	2.297
400.0	11.592	35.578	220.6	11.540	3650.0	2.588	34.923	245.9	2.277
450.0	11.426	35.569	216.5	11.368	3700.0	2.578	34.921	245.5	2.262
500.0	11.260	35.567	212.5	11.196	3750.0	2.571	34.920	245.8	2.249
550.0	11.113	35.564	209.0	11.044	3800.0	2.562	34.919	246.0	2.234
600.0	11.002	35.581	205.4	10.927	3850.0	2.551	34.917	246.0	2.219
650.0	10.948	35.635	197.1	10.865	3900.0	2.541	34.916	245.5	2.203
700.0	10.983	35.710	191.5	10.894	3950.0	2.534	34.914	245.4	2.191
750.0	11.040	35.792	188.3	10.944	4000.0	2.530	34.913	245.2	2.181
800.0	11.099	35.875	185.9	10.996	4050.0	2.522	34.912	245.2	2.167
850.0	11.129	35.933	184.6	11.019	4100.0	2.515	34.911	245.6	2.155
900.0	11.046	35.974	184.7	10.930	4150.0	2.514	34.909	245.5	2.147
950.0	11.004	36.011	183.7	10.882	4200.0	2.509	34.909	245.1	2.137
1000.0	10.852	36.017	183.9	10.724	4250.0	2.503	34.907	245.5	2.126
1050.0	10.655	36.012	185.3	10.521	4300.0	2.501	34.907	245.5	2.118
1100.0	10.660	36.059	185.2	10.519	4350.0	2.498	34.906	245.5	2.108
1150.0	10.291	36.015	188.0	10.148	4400.0	2.495	34.904	245.3	2.100
1200.0	10.084	36.004	190.4	9.935	4450.0	2.492	34.904	245.6	2.091
1250.0	9.705	35.947	193.1	9.553	4500.0	2.492	34.904	245.5	2.085
1300.0	9.274	35.888	198.1	9.120	4550.0	2.494	34.903	245.5	2.080
1350.0	8.601	35.770	205.6	8.447	4600.0	2.493	34.903	245.7	2.074
1400.0	7.846	35.645	213.1	7.694	4650.0	2.497	34.902	245.8	2.071
1450.0	7.087	35.495	221.7	6.937	4700.0	2.498	34.901	245.7	2.066
1500.0	6.614	35.413	226.7	6.463	4750.0	2.500	34.901	245.0	2.062
1550.0	5.971	35.306	234.8	5.823	4800.0	2.503	34.900	245.7	2.059
1600.0	5.536	35.234	240.8	5.388	4850.0	2.506	34.901	245.0	2.055
1650.0	5.192	35.180	245.7	5.043	4900.0	2.509	34.899	245.6	2.052
1700.0	4.926	35.143	249.6	4.775	4950.0	2.515	34.899	245.6	2.052
1750.0	4.600	35.091	255.1	4.448	5000.0	2.520	34.900	245.6	2.050
1800.0	4.405	35.061	257.4	4.251	5050.0	2.525	34.899	245.3	2.049
1850.0	4.228	35.038	260.0	4.071	5100.0	2.529	34.899	245.4	2.046
1900.0	4.080	35.019	261.4	3.921	5150.0	2.535	34.899	244.8	2.045
1950.0	3.995	35.013	261.9	3.833	5200.0	2.541	34.899	244.9	2.044
2000.0	3.915	35.010	262.3	3.749	5250.0	2.547	34.898	244.8	2.044
2050.0	3.858	35.008	261.8	3.688	5300.0	2.553	34.899	244.5	2.043
2100.0	3.779	35.003	260.8	3.605	5350.0	2.560	34.898	244.2	2.043
2150.0	3.709	34.998	260.7	3.531	5400.0	2.566	34.899	244.6	2.042
2200.0	3.668	35.004	258.6	3.486	5402.0	2.567	34.898	244.7	2.043
2250.0	3.618	35.002	257.5	3.431					
2300.0	3.564	35.001	256.5	3.373					
2350.0	3.515	34.998	257.2	3.321					
2400.0	3.455	34.995	256.0	3.257					
2450.0	3.390	34.992	254.2	3.188					
2500.0	3.328	34.988	253.7	3.122					
2550.0	3.267	34.985	253.1	3.057					
2600.0	3.204	34.980	252.6	2.990					
2650.0	3.149	34.975	252.4	2.931					
2700.0	3.085	34.970	252.2	2.863					
2750.0	3.027	34.965	251.6	2.802					
2800.0	2.980	34.961	251.0	2.751					
2850.0	2.941	34.958	250.8	2.707					
2900.0	2.909	34.956	250.0	2.671					
2950.0	2.870	34.953	250.0	2.627					
3000.0	2.843	34.950	249.2	2.595					



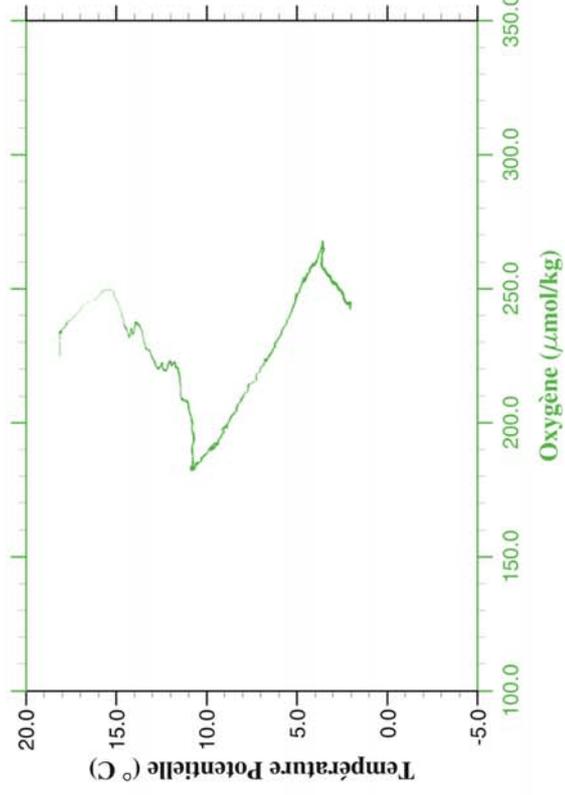
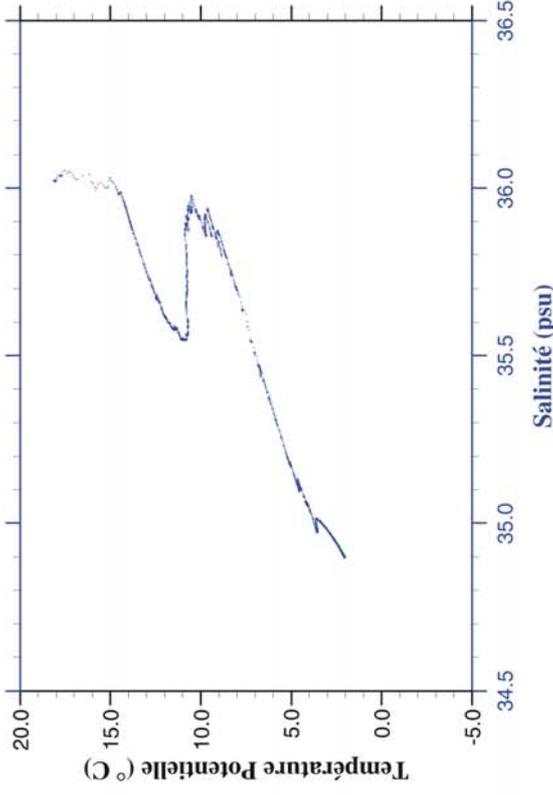
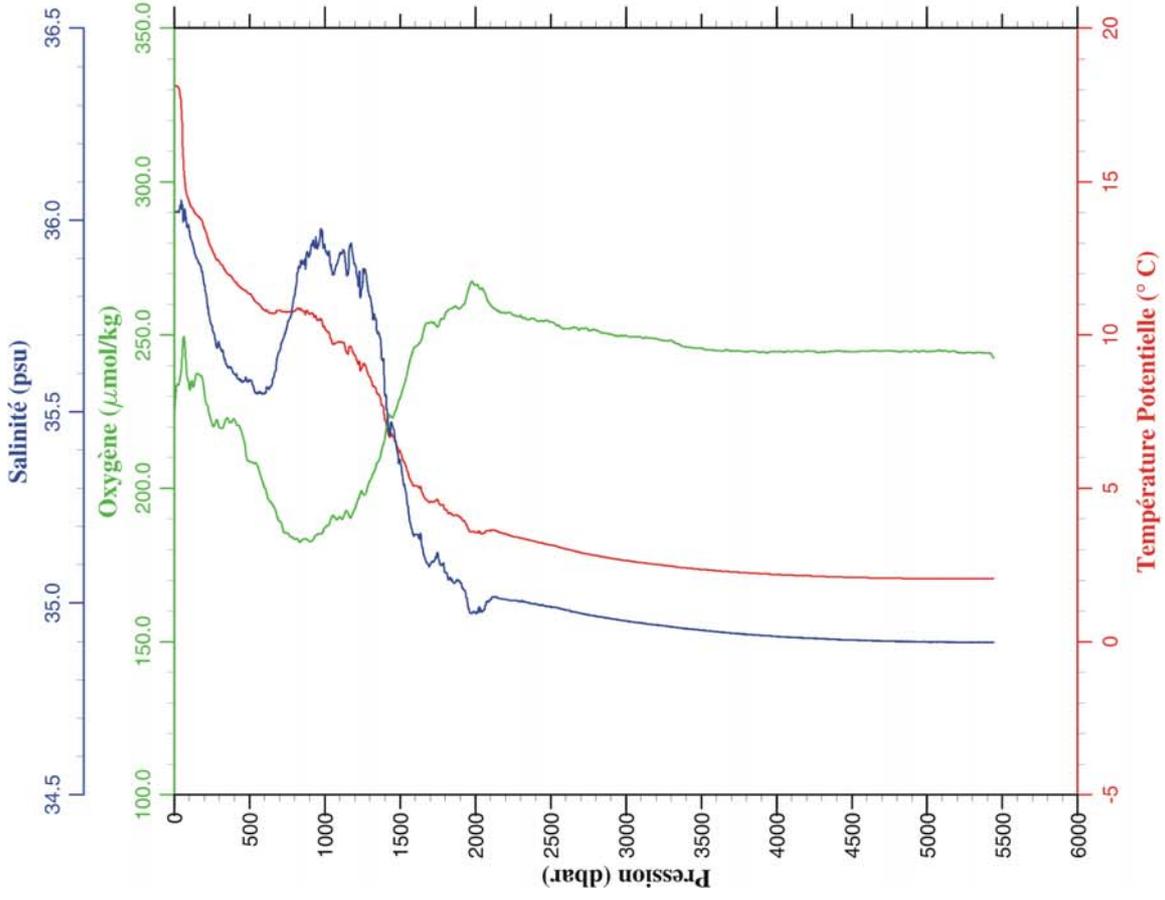
Station 77



Station 78



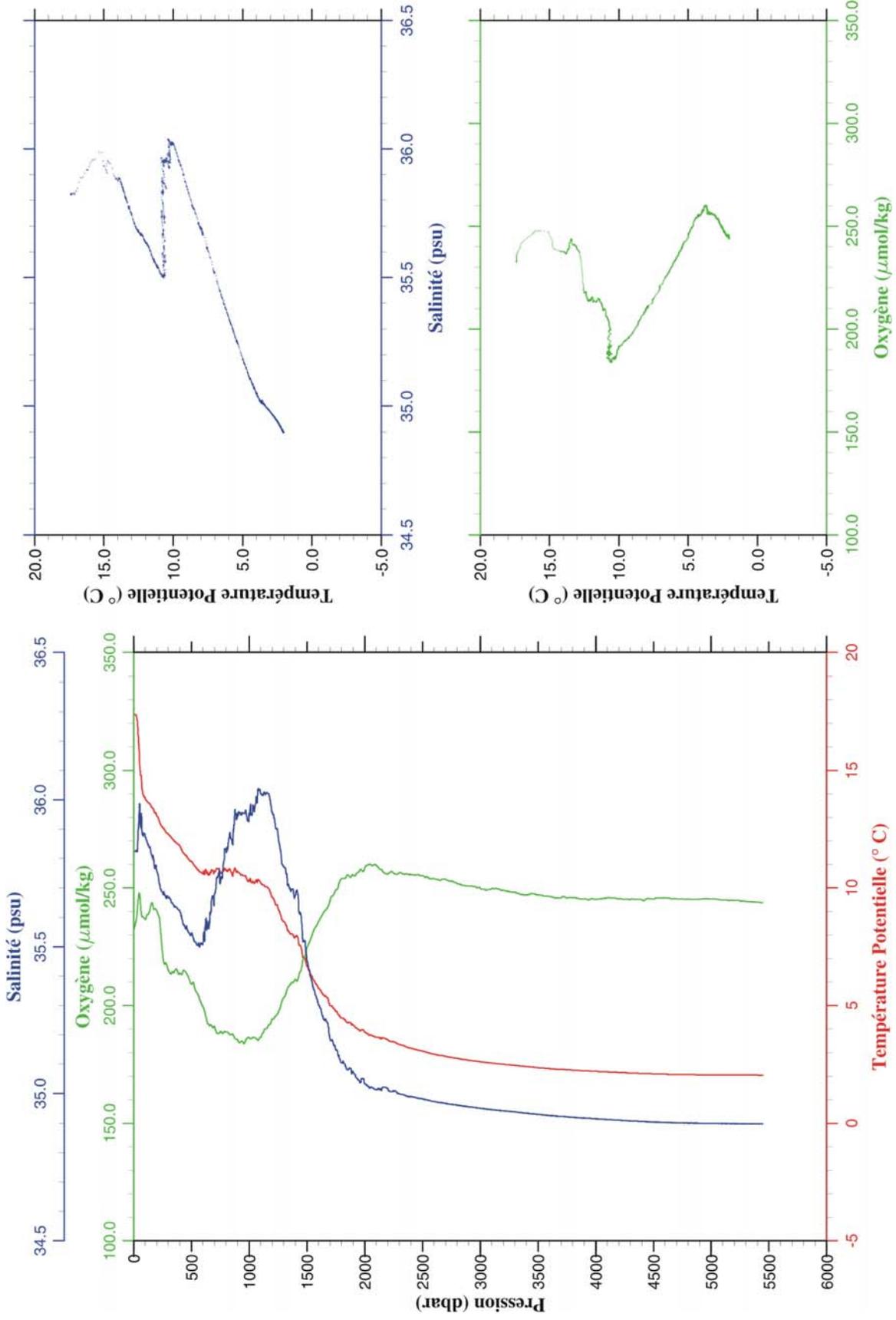
Station 79



Station 80

Station : 81 Campagne : OVIDE 02
 Date : 07-07-02 Navire : N/O THALASSA
 Profondeur : 5292 Organisme : IFREMER
 Position : N 41 5.08
 W 13 29.54

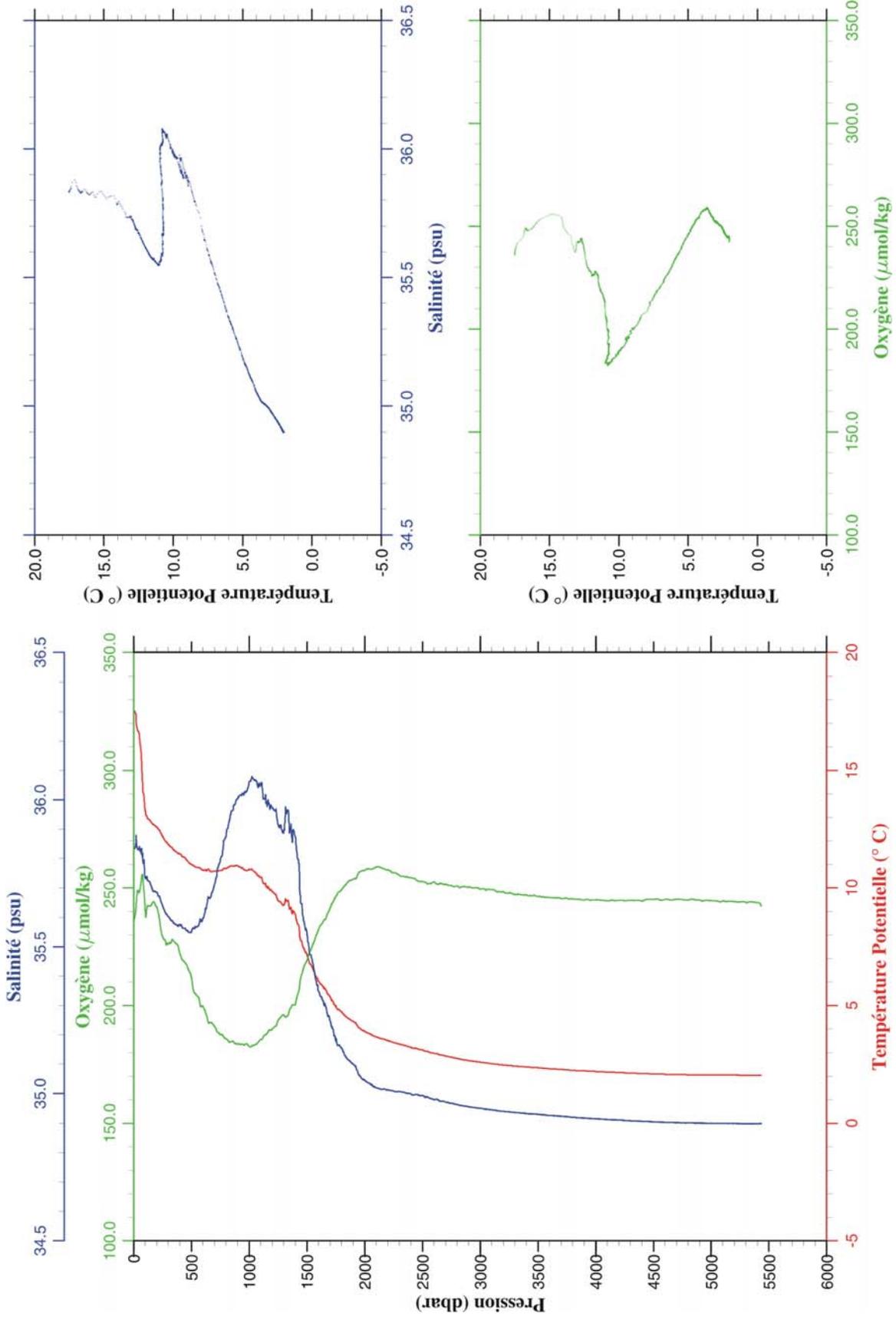
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	17.381	35.824	232.5	17.381	3050.0	2.831	34.948	249.0	2.579
10.0	17.381	35.825	233.5	17.380	3100.0	2.810	34.946	249.7	2.553
20.0	17.378	35.825	235.8	17.375	3150.0	2.791	34.944	249.7	2.529
30.0	17.144	35.822	239.8	17.139	3200.0	2.770	34.942	249.0	2.503
40.0	16.420	35.906	245.3	16.414	3250.0	2.750	34.940	248.5	2.479
50.0	15.738	35.957	247.8	15.730	3300.0	2.734	34.938	248.3	2.457
100.0	13.813	35.873	236.7	13.799	3350.0	2.711	34.936	247.3	2.430
150.0	13.499	35.818	242.9	13.477	3400.0	2.693	34.934	246.9	2.407
200.0	13.104	35.755	240.3	13.076	3450.0	2.675	34.932	247.6	2.383
250.0	12.616	35.685	222.3	12.582	3500.0	2.653	34.929	247.1	2.357
300.0	12.324	35.669	215.1	12.284	3550.0	2.642	34.928	246.6	2.340
350.0	12.040	35.639	214.1	11.993	3600.0	2.623	34.926	246.3	2.317
400.0	11.832	35.623	213.8	11.780	3650.0	2.610	34.924	245.7	2.298
450.0	11.434	35.561	214.3	11.376	3700.0	2.605	34.922	245.8	2.288
500.0	11.189	35.540	209.0	11.126	3750.0	2.593	34.922	245.8	2.271
550.0	10.863	35.505	205.2	10.795	3800.0	2.583	34.919	245.9	2.255
600.0	10.680	35.509	199.5	10.606	3850.0	2.573	34.918	245.6	2.240
650.0	10.621	35.562	192.0	10.541	3900.0	2.570	34.918	245.4	2.231
700.0	10.805	35.682	191.1	10.717	3950.0	2.560	34.916	245.1	2.216
750.0	10.708	35.713	188.9	10.614	4000.0	2.554	34.914	245.2	2.204
800.0	10.871	35.831	188.7	10.770	4050.0	2.548	34.913	245.4	2.193
850.0	10.745	35.865	187.9	10.637	4100.0	2.540	34.912	245.8	2.179
900.0	10.810	35.953	185.4	10.696	4150.0	2.533	34.911	245.7	2.166
950.0	10.635	35.954	184.0	10.515	4200.0	2.527	34.910	245.4	2.154
1000.0	10.444	35.952	186.4	10.319	4250.0	2.520	34.909	245.2	2.142
1050.0	10.381	35.977	186.3	10.250	4300.0	2.517	34.907	245.1	2.133
1100.0	10.356	36.022	186.5	10.218	4350.0	2.512	34.907	245.2	2.123
1150.0	10.194	36.024	190.2	10.051	4400.0	2.509	34.906	245.0	2.113
1200.0	9.742	35.957	194.2	9.596	4450.0	2.506	34.905	245.4	2.105
1250.0	9.296	35.874	196.9	9.148	4500.0	2.502	34.903	245.3	2.095
1300.0	8.720	35.772	203.4	8.571	4550.0	2.502	34.903	245.7	2.088
1350.0	8.252	35.699	208.6	8.102	4600.0	2.501	34.902	245.7	2.082
1400.0	8.062	35.674	211.2	7.908	4650.0	2.502	34.901	245.5	2.076
1450.0	7.629	35.602	215.2	7.473	4700.0	2.503	34.901	245.4	2.071
1500.0	6.822	35.455	224.6	6.670	4750.0	2.506	34.901	245.3	2.068
1550.0	6.298	35.370	230.5	6.145	4800.0	2.508	34.900	245.3	2.064
1600.0	5.886	35.303	235.6	5.734	4850.0	2.512	34.900	245.2	2.061
1650.0	5.572	35.250	240.1	5.418	4900.0	2.514	34.900	245.2	2.057
1700.0	5.142	35.185	244.6	4.989	4950.0	2.519	34.899	245.5	2.055
1750.0	4.899	35.148	249.1	4.743	5000.0	2.523	34.899	245.4	2.053
1800.0	4.625	35.105	254.0	4.468	5050.0	2.528	34.899	245.2	2.051
1850.0	4.437	35.082	255.6	4.277	5100.0	2.533	34.898	244.9	2.050
1900.0	4.332	35.073	255.5	4.169	5150.0	2.538	34.899	244.7	2.048
1950.0	4.143	35.047	256.8	3.978	5200.0	2.543	34.898	244.7	2.047
2000.0	4.032	35.034	258.4	3.864	5250.0	2.549	34.898	244.5	2.045
2050.0	3.920	35.022	260.0	3.749	5300.0	2.554	34.898	244.3	2.044
2100.0	3.826	35.013	259.7	3.651	5350.0	2.559	34.898	244.0	2.042
2150.0	3.784	35.017	257.6	3.605	5400.0	2.563	34.898	243.9	2.040
2200.0	3.714	35.016	255.9	3.531	5444.0	2.569	34.898	243.8	2.039
2250.0	3.639	35.009	256.3	3.452					
2300.0	3.536	34.999	256.5	3.346					
2350.0	3.461	34.995	255.9	3.268					
2400.0	3.382	34.991	255.8	3.185					
2450.0	3.319	34.986	255.6	3.118					
2500.0	3.266	34.983	255.3	3.061					
2550.0	3.200	34.978	254.4	2.991					
2600.0	3.147	34.974	254.0	2.934					
2650.0	3.103	34.970	253.2	2.886					
2700.0	3.058	34.967	253.7	2.837					
2750.0	3.016	34.964	252.9	2.790					
2800.0	2.982	34.961	251.9	2.753					
2850.0	2.945	34.958	251.1	2.711					
2900.0	2.911	34.956	250.8	2.673					
2950.0	2.886	34.953	250.6	2.643					
3000.0	2.856	34.951	250.0	2.608					



Station 81

Station : 82 Campagne : OVIDE 02
 Date : 07-07-02 Navire : N/O THALASSA
 Profondeur : 5283 Organisme : IFREMER
 Position : N 40 47.17
 W 13 5.93

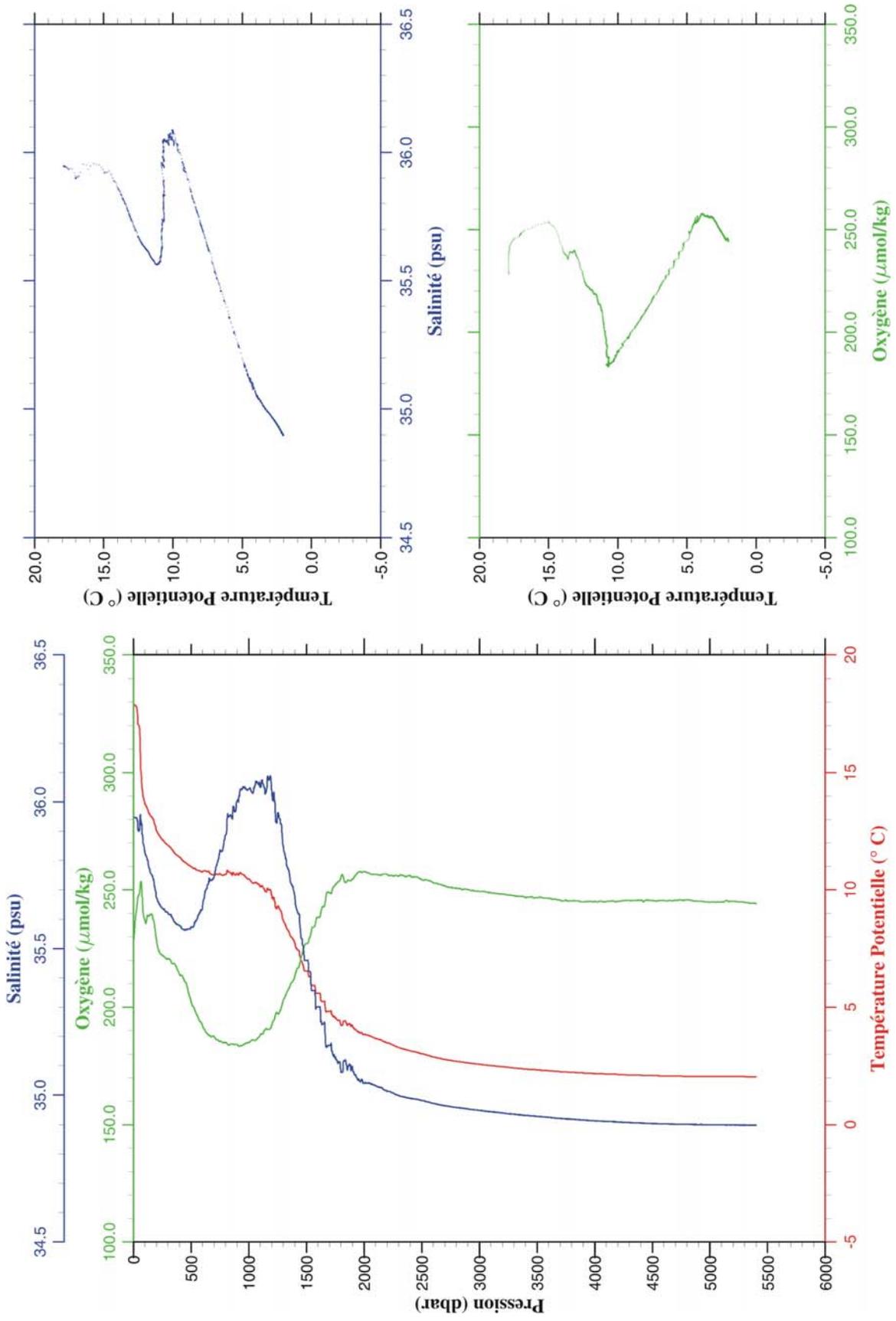
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	17.523	35.834	236.2	17.523	3050.0	2.813	34.947	249.1	2.561
10.0	17.499	35.835	237.7	17.498	3100.0	2.781	34.945	249.3	2.525
20.0	17.351	35.854	241.5	17.348	3150.0	2.760	34.942	248.4	2.499
30.0	16.789	35.837	247.9	16.784	3200.0	2.738	34.940	248.4	2.472
40.0	16.662	35.830	248.7	16.655	3250.0	2.721	34.938	247.9	2.450
50.0	16.516	35.834	248.1	16.507	3300.0	2.701	34.936	247.3	2.426
100.0	13.297	35.734	240.3	13.283	3350.0	2.686	34.934	247.2	2.406
150.0	12.828	35.709	242.4	12.808	3400.0	2.675	34.933	247.0	2.389
200.0	12.622	35.685	241.8	12.595	3450.0	2.659	34.932	246.7	2.368
250.0	12.227	35.639	229.5	12.193	3500.0	2.653	34.930	246.4	2.357
300.0	11.901	35.603	226.1	11.862	3550.0	2.633	34.928	246.2	2.332
350.0	11.654	35.579	227.2	11.609	3600.0	2.619	34.926	245.9	2.313
400.0	11.506	35.576	222.1	11.455	3650.0	2.611	34.925	245.9	2.299
450.0	11.299	35.558	217.9	11.242	3700.0	2.600	34.923	245.6	2.283
500.0	11.055	35.549	212.1	10.992	3750.0	2.588	34.922	245.7	2.266
550.0	10.941	35.568	204.0	10.872	3800.0	2.575	34.920	245.4	2.248
600.0	10.830	35.596	199.6	10.755	3850.0	2.566	34.918	245.3	2.233
650.0	10.852	35.667	192.4	10.771	3900.0	2.560	34.917	245.0	2.222
700.0	10.809	35.712	191.1	10.721	3950.0	2.552	34.917	244.7	2.207
750.0	10.837	35.798	187.5	10.743	4000.0	2.546	34.914	245.0	2.196
800.0	10.919	35.876	185.9	10.818	4050.0	2.542	34.913	244.8	2.187
850.0	11.050	35.962	184.8	10.941	4100.0	2.533	34.912	244.5	2.172
900.0	11.071	36.005	183.5	10.955	4150.0	2.527	34.911	244.7	2.160
950.0	10.919	36.019	183.3	10.797	4200.0	2.524	34.910	244.7	2.152
1000.0	10.921	36.063	182.6	10.792	4250.0	2.517	34.909	244.6	2.139
1050.0	10.804	36.065	183.4	10.670	4300.0	2.513	34.908	244.7	2.129
1100.0	10.590	36.052	185.5	10.450	4350.0	2.509	34.906	244.7	2.119
1150.0	10.218	35.989	187.9	10.075	4400.0	2.504	34.906	244.5	2.109
1200.0	9.996	35.972	190.1	9.848	4450.0	2.503	34.905	245.2	2.101
1250.0	9.626	35.915	193.6	9.475	4500.0	2.501	34.905	245.1	2.094
1300.0	9.445	35.895	196.1	9.290	4550.0	2.501	34.903	245.1	2.088
1350.0	9.255	35.887	198.2	9.095	4600.0	2.498	34.903	245.1	2.078
1400.0	9.036	35.872	200.7	8.872	4650.0	2.498	34.902	244.9	2.072
1450.0	7.905	35.647	212.7	7.746	4700.0	2.498	34.902	245.2	2.066
1500.0	7.335	35.549	219.1	7.177	4750.0	2.501	34.901	245.1	2.063
1550.0	6.748	35.446	225.8	6.590	4800.0	2.503	34.900	244.9	2.059
1600.0	6.196	35.350	232.3	6.040	4850.0	2.506	34.900	245.0	2.056
1650.0	5.883	35.300	236.5	5.725	4900.0	2.510	34.900	244.9	2.053
1700.0	5.526	35.249	241.4	5.367	4950.0	2.515	34.899	244.7	2.052
1750.0	5.102	35.179	246.3	4.944	5000.0	2.519	34.899	244.6	2.049
1800.0	4.889	35.155	249.3	4.728	5050.0	2.523	34.899	244.4	2.046
1850.0	4.644	35.120	252.2	4.482	5100.0	2.528	34.899	244.5	2.045
1900.0	4.494	35.101	253.6	4.329	5150.0	2.533	34.899	244.4	2.043
1950.0	4.226	35.063	256.5	4.060	5200.0	2.537	34.899	244.2	2.040
2000.0	4.064	35.045	257.4	3.895	5250.0	2.543	34.898	244.1	2.040
2050.0	3.949	35.033	258.0	3.777	5300.0	2.548	34.898	243.8	2.038
2100.0	3.843	35.020	258.8	3.668	5350.0	2.554	34.899	244.1	2.037
2150.0	3.766	35.015	258.4	3.587	5400.0	2.561	34.898	243.8	2.038
2200.0	3.698	35.013	257.6	3.515	5432.0	2.565	34.898	242.3	2.038
2250.0	3.614	35.009	256.5	3.427					
2300.0	3.554	35.008	255.5	3.364					
2350.0	3.494	35.003	254.6	3.300					
2400.0	3.421	35.000	254.4	3.223					
2450.0	3.373	34.997	253.2	3.171					
2500.0	3.318	34.994	252.7	3.112					
2550.0	3.252	34.988	251.8	3.042					
2600.0	3.181	34.980	252.6	2.967					
2650.0	3.122	34.975	251.9	2.905					
2700.0	3.079	34.972	251.6	2.858					
2750.0	3.025	34.967	251.0	2.800					
2800.0	2.981	34.964	250.9	2.752					
2850.0	2.934	34.959	250.6	2.700					
2900.0	2.898	34.956	250.4	2.659					
2950.0	2.869	34.953	250.0	2.627					
3000.0	2.841	34.951	249.5	2.594					



Station 82

Station	: 83	Campagne	: OVIDE 02
Date	: 07-07-02	Navire	: N/O THALASSA
Profondeur	: 5254	Organisme	: IFREMER
Position	: N 40 33.06		
	W 12 38.78		

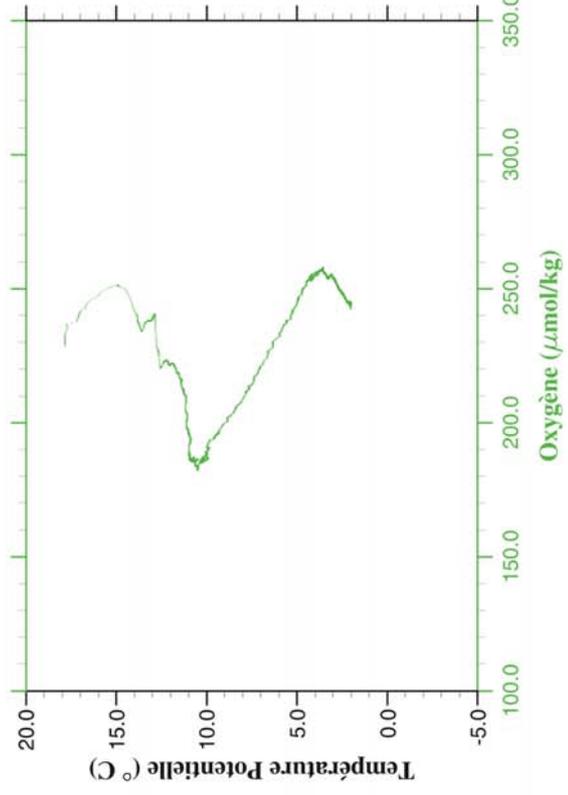
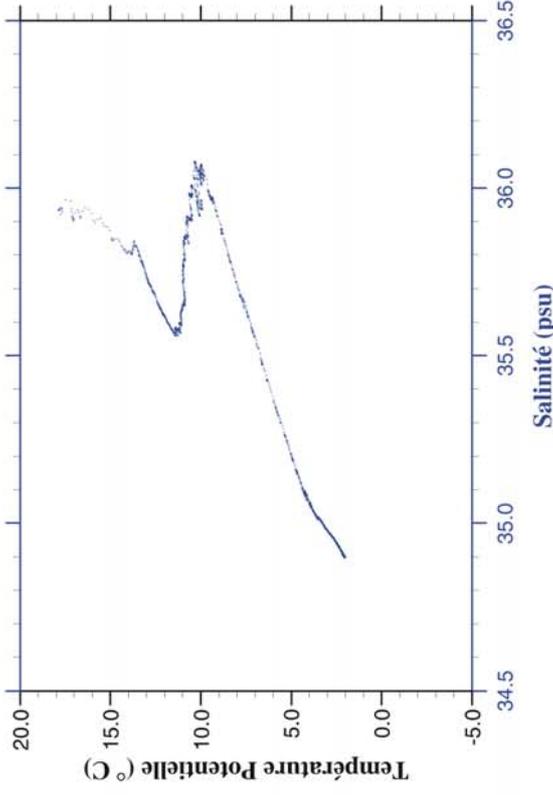
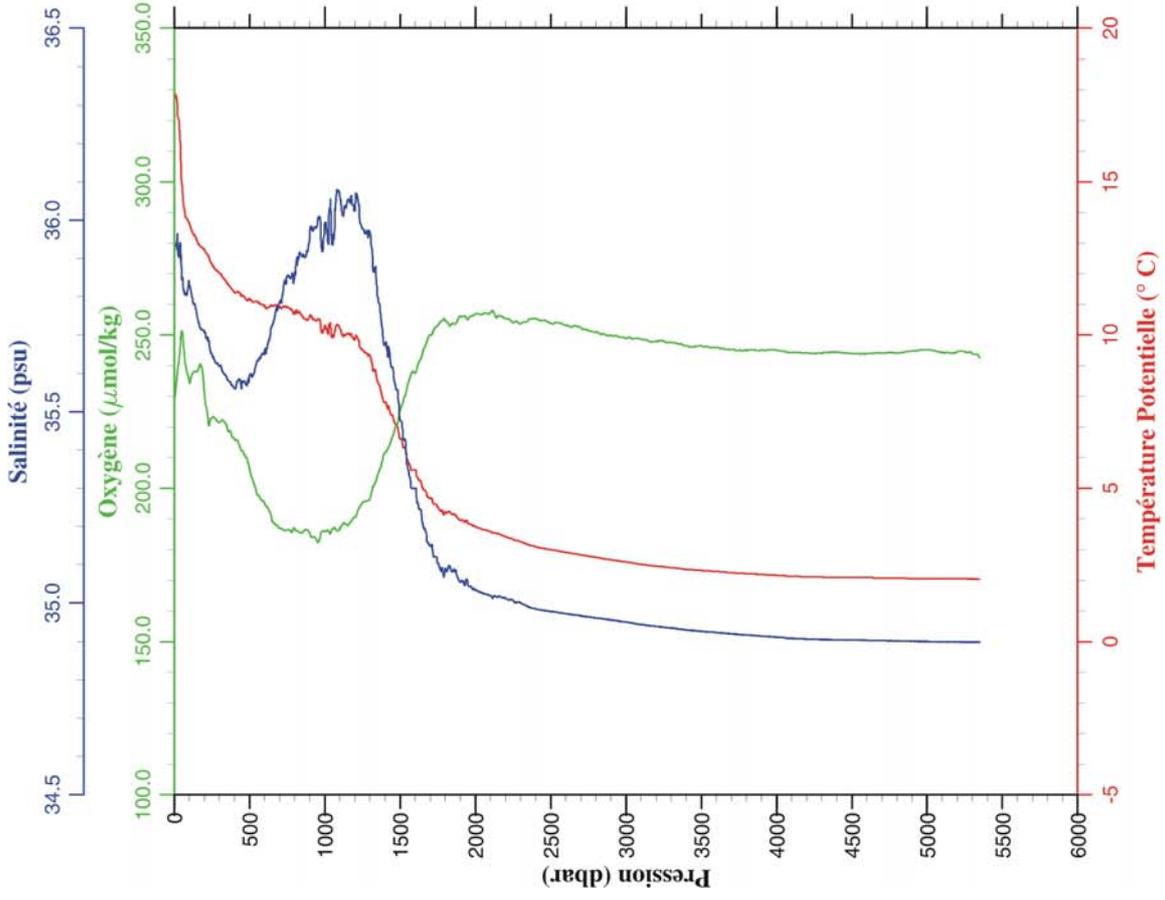
PRESSION	TEMPERA-	SALINITE	OXYGENE	TEMP.	PRESSION	TEMPERA-	SALINITE	OXYGENE	TEMP.
dbar	TURE	psu	DISSOUS	POTENT.	dbar	TURE	psu	DISSOUS	POTENT.
	deg.cels.		umol/kg	deg.cels.		deg.cels.		umol/kg	deg.cels.
1.0	17.873	35.946	228.2	17.872	3050.0	2.793	34.946	249.2	2.542
10.0	17.881	35.947	232.9	17.879	3100.0	2.769	34.943	248.8	2.513
20.0	17.865	35.947	239.0	17.861	3150.0	2.750	34.942	248.5	2.488
30.0	17.715	35.944	243.1	17.710	3200.0	2.727	34.940	248.3	2.461
40.0	17.065	35.901	247.1	17.059	3250.0	2.709	34.937	248.0	2.439
50.0	17.009	35.901	247.9	17.000	3300.0	2.688	34.935	247.6	2.412
100.0	13.666	35.827	237.0	13.652	3350.0	2.667	34.933	247.3	2.387
150.0	13.168	35.756	239.7	13.147	3400.0	2.651	34.931	246.8	2.366
200.0	12.555	35.673	228.7	12.528	3450.0	2.640	34.930	247.1	2.349
250.0	12.184	35.639	222.2	12.151	3500.0	2.625	34.928	246.7	2.330
300.0	11.942	35.621	220.7	11.903	3550.0	2.613	34.926	246.7	2.312
350.0	11.660	35.595	218.8	11.615	3600.0	2.602	34.925	246.3	2.296
400.0	11.444	35.577	213.9	11.393	3650.0	2.585	34.923	246.1	2.274
450.0	11.227	35.564	210.7	11.170	3700.0	2.571	34.921	245.7	2.255
500.0	11.059	35.572	202.6	10.995	3750.0	2.562	34.920	245.6	2.241
550.0	10.910	35.599	196.9	10.841	3800.0	2.553	34.918	245.4	2.226
600.0	10.856	35.645	192.1	10.781	3850.0	2.544	34.917	245.3	2.211
650.0	10.863	35.722	188.1	10.781	3900.0	2.537	34.915	245.0	2.199
700.0	10.732	35.747	187.4	10.645	3950.0	2.531	34.914	245.0	2.188
750.0	10.790	35.834	185.4	10.695	4000.0	2.524	34.913	245.1	2.175
800.0	10.762	35.888	185.0	10.661	4050.0	2.519	34.912	245.1	2.164
850.0	10.788	35.952	184.4	10.680	4100.0	2.514	34.911	245.0	2.154
900.0	10.806	36.004	184.1	10.691	4150.0	2.512	34.910	245.3	2.146
950.0	10.783	36.051	183.8	10.662	4200.0	2.508	34.909	245.2	2.137
1000.0	10.590	36.044	184.9	10.463	4250.0	2.501	34.908	245.4	2.124
1050.0	10.415	36.047	185.7	10.284	4300.0	2.496	34.906	245.5	2.113
1100.0	10.279	36.050	188.2	10.141	4350.0	2.496	34.906	245.5	2.106
1150.0	10.059	36.035	190.8	9.916	4400.0	2.495	34.905	245.6	2.100
1200.0	9.907	36.037	192.5	9.760	4450.0	2.493	34.904	245.6	2.092
1250.0	9.470	35.962	197.4	9.320	4500.0	2.492	34.903	245.5	2.085
1300.0	8.855	35.846	203.0	8.705	4550.0	2.493	34.903	245.4	2.080
1350.0	8.357	35.762	208.1	8.205	4600.0	2.493	34.902	245.5	2.073
1400.0	7.852	35.673	213.4	7.699	4650.0	2.495	34.902	245.5	2.069
1450.0	7.177	35.552	220.5	7.026	4700.0	2.496	34.901	245.6	2.064
1500.0	6.693	35.460	227.1	6.542	4750.0	2.498	34.901	245.8	2.060
1550.0	6.084	35.356	233.8	5.934	4800.0	2.501	34.901	245.7	2.057
1600.0	5.745	35.302	238.4	5.595	4850.0	2.504	34.900	245.4	2.054
1650.0	5.404	35.245	242.8	5.252	4900.0	2.508	34.900	245.1	2.051
1700.0	4.981	35.170	248.8	4.829	4950.0	2.512	34.900	245.0	2.049
1750.0	4.715	35.129	252.1	4.562	5000.0	2.517	34.900	244.8	2.047
1800.0	4.390	35.078	255.4	4.236	5050.0	2.522	34.899	244.8	2.046
1850.0	4.427	35.097	253.5	4.268	5100.0	2.528	34.899	244.9	2.045
1900.0	4.374	35.098	254.7	4.210	5150.0	2.533	34.899	245.3	2.043
1950.0	4.123	35.054	257.6	3.959	5200.0	2.538	34.899	245.1	2.041
2000.0	3.993	35.040	257.8	3.826	5250.0	2.544	34.898	244.9	2.041
2050.0	3.950	35.041	257.0	3.778	5300.0	2.550	34.899	244.7	2.040
2100.0	3.848	35.033	256.7	3.673	5350.0	2.556	34.898	244.3	2.039
2150.0	3.779	35.026	256.5	3.600	5400.0	2.562	34.898	244.2	2.039
2200.0	3.664	35.014	256.6	3.482	5401.0	2.562	34.898	244.2	2.039
2250.0	3.587	35.009	255.9	3.401					
2300.0	3.474	34.999	255.9	3.285					
2350.0	3.400	34.994	256.0	3.208					
2400.0	3.339	34.989	256.2	3.143					
2450.0	3.290	34.987	255.5	3.090					
2500.0	3.225	34.982	254.5	3.021					
2550.0	3.165	34.977	254.2	2.957					
2600.0	3.094	34.973	253.1	2.882					
2650.0	3.045	34.968	252.4	2.829					
2700.0	2.993	34.964	251.7	2.773					
2750.0	2.954	34.961	251.0	2.730					
2800.0	2.924	34.958	250.8	2.696					
2850.0	2.896	34.956	250.2	2.663					
2900.0	2.868	34.953	250.2	2.630					
2950.0	2.838	34.950	249.8	2.596					
3000.0	2.815	34.948	249.3	2.568					



Station 83

Station : 84 Campagne : OVIDE 02
 Date : 08-07-02 Navire : N/O THALASSA
 Profondeur : 5210 Organisme : IFREMER
 Position : N 40 20.03
 W 12 13.17

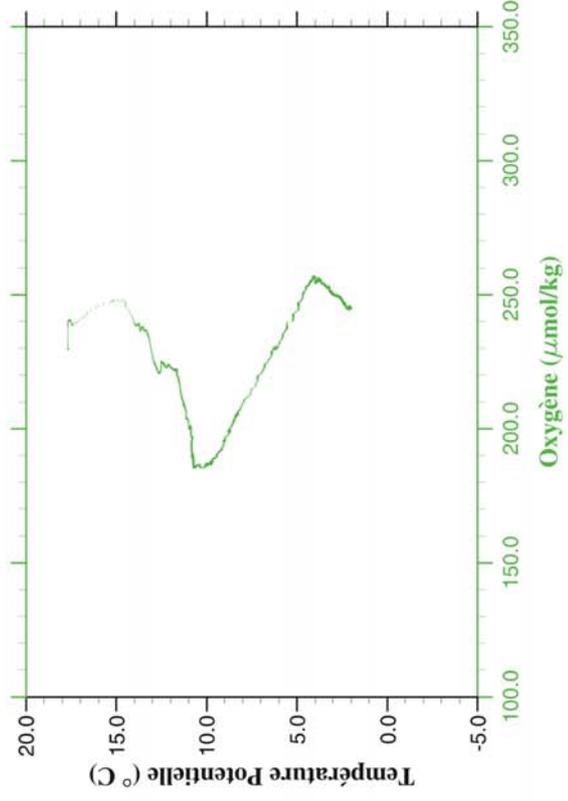
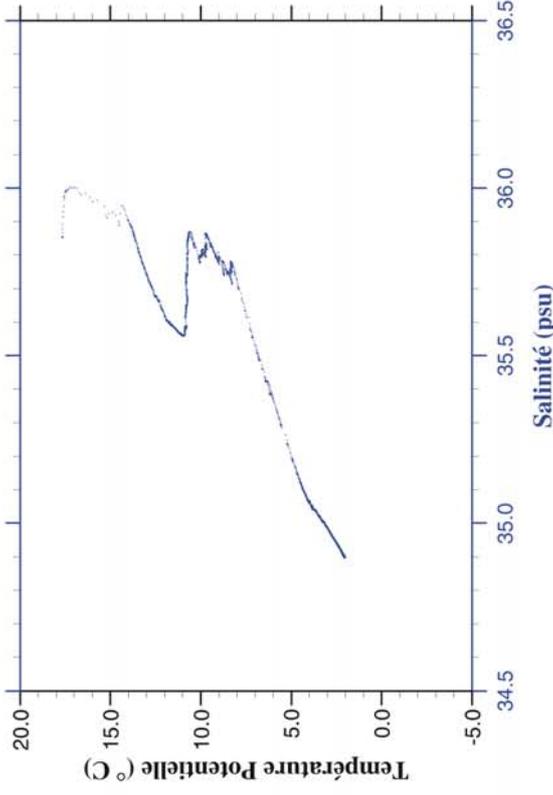
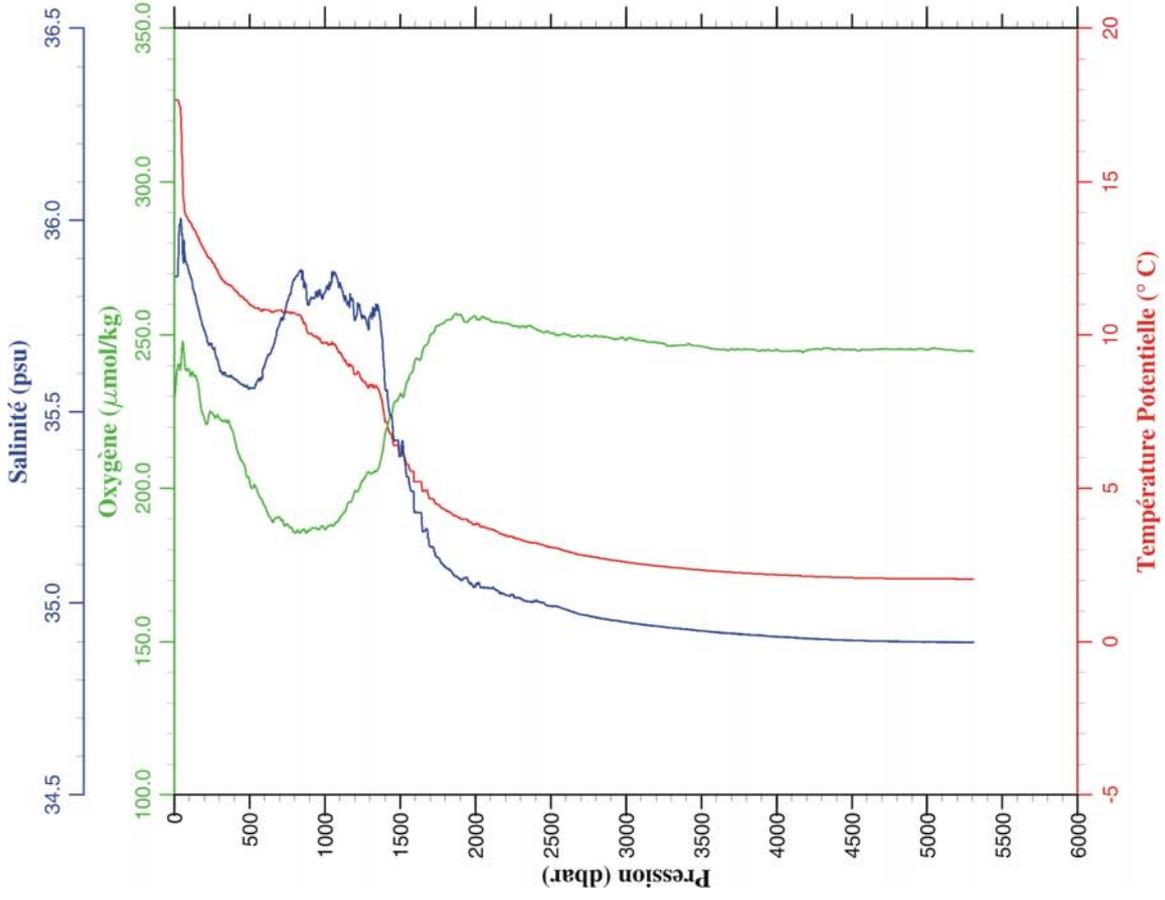
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	17.851	35.935	229.0	17.851	3050.0	2.809	34.948	248.9	2.557
10.0	17.845	35.934	232.2	17.843	3100.0	2.775	34.944	248.6	2.518
20.0	17.487	35.965	237.3	17.484	3150.0	2.746	34.942	248.0	2.485
30.0	17.035	35.905	241.0	17.030	3200.0	2.723	34.939	248.0	2.457
40.0	16.201	35.938	246.6	16.195	3250.0	2.704	34.937	248.0	2.433
50.0	14.947	35.853	251.3	14.939	3300.0	2.687	34.935	247.6	2.411
100.0	13.673	35.833	234.8	13.658	3350.0	2.665	34.933	247.1	2.385
150.0	13.110	35.754	238.1	13.089	3400.0	2.636	34.930	246.6	2.351
200.0	12.809	35.710	231.2	12.782	3450.0	2.626	34.928	246.2	2.336
250.0	12.351	35.650	222.8	12.317	3500.0	2.614	34.927	246.5	2.318
300.0	12.073	35.619	221.5	12.033	3550.0	2.601	34.925	246.2	2.301
350.0	11.743	35.589	220.2	11.698	3600.0	2.589	34.923	245.9	2.283
400.0	11.443	35.562	216.1	11.392	3650.0	2.575	34.922	245.6	2.264
450.0	11.364	35.579	212.2	11.306	3700.0	2.564	34.920	245.3	2.248
500.0	11.249	35.595	206.5	11.185	3750.0	2.549	34.918	245.1	2.227
550.0	11.164	35.631	198.1	11.094	3800.0	2.540	34.917	245.0	2.213
600.0	10.995	35.654	195.1	10.919	3850.0	2.536	34.916	245.2	2.204
650.0	11.047	35.724	189.2	10.965	3900.0	2.526	34.914	245.1	2.189
700.0	11.016	35.787	187.0	10.927	3950.0	2.519	34.913	245.2	2.176
750.0	11.012	35.852	186.3	10.916	4000.0	2.506	34.911	245.0	2.157
800.0	10.854	35.860	186.9	10.753	4050.0	2.496	34.910	244.8	2.142
850.0	10.726	35.905	185.3	10.619	4100.0	2.490	34.908	244.4	2.131
900.0	10.751	35.966	185.2	10.637	4150.0	2.486	34.907	244.4	2.121
950.0	10.608	35.984	182.6	10.488	4200.0	2.484	34.906	244.1	2.113
1000.0	10.425	35.993	185.9	10.300	4250.0	2.482	34.906	243.9	2.105
1050.0	10.051	35.939	186.7	9.922	4300.0	2.484	34.905	244.0	2.101
1100.0	10.364	36.062	186.8	10.226	4350.0	2.485	34.905	244.2	2.096
1150.0	10.196	36.051	187.9	10.053	4400.0	2.489	34.904	244.5	2.094
1200.0	10.036	36.031	190.8	9.887	4450.0	2.492	34.904	244.1	2.091
1250.0	9.660	35.977	195.3	9.508	4500.0	2.496	34.903	243.9	2.089
1300.0	9.486	35.969	196.6	9.330	4550.0	2.499	34.904	243.9	2.085
1350.0	8.640	35.801	204.1	8.486	4600.0	2.503	34.903	243.9	2.084
1400.0	7.954	35.675	211.6	7.800	4650.0	2.505	34.903	244.1	2.079
1450.0	7.538	35.615	217.0	7.383	4700.0	2.506	34.902	244.1	2.074
1500.0	6.764	35.477	225.5	6.612	4750.0	2.508	34.902	244.3	2.070
1550.0	6.107	35.362	233.6	5.957	4800.0	2.509	34.902	244.1	2.065
1600.0	5.736	35.300	237.5	5.585	4850.0	2.512	34.901	244.5	2.061
1650.0	5.170	35.208	244.3	5.021	4900.0	2.514	34.900	244.8	2.057
1700.0	4.810	35.149	250.1	4.660	4950.0	2.516	34.900	245.1	2.052
1750.0	4.531	35.105	253.2	4.380	5000.0	2.519	34.900	245.2	2.049
1800.0	4.388	35.091	254.8	4.235	5050.0	2.523	34.899	244.9	2.047
1850.0	4.314	35.083	253.9	4.157	5100.0	2.528	34.899	244.4	2.045
1900.0	4.118	35.054	256.2	3.958	5150.0	2.533	34.899	244.2	2.043
1950.0	4.020	35.048	255.2	3.857	5200.0	2.537	34.899	244.6	2.040
2000.0	3.900	35.034	256.8	3.734	5250.0	2.543	34.898	244.5	2.040
2050.0	3.824	35.025	256.9	3.654	5300.0	2.549	34.898	243.9	2.040
2100.0	3.763	35.020	257.3	3.590	5349.0	2.556	34.899	242.6	2.039
2150.0	3.688	35.016	256.3	3.510					
2200.0	3.602	35.012	255.4	3.421					
2250.0	3.522	35.007	254.1	3.338					
2300.0	3.449	35.001	253.7	3.260					
2350.0	3.356	34.990	254.8	3.165					
2400.0	3.294	34.985	255.4	3.098					
2450.0	3.240	34.981	254.8	3.040					
2500.0	3.197	34.979	253.9	2.993					
2550.0	3.161	34.976	254.1	2.954					
2600.0	3.120	34.973	253.2	2.908					
2650.0	3.086	34.970	252.8	2.869					
2700.0	3.049	34.967	252.5	2.828					
2750.0	3.011	34.964	251.5	2.786					
2800.0	2.978	34.962	250.9	2.748					
2850.0	2.937	34.959	250.4	2.703					
2900.0	2.909	34.956	249.9	2.671					
2950.0	2.870	34.953	249.4	2.627					
3000.0	2.843	34.951	248.9	2.596					



Station 84

Station : 85 Campagne : OVIDE 02
 Date : 08-07-02 Navire : N/O THALASSA
 Profondeur : 5166 Organisme : IFREMER
 Position : N 40 20.03
 W 11 46.73

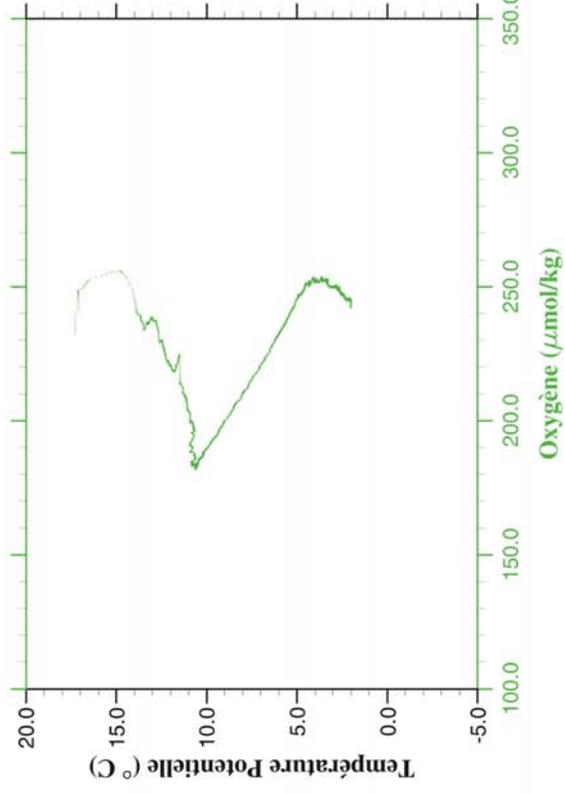
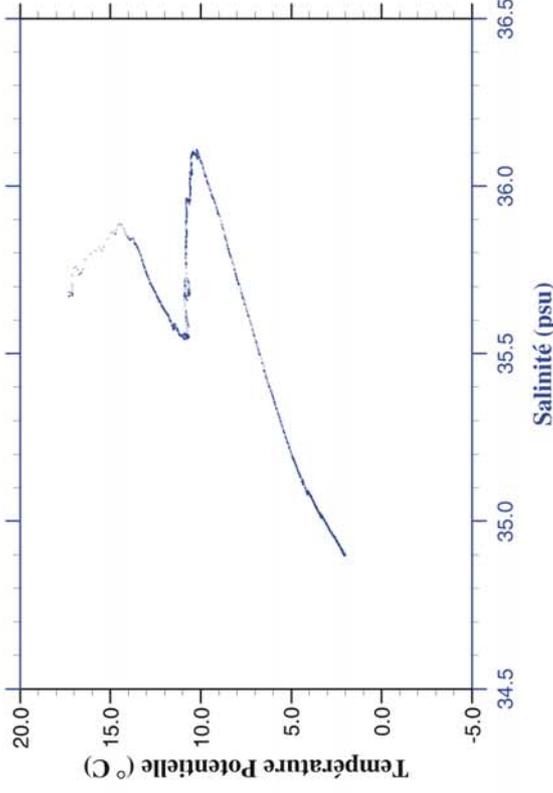
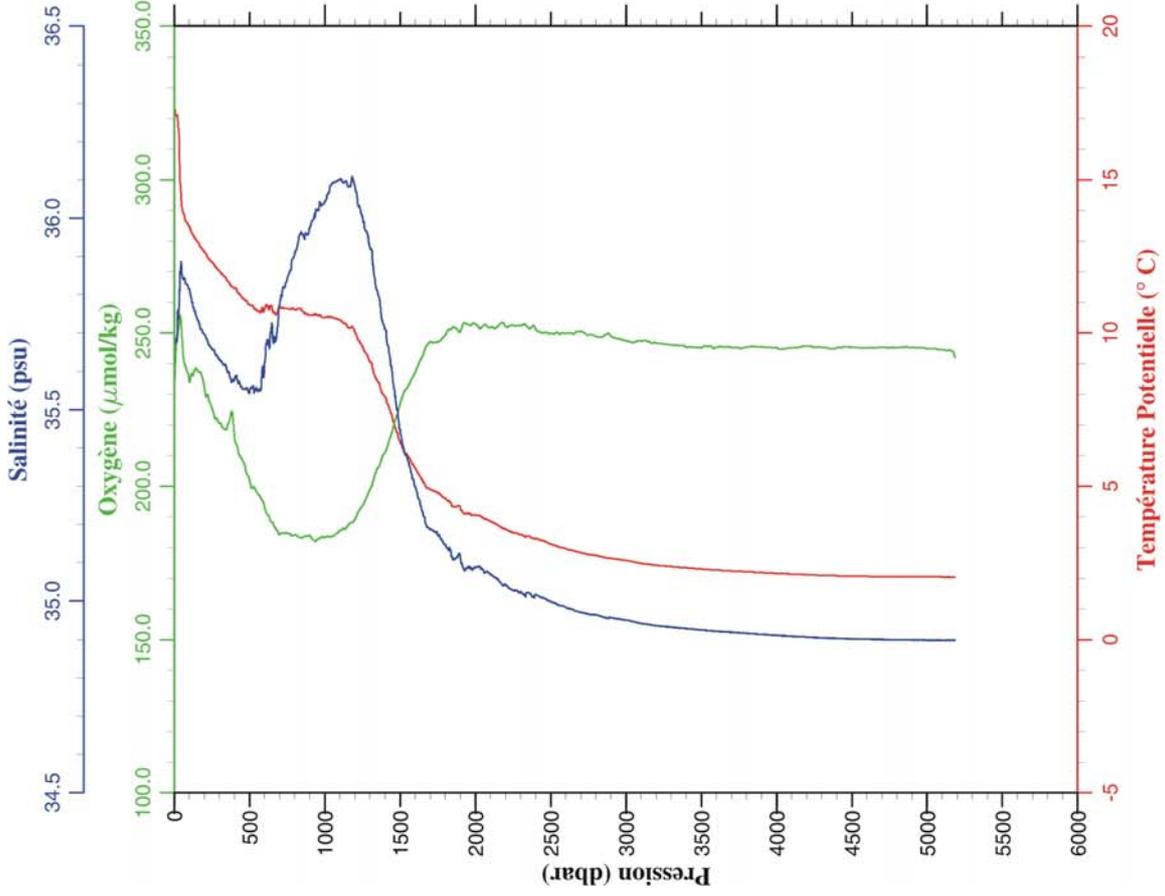
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	17.670	35.853	229.5	17.669	3050.0	2.810	34.947	248.7	2.558
10.0	17.670	35.853	232.9	17.668	3100.0	2.780	34.945	248.1	2.523
20.0	17.671	35.853	238.6	17.668	3150.0	2.758	34.942	247.7	2.496
30.0	17.593	35.947	240.6	17.588	3200.0	2.736	34.940	247.6	2.469
40.0	17.446	35.992	238.7	17.439	3250.0	2.715	34.938	247.2	2.444
50.0	16.386	35.984	244.2	16.378	3300.0	2.696	34.936	246.6	2.420
100.0	13.723	35.861	238.3	13.708	3350.0	2.681	34.934	246.7	2.400
150.0	13.287	35.782	235.6	13.266	3400.0	2.659	34.932	246.8	2.374
200.0	12.800	35.712	222.9	12.773	3450.0	2.641	34.929	246.5	2.351
250.0	12.429	35.670	224.6	12.395	3500.0	2.628	34.928	246.2	2.332
300.0	12.013	35.617	222.7	11.974	3550.0	2.612	34.926	245.8	2.311
350.0	11.717	35.593	221.4	11.672	3600.0	2.600	34.925	245.3	2.294
400.0	11.531	35.585	216.4	11.479	3650.0	2.585	34.922	245.3	2.274
450.0	11.315	35.570	208.7	11.257	3700.0	2.575	34.922	245.5	2.259
500.0	11.075	35.561	202.7	11.012	3750.0	2.565	34.919	245.3	2.244
550.0	10.943	35.577	199.5	10.874	3800.0	2.556	34.918	245.4	2.229
600.0	10.906	35.619	194.3	10.831	3850.0	2.547	34.917	245.2	2.214
650.0	10.832	35.664	189.2	10.750	3900.0	2.539	34.916	245.0	2.202
700.0	10.894	35.731	190.6	10.805	3950.0	2.533	34.914	245.1	2.189
750.0	10.851	35.788	188.3	10.756	4000.0	2.526	34.913	245.3	2.177
800.0	10.813	35.848	185.8	10.712	4050.0	2.520	34.911	244.8	2.166
850.0	10.638	35.854	186.2	10.531	4100.0	2.516	34.910	244.9	2.155
900.0	10.164	35.792	186.2	10.054	4150.0	2.508	34.908	244.8	2.142
950.0	10.030	35.804	186.8	9.914	4200.0	2.500	34.908	245.0	2.129
1000.0	9.862	35.810	186.7	9.741	4250.0	2.496	34.906	245.4	2.119
1050.0	9.886	35.865	187.8	9.758	4300.0	2.492	34.906	245.4	2.109
1100.0	9.582	35.835	190.4	9.451	4350.0	2.490	34.905	245.6	2.101
1150.0	9.185	35.784	194.8	9.050	4400.0	2.488	34.904	245.5	2.093
1200.0	8.851	35.740	199.1	8.713	4450.0	2.488	34.903	245.2	2.087
1250.0	8.678	35.747	202.5	8.536	4500.0	2.487	34.903	245.2	2.080
1300.0	8.526	35.750	204.9	8.379	4550.0	2.488	34.902	244.9	2.075
1350.0	8.436	35.770	206.0	8.283	4600.0	2.488	34.902	245.2	2.069
1400.0	7.334	35.569	217.7	7.187	4650.0	2.490	34.901	245.4	2.064
1450.0	6.741	35.459	225.5	6.595	4700.0	2.492	34.901	245.5	2.061
1500.0	6.300	35.385	230.7	6.154	4750.0	2.496	34.900	245.4	2.058
1550.0	5.922	35.331	234.9	5.774	4800.0	2.498	34.900	245.5	2.054
1600.0	5.366	35.238	241.7	5.219	4850.0	2.503	34.899	245.4	2.052
1650.0	5.054	35.187	244.9	4.906	4900.0	2.506	34.899	245.4	2.049
1700.0	4.808	35.147	250.0	4.659	4950.0	2.510	34.899	245.6	2.046
1750.0	4.624	35.119	253.0	4.472	5000.0	2.515	34.899	245.1	2.045
1800.0	4.442	35.096	254.5	4.288	5050.0	2.519	34.899	245.7	2.043
1850.0	4.300	35.077	255.8	4.143	5100.0	2.525	34.898	245.4	2.042
1900.0	4.171	35.063	256.7	4.011	5150.0	2.530	34.898	245.1	2.040
1950.0	4.095	35.062	254.5	3.930	5200.0	2.536	34.898	244.9	2.039
2000.0	3.983	35.043	256.0	3.816	5250.0	2.542	34.899	245.0	2.039
2050.0	3.917	35.042	256.0	3.745	5300.0	2.549	34.898	244.7	2.039
2100.0	3.840	35.038	254.8	3.665	5307.0	2.549	34.899	244.5	2.039
2150.0	3.755	35.032	254.1	3.577					
2200.0	3.644	35.021	253.9	3.463					
2250.0	3.601	35.021	252.9	3.415					
2300.0	3.525	35.012	252.7	3.336					
2350.0	3.439	35.004	253.0	3.246					
2400.0	3.415	35.006	252.1	3.217					
2450.0	3.355	35.002	250.8	3.154					
2500.0	3.286	34.993	250.6	3.081					
2550.0	3.243	34.991	250.0	3.034					
2600.0	3.167	34.984	250.2	2.954					
2650.0	3.105	34.977	249.5	2.888					
2700.0	3.050	34.970	249.5	2.829					
2750.0	3.010	34.967	249.9	2.785					
2800.0	2.972	34.962	249.8	2.742					
2850.0	2.931	34.959	249.3	2.697					
2900.0	2.896	34.956	249.0	2.658					
2950.0	2.868	34.953	248.7	2.625					
3000.0	2.839	34.951	248.4	2.592					



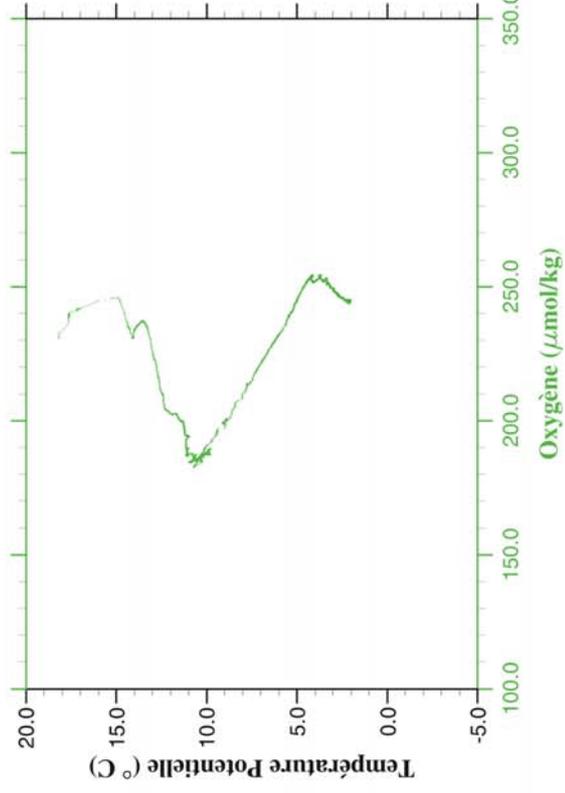
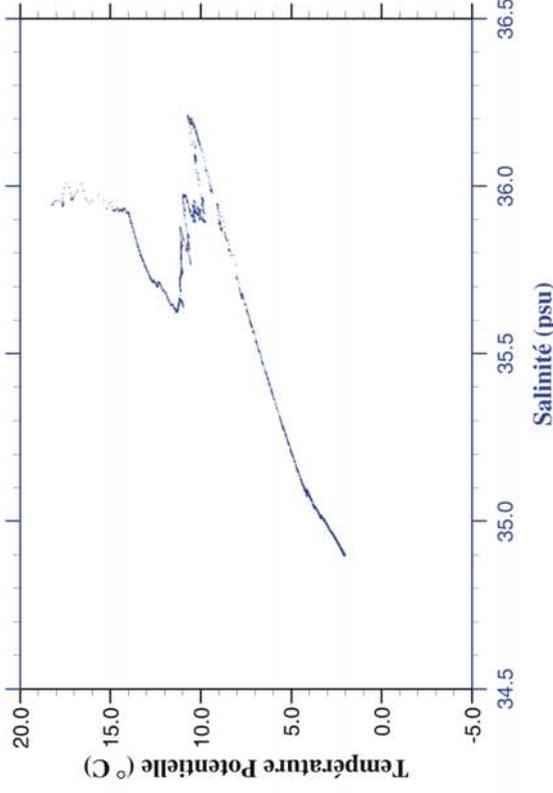
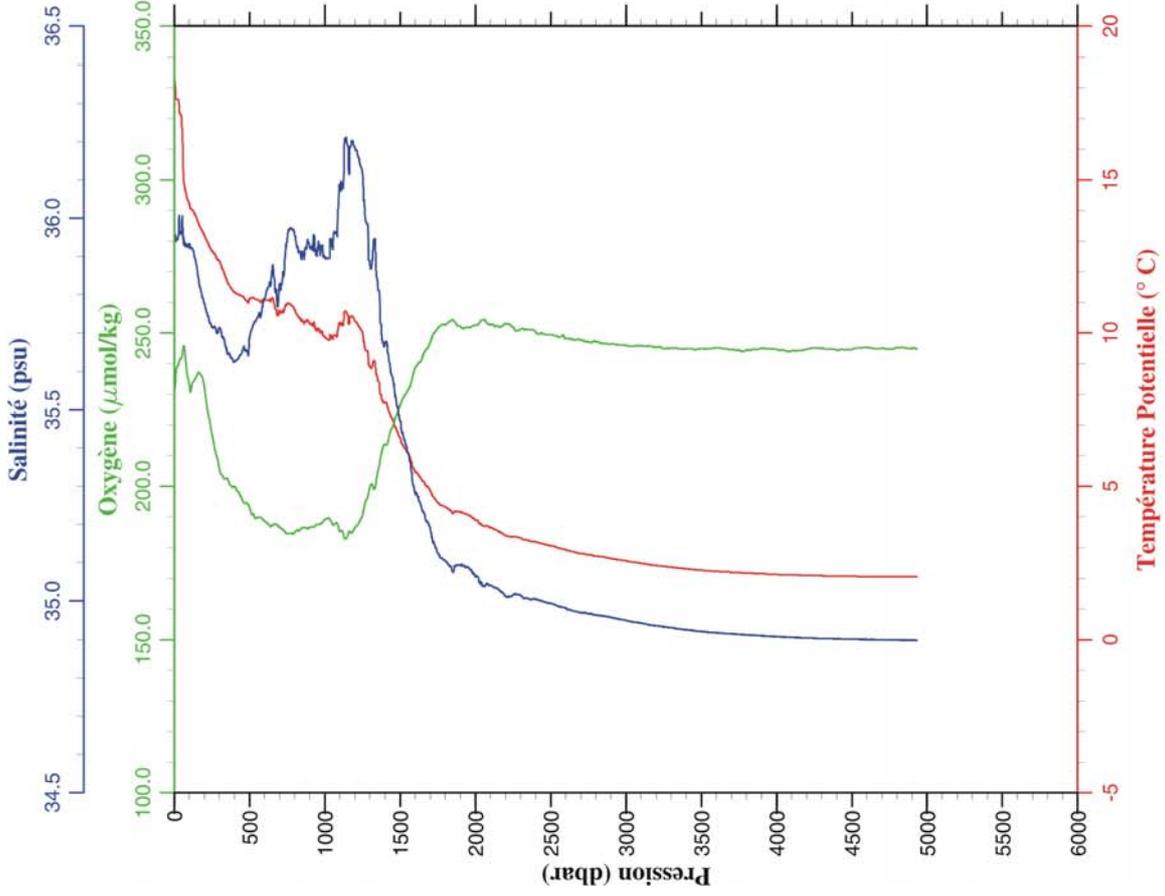
Station 85

Station : 86 Campagne : OVIDE 02
 Date : 08-07-02 Navire : N/O THALASSA
 Profondeur : 5054 Organisme : IFREMER
 Position : N 40 19.98
 W 11 20.48

PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	17.282	35.672	232.8	17.282	3050.0	2.788	34.947	246.8	2.536
10.0	17.113	35.674	242.9	17.111	3100.0	2.742	34.942	247.4	2.487
20.0	17.115	35.701	248.2	17.112	3150.0	2.715	34.939	247.2	2.454
30.0	16.597	35.743	252.0	16.592	3200.0	2.689	34.936	246.7	2.424
40.0	14.809	35.862	255.8	14.803	3250.0	2.671	34.934	246.6	2.401
50.0	14.215	35.864	250.5	14.208	3300.0	2.654	34.932	246.1	2.379
100.0	13.506	35.815	234.3	13.491	3350.0	2.637	34.930	245.9	2.358
150.0	13.016	35.740	238.3	12.996	3400.0	2.625	34.929	245.4	2.340
200.0	12.682	35.696	232.2	12.654	3450.0	2.609	34.927	245.3	2.319
250.0	12.341	35.658	225.6	12.307	3500.0	2.595	34.925	245.2	2.300
300.0	12.057	35.631	220.7	12.018	3550.0	2.581	34.922	245.7	2.281
350.0	11.772	35.602	218.9	11.726	3600.0	2.571	34.922	245.4	2.266
400.0	11.518	35.578	216.1	11.467	3650.0	2.560	34.920	245.4	2.249
450.0	11.216	35.558	208.8	11.159	3700.0	2.553	34.918	245.3	2.237
500.0	10.976	35.544	202.1	10.913	3750.0	2.544	34.917	245.1	2.223
550.0	10.785	35.550	198.0	10.717	3800.0	2.537	34.916	245.5	2.211
600.0	10.872	35.618	193.2	10.797	3850.0	2.528	34.915	245.6	2.196
650.0	10.884	35.719	188.4	10.803	3900.0	2.520	34.914	245.5	2.182
700.0	10.893	35.771	184.2	10.804	3950.0	2.513	34.912	245.3	2.170
750.0	10.898	35.839	184.7	10.803	4000.0	2.504	34.911	245.2	2.155
800.0	10.872	35.907	184.1	10.770	4050.0	2.499	34.909	244.9	2.145
850.0	10.838	35.960	183.2	10.730	4100.0	2.493	34.908	245.1	2.133
900.0	10.693	35.977	184.0	10.579	4150.0	2.490	34.908	245.4	2.124
950.0	10.710	36.023	182.8	10.589	4200.0	2.484	34.906	245.7	2.113
1000.0	10.626	36.042	183.4	10.500	4250.0	2.479	34.905	245.4	2.102
1050.0	10.646	36.092	183.7	10.512	4300.0	2.474	34.904	245.4	2.091
1100.0	10.569	36.100	185.5	10.430	4350.0	2.474	34.904	244.9	2.085
1150.0	10.346	36.085	186.9	10.202	4400.0	2.474	34.903	245.2	2.079
1200.0	10.175	36.078	189.3	10.025	4450.0	2.474	34.902	245.5	2.074
1250.0	9.716	36.006	193.6	9.564	4500.0	2.476	34.901	245.4	2.069
1300.0	9.221	35.922	199.0	9.067	4550.0	2.477	34.901	245.1	2.064
1350.0	8.587	35.807	205.9	8.433	4600.0	2.479	34.901	245.2	2.060
1400.0	8.081	35.710	211.0	7.926	4650.0	2.482	34.901	245.1	2.057
1450.0	7.347	35.586	218.3	7.194	4700.0	2.485	34.900	245.3	2.054
1500.0	6.640	35.449	226.9	6.489	4750.0	2.488	34.900	245.2	2.051
1550.0	6.148	35.370	232.3	5.997	4800.0	2.493	34.899	245.2	2.049
1600.0	5.738	35.299	237.0	5.588	4850.0	2.497	34.899	245.4	2.047
1650.0	5.342	35.233	242.5	5.191	4900.0	2.501	34.899	245.3	2.045
1700.0	5.048	35.188	247.1	4.895	4950.0	2.506	34.899	245.2	2.043
1750.0	4.932	35.172	247.1	4.776	5000.0	2.511	34.898	245.0	2.041
1800.0	4.771	35.148	249.3	4.612	5050.0	2.517	34.899	244.9	2.040
1850.0	4.494	35.109	251.9	4.334	5100.0	2.523	34.898	244.5	2.040
1900.0	4.481	35.116	250.5	4.316	5150.0	2.529	34.899	244.4	2.039
1950.0	4.300	35.090	252.8	4.133	5187.0	2.534	34.899	242.0	2.039
2000.0	4.233	35.088	253.0	4.062					
2050.0	4.161	35.082	252.2	3.986					
2100.0	4.038	35.070	251.9	3.860					
2150.0	3.921	35.057	252.2	3.740					
2200.0	3.784	35.041	252.3	3.600					
2250.0	3.680	35.028	252.6	3.492					
2300.0	3.632	35.025	252.4	3.440					
2350.0	3.576	35.023	251.9	3.380					
2400.0	3.501	35.017	251.3	3.302					
2450.0	3.420	35.009	250.0	3.217					
2500.0	3.326	34.999	249.9	3.119					
2550.0	3.234	34.990	250.0	3.025					
2600.0	3.177	34.985	249.9	2.964					
2650.0	3.111	34.978	249.7	2.894					
2700.0	3.055	34.970	250.6	2.834					
2750.0	3.002	34.966	249.3	2.777					
2800.0	2.974	34.964	248.9	2.745					
2850.0	2.915	34.959	248.8	2.681					
2900.0	2.889	34.957	249.0	2.651					
2950.0	2.857	34.954	248.1	2.615					
3000.0	2.826	34.951	247.5	2.579					



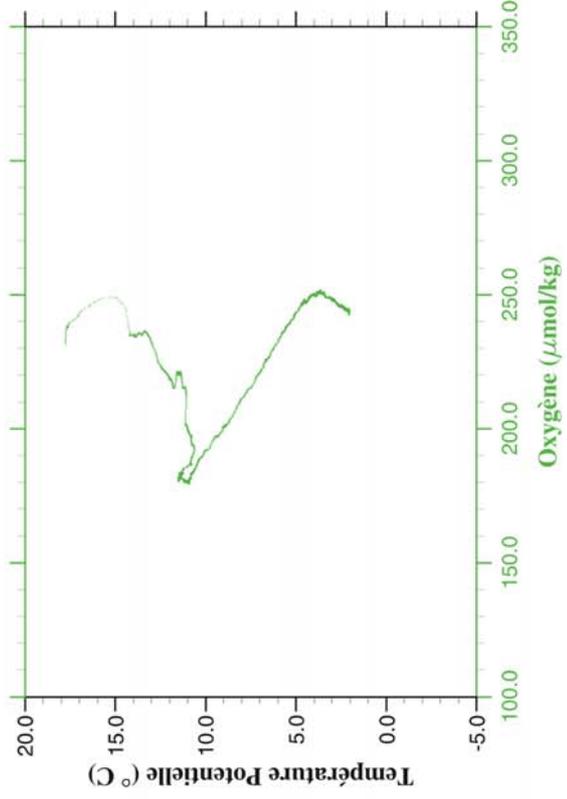
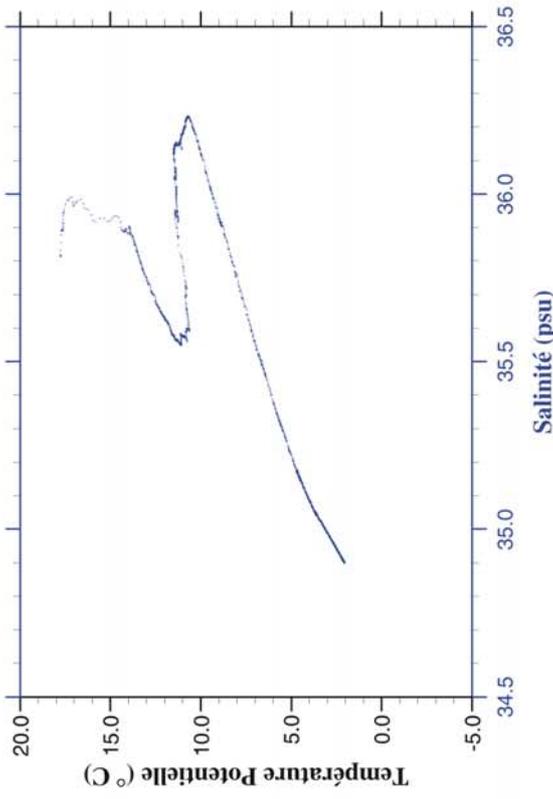
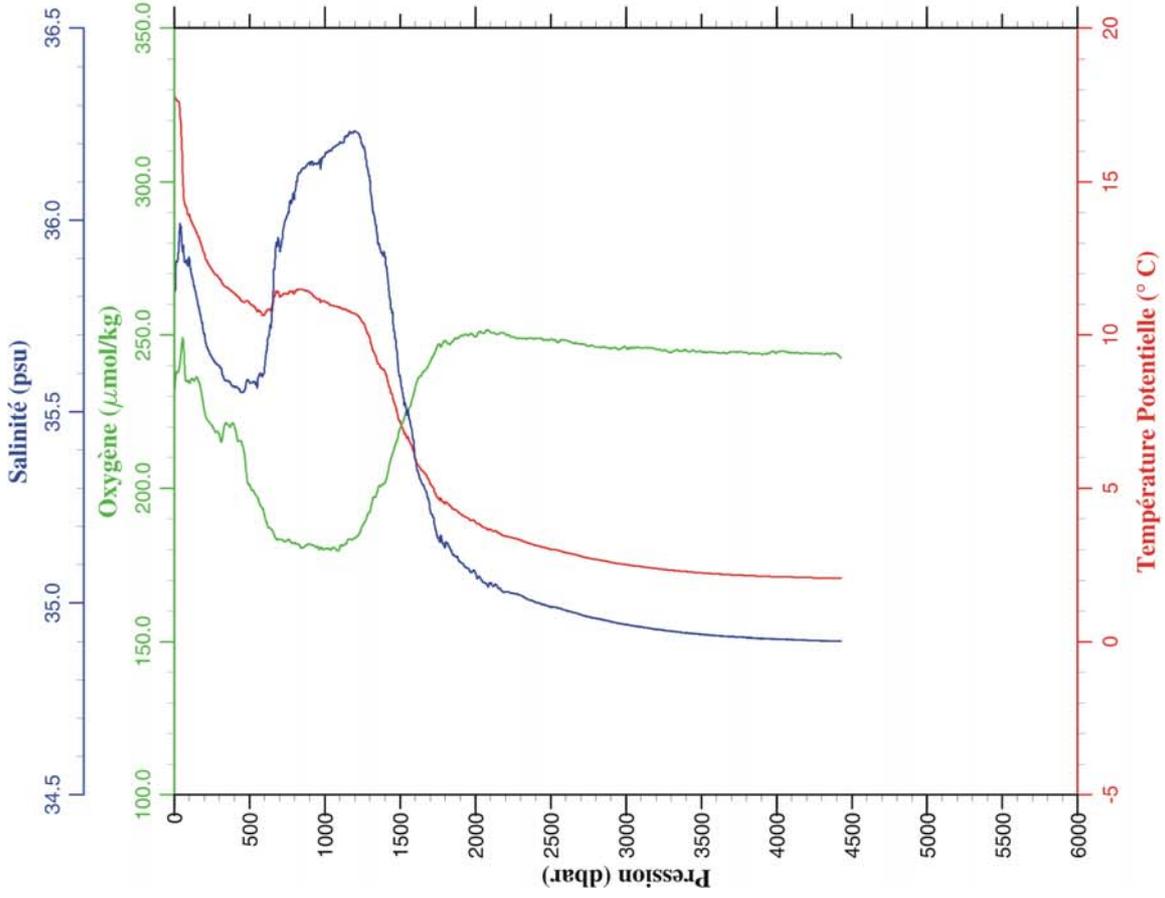
Station 86



Station 87

Station : 88 Campagne : OVIDE 02
 Date : 08-07-02 Navire : N/O THALASSA
 Profondeur : 4320 Organisme : IFREMER
 Position : N 40 20.06
 W 10 34.55

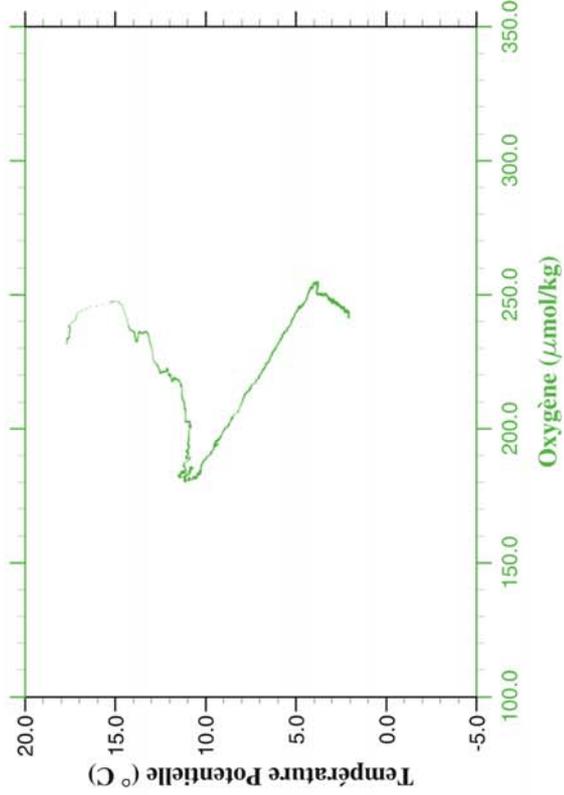
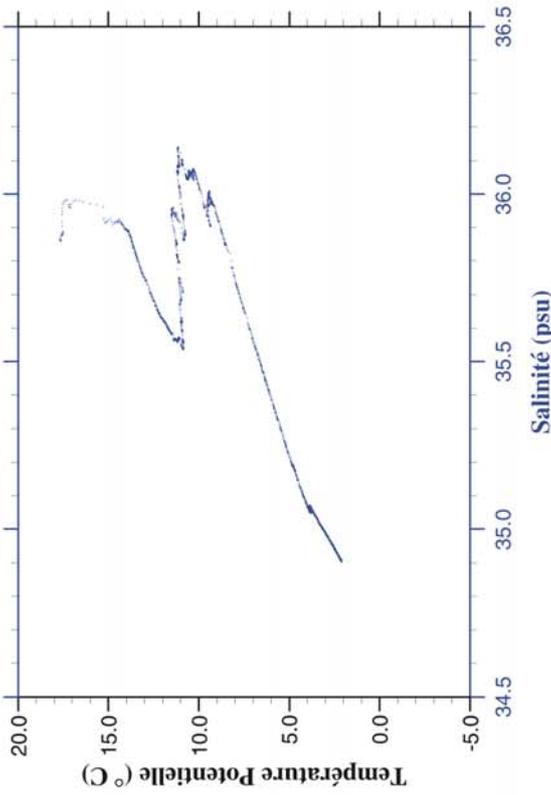
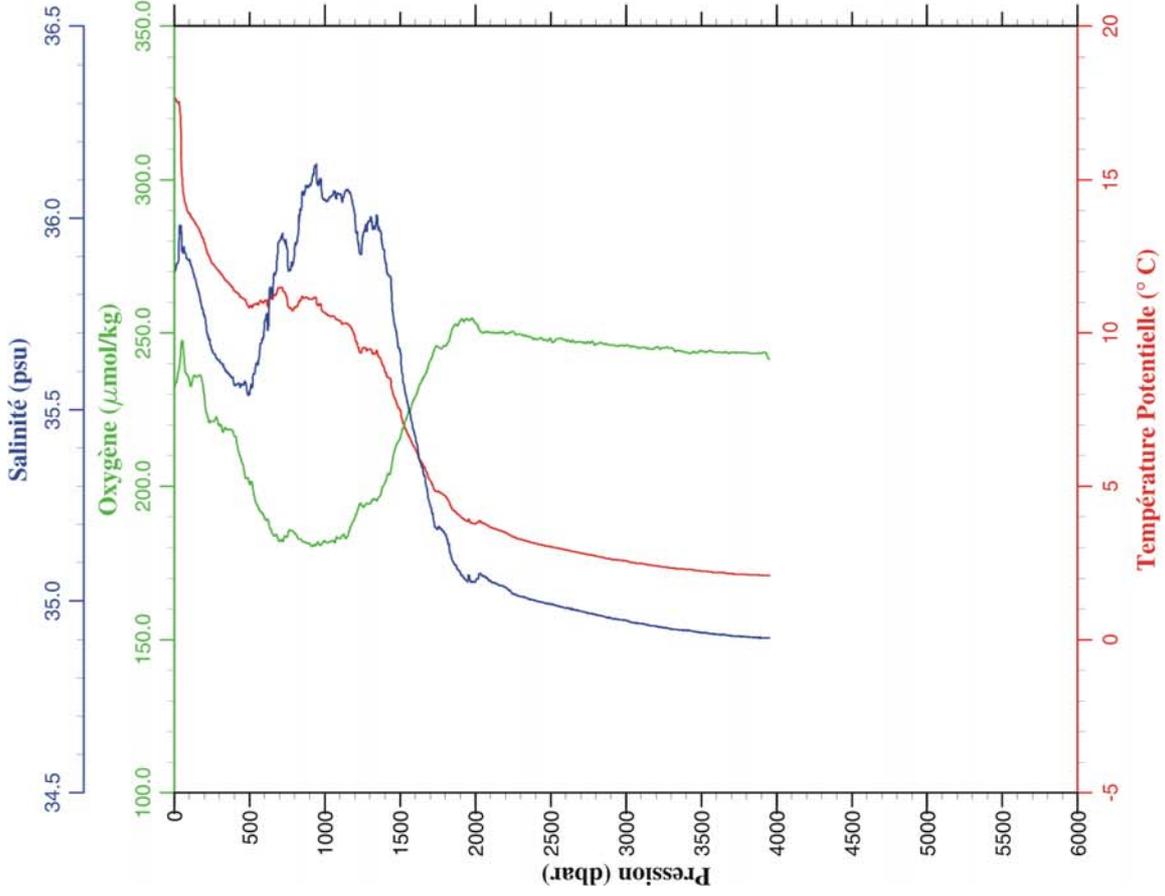
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	17.743	35.815	231.6	17.743	3050.0	2.723	34.941	246.0	2.473
10.0	17.737	35.855	236.0	17.735	3100.0	2.700	34.938	245.7	2.445
20.0	17.652	35.892	238.1	17.649	3150.0	2.672	34.935	245.8	2.413
30.0	17.628	35.934	238.3	17.623	3200.0	2.644	34.932	245.4	2.380
40.0	17.071	35.977	241.7	17.065	3250.0	2.615	34.929	245.1	2.347
50.0	16.354	35.955	246.4	16.346	3300.0	2.599	34.927	244.3	2.326
100.0	13.934	35.900	234.4	13.920	3350.0	2.580	34.925	244.7	2.302
150.0	13.351	35.795	236.2	13.330	3400.0	2.562	34.922	245.0	2.279
200.0	12.686	35.703	225.4	12.658	3450.0	2.545	34.920	245.0	2.257
250.0	12.171	35.641	220.7	12.138	3500.0	2.534	34.919	244.6	2.241
300.0	11.895	35.618	217.4	11.855	3550.0	2.519	34.917	244.5	2.221
350.0	11.592	35.581	221.1	11.547	3600.0	2.509	34.915	244.3	2.206
400.0	11.392	35.563	220.2	11.341	3650.0	2.501	34.914	244.3	2.192
450.0	11.156	35.551	214.5	11.099	3700.0	2.490	34.913	244.6	2.176
500.0	11.117	35.576	201.2	11.053	3750.0	2.485	34.911	244.5	2.165
550.0	10.828	35.563	197.3	10.760	3800.0	2.477	34.910	244.3	2.152
600.0	10.743	35.614	191.0	10.669	3850.0	2.470	34.909	244.0	2.140
650.0	11.026	35.767	186.3	10.943	3900.0	2.465	34.907	243.8	2.129
700.0	11.336	35.923	183.4	11.245	3950.0	2.462	34.907	244.0	2.121
750.0	11.440	36.012	182.9	11.342	4000.0	2.461	34.906	244.1	2.114
800.0	11.503	36.074	182.3	11.397	4050.0	2.460	34.906	244.6	2.107
850.0	11.604	36.135	180.5	11.492	4100.0	2.459	34.905	244.3	2.101
900.0	11.496	36.147	181.6	11.377	4150.0	2.457	34.904	244.1	2.093
950.0	11.305	36.148	181.0	11.181	4200.0	2.457	34.903	244.2	2.086
1000.0	11.220	36.167	180.3	11.089	4250.0	2.454	34.903	243.9	2.077
1050.0	11.105	36.187	180.5	10.968	4300.0	2.456	34.901	243.8	2.074
1100.0	11.050	36.204	180.7	10.907	4350.0	2.457	34.900	243.9	2.069
1150.0	10.946	36.219	183.0	10.797	4400.0	2.459	34.900	243.9	2.065
1200.0	10.848	36.232	183.8	10.693	4428.0	2.460	34.901	242.5	2.062
1250.0	10.573	36.194	187.8	10.414					
1300.0	10.049	36.102	192.2	9.887					
1350.0	9.255	35.957	199.0	9.094					
1400.0	8.978	35.905	201.8	8.814					
1450.0	8.188	35.761	211.2	8.026					
1500.0	7.351	35.593	219.5	7.192					
1550.0	6.792	35.493	225.6	6.634					
1600.0	6.130	35.377	232.6	5.974					
1650.0	5.719	35.310	237.8	5.563					
1700.0	5.288	35.242	241.3	5.132					
1750.0	4.831	35.170	246.7	4.676					
1800.0	4.658	35.145	248.1	4.500					
1850.0	4.494	35.127	247.9	4.334					
1900.0	4.336	35.108	249.7	4.173					
1950.0	4.202	35.091	249.8	4.036					
2000.0	4.080	35.080	249.4	3.910					
2050.0	3.907	35.056	250.6	3.736					
2100.0	3.834	35.051	251.0	3.659					
2150.0	3.719	35.041	250.3	3.541					
2200.0	3.617	35.029	250.3	3.435					
2250.0	3.567	35.026	249.4	3.381					
2300.0	3.502	35.021	248.9	3.312					
2350.0	3.401	35.009	248.9	3.208					
2400.0	3.334	35.003	248.9	3.137					
2450.0	3.276	34.996	248.3	3.076					
2500.0	3.212	34.989	248.7	3.008					
2550.0	3.181	34.987	247.6	2.973					
2600.0	3.115	34.981	248.2	2.903					
2650.0	3.066	34.976	247.3	2.850					
2700.0	3.007	34.971	247.0	2.787					
2750.0	2.945	34.964	246.3	2.721					
2800.0	2.905	34.960	246.1	2.677					
2850.0	2.867	34.957	246.2	2.635					
2900.0	2.820	34.952	245.6	2.583					
2950.0	2.784	34.948	245.2	2.543					
3000.0	2.755	34.944	245.9	2.509					



Station 88

Station : 89 Campagne : OVIDE 02
 Date : 09-07-02 Navire : N/O THALASSA
 Profondeur : 3880 Organisme : IFREMER
 Position : N 40 19.97
 W 10 18.03

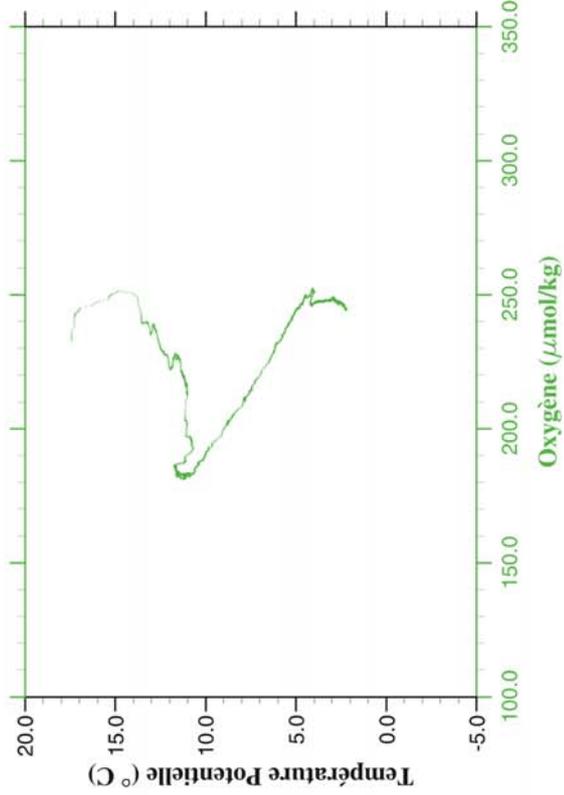
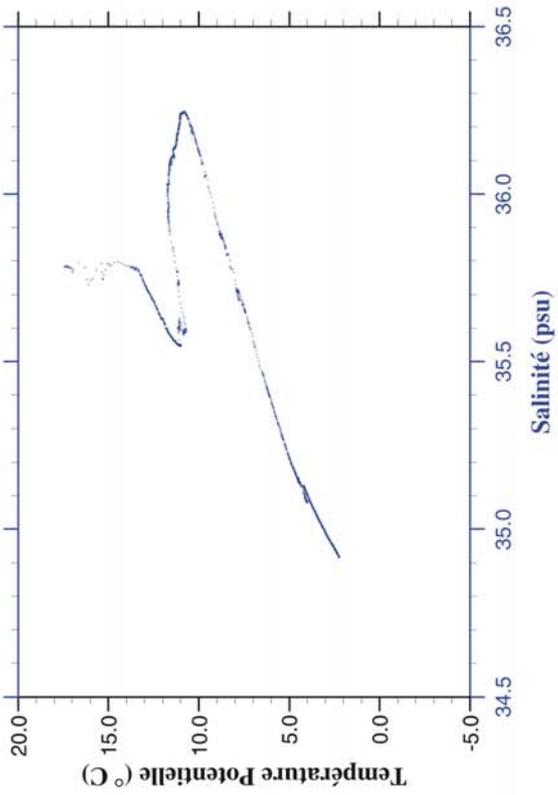
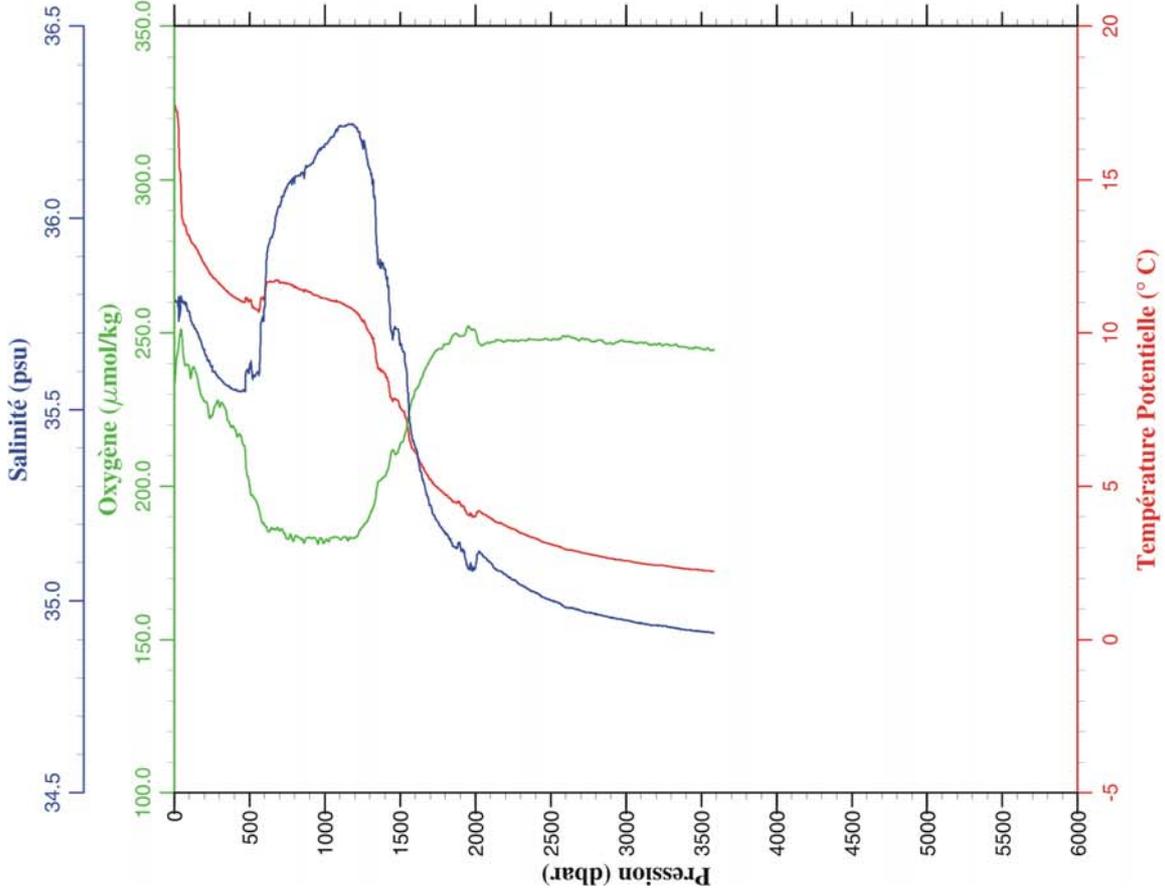
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	17.665	35.860	231.8	17.665	3050.0	2.749	34.943	245.6	2.499
10.0	17.657	35.864	233.5	17.655	3100.0	2.732	34.942	245.2	2.477
20.0	17.534	35.882	235.4	17.531	3150.0	2.697	34.938	245.0	2.437
30.0	17.552	35.918	237.9	17.547	3200.0	2.669	34.934	245.4	2.405
40.0	17.147	35.961	241.8	17.140	3250.0	2.639	34.931	245.1	2.370
50.0	15.250	35.925	247.3	15.242	3300.0	2.609	34.928	245.2	2.335
100.0	13.922	35.892	234.5	13.907	3350.0	2.586	34.925	244.2	2.308
150.0	13.517	35.823	235.8	13.496	3400.0	2.579	34.924	243.8	2.296
200.0	12.986	35.741	229.4	12.958	3450.0	2.559	34.921	244.0	2.270
250.0	12.327	35.655	221.2	12.293	3500.0	2.526	34.918	244.2	2.233
300.0	12.049	35.628	219.8	12.009	3550.0	2.509	34.916	244.2	2.211
350.0	11.720	35.598	218.4	11.675	3600.0	2.491	34.914	243.7	2.188
400.0	11.423	35.564	216.3	11.372	3650.0	2.489	34.913	243.7	2.181
450.0	11.213	35.566	207.7	11.156	3700.0	2.457	34.910	243.8	2.144
500.0	10.894	35.540	200.9	10.831	3750.0	2.452	34.908	243.7	2.133
550.0	11.038	35.621	194.0	10.969	3800.0	2.441	34.907	243.6	2.117
600.0	11.135	35.725	189.7	11.059	3850.0	2.436	34.905	243.3	2.106
650.0	11.173	35.795	184.6	11.090	3900.0	2.432	34.904	243.4	2.097
700.0	11.567	35.942	182.0	11.475	3950.0	2.435	34.904	241.5	2.094
750.0	11.226	35.919	183.5	11.129	3955.0	2.435	34.904	241.6	2.094
800.0	10.946	35.924	184.7	10.843					
850.0	11.314	36.069	182.2	11.202					
900.0	11.228	36.087	181.1	11.111					
950.0	11.071	36.096	181.7	10.948					
1000.0	10.786	36.046	182.1	10.658					
1050.0	10.686	36.059	182.2	10.552					
1100.0	10.541	36.063	182.9	10.402					
1150.0	10.454	36.074	183.6	10.308					
1200.0	10.024	36.006	189.8	9.876					
1250.0	9.657	35.950	193.5	9.505					
1300.0	9.620	35.993	194.2	9.463					
1350.0	9.514	35.999	195.6	9.351					
1400.0	8.908	35.892	201.1	8.745					
1450.0	8.234	35.756	208.7	8.071					
1500.0	7.654	35.653	215.6	7.492					
1550.0	6.905	35.521	223.1	6.745					
1600.0	6.389	35.431	229.1	6.230					
1650.0	5.896	35.347	235.1	5.738					
1700.0	5.332	35.250	241.0	5.175					
1750.0	4.975	35.189	245.5	4.818					
1800.0	4.847	35.176	245.8	4.687					
1850.0	4.403	35.104	251.6	4.244					
1900.0	4.187	35.075	254.1	4.026					
1950.0	4.039	35.053	254.5	3.876					
2000.0	3.950	35.050	253.3	3.783					
2050.0	3.968	35.065	250.1	3.796					
2100.0	3.841	35.054	250.2	3.666					
2150.0	3.760	35.043	250.2	3.581					
2200.0	3.684	35.037	249.8	3.501					
2250.0	3.532	35.018	250.5	3.347					
2300.0	3.458	35.013	249.7	3.270					
2350.0	3.386	35.007	248.9	3.194					
2400.0	3.328	35.001	248.1	3.132					
2450.0	3.280	34.996	247.8	3.080					
2500.0	3.230	34.992	248.2	3.026					
2550.0	3.184	34.987	248.1	2.975					
2600.0	3.136	34.982	247.8	2.923					
2650.0	3.085	34.978	247.5	2.868					
2700.0	3.044	34.973	247.2	2.823					
2750.0	2.996	34.968	247.2	2.771					
2800.0	2.956	34.965	246.4	2.726					
2850.0	2.911	34.961	246.4	2.678					
2900.0	2.863	34.956	246.1	2.625					
2950.0	2.831	34.952	245.7	2.589					
3000.0	2.812	34.951	246.1	2.565					



Station 89

Station : 90 Campagne : OVIDE 02
 Date : 09-07-02 Navire : N/O THALASSA
 Profondeur : 3525 Organisme : IFREMER
 Position : N 40 20.00
 W 10 1.90

PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	17.418	35.783	233.0	17.418	3050.0	2.774	34.946	246.9	2.523
10.0	17.287	35.785	238.3	17.285	3100.0	2.745	34.943	247.0	2.489
20.0	17.222	35.782	243.0	17.219	3150.0	2.709	34.938	246.3	2.449
30.0	16.188	35.744	246.5	16.183	3200.0	2.695	34.937	246.3	2.430
40.0	15.243	35.760	249.9	15.237	3250.0	2.687	34.936	246.0	2.417
50.0	13.986	35.787	250.3	13.978	3300.0	2.649	34.932	245.9	2.375
100.0	13.165	35.756	238.6	13.151	3350.0	2.618	34.929	245.6	2.339
150.0	12.762	35.704	236.3	12.741	3400.0	2.586	34.925	245.4	2.302
200.0	12.291	35.656	227.7	12.264	3450.0	2.575	34.922	245.0	2.286
250.0	11.922	35.612	222.9	11.889	3500.0	2.557	34.921	244.8	2.263
300.0	11.654	35.581	226.0	11.616	3550.0	2.543	34.920	244.8	2.244
350.0	11.413	35.562	222.5	11.368	3584.0	2.523	34.917	244.4	2.221
400.0	11.232	35.552	218.8	11.181					
450.0	11.083	35.547	215.0	11.026					
500.0	11.116	35.607	200.5	11.052					
550.0	10.842	35.597	194.6	10.773					
600.0	11.273	35.771	187.2	11.196					
650.0	11.762	35.951	186.2	11.675					
700.0	11.744	36.032	185.4	11.651					
750.0	11.717	36.083	182.9	11.618					
800.0	11.609	36.096	183.1	11.503					
850.0	11.521	36.118	183.0	11.409					
900.0	11.455	36.138	183.3	11.336					
950.0	11.345	36.169	181.7	11.221					
1000.0	11.268	36.193	181.9	11.137					
1050.0	11.191	36.212	183.1	11.053					
1100.0	11.160	36.241	182.7	11.016					
1150.0	11.022	36.244	182.4	10.872					
1200.0	10.870	36.239	183.3	10.715					
1250.0	10.548	36.189	186.6	10.388					
1300.0	10.156	36.129	190.7	9.993					
1350.0	9.115	35.910	200.5	8.955					
1400.0	8.847	35.867	203.2	8.684					
1450.0	7.929	35.684	211.8	7.770					
1500.0	7.742	35.668	213.6	7.579					
1550.0	7.100	35.553	220.5	6.938					
1600.0	6.274	35.402	231.1	6.117					
1650.0	5.780	35.317	236.0	5.624					
1700.0	5.382	35.249	241.3	5.226					
1750.0	5.112	35.207	244.7	4.954					
1800.0	4.875	35.176	246.4	4.715					
1850.0	4.656	35.143	249.2	4.494					
1900.0	4.586	35.143	249.0	4.419					
1950.0	4.243	35.088	252.1	4.076					
2000.0	4.187	35.086	250.6	4.016					
2050.0	4.275	35.119	246.1	4.098					
2100.0	4.144	35.100	246.9	3.964					
2150.0	3.995	35.079	247.6	3.812					
2200.0	3.909	35.070	247.3	3.723					
2250.0	3.794	35.055	247.4	3.604					
2300.0	3.666	35.042	247.8	3.474					
2350.0	3.578	35.032	247.8	3.382					
2400.0	3.495	35.022	247.9	3.296					
2450.0	3.379	35.010	247.8	3.177					
2500.0	3.313	35.002	247.7	3.107					
2550.0	3.250	34.996	248.1	3.041					
2600.0	3.155	34.984	248.7	2.942					
2650.0	3.119	34.982	248.5	2.902					
2700.0	3.061	34.975	248.0	2.840					
2750.0	3.014	34.970	247.9	2.789					
2800.0	2.973	34.967	247.3	2.743					
2850.0	2.923	34.962	247.1	2.690					
2900.0	2.880	34.958	246.7	2.642					
2950.0	2.841	34.953	247.2	2.599					
3000.0	2.812	34.951	247.3	2.565					



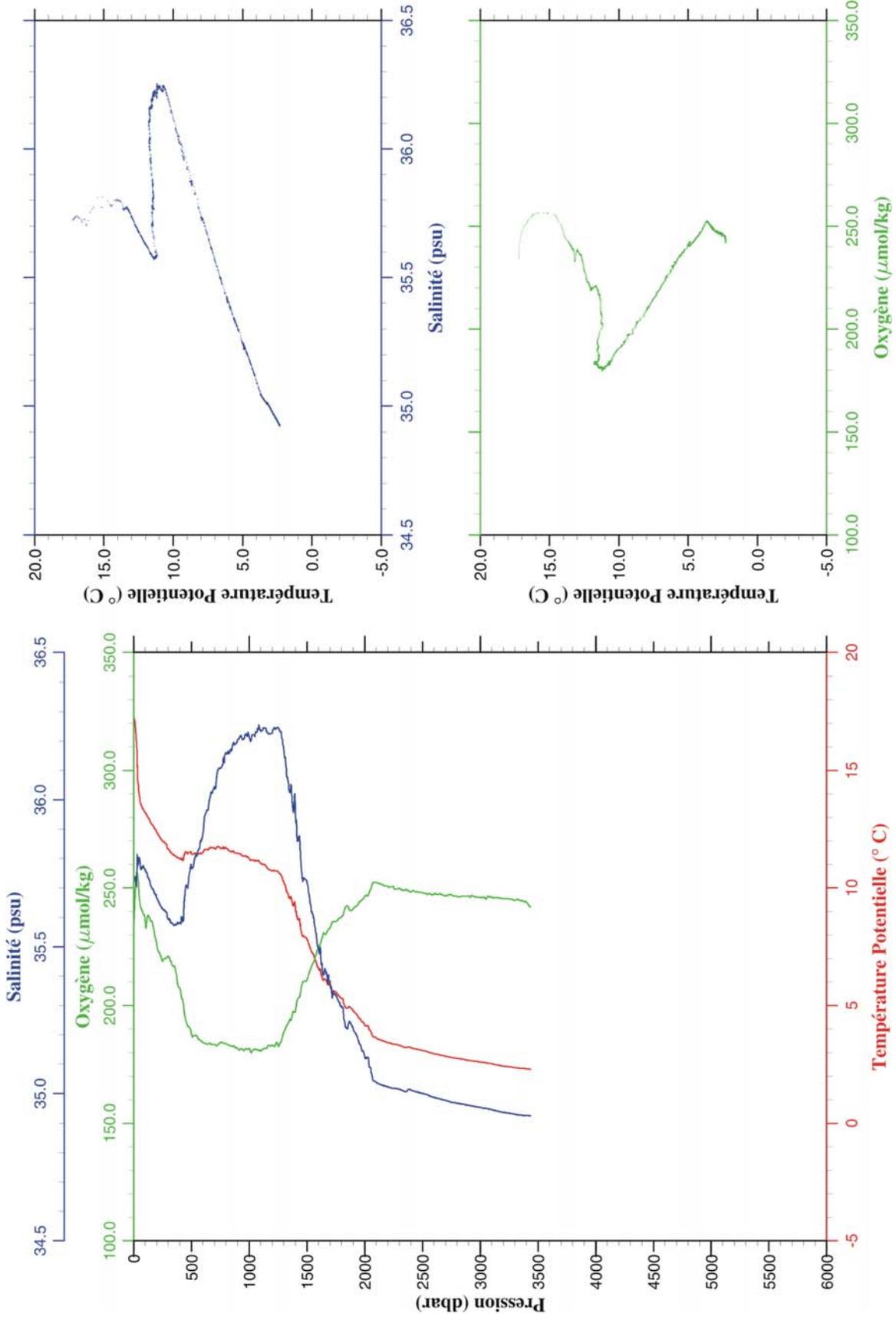
Station 90

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Station   : 91           Campagne  : OVIDE 02
Date      : 09-07-02   Navire    : N/O THALASSA
Profondeur : 3341      Organisme : IFREMER
Position  : N 40 20.00
           W 9 56.58
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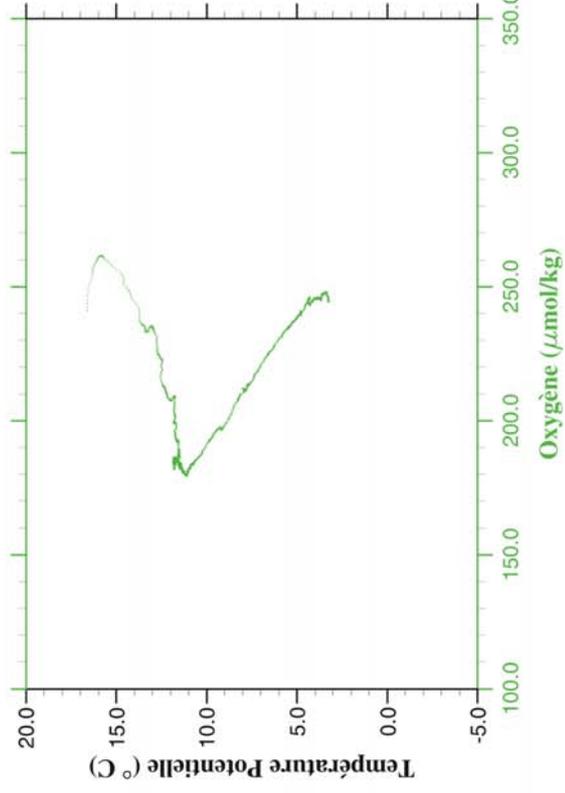
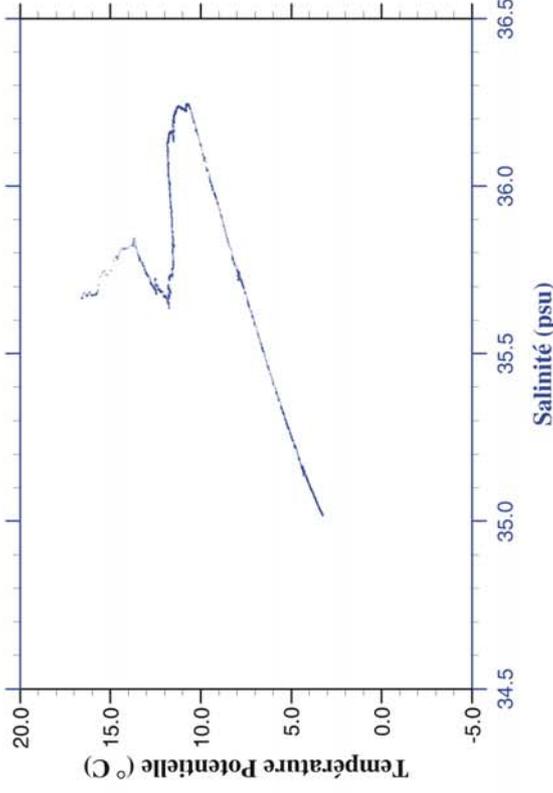
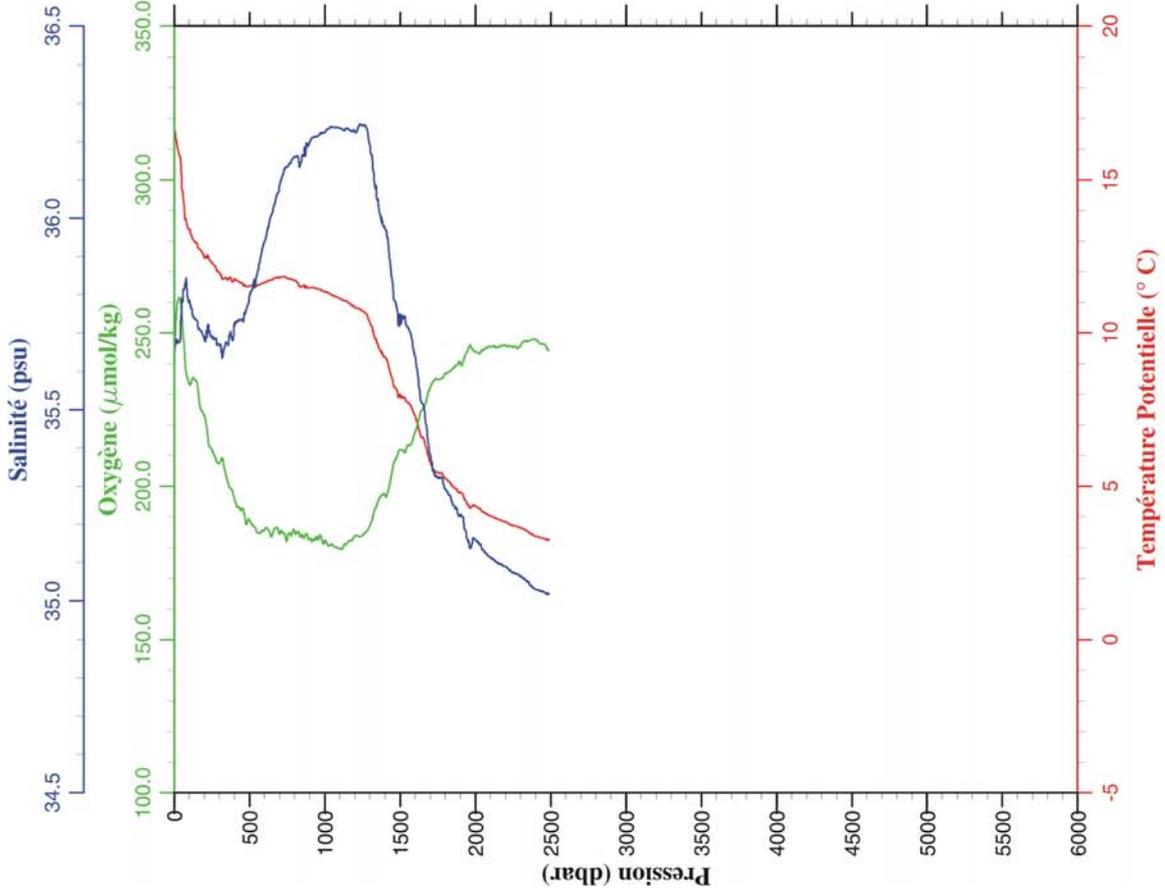
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dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	17.215	35.725	234.2	17.215	3050.0	2.818	34.950	245.3	2.566
10.0	17.094	35.734	243.7	17.093	3100.0	2.784	34.947	246.1	2.527
20.0	16.560	35.716	252.9	16.557	3150.0	2.731	34.941	245.9	2.471
30.0	15.449	35.810	256.5	15.444	3200.0	2.694	34.937	245.6	2.429
40.0	14.397	35.783	252.6	14.392	3250.0	2.667	34.934	245.4	2.398
50.0	13.954	35.800	245.8	13.947	3300.0	2.638	34.931	244.7	2.363
100.0	13.217	35.760	235.9	13.204	3350.0	2.611	34.928	244.5	2.332
150.0	12.775	35.705	235.8	12.754	3400.0	2.597	34.925	244.1	2.313
200.0	12.396	35.664	226.1	12.369	3438.0	2.580	34.924	242.1	2.292
250.0	12.031	35.630	218.8	11.998					
300.0	11.692	35.594	221.0	11.653					
350.0	11.432	35.572	216.9	11.387					
400.0	11.311	35.582	207.3	11.260					
450.0	11.601	35.703	194.1	11.543					
500.0	11.519	35.770	188.1	11.454					
550.0	11.502	35.818	187.0	11.431					
600.0	11.590	35.880	184.1	11.511					
650.0	11.771	35.990	183.8	11.684					
700.0	11.780	36.045	183.3	11.687					
750.0	11.807	36.108	184.2	11.707					
800.0	11.806	36.160	183.7	11.699					
850.0	11.638	36.170	182.6	11.525					
900.0	11.595	36.205	181.7	11.476					
950.0	11.475	36.206	180.9	11.349					
1000.0	11.392	36.216	181.7	11.259					
1050.0	11.283	36.214	181.4	11.145					
1100.0	11.201	36.236	180.7	11.056					
1150.0	11.048	36.233	181.9	10.898					
1200.0	10.885	36.229	183.1	10.729					
1250.0	10.860	36.246	182.9	10.698					
1300.0	10.410	36.170	188.7	10.245					
1350.0	9.726	36.027	194.0	9.560					
1400.0	9.284	35.966	197.6	9.117					
1450.0	8.341	35.772	207.3	8.178					
1500.0	7.975	35.722	210.8	7.809					
1550.0	7.386	35.609	217.9	7.221					
1600.0	6.762	35.497	224.9	6.599					
1650.0	6.288	35.416	230.8	6.125					
1700.0	6.019	35.384	233.0	5.854					
1750.0	5.728	35.334	235.8	5.562					
1800.0	5.471	35.294	237.8	5.303					
1850.0	5.044	35.222	242.5	4.876					
1900.0	4.957	35.221	241.2	4.785					
1950.0	4.640	35.174	243.9	4.468					
2000.0	4.345	35.125	246.3	4.171					
2050.0	4.127	35.088	249.3	3.952					
2100.0	3.792	35.039	252.2	3.618					
2150.0	3.697	35.030	251.6	3.519					
2200.0	3.606	35.024	250.6	3.424					
2250.0	3.545	35.019	250.5	3.360					
2300.0	3.503	35.015	249.8	3.313					
2350.0	3.412	35.007	249.0	3.219					
2400.0	3.404	35.012	248.2	3.206					
2450.0	3.345	35.006	248.4	3.144					
2500.0	3.299	35.001	248.0	3.094					
2550.0	3.232	34.995	247.6	3.023					
2600.0	3.166	34.987	247.4	2.953					
2650.0	3.116	34.982	247.6	2.899					
2700.0	3.070	34.977	246.6	2.849					
2750.0	3.015	34.971	247.1	2.790					
2800.0	2.983	34.968	246.4	2.753					
2850.0	2.960	34.965	246.6	2.726					
2900.0	2.911	34.961	246.6	2.673					
2950.0	2.876	34.957	246.2	2.633					
3000.0	2.849	34.954	245.8	2.601					



Station 91

Station	: 92	Campagne	: OVIDE 02
Date	: 09-07-02	Navire	: N/O THALASSA
Profondeur	: 2413	Organisme	: IFREMER
Position	: N 40 19.92		
	W 9 52.71		

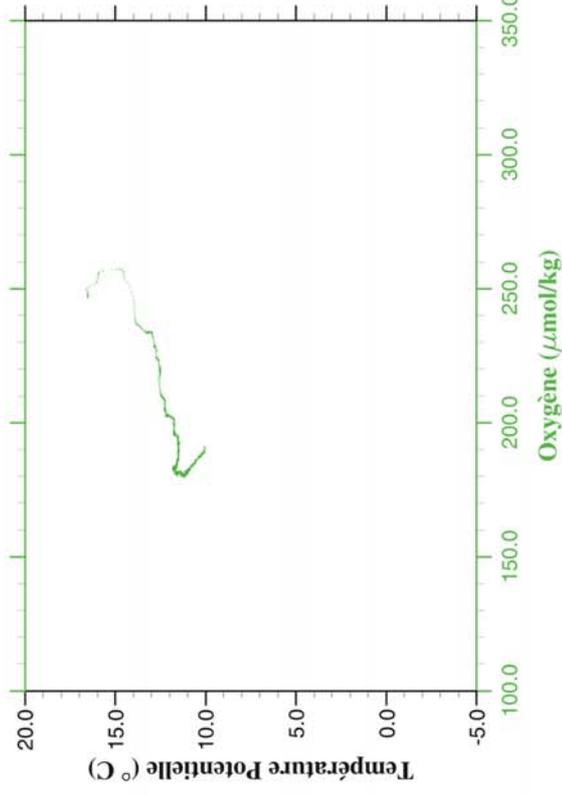
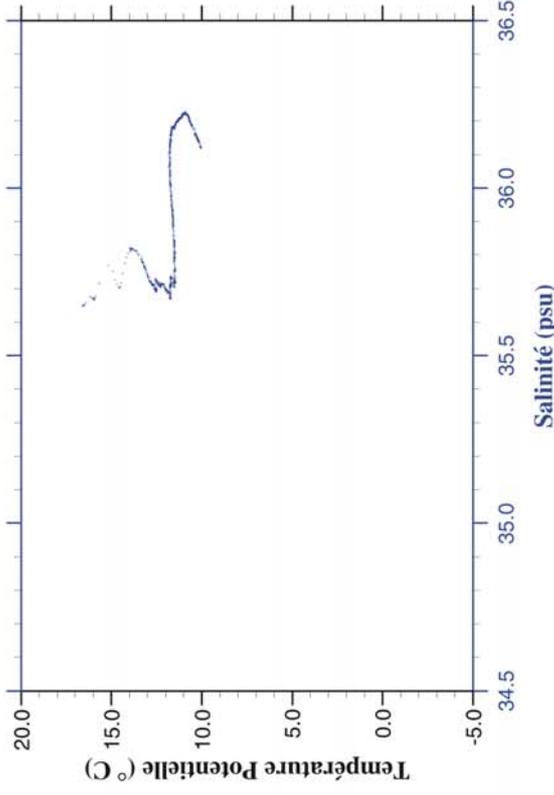
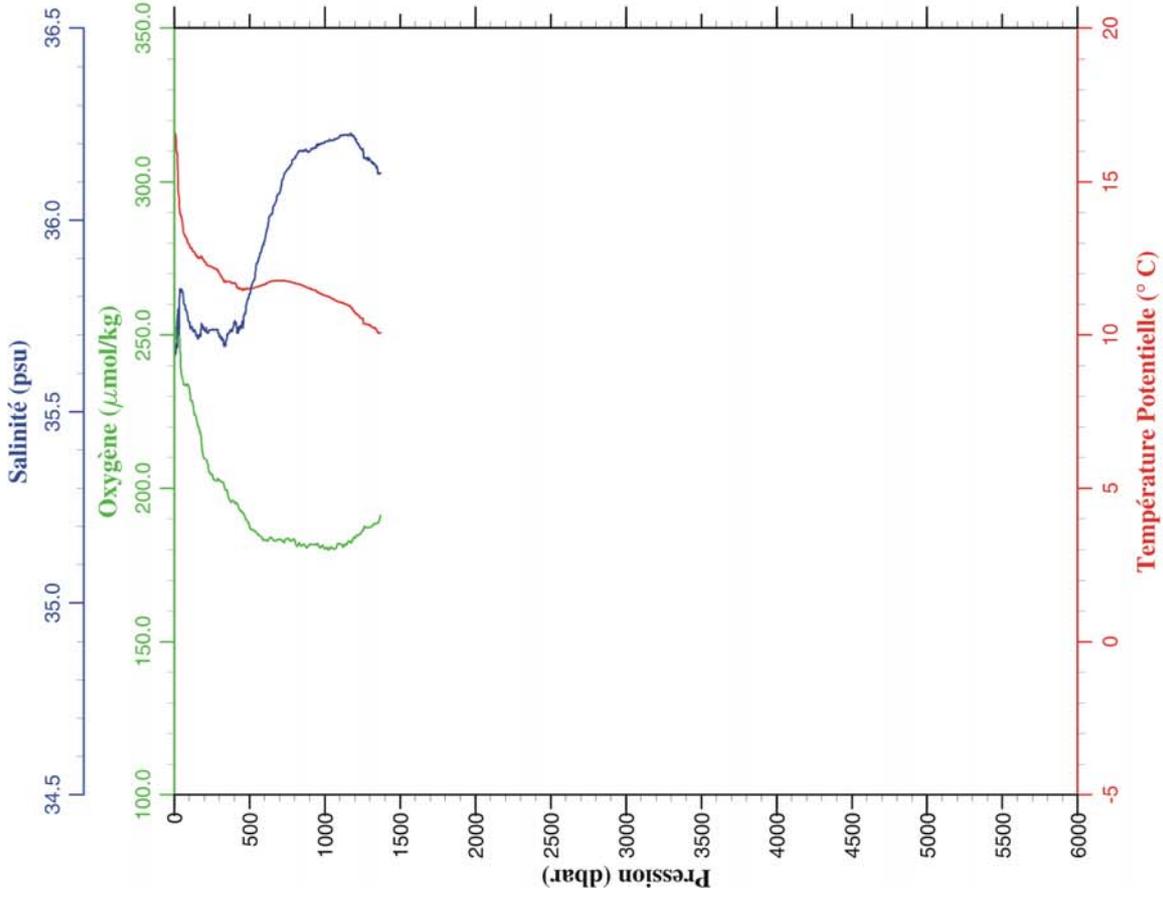
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	16.585	35.666	241.1	16.585
10.0	16.393	35.682	252.5	16.392
20.0	16.081	35.678	259.4	16.078
30.0	15.897	35.675	261.4	15.892
40.0	15.734	35.684	261.1	15.728
50.0	14.979	35.749	256.5	14.971
100.0	13.387	35.782	233.4	13.373
150.0	12.950	35.732	233.9	12.930
200.0	12.507	35.681	223.0	12.480
250.0	12.333	35.693	212.0	12.300
300.0	11.995	35.669	207.5	11.956
350.0	11.813	35.674	202.4	11.767
400.0	11.811	35.727	195.8	11.759
450.0	11.687	35.736	192.7	11.629
500.0	11.605	35.797	189.0	11.540
550.0	11.624	35.851	185.1	11.552
600.0	11.725	35.938	185.9	11.646
650.0	11.827	36.013	184.0	11.740
700.0	11.921	36.088	184.5	11.828
750.0	11.897	36.134	182.6	11.796
800.0	11.827	36.161	185.2	11.720
850.0	11.647	36.163	184.3	11.534
900.0	11.597	36.198	183.0	11.478
950.0	11.568	36.214	182.8	11.442
1000.0	11.487	36.224	182.3	11.354
1050.0	11.369	36.238	181.2	11.230
1100.0	11.279	36.237	179.7	11.134
1150.0	11.176	36.233	181.5	11.025
1200.0	10.983	36.224	183.8	10.826
1250.0	10.883	36.241	184.0	10.720
1300.0	10.524	36.190	187.2	10.358
1350.0	9.811	36.048	194.5	9.646
1400.0	9.375	35.973	197.0	9.207
1450.0	8.634	35.831	205.7	8.468
1500.0	8.174	35.750	212.0	8.006
1550.0	7.916	35.716	213.3	7.745
1600.0	7.496	35.641	217.5	7.324
1650.0	6.764	35.516	225.1	6.595
1700.0	5.957	35.380	232.2	5.793
1750.0	5.604	35.323	234.9	5.439
1800.0	5.419	35.292	236.8	5.251
1850.0	5.160	35.252	238.4	4.991
1900.0	4.983	35.226	240.2	4.811
1950.0	4.552	35.156	244.3	4.381
2000.0	4.525	35.160	243.8	4.350
2050.0	4.347	35.134	244.4	4.169
2100.0	4.217	35.115	245.5	4.036
2150.0	4.105	35.099	245.3	3.921
2200.0	4.028	35.090	246.0	3.839
2250.0	3.912	35.074	245.4	3.721
2300.0	3.835	35.064	246.0	3.640
2350.0	3.722	35.050	247.3	3.524
2400.0	3.569	35.031	247.9	3.369
2450.0	3.507	35.024	246.4	3.302
2488.0	3.448	35.018	244.4	3.241



Station 92

Station	: 93	Campagne	: OVIDE 02
Date	: 09-07-02	Navire	: N/O THALASSA
Profondeur	: 1287	Organisme	: IFREMER
Position	: N 40 19.98		
	W 9 48.03		

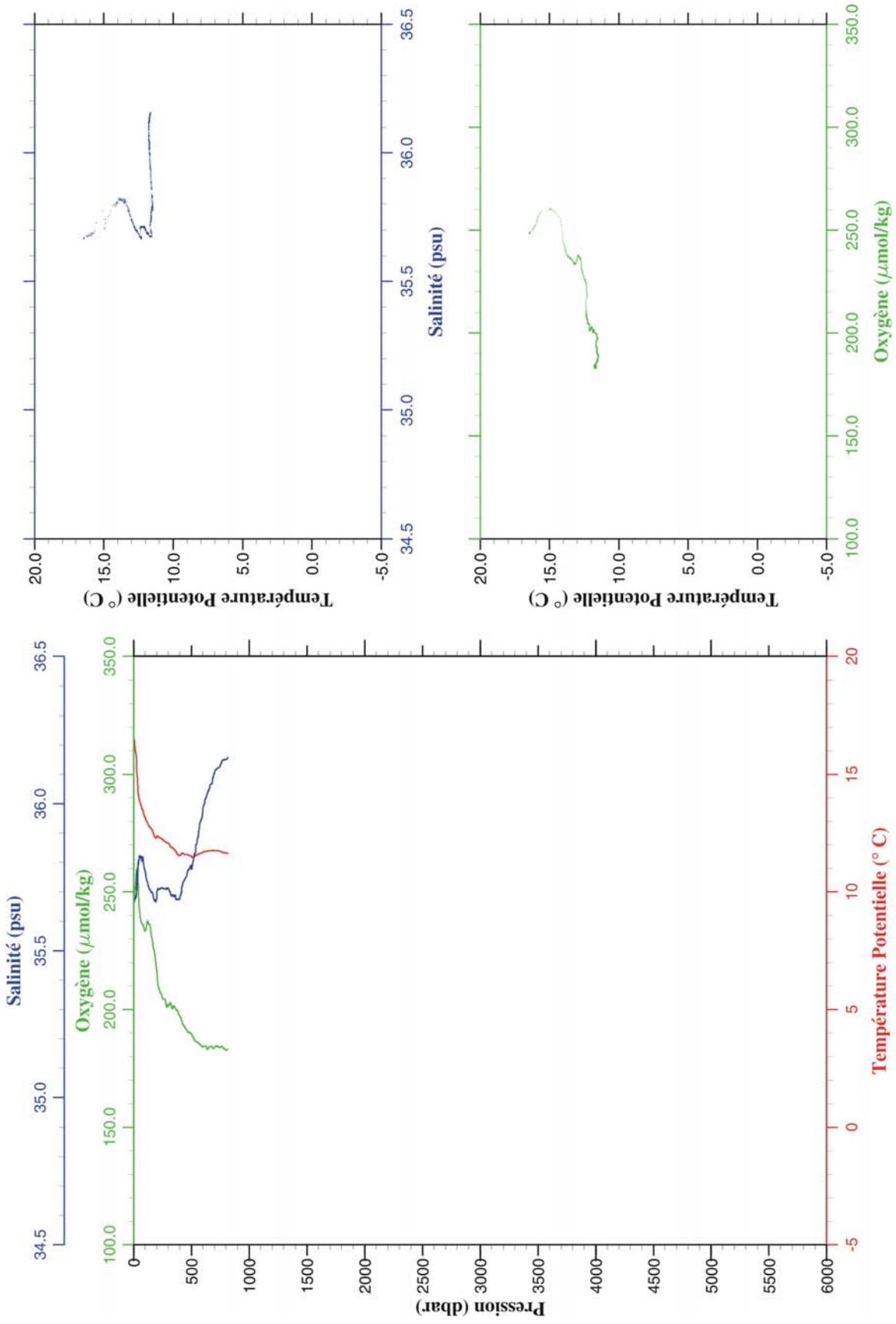
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	16.521	35.650	246.7	16.521
10.0	16.588	35.648	249.9	16.587
20.0	15.940	35.669	255.5	15.937
30.0	14.535	35.703	255.5	14.530
40.0	13.949	35.813	243.6	13.943
50.0	13.823	35.818	236.9	13.816
100.0	12.972	35.734	232.6	12.958
150.0	12.602	35.699	222.0	12.582
200.0	12.428	35.714	209.8	12.401
250.0	12.259	35.713	204.7	12.225
300.0	12.048	35.696	202.4	12.008
350.0	11.793	35.693	199.3	11.748
400.0	11.762	35.734	195.4	11.710
450.0	11.576	35.730	192.3	11.517
500.0	11.568	35.807	187.7	11.503
550.0	11.644	35.887	185.3	11.572
600.0	11.723	35.946	183.1	11.644
650.0	11.836	36.017	183.6	11.749
700.0	11.858	36.071	183.5	11.765
750.0	11.851	36.132	183.6	11.751
800.0	11.802	36.162	183.1	11.695
850.0	11.740	36.181	181.3	11.627
900.0	11.644	36.180	181.8	11.524
950.0	11.527	36.199	182.0	11.401
1000.0	11.428	36.203	180.1	11.295
1050.0	11.323	36.207	180.6	11.185
1100.0	11.228	36.220	181.8	11.083
1150.0	11.127	36.221	182.2	10.977
1200.0	10.888	36.214	183.8	10.733
1250.0	10.705	36.184	186.0	10.544
1300.0	10.476	36.157	187.4	10.311
1350.0	10.284	36.132	188.7	10.113
1370.0	10.238	36.121	191.1	10.065



Station 93

Station	: 94	Campagne	: OVIDE 02
Date	: 09-07-02	Navire	: N/O THALASSA
Profondeur	: 792	Organisme	: IFREMER
Position	: N 40 20.03		
	W 9 46.05		

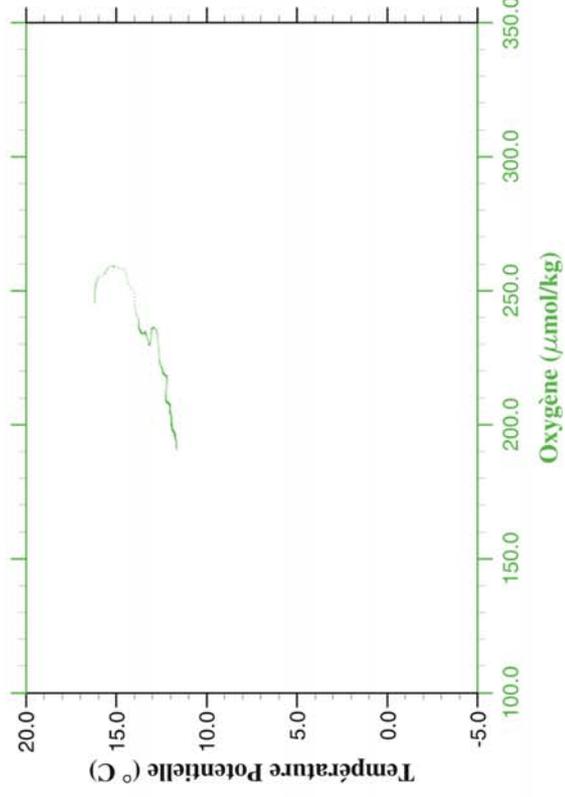
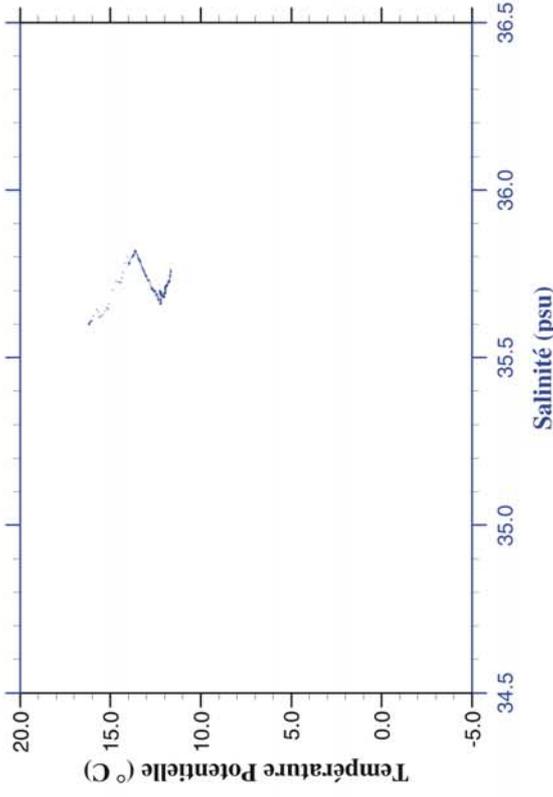
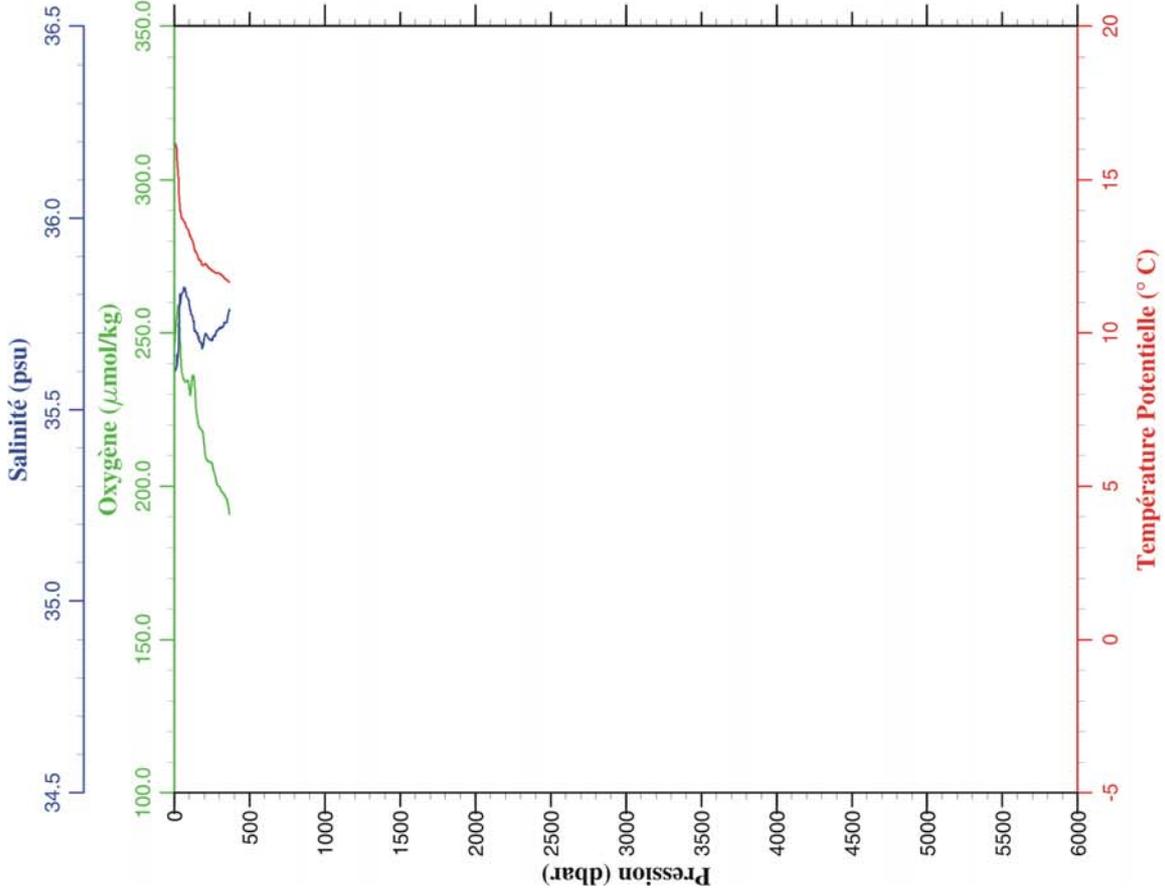
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	16.439	35.668	248.4	16.439
10.0	16.210	35.676	250.0	16.208
20.0	15.881	35.682	255.3	15.878
30.0	14.959	35.705	260.3	14.955
40.0	14.172	35.793	252.8	14.166
50.0	13.908	35.824	242.6	13.901
100.0	13.179	35.768	233.4	13.165
150.0	12.713	35.699	232.8	12.693
200.0	12.381	35.684	216.3	12.354
250.0	12.269	35.713	204.9	12.236
300.0	12.100	35.714	202.0	12.060
350.0	11.844	35.688	201.5	11.799
400.0	11.613	35.680	197.2	11.561
450.0	11.652	35.748	191.8	11.593
500.0	11.563	35.792	189.4	11.498
550.0	11.645	35.871	186.2	11.573
600.0	11.769	35.980	184.1	11.689
650.0	11.828	36.046	183.9	11.741
700.0	11.852	36.104	183.8	11.758
750.0	11.826	36.131	183.9	11.725
800.0	11.764	36.151	182.8	11.658
814.0	11.742	36.158	183.2	11.634



Station 94

Station	: 95	Campagne	: OVIDE 02
Date	: 09-07-02	Navire	: N/O THALASSA
Profondeur	: 395	Organisme	: IFREMER
Position	: N 40 20.10		
	W 9 38.55		

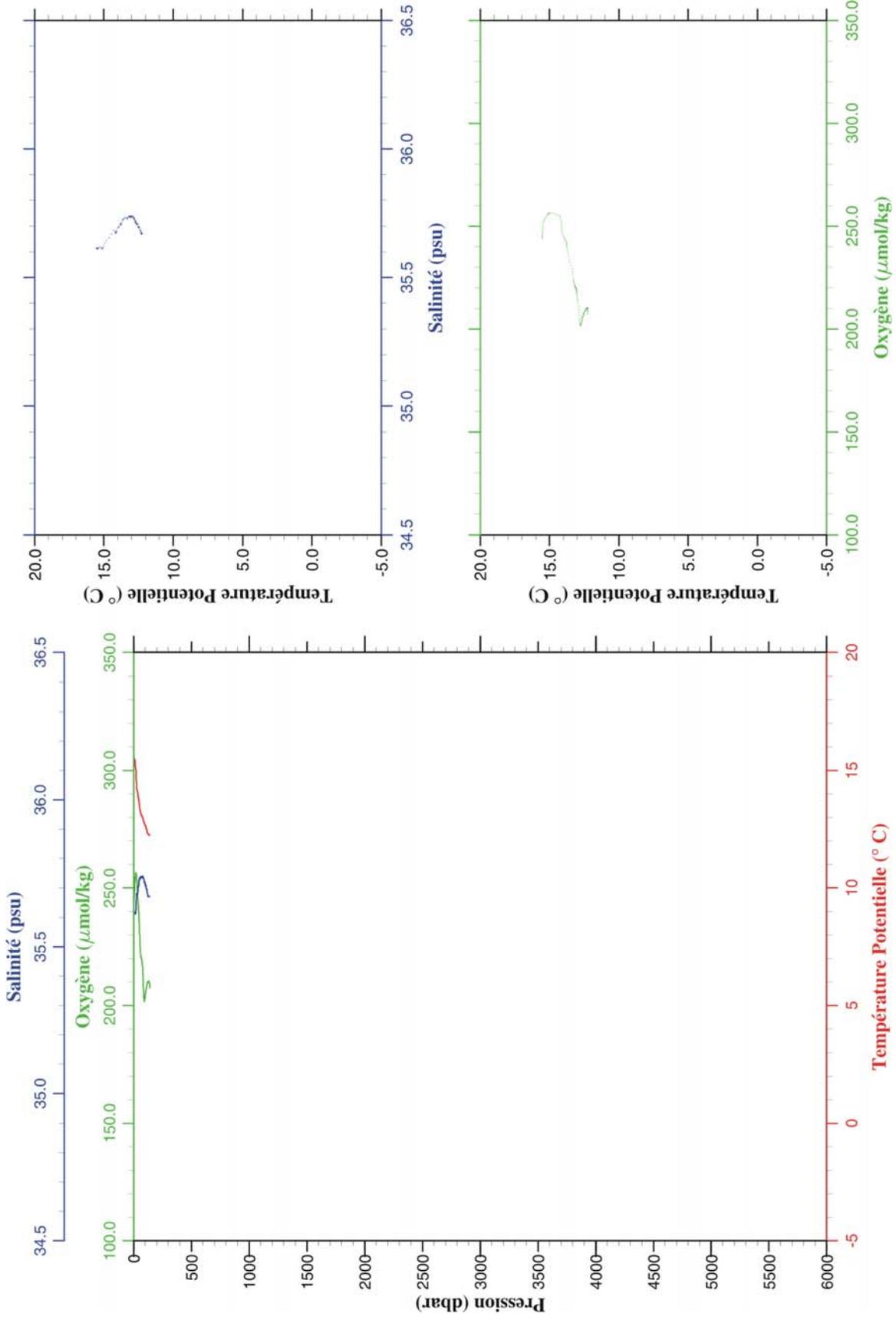
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	16.189	35.601	245.6	16.189
10.0	16.156	35.602	251.2	16.154
20.0	15.610	35.623	256.9	15.607
30.0	14.675	35.726	258.1	14.670
40.0	13.989	35.777	246.2	13.983
50.0	13.753	35.801	238.0	13.746
100.0	13.277	35.774	231.8	13.263
150.0	12.607	35.700	223.3	12.587
200.0	12.266	35.689	213.1	12.239
250.0	12.067	35.682	207.5	12.034
300.0	11.986	35.713	200.0	11.947
350.0	11.785	35.729	195.7	11.740
368.0	11.709	35.763	190.9	11.661



Station 95

Station	: 96	Campagne	: OVIDE 02
Date	: 10-07-02	Navire	: N/O THALASSA
Profondeur	: 148	Organisme	: IFREMER
Position	: N 40 20.06		
	W 9 27.49		

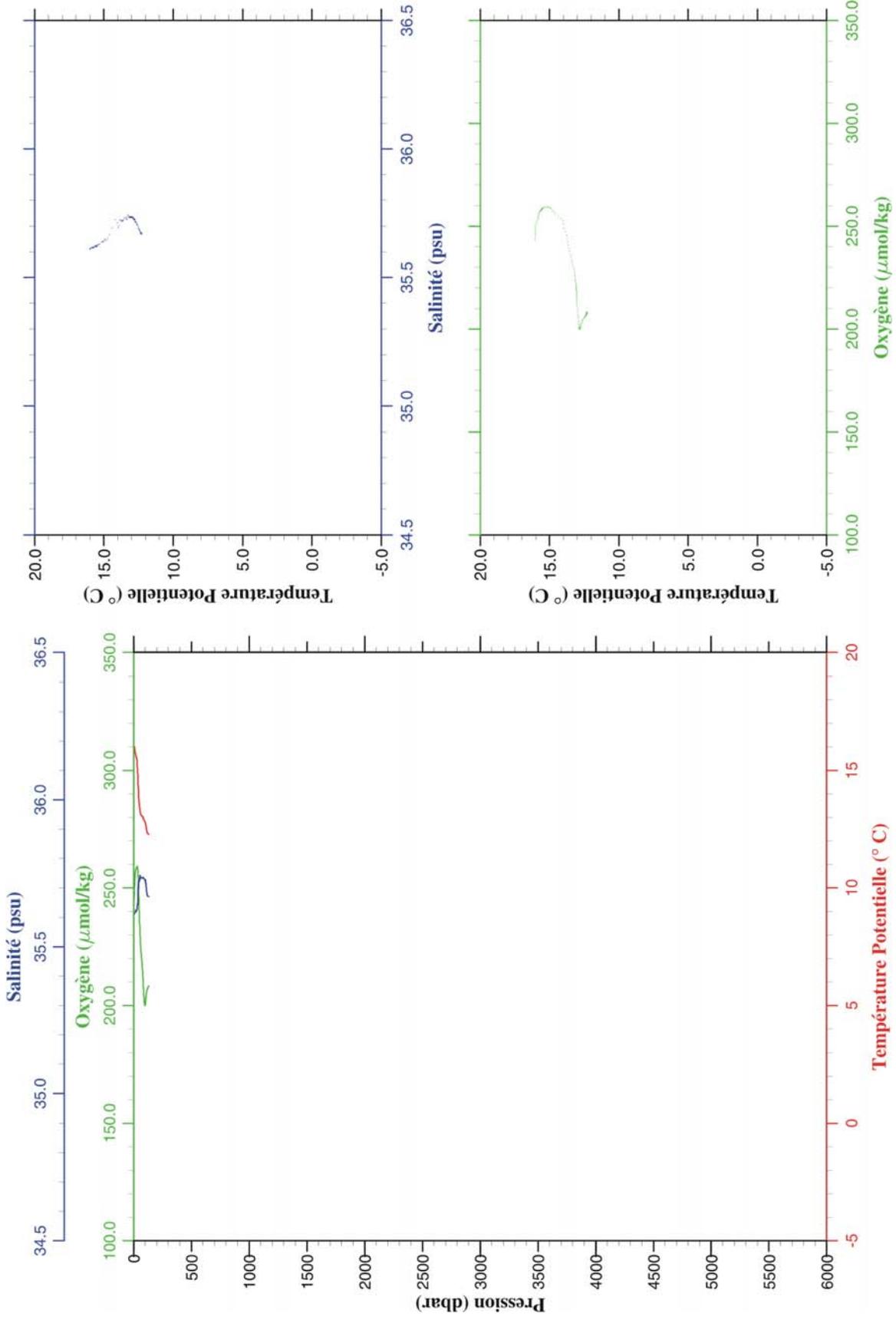
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	15.512	35.614	244.1	15.512
10.0	15.470	35.612	250.8	15.469
20.0	14.990	35.627	256.5	14.986
30.0	14.143	35.674	250.6	14.139
40.0	13.844	35.708	242.8	13.838
50.0	13.593	35.727	233.7	13.586
100.0	12.671	35.710	204.3	12.657
141.0	12.269	35.671	207.5	12.250



Station 96

Station	: 97	Campagne	: OVIDE 02
Date	: 10-07-02	Navire	: N/O THALASSA
Profondeur	: 150	Organisme	: IFREMER
Position	: N 40 19.95		
	W 9 27.60		

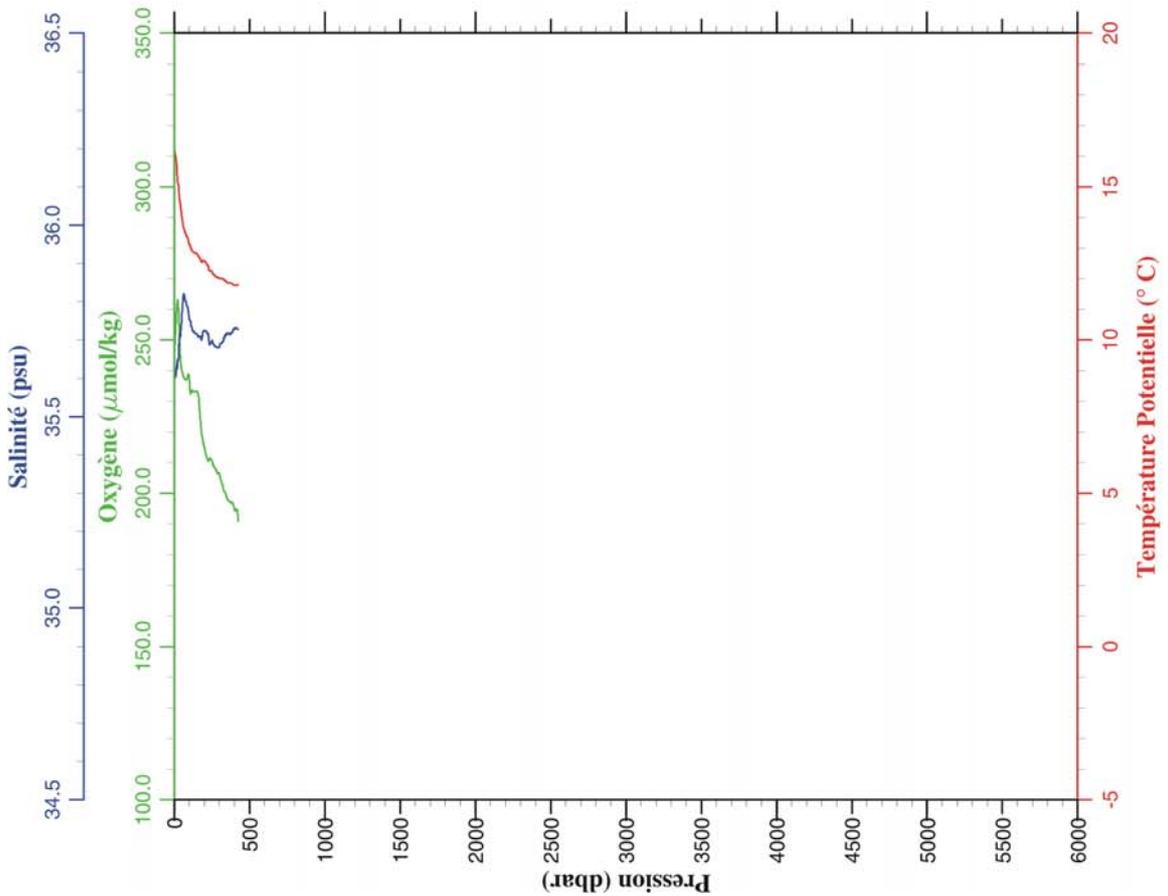
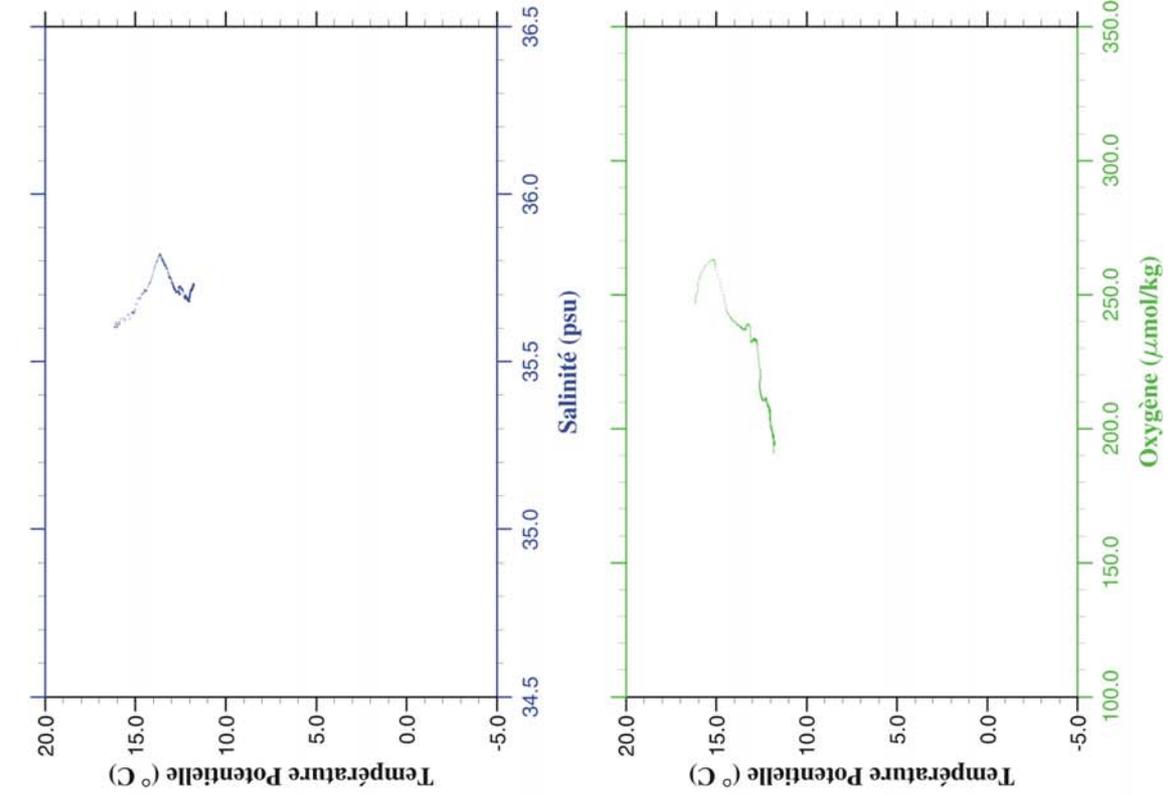
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	16.006	35.611	243.5	16.006
10.0	15.856	35.616	253.0	15.854
20.0	15.586	35.624	257.9	15.583
30.0	15.280	35.631	259.2	15.275
40.0	14.157	35.724	253.8	14.151
50.0	13.589	35.725	237.9	13.582
100.0	12.809	35.726	200.4	12.795
130.0	12.297	35.670	208.3	12.280



Station 97

Station	: 98	Campagne	: OVIDE 02
Date	: 10-07-02	Navire	: N/O THALASSA
Profondeur	: 422	Organisme	: IFREMER
Position	: N 40 19.98		
	W 9 38.59		

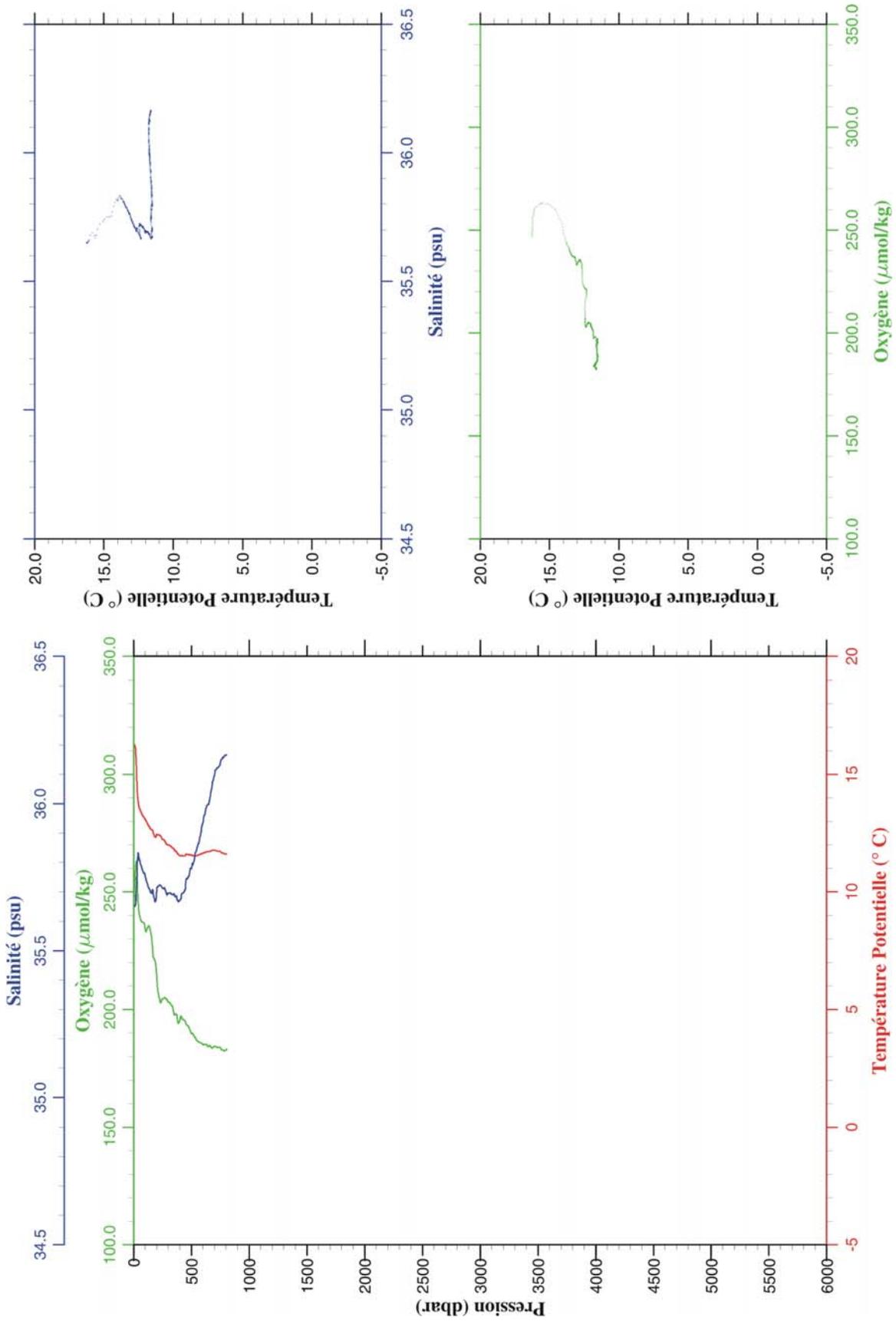
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	16.141	35.603	246.8	16.140
10.0	16.023	35.603	253.9	16.021
20.0	15.343	35.640	262.4	15.340
30.0	14.930	35.673	257.5	14.926
40.0	14.452	35.710	244.6	14.446
50.0	14.113	35.751	240.4	14.106
100.0	13.124	35.754	236.9	13.111
150.0	12.845	35.716	233.3	12.825
200.0	12.615	35.724	215.0	12.587
250.0	12.272	35.698	210.6	12.239
300.0	12.053	35.682	206.5	12.014
350.0	11.921	35.717	198.5	11.875
400.0	11.844	35.731	194.7	11.791
426.0	11.859	35.729	190.8	11.802



Station 98

Station	: 99	Campagne	: OVIDE 02
Date	: 10-07-02	Navire	: N/O THALASSA
Profondeur	: 806	Organisme	: IFREMER
Position	: N 40 19.95		
	W 9 46.17		

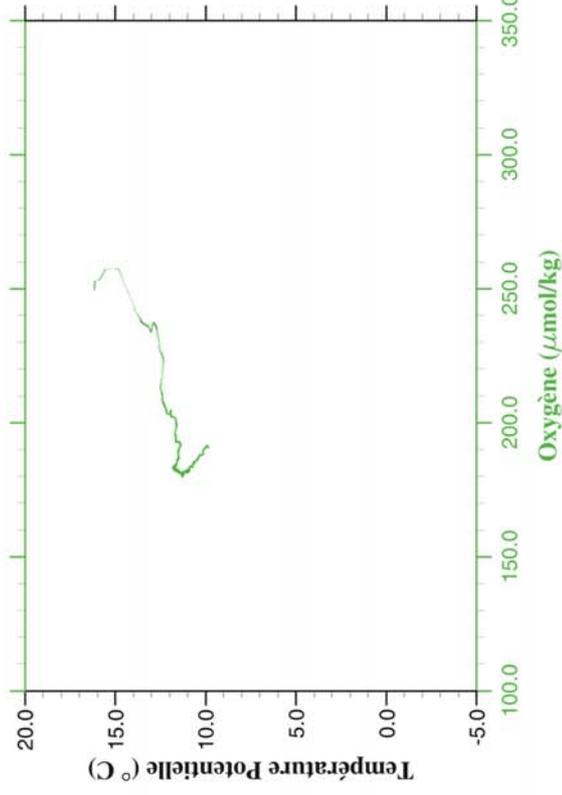
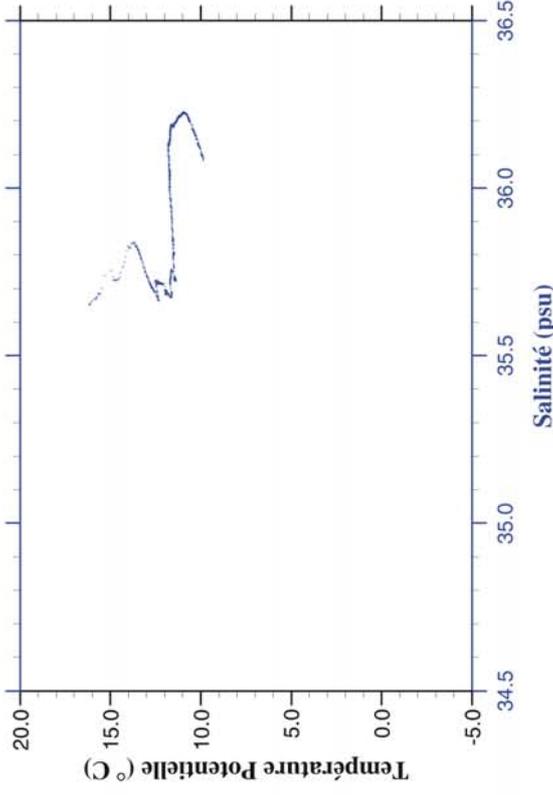
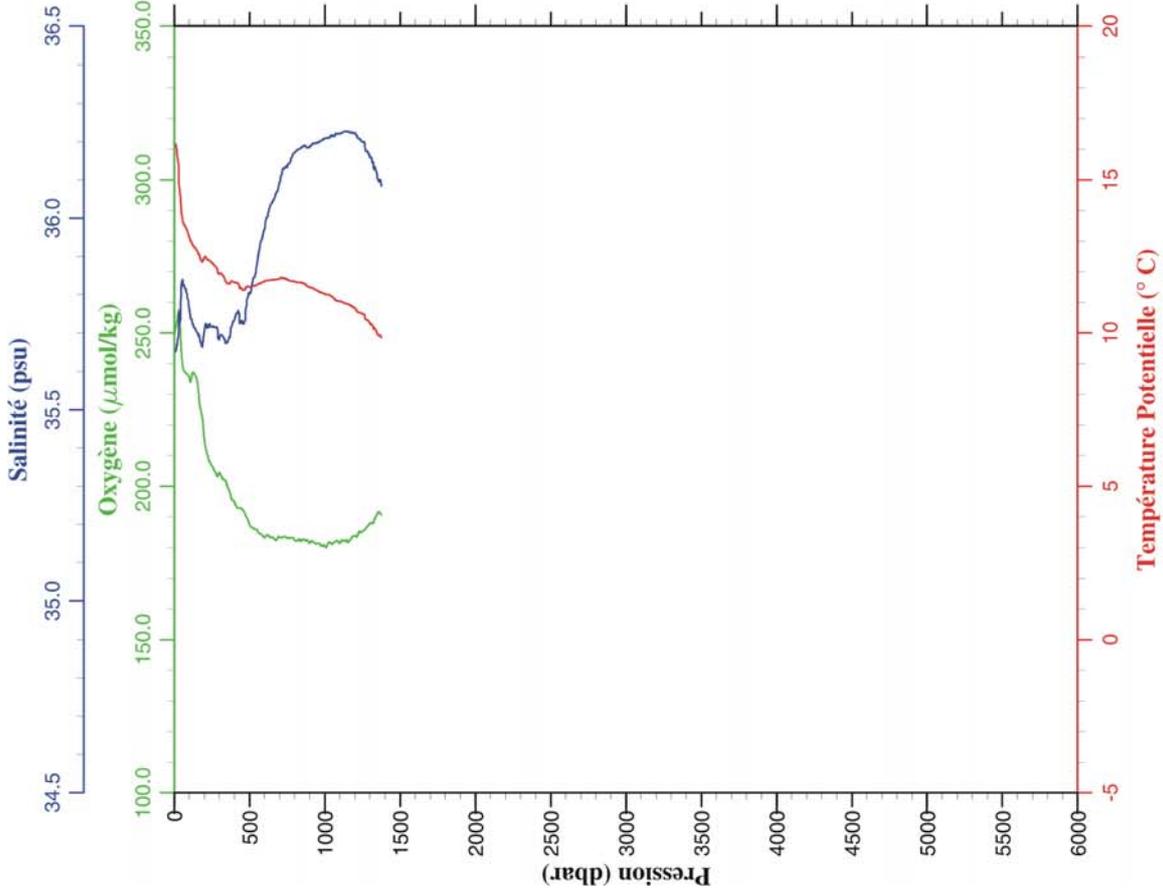
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	16.240	35.650	246.8	16.240
10.0	16.235	35.649	253.9	16.233
20.0	15.705	35.678	262.4	15.702
30.0	14.388	35.771	257.5	14.383
40.0	13.799	35.829	244.6	13.793
50.0	13.592	35.808	240.4	13.585
100.0	13.091	35.753	234.3	13.077
150.0	12.679	35.697	232.2	12.659
200.0	12.465	35.704	213.9	12.439
250.0	12.256	35.712	204.6	12.223
300.0	12.032	35.695	203.2	11.993
350.0	11.872	35.692	197.7	11.826
400.0	11.586	35.671	195.5	11.534
450.0	11.650	35.727	194.4	11.591
500.0	11.618	35.779	189.6	11.553
550.0	11.625	35.850	186.7	11.553
600.0	11.720	35.936	185.1	11.641
650.0	11.797	36.001	184.4	11.711
700.0	11.868	36.095	184.3	11.774
750.0	11.813	36.138	183.8	11.713
800.0	11.717	36.165	182.6	11.611
806.0	11.716	36.166	183.2	11.609



Station 99

Station	: 100	Campagne	: OVIDE 02
Date	: 10-07-02	Navire	: N/O THALASSA
Profondeur	: 1307	Organisme	: IFREMER
Position	: N 40 20.00		
	W 9 48.11		

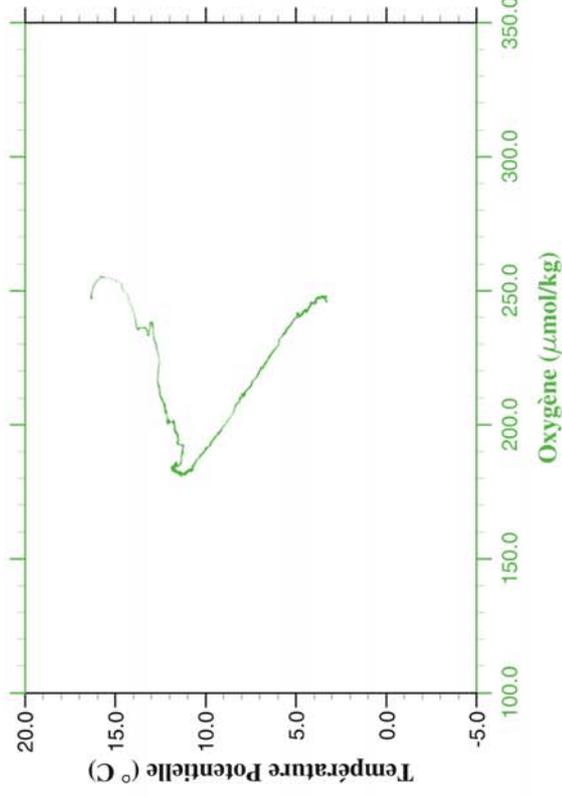
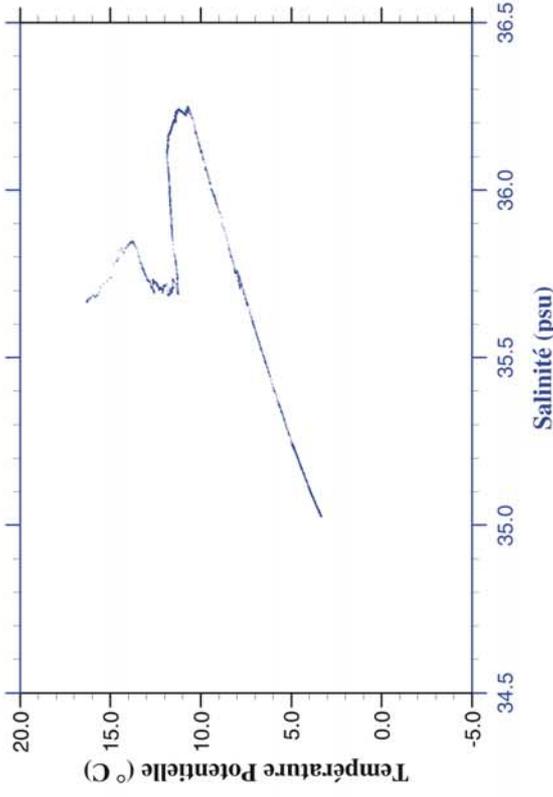
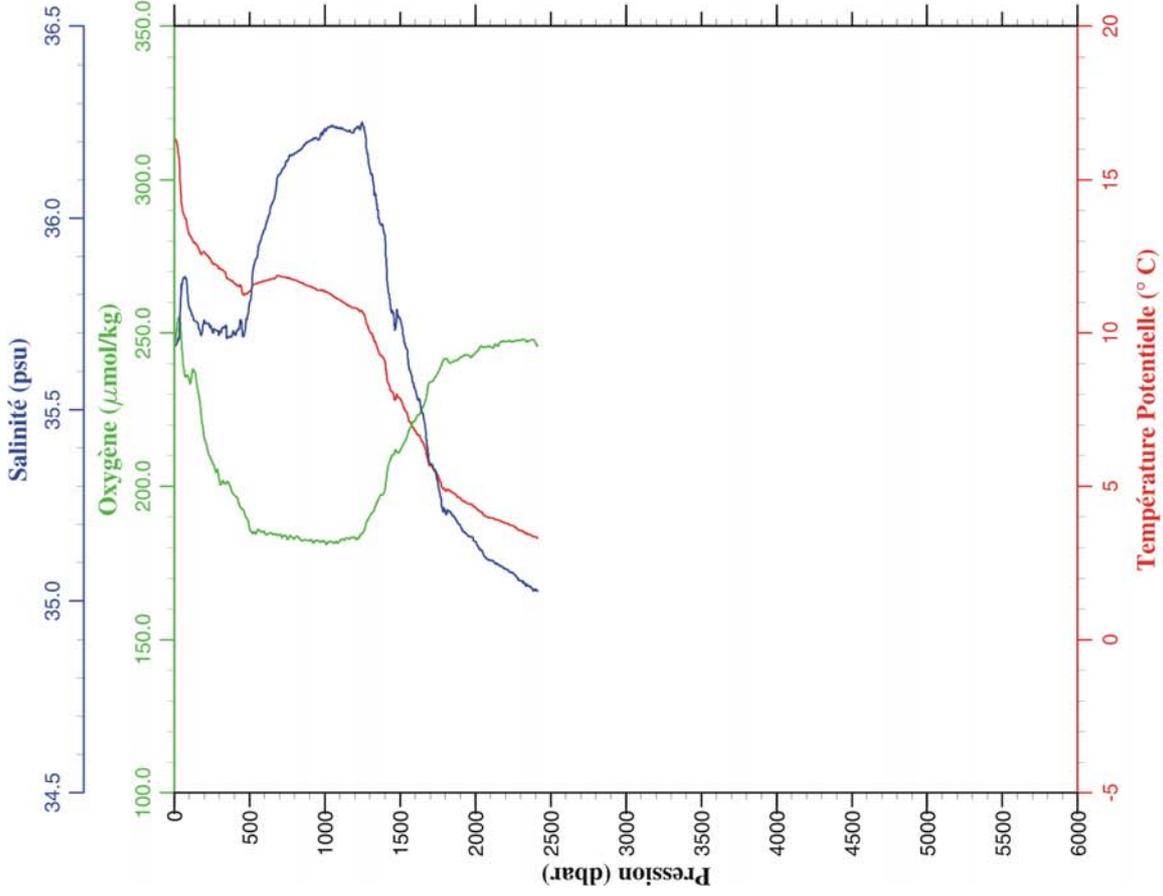
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	16.164	35.652	249.6	16.164
10.0	16.159	35.653	251.5	16.157
20.0	15.779	35.672	254.3	15.775
30.0	14.991	35.753	257.5	14.986
40.0	14.486	35.735	251.4	14.481
50.0	13.941	35.821	242.6	13.934
100.0	13.141	35.761	235.5	13.127
150.0	12.720	35.702	234.8	12.699
200.0	12.484	35.707	215.3	12.457
250.0	12.335	35.716	206.6	12.302
300.0	11.968	35.684	204.6	11.929
350.0	11.677	35.676	200.4	11.632
400.0	11.703	35.735	194.7	11.650
450.0	11.512	35.733	192.5	11.454
500.0	11.562	35.804	187.5	11.497
550.0	11.649	35.879	185.8	11.577
600.0	11.757	35.969	183.2	11.678
650.0	11.827	36.041	183.4	11.741
700.0	11.861	36.092	183.4	11.767
750.0	11.837	36.131	183.0	11.737
800.0	11.788	36.171	182.4	11.680
850.0	11.752	36.185	182.5	11.638
900.0	11.615	36.187	181.4	11.495
950.0	11.510	36.196	181.4	11.384
1000.0	11.406	36.209	180.5	11.273
1050.0	11.327	36.215	181.1	11.188
1100.0	11.180	36.221	181.4	11.036
1150.0	11.100	36.226	181.9	10.949
1200.0	10.962	36.222	183.9	10.806
1250.0	10.794	36.200	185.4	10.632
1300.0	10.481	36.159	187.8	10.315
1350.0	10.123	36.103	191.1	9.954
1376.0	10.021	36.083	190.7	9.850



Station 100

Station	: 101	Campagne	: OVIDE 02
Date	: 10-07-02	Navire	: N/O THALASSA
Profondeur	: 2344	Organisme	: IFREMER
Position	: N 40 20.01		
	W 9 52.54		

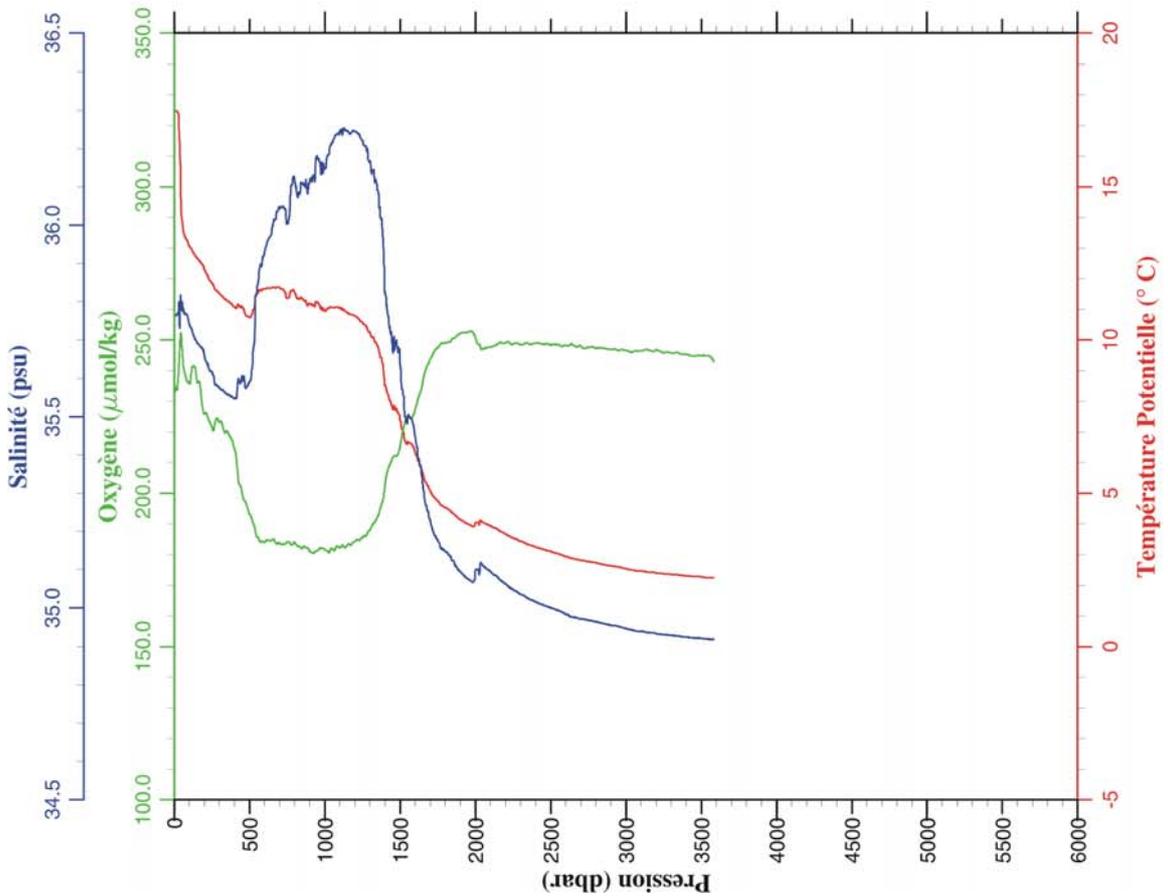
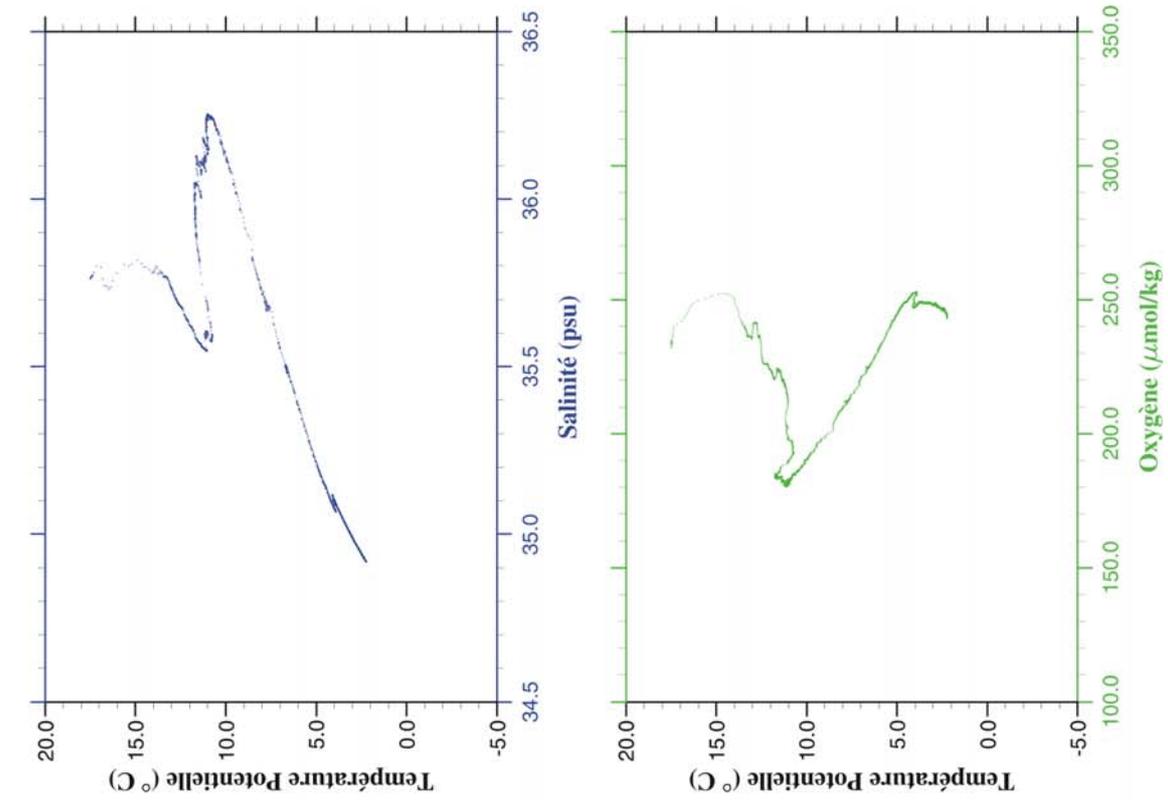
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	16.310	35.668	247.1	16.310
10.0	16.312	35.668	248.5	16.311
20.0	16.154	35.677	252.4	16.151
30.0	15.790	35.681	255.2	15.785
40.0	14.829	35.779	253.2	14.823
50.0	14.256	35.814	246.3	14.249
100.0	13.225	35.766	234.7	13.211
150.0	12.901	35.729	233.3	12.881
200.0	12.660	35.733	215.7	12.632
250.0	12.360	35.709	208.2	12.327
300.0	12.160	35.704	201.8	12.120
350.0	11.846	35.689	201.3	11.800
400.0	11.675	35.696	197.0	11.623
450.0	11.421	35.714	192.5	11.363
500.0	11.427	35.779	186.1	11.362
550.0	11.689	35.896	185.2	11.616
600.0	11.776	35.969	184.9	11.697
650.0	11.854	36.038	184.5	11.768
700.0	11.953	36.114	184.3	11.859
750.0	11.898	36.150	182.8	11.797
800.0	11.833	36.169	183.0	11.725
850.0	11.747	36.182	182.2	11.633
900.0	11.645	36.202	182.3	11.525
950.0	11.518	36.206	182.3	11.391
1000.0	11.506	36.234	181.9	11.373
1050.0	11.378	36.241	181.8	11.239
1100.0	11.219	36.236	182.1	11.074
1150.0	11.067	36.226	183.2	10.917
1200.0	10.977	36.232	183.3	10.820
1250.0	10.841	36.242	184.6	10.679
1300.0	10.208	36.130	190.3	10.045
1350.0	9.671	36.020	195.1	9.506
1400.0	9.206	35.947	199.2	9.040
1450.0	8.243	35.758	210.1	8.080
1500.0	8.029	35.738	211.6	7.863
1550.0	7.467	35.643	216.8	7.301
1600.0	6.998	35.557	221.4	6.832
1650.0	6.605	35.490	225.7	6.438
1700.0	5.838	35.360	234.1	5.675
1750.0	5.525	35.311	236.9	5.361
1800.0	5.061	35.238	241.6	4.897
1850.0	4.949	35.222	240.5	4.782
1900.0	4.781	35.199	242.1	4.612
1950.0	4.607	35.172	242.7	4.435
2000.0	4.480	35.155	243.5	4.305
2050.0	4.282	35.125	245.3	4.105
2100.0	4.151	35.107	245.6	3.971
2150.0	4.088	35.096	245.7	3.903
2200.0	3.982	35.083	247.2	3.795
2250.0	3.907	35.074	247.2	3.716
2300.0	3.746	35.053	247.5	3.552
2350.0	3.640	35.041	247.4	3.443
2400.0	3.554	35.030	246.7	3.354
2412.0	3.506	35.026	245.6	3.305



Station 101

Station : 102 Campagne : OVIDE 02
 Date : 10-07-02 Navire : N/O THALASSA
 Profondeur : 3519 Organisme : IFREMER
 Position : N 40 20.01
 W 10 1.95

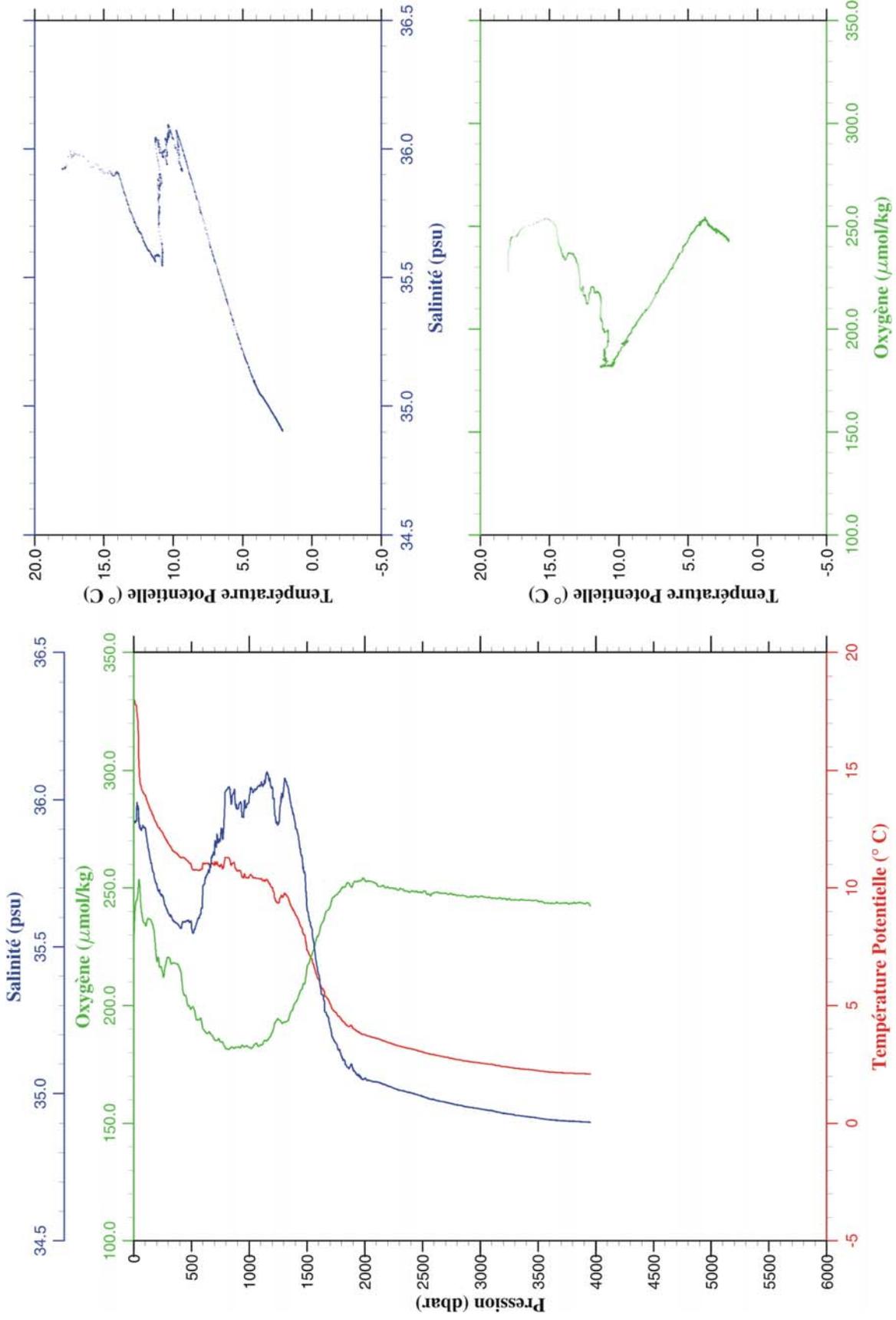
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	17.472	35.766	231.9	17.472	3050.0	2.741	34.943	246.3	2.490
10.0	17.469	35.765	234.7	17.467	3100.0	2.717	34.939	246.6	2.462
20.0	17.471	35.766	233.8	17.467	3150.0	2.690	34.936	246.7	2.430
30.0	17.159	35.801	241.0	17.154	3200.0	2.665	34.934	246.8	2.401
40.0	15.613	35.805	250.4	15.607	3250.0	2.643	34.931	245.8	2.374
50.0	14.000	35.785	249.7	13.993	3300.0	2.629	34.929	245.7	2.355
100.0	13.077	35.741	235.9	13.063	3350.0	2.612	34.928	245.7	2.333
150.0	12.704	35.693	236.7	12.684	3400.0	2.589	34.925	245.3	2.306
200.0	12.321	35.655	225.9	12.294	3450.0	2.575	34.922	244.7	2.286
250.0	11.904	35.618	221.6	11.871	3500.0	2.565	34.922	244.9	2.271
300.0	11.568	35.576	223.2	11.529	3550.0	2.547	34.919	244.8	2.248
350.0	11.338	35.559	220.4	11.294	3584.0	2.545	34.918	243.0	2.243
400.0	11.127	35.548	214.4	11.076					
450.0	11.151	35.606	200.2	11.094					
500.0	10.809	35.589	193.1	10.747					
550.0	11.569	35.831	185.7	11.498					
600.0	11.752	35.927	183.9	11.673					
650.0	11.802	35.994	184.8	11.715					
700.0	11.800	36.048	183.8	11.707					
750.0	11.464	36.004	184.1	11.365					
800.0	11.658	36.118	183.9	11.551					
850.0	11.479	36.111	182.0	11.367					
900.0	11.321	36.118	181.0	11.203					
950.0	11.349	36.178	181.1	11.224					
1000.0	11.079	36.149	181.5	10.949					
1050.0	11.199	36.214	182.0	11.061					
1100.0	11.208	36.245	182.3	11.063					
1150.0	11.045	36.247	183.2	10.894					
1200.0	10.942	36.245	184.2	10.786					
1250.0	10.739	36.221	185.5	10.577					
1300.0	10.423	36.167	188.1	10.258					
1350.0	9.972	36.090	192.2	9.804					
1400.0	8.703	35.825	202.9	8.542					
1450.0	7.904	35.671	211.6	7.745					
1500.0	7.521	35.632	215.3	7.361					
1550.0	6.768	35.483	224.9	6.610					
1600.0	6.514	35.452	227.2	6.354					
1650.0	5.823	35.324	236.1	5.666					
1700.0	5.249	35.231	243.8	5.094					
1750.0	4.896	35.176	247.6	4.740					
1800.0	4.687	35.148	249.2	4.529					
1850.0	4.516	35.124	250.6	4.355					
1900.0	4.306	35.096	252.2	4.143					
1950.0	4.166	35.077	252.5	4.001					
2000.0	4.217	35.099	250.8	4.046					
2050.0	4.227	35.111	247.1	4.051					
2100.0	4.113	35.095	247.7	3.933					
2150.0	3.997	35.080	248.7	3.814					
2200.0	3.864	35.064	249.1	3.679					
2250.0	3.730	35.048	248.7	3.542					
2300.0	3.628	35.036	248.5	3.436					
2350.0	3.525	35.026	248.9	3.331					
2400.0	3.446	35.017	249.0	3.248					
2450.0	3.373	35.008	248.7	3.171					
2500.0	3.313	35.002	248.3	3.107					
2550.0	3.237	34.994	248.4	3.028					
2600.0	3.149	34.985	248.3	2.937					
2650.0	3.079	34.977	248.3	2.862					
2700.0	3.033	34.971	248.0	2.812					
2750.0	2.997	34.968	247.7	2.772					
2800.0	2.962	34.965	247.4	2.733					
2850.0	2.909	34.960	247.3	2.676					
2900.0	2.870	34.956	246.9	2.632					
2950.0	2.838	34.952	246.6	2.596					
3000.0	2.784	34.946	246.7	2.538					



Station 102

Station	: 103	Campagne	: OVIDE 02
Date	: 10-07-02	Navire	: N/O THALASSA
Profondeur	: 3880	Organisme	: IFREMER
Position	: N 40 20.02		
	W 10 17.94		

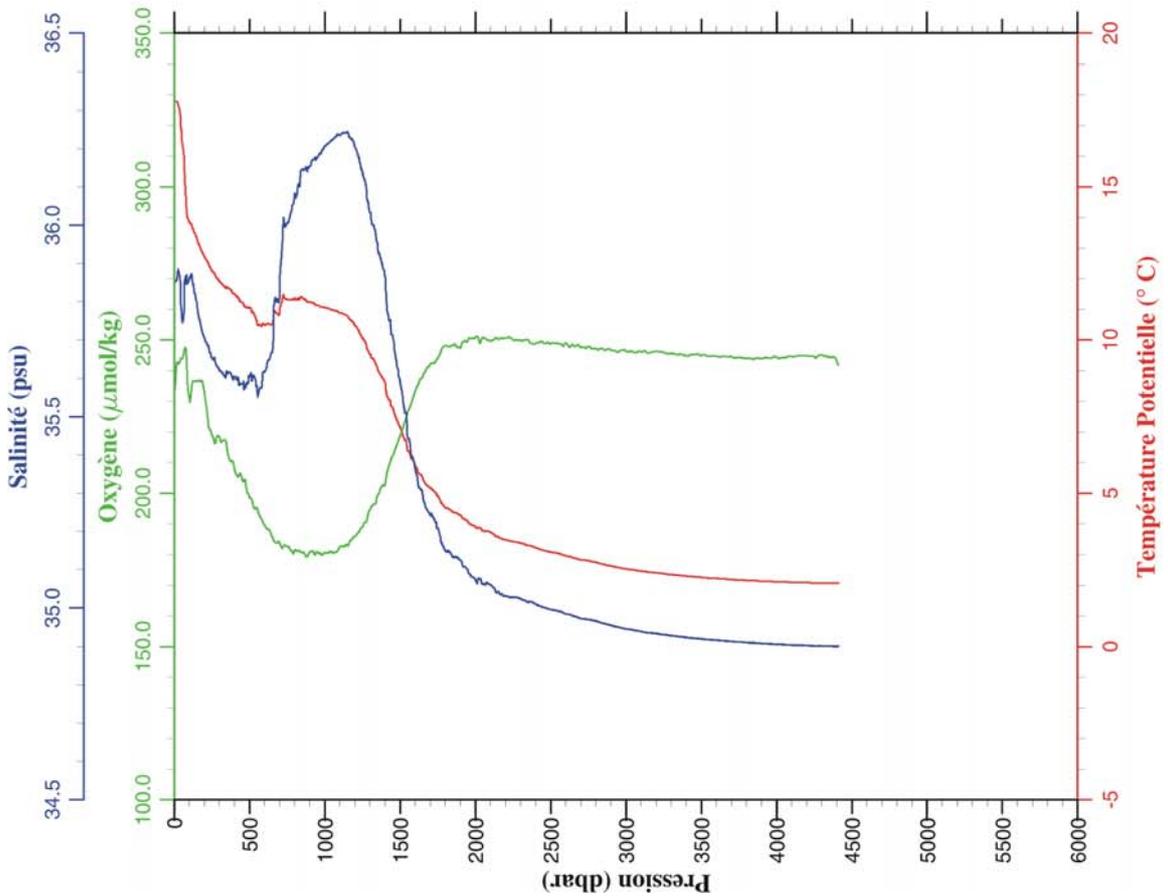
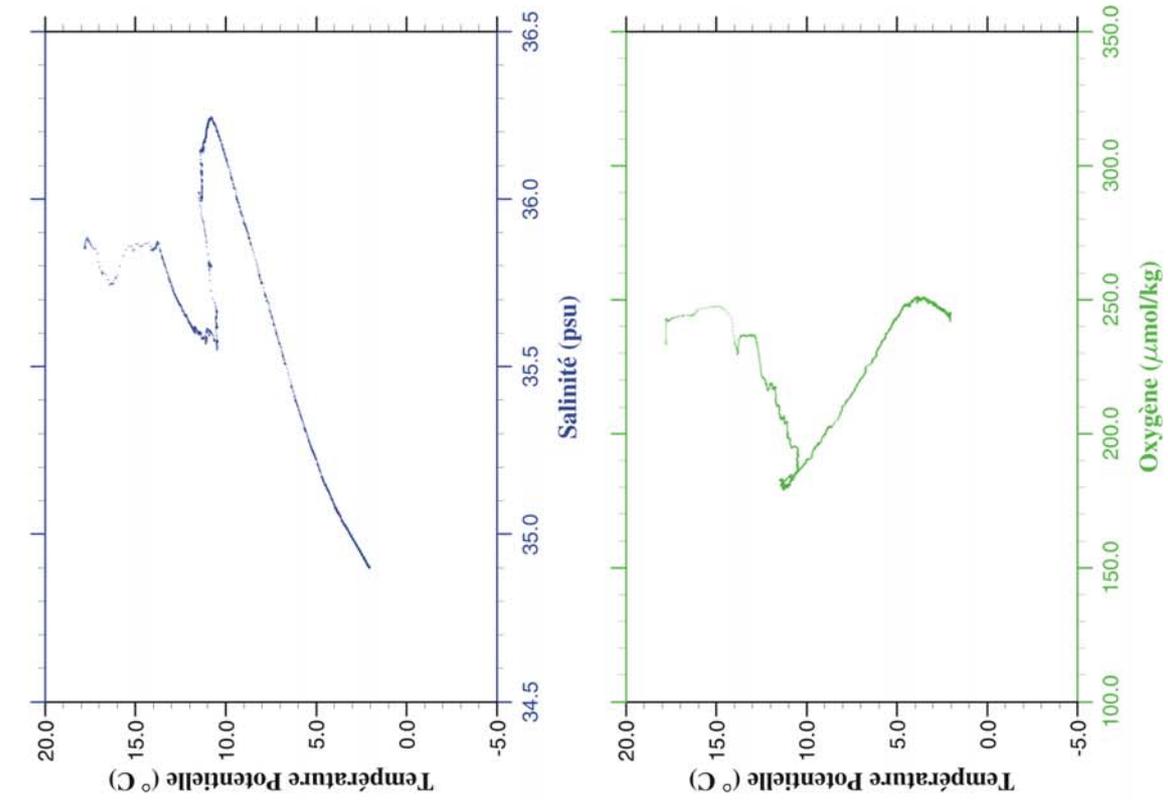
PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	17.988	35.923	228.3	17.988	3050.0	2.776	34.946	246.0	2.524
10.0	17.962	35.921	238.4	17.960	3100.0	2.757	34.942	245.6	2.501
20.0	17.783	35.927	244.0	17.780	3150.0	2.704	34.938	245.6	2.445
30.0	17.340	35.977	245.4	17.335	3200.0	2.670	34.933	245.6	2.406
40.0	16.471	35.972	250.4	16.464	3250.0	2.644	34.931	245.5	2.374
50.0	15.004	35.905	253.0	14.996	3300.0	2.612	34.928	245.0	2.338
100.0	13.965	35.903	234.5	13.951	3350.0	2.590	34.925	245.1	2.311
150.0	13.298	35.786	236.3	13.277	3400.0	2.572	34.923	244.8	2.288
200.0	12.753	35.711	219.3	12.726	3450.0	2.550	34.919	244.6	2.262
250.0	12.389	35.674	214.0	12.356	3500.0	2.522	34.917	244.4	2.229
300.0	11.922	35.614	220.5	11.883	3550.0	2.500	34.914	243.8	2.202
350.0	11.600	35.586	217.9	11.555	3600.0	2.479	34.912	243.5	2.176
400.0	11.371	35.568	215.7	11.320	3650.0	2.465	34.910	243.5	2.157
450.0	11.299	35.584	204.2	11.242	3700.0	2.453	34.908	243.5	2.140
500.0	10.998	35.580	198.7	10.935	3750.0	2.449	34.907	243.6	2.131
550.0	10.835	35.585	193.8	10.767	3800.0	2.445	34.906	243.4	2.121
600.0	11.125	35.706	190.1	11.048	3850.0	2.439	34.905	243.7	2.110
650.0	11.103	35.753	188.6	11.020	3900.0	2.437	34.904	243.3	2.102
700.0	11.074	35.812	185.5	10.985	3950.0	2.434	34.903	242.6	2.094
750.0	11.007	35.863	184.5	10.911	3952.0	2.435	34.903	242.5	2.094
800.0	11.400	36.032	181.7	11.295					
850.0	11.111	35.996	182.3	11.001					
900.0	10.839	35.968	182.4	10.725					
950.0	10.547	35.939	182.7	10.428					
1000.0	10.624	36.008	182.2	10.498					
1050.0	10.567	36.035	183.5	10.435					
1100.0	10.527	36.048	183.4	10.388					
1150.0	10.510	36.091	185.0	10.365					
1200.0	10.166	36.041	188.6	10.016					
1250.0	9.522	35.918	194.5	9.372					
1300.0	9.863	36.042	193.0	9.703					
1350.0	9.567	36.015	195.6	9.404					
1400.0	9.016	35.908	201.2	8.852					
1450.0	8.486	35.811	206.7	8.321					
1500.0	7.543	35.632	215.8	7.382					
1550.0	6.964	35.533	222.6	6.804					
1600.0	6.280	35.410	229.8	6.123					
1650.0	5.762	35.316	236.9	5.606					
1700.0	5.224	35.226	242.1	5.069					
1750.0	4.865	35.173	246.9	4.710					
1800.0	4.564	35.128	249.8	4.408					
1850.0	4.295	35.090	252.3	4.138					
1900.0	4.195	35.083	251.9	4.034					
1950.0	4.020	35.059	253.1	3.857					
2000.0	3.932	35.051	253.3	3.765					
2050.0	3.849	35.044	252.9	3.678					
2100.0	3.782	35.040	252.0	3.608					
2150.0	3.695	35.035	250.8	3.517					
2200.0	3.621	35.027	250.4	3.439					
2250.0	3.533	35.019	249.9	3.348					
2300.0	3.470	35.012	249.4	3.282					
2350.0	3.404	35.008	248.7	3.212					
2400.0	3.353	35.003	248.5	3.156					
2450.0	3.298	34.998	248.7	3.098					
2500.0	3.233	34.991	248.0	3.028					
2550.0	3.164	34.984	247.4	2.956					
2600.0	3.121	34.980	247.9	2.909					
2650.0	3.074	34.976	247.8	2.858					
2700.0	3.028	34.971	247.8	2.807					
2750.0	2.978	34.966	247.7	2.753					
2800.0	2.935	34.962	246.8	2.707					
2850.0	2.894	34.958	246.9	2.661					
2900.0	2.857	34.954	246.2	2.619					
2950.0	2.830	34.951	246.6	2.589					
3000.0	2.802	34.948	246.4	2.555					



Station 103

Station	: 104	Campagne	: OVIDE 02
Date	: 10-07-02	Navire	: N/O THALASSA
Profondeur	: 4327	Organisme	: IFREMER
Position	: N 40 20.04		
	W 10 34.54		

PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.	PRESSION	TEMPERA- TURE	SALINITE	OXYGENE DISSOUS	TEMP. POTENT.
dbar	deg.cels.	psu	umol/kg	deg.cels.	dbar	deg.cels.	psu	umol/kg	deg.cels.
1.0	17.787	35.854	233.3	17.787	3050.0	2.750	34.942	246.1	2.499
10.0	17.791	35.854	238.0	17.789	3100.0	2.713	34.939	246.2	2.458
20.0	17.775	35.866	242.8	17.772	3150.0	2.690	34.936	245.7	2.430
30.0	17.628	35.879	242.2	17.623	3200.0	2.667	34.934	246.4	2.403
40.0	17.318	35.852	243.3	17.312	3250.0	2.645	34.931	246.0	2.376
50.0	16.776	35.780	244.2	16.768	3300.0	2.619	34.929	245.6	2.345
100.0	13.878	35.861	231.3	13.864	3350.0	2.602	34.926	245.2	2.323
150.0	13.340	35.798	236.5	13.319	3400.0	2.583	34.924	245.0	2.299
200.0	12.756	35.706	232.9	12.729	3450.0	2.565	34.921	245.3	2.276
250.0	12.296	35.654	219.0	12.262	3500.0	2.550	34.920	245.0	2.257
300.0	11.950	35.622	218.5	11.910	3550.0	2.535	34.918	244.8	2.237
350.0	11.749	35.612	214.8	11.703	3600.0	2.528	34.917	244.8	2.224
400.0	11.556	35.604	208.0	11.504	3650.0	2.512	34.915	244.8	2.203
450.0	11.283	35.585	204.7	11.226	3700.0	2.501	34.913	244.6	2.186
500.0	11.113	35.606	198.7	11.049	3750.0	2.491	34.912	244.3	2.171
550.0	10.661	35.581	195.1	10.593	3800.0	2.482	34.911	243.9	2.157
600.0	10.556	35.616	189.4	10.482	3850.0	2.478	34.909	243.8	2.147
650.0	10.588	35.667	185.8	10.508	3900.0	2.471	34.908	243.9	2.135
700.0	11.071	35.836	183.7	10.982	3950.0	2.466	34.906	244.2	2.124
750.0	11.414	36.005	182.6	11.316	4000.0	2.460	34.906	244.4	2.113
800.0	11.481	36.083	181.5	11.376	4050.0	2.455	34.905	244.1	2.103
850.0	11.498	36.145	180.6	11.386	4100.0	2.454	34.904	244.7	2.096
900.0	11.345	36.154	180.9	11.226	4150.0	2.451	34.903	244.9	2.087
950.0	11.261	36.177	180.9	11.137	4200.0	2.452	34.902	244.9	2.082
1000.0	11.191	36.207	180.7	11.060	4250.0	2.453	34.901	244.5	2.077
1050.0	11.119	36.223	180.7	10.982	4300.0	2.454	34.901	245.1	2.073
1100.0	11.032	36.235	182.5	10.889	4350.0	2.457	34.900	244.5	2.069
1150.0	10.935	36.244	182.8	10.786	4400.0	2.459	34.900	243.1	2.065
1200.0	10.638	36.204	186.0	10.484	4411.0	2.460	34.900	242.0	2.064
1250.0	10.224	36.137	188.8	10.067					
1300.0	9.701	36.033	194.7	9.542					
1350.0	9.237	35.952	199.2	9.077					
1400.0	8.775	35.865	202.7	8.613					
1450.0	7.971	35.712	212.1	7.811					
1500.0	7.330	35.592	218.8	7.171					
1550.0	6.536	35.444	226.6	6.381					
1600.0	6.060	35.365	233.1	5.905					
1650.0	5.650	35.296	238.0	5.495					
1700.0	5.315	35.243	242.0	5.159					
1750.0	5.077	35.208	244.0	4.919					
1800.0	4.687	35.150	248.1	4.529					
1850.0	4.542	35.133	248.2	4.381					
1900.0	4.456	35.126	247.5	4.291					
1950.0	4.234	35.100	249.9	4.067					
2000.0	4.068	35.075	250.8	3.899					
2050.0	3.952	35.063	250.9	3.780					
2100.0	3.902	35.062	249.9	3.726					
2150.0	3.765	35.044	250.3	3.586					
2200.0	3.662	35.030	250.7	3.480					
2250.0	3.612	35.029	250.2	3.426					
2300.0	3.567	35.025	250.0	3.377					
2350.0	3.481	35.015	250.1	3.287					
2400.0	3.424	35.011	248.8	3.226					
2450.0	3.347	35.003	249.0	3.145					
2500.0	3.284	34.996	248.8	3.078					
2550.0	3.241	34.992	248.8	3.032					
2600.0	3.171	34.985	249.0	2.957					
2650.0	3.109	34.980	248.4	2.892					
2700.0	3.048	34.973	247.5	2.827					
2750.0	3.025	34.971	247.9	2.800					
2800.0	2.981	34.967	247.2	2.751					
2850.0	2.919	34.961	247.0	2.686					
2900.0	2.870	34.956	246.8	2.632					
2950.0	2.816	34.951	246.2	2.574					
3000.0	2.779	34.946	246.3	2.533					



Station 104

OVIDE 2002

Contract number: 01/ 2 210 557

**MESURES DE pH ET D'ALCALINITÉ LORS DE LA
CAMPAGNE OVIDE 2002.**

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FINAL SCIENTIFIC REPORT

CO₂ parameters report.

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The carbon system is defined by four variables: pH, Total Alkalinity (TA), partial pressure of carbon dioxide (pCO₂) and Total Inorganic Carbon (C_T). The knowledge of two of these variables allows calculating the other two by means of a set of equations deduced from thermodynamic equilibrium. During the OVIDE 2002 cruise carried out between 11th June and 11th July on board R/V THALASSA, pH and TA measurements were sampled from bottle depths at selected stations (Table 1) and analysed on board. Moreover, pCO₂ has been continuously determined in surface waters along the vessel track.

a) pH analysis.

pH was measured spectrophotometrically following Clayton and Byrne (1993). Roughly, this method consists on adding a dye solution to the seawater sample, so that the ratio between two absorbances at two different wavelengths is proportional to the sample pH.

Sampling and analytical methods.

Seawater samples for pH were collected after oxygen samples from depth using cylindrical optical glass 10-cm pathlength cells, which were filled to overflowing and immediately stoppered.

Seawater pH was measured using a double-wavelength spectrophotometric procedure (Byrne, 1987). The indicator was a solution of m-cresol purple prepared in seawater.

After sampling all the samples were stabilised at 25°C. All the absorbance measurements were obtained in the thermostatted (25±0.2 °C) cell compartment of a CECIL 3041 spectrophotometer.

After blanking with the sampled seawater without dye, 75 µl of the dye solution were added to each sample using an adjustable repeater pipette. The absorbance was measured at three different fixed wavelenghts (434, 578 and 730 nm), pH, on the total hydrogen ion concentration scale, is calculated using the following formula (Clayton and Byrne, 1993):

$$\text{pH}_T = 1245.69/T + 3.8275 + (2.11 \cdot 10^{-3})(35-S) + \log((R-0.0069)/(2.222-R \cdot 0.133))$$

where R is the ratio of the absorbances of the acidic and basic forms of the indicator corrected for baseline absorbance at 730 nm ($R = A_{578}/A_{434}$), T is temperature in Kelvin scale and S is salinity.

DelValls and Dickson (1998) in a revision of the pH values initially assigned to the 'tris' buffers used to characterise the indicator, have suggested an increase of 0.0047, which translate into a comparable increase in the pH_T values finally calculated.

Figure 1 shows the deviation from the mean value of the pH_{25_T} measurements on the CRM batches. The mean pH_{25_T} values obtained over 62 measurements done on samples from batch 55 was 7.9170 ± 0.0023 , and over 20 samples of batch 54 was 7.9191 ± 0.0016 . The corresponding theoretical pH_{25_T} values for these batches using the dissociation constants from Lueker *et al.* (2000) were 7.9172 and 7.9184, respectively. Therefore, our pH measurements are in agreement with the theoretical values.

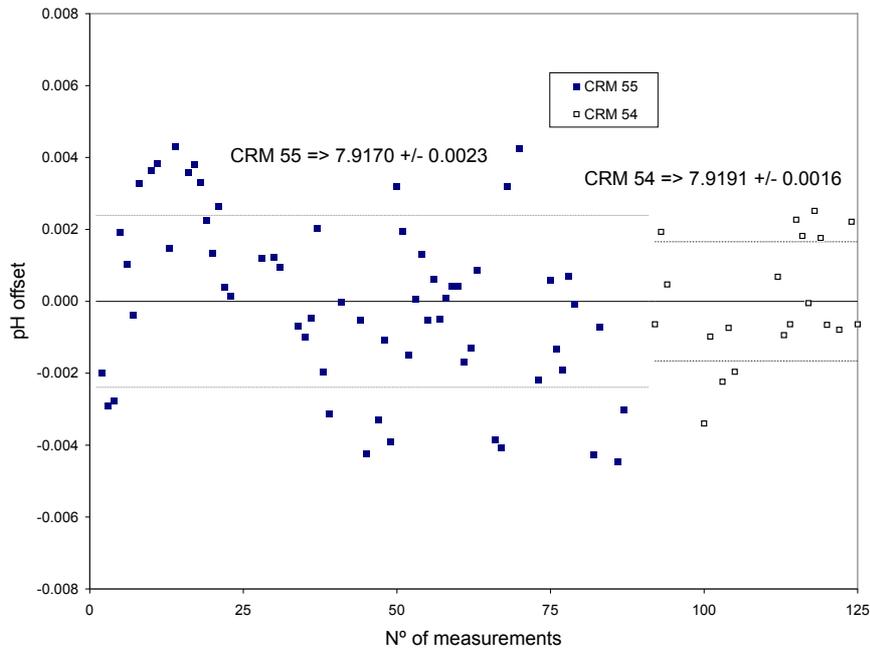


Figure 1. Deviations from the mean value of the pH measurements on the CRM during the cruise. The dotted lines represent the standard deviation from the mean.

Reproducibility.

Regarding the reproducibility of our measurements, at station 73 all the bottles were closed at the same depth, about 4236 meters. We took and analysed 26 samples taken from 26 different bottles. Besides, we analysed 6 samples taken from two bottles. Table 2 shows the results of these measurements.

Table 2. Summary of the reproducibility on pH_{25_T} measurements (station 73).

	<u>Samples taken at the same Niskin bottle</u>		<u>Samples taken at different Niskin bottles</u>
Bottle	22	5	from 3 to 30

Mean	7.7364	7.7356	7.7357
STD	0.0005	0.0013	0.0011
N	6	6	26

In several stations two Niskin bottles were closed at the same depth. Figure 2 shows the absolute pH difference between replicates. The mean and standard deviation of these differences is 0.0016 ± 0.0015 (n=32).

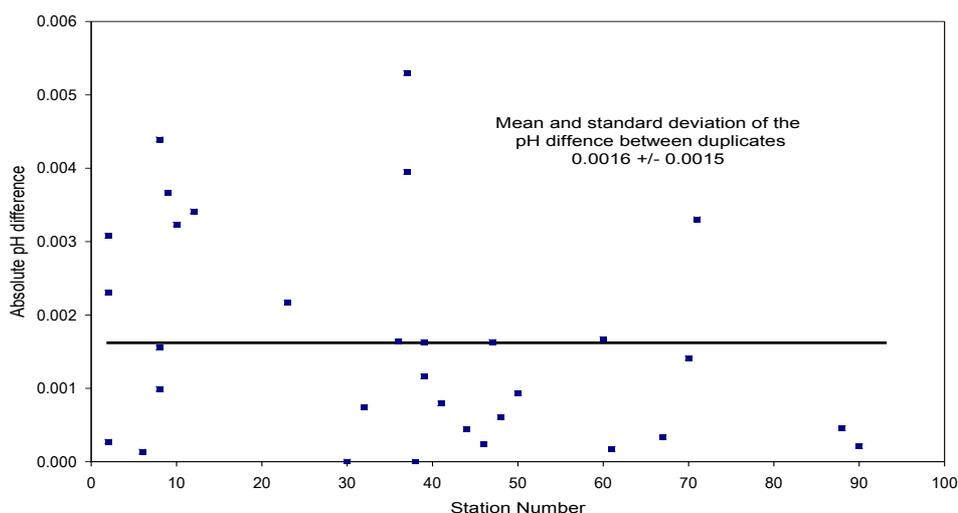


Figure 2. Absolute difference in the pH values for the duplicates taken at each station during the cruise. The line is the mean value of the differences.

From the former series of analysis we conclude that pH was determined during the OVIDE cruise with an uncertainty of ± 0.0014 pH units, this is the mean of the standard deviations obtained in the CRM and reproducibility analyses.

b) Alkalinity analysis.

Sampling and analytical methods.

Following the sampling sequence proposed during WOCE (World Ocean Circulation Experiment), seawater samples for Total Alkalinity (TA) were collected after pH samples, in 600 ml glass bottles. Samples were filled to overflowing and immediately stopped. TA

profiles were usually sampled and analysed every other station (Table 1). Eighteen samples were taken at each profile, all the bottle levels were analysed from bottom up to 500 meters, and every two levels from 500 meters up to the surface.

TA was measured using an automatic potentiometric titrator "Titrino Metrohm", with a Metrohm 6.0233.100 combination glass electrode and a Pt-100 probe to check the temperature. Potentiometric titrations were carried out with hydrochloric acid ($[HCl] = 0.1\text{ N}$) to a final pH of 4.40 (Pérez and Fraga, 1987). The electrodes were standardised using a buffer of pH 4.42 made in CO_2 free seawater (Pérez *et al.*, 2002). Table 3 shows the value of the asymmetrical pH (pH_{as}), which is the value of the electrode pH after its calibration. The 0.1 N hydrochloric acid was prepared mixing 0.5 mol (18.231 g) of commercially HCl supplied by Riedel-deHaën® (Fixanal 38285) with mili-Q water into a graduated 5-L beaker at controlled temperature conditions. The HCl normality (Table 3) is exactly referred to 20°C. The variation of salinity after the titration is lower than 0.1 units, which is taken into account in the final TA calculation.

Quality control.

Usually, each sample is analysed twice for alkalinity. Table 3 shows the average standard deviation of the replicates analysed during each batch of analysis. This difference was about $1.0\ \mu\text{mol}\cdot\text{kg}^{-1}$.

CRM analyses were performed in order to control the accuracy of our TA measurements. Accordingly, the final pH of every batch of analyses was corrected to obtain the closest mean TA on the CRM analyses to the certified value. Table 3 shows the pH (ΔpH) correction applied to each batch and the mean value of the CRM determinations after applying the former correction.

In order to check the precision of the TA measurements, surface seawater was used as a "quasi-steady" seawater substandard (SB). It consists in surface seawater taken from the non-toxic supply and stored in the dark into a large container (25 liters) during 2 days before use. This substandard seawater was analysed at the beginning and at the end of each batch of analyses. The reproducibility of these substandard measurements is better than 0.05% (Table 3) and the estimated drift for each day was very low.

Table 3. Daily calibrations of the pH electrode during the TA analyses. pH_{as} is the asymmetrical pH, T is the temperature at which the electrode was calibrated with the buffer solution which has a very stable pH of 4.42 despite the temperature variation. N_{HCl} is the normality of the hydrochloric solution used. ΔpH is the pH correction applied to each set of measurements to refer the TA determinations on the CRM to the corresponding nominal value: batch 55 has a certified TA value of $2227.9 \mu\text{mol}\cdot\text{kg}^{-1}$ and batch 54, $2342.1 \mu\text{mol}\cdot\text{kg}^{-1}$. The mean value of the TA measurements on the CRM samples is also shown (Fitted TA). At the beginning and the end of each batch of measurements a series of substandard (SB) analyses was done, the mean and the drift obtained from those analyses are also shown. The average of the difference (Av. Dif.) in the duplicate's analyses is shown.

Day 2002	pH _{as}	T °C	pH buffer	N _{HCl}	CRM #	ΔpH	Fitted TA	SB1 TA	SB2 TA	Drift	Av. Dif.	Station
14-6	6.90	24.8	4.42	0.100008	55	0.010	2227.9	2336.9		0.002%	0.8	0
17-6	6.91	24.0	4.42	0.100008	55	0.010	2227.9	2333.1		0.000%	0.6	2 – 3
19-6	6.92	22.2	4.42	0.100008	55	-0.010	2229.6	2334.1		0.000%	1.0	6 – 10
19-6	6.93	22.2	4.42	0.100008	55	-0.025	2228.1	2334.7		-0.001%	1.4	12 - 14
20-6	6.91	24.0	4.42	0.100008	55	-0.010	2227.9	2334.1		0.001%	1.0	16 - 18
21-6	6.93	23.4	4.42	0.100008	55	-0.015	2228.4	2334.1		0.000%	0.9	20 - 24
22-6	6.93	21.9	4.42	0.100008	55	-0.015	2228.5	2333.5		0.000%	1.1	26 - 30
23-6	6.93	22.0	4.42	0.100008	55	-0.015	2227.9	2333.4		0.000%	1.0	32 - 36
24-6	6.94	21.9	4.42	0.100008	55	-0.015	2227.7	2335.0		0.000%	1.0	38 - 40
25-6	6.93	22.5	4.42	0.100008	55	-0.005	2228.0	2335.4		0.000%	0.9	42 - 46
26-6	6.94	22.0	4.42	0.099978	55	0.021	2226.2	2335.0		0.000%	0.7	48 - 50
28-6	6.97	17.2	4.42	0.099978	55	-0.007	2227.9	2334.4		0.012%	0.9	52 - 56
29-6	6.97	23.1	4.42	0.099978	55	-0.004	2227.8		2347.9	0.005%	0.7	58 - 62
30-6	6.98	24.5	4.42	0.099978	55	-0.040	2228.4		2348.6	0.000%	0.9	64 - 66
1-7	6.97	26.0	4.42	0.099978	55	-0.001	2227.8		2348.8	0.000%	0.9	68 - 70
2-7	6.99	25.7	4.42	0.099978	55	-0.013	2227.9		2347.9	0.000%	1.2	72
6-7	6.99	25.7	4.42	0.099978	55	0.001	2227.9		2348.4	0.000%	0.8	74 - 76
7-7	7.00	23.0	4.42	0.099978	54	-0.016	2342.1		2346.9	0.000%	1.1	78 - 80
8-7	6.99	25.6	4.42	0.099978	54	-0.016	2342.3		2346.4	-0.003%	1.1	82 - 84
9-7	6.99	25.7	4.42	0.099978	54	-0.019	2342.2		2347.9	0.000%	1.4	86 - 90
10-7	7.00	22.2	4.42	0.099978	54	-0.016	2349.2		2346.5	0.000%	1.2	92 - 96
							Average	2334.2	2347.8		1.0	
							Std	0.7	0.8			
								0.03%	0.04%			

Reproducibility.

In the test station (station 0) 28 bottles were closed at 4000 dbars. Twenty-four of the them were sampled for alkalinity but one of them was rejected because of a likely leakage in the Niskin bottle. Figure 3 shows the analyses made in each Niskin bottle (in some of them two analyses were done, so the mean and standard deviation are shown), labelled consecutively from 3 to 30. The standard deviation of all the TA determinations for these 23 bottles was $0.8 \mu\text{mol}\cdot\text{kg}^{-1}$.

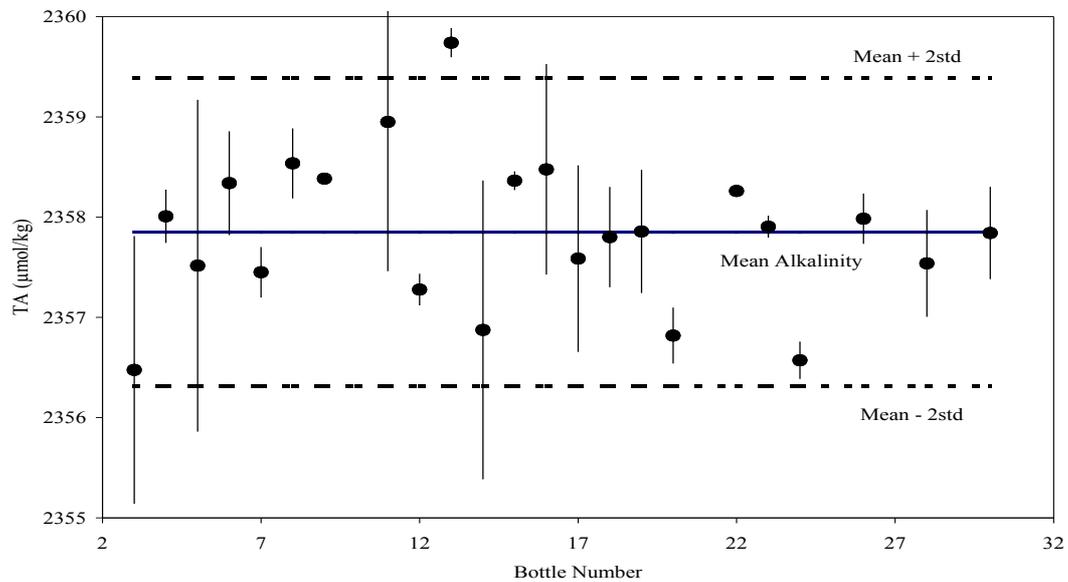


Figure 3. TA values obtained in the test station (station 0). All samples were taken at 4000 dbars. Most of the samples from the same bottle were analysed twice, so the mean and standard deviation of both analyses is shown by vertical bars. The standard deviation of all samples was $0.8 \mu\text{mol}\cdot\text{kg}^{-1}$.

Additionally, in many stations two Niskins bottles were closed at the same depth. Figure 4 shows the absolute difference between the duplicates. The mean difference was $0.5 \mu\text{mol}\cdot\text{kg}^{-1}$.

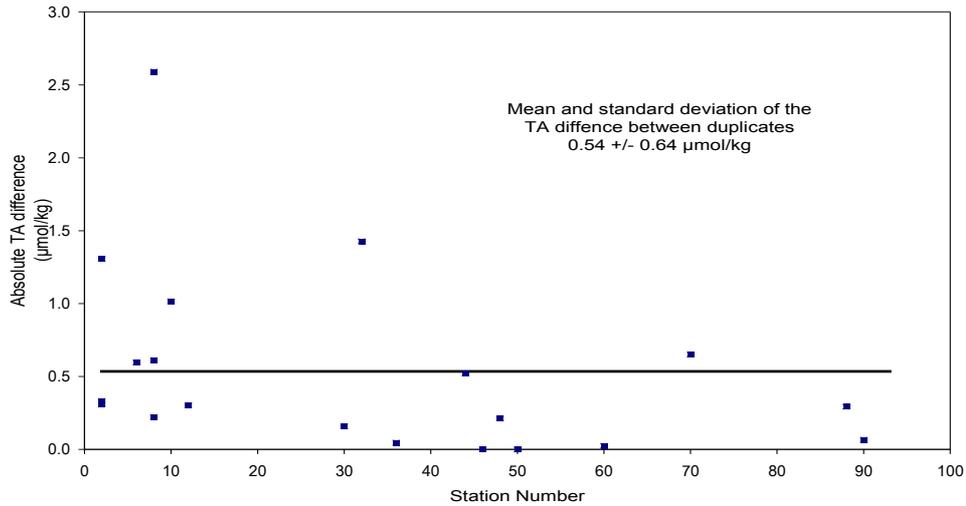


Figure 4. Absolute difference of the TA values for the duplicates taken at each station during the cruise. The line is the mean value of the differences.

From the former series of analyses we conclude that TA was determined during the OVIDE cruise with an uncertainty of $\pm 1 \mu\text{mol}\cdot\text{kg}^{-1}$.

Comparison with silicate.

Silicate and salinity normalized alkalinity ($\text{NTA} = \text{TA}/\text{S}\cdot 35$) in the North Atlantic present a strong covariation. Figure 5 shows the high correlation of NTA versus silicate for samples taken below 200 meters, presumably not affected by biological processes. The standard deviation of the NTA residuals as a function of silicate is $2.9 \mu\text{mol}\cdot\text{kg}^{-1}$. This figure can be considered as the likely maximum error incurred in alkalinity if no error is assumed in the silicate analyses. Other likely sources of uncertainty are the error in the silicate determination and non-linear natural processes, which could contribute to explain the difference between the analytical error in the alkalinity and the standard deviation of these residuals.

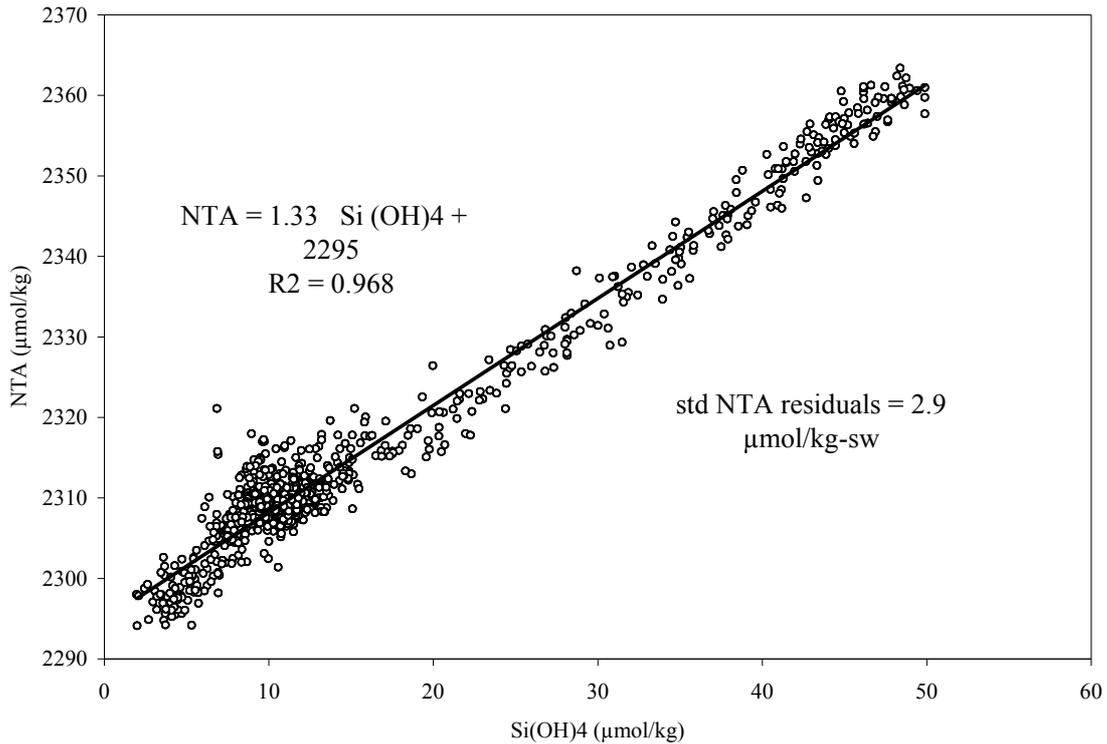


Figure 5. Relationship between normalized alkalinity (NTA) and silicate (Si(OH)_4) for samples below 200 meters, both variable in $\mu\text{mol}\cdot\text{kg}^{-1}$.

c) Underway CO₂ measurements.

A system designed by the IIM group of Vigo was used to measure the mole fraction of CO₂ in air and surface seawater. Atmospheric CO₂ was measured by the system from an air intake mounted in the mast of the ship and surface seawater was pumped from the ship's keel. This system is very similar to the one developed in the University of Kiel by Körtzinger *et al.* (1996) and uses a non-dispersive infrared detector (LICOR 6262) for CO₂ and H₂O. The equilibrator combines two types of equilibration concepts, the bubble and laminar type flows, the first one describes the water chamber constantly renewed with water (appr. 1500 ml) and bubbled with air, and the latter one describes the flow of entering seawater from the top as a laminar flow. Therefore, the counter-current flow direction of seawater and air as well as the large surface area facilitate the establishment of equilibrium.

The equipment was calibrated with two standards, CO₂-free air and high CO₂ standard gas. Surface seawater partial pressure of CO₂ ($p\text{CO}_2$ μatm) at 100% humidity was calculated based on molar fraction of CO₂ ($x\text{CO}_2$, directly measured by the LICOR) ambient pressure p (atm), recorded by the system, and saturation water vapour pressure w (atm).

$$p\text{CO}_2 = x\text{CO}_2 (p - w)$$

pCO₂ is corrected for the temperature shift between in-situ temperature and equilibrator temperature using an empirical equation (DOE, 1994) which was originally proposed by Takahashi *et al.* (1993). The non-ideal behaviour of CO₂, although small, has to be taken into account. The calculation of CO₂ fugacity was done after Weiss (1974).

The equipment also included a probe (SBE micro TSS) for measuring seawater temperature and salinity, a probe for measuring surface oxygen (SBE-43) and a fluorometer (wetstar from Wetlab) to determine the fluorescence of surface water.

The molar fraction of CO₂ is corrected according to the standards run during each calibration. [Table 4](#) shows the small corrections applied at 320 and 370 ppm.

Table 4. Date of the LICOR calibration, and corrections applied over the molar fraction of CO₂ at 320 and 370 ppm.

Calibration date	Cor. at 320 ppm	Cor. at 370 ppm
11-6-02 19:57	0.4	0.6
12-6-02 21:17	0.5	0.7
13-6-02 7:28	-0.2	-0.1
13-6-02 21:51	-0.2	-0.1
14-6-02 11:59	-0.1	0.0
14-6-02 14:05	-0.3	-0.2
15-6-02 6:04	-0.1	0.1
16-6-02 6:05	0.1	0.2
16-6-02 8:44	0.2	0.2
17-6-02 1:52	-0.1	-0.1
18-6-02 2:34	-0.1	-0.1
18-6-02 6:17	-0.3	-0.2
20-6-02 3:19	1.6	1.8
22-6-02 4:13	2.0	2.2
25-6-02 4:04	1.8	2.1
25-6-02 4:14	0.4	0.5
25-6-02 4:49	-0.1	-0.1
28-6-02 6:34	1.7	1.8
28-6-02 6:47	0.1	0.2
30-6-02 9:32	-0.8	0.0
1-7-02 2:39	-1.4	-0.6
1-7-02 2:48	-0.2	-0.2
2-7-02 1:24	0.6	0.6
3-7-02 18:40	0.6	0.3
3-7-02 18:49	0.1	-0.1
6-7-02 13:48	0.3	0.2
6-7-02 14:07	-0.1	0.0
8-7-02 10:33	-0.2	0.3
9-7-02 16:37	-0.2	-0.3
11-7-02 1:29	0.1	0.4
11-7-02 11:41	0.2	0.1

Figure 6 shows the variation of CO₂ fugacity (fCO₂) during the OVIDE cruise, both in surface seawater and the atmosphere. Showing that the Subpolar North Atlantic mainly acted as a sink for atmospheric CO₂ during the period.

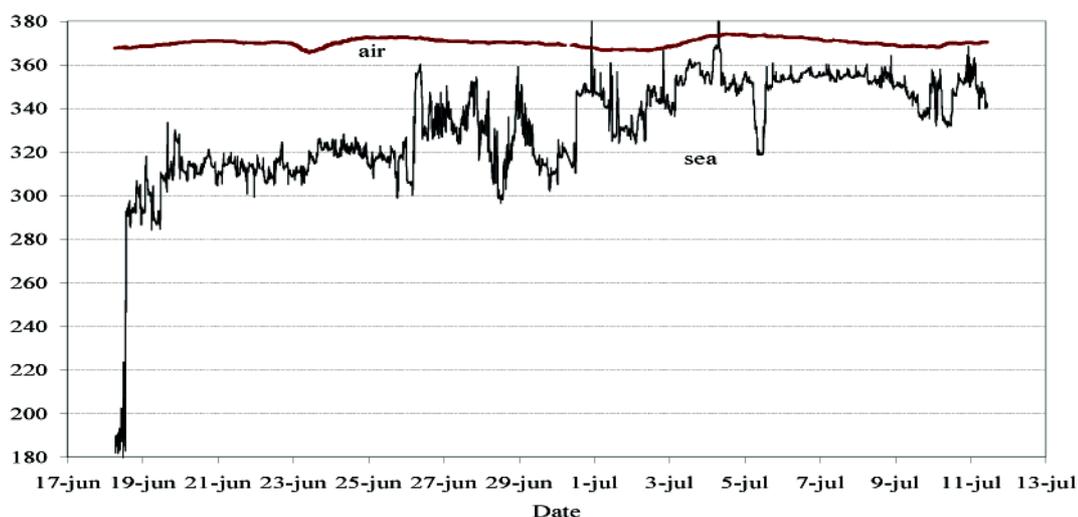


Figure 6. Temporal evolution of the CO₂ fugacity (fCO₂) in seawater and air along the OVIDE cruise.

d) Internal Consistency of Carbonic System.

Next figure compares the CO₂ fugacity (fCO₂) values measured at every station and those calculated from pH_T and TA with the Lueker *et al.* (2000) dissociation constants. The agreement between both fCO₂ is excellent, confirming the good internal consistency of our measurements. The average and standard deviation of the differences between both calculated and measured fCO₂ was $-4 \pm 4.6 \mu\text{atm}$. To centre the fCO₂ residuals to zero pH should be decreased in 0.004 units.

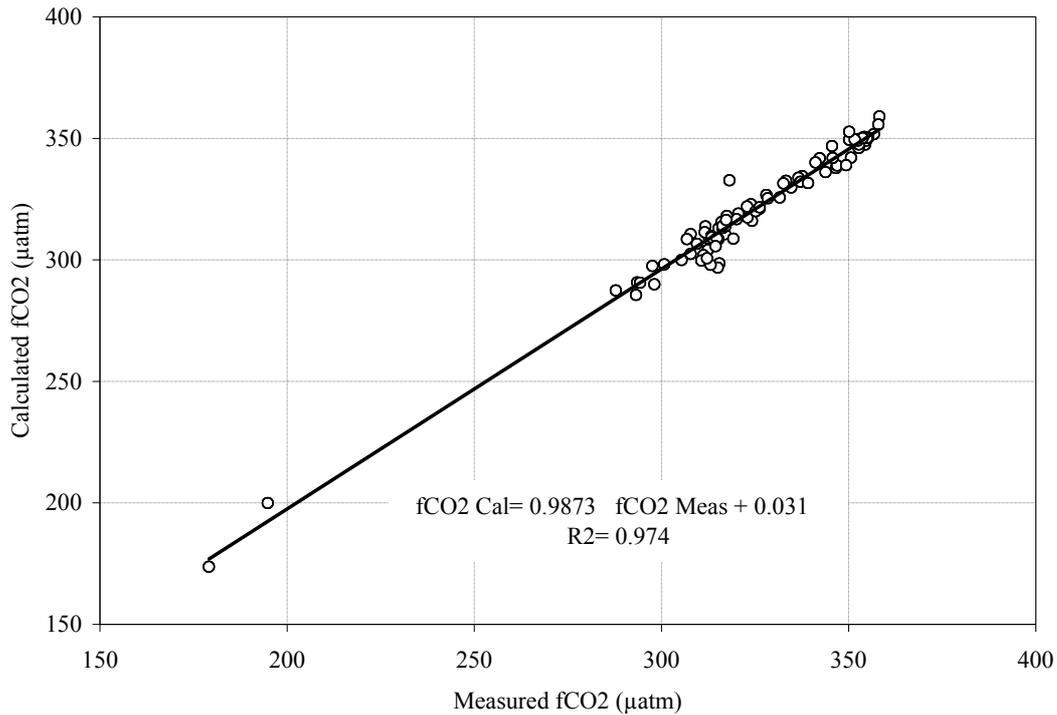


Figure 7. Relationship between CO₂ fugacity measured and calculated as a function of TA and pH measured at the surface of the OVIDE stations.

Table 5 offers more detail about these comparisons, with the pH_T and TA values analysed at the surface of each station, the fCO₂ calculated from them and that measured by the underway equipment. Note that as TA samples were taken more unevenly than pH, surface TA was interpolated as a function of salinity in some stations. The linear function used was:

$$TA = 46.89 \cdot S + 672.43, \quad r^2 = 0.988, n = 46$$

The estimated error in fCO₂ calculated from the reproducibility of pH_T (± 0.0014) and alkalinity ($\pm 1 \mu\text{mol} \cdot \text{kg}^{-1}$) is 3 µatm. This value is slightly lower than that estimated from the direct comparison of measured and calculated fCO₂, 4 µatm. The former error includes other sources of error apart from the sampling and the analysis procedures as those due to the oceanographic representativeness of the samples.

Table 5. Comparison between calculated and measured CO₂ fugacity on some OVIDE stations. Some alkalinity values were calculated as a function of salinity. Total alkalinity (TA) is given in $\mu\text{mol}\cdot\text{kg}^{-1}$ and CO₂ fugacity ($f\text{CO}_2$) in μatm . $\Delta f\text{CO}_2$ is the $f\text{CO}_2$ difference between measured and calculated $f\text{CO}_2$.

Time	Lat	Long	St	Depth	Sal.	T (°C)	pH _{25T}	TA	TA Cal	Cal. fCO ₂	Meas. fCO ₂	$\Delta f\text{CO}_2$
15-6-02 10:51	54.170	26.491	1	8	35.138	10.67	7.901		2320	330	335	-5
16-6-02 8:17	56.019	31.544	2	8	34.869	8.94	7.888	2302	2308	316	324	-8
17-6-02 3:46	57.623	36.005	3	6	34.944	7.63	7.863	2308	2311	321	325	-4
18-6-02 6:15	59.831	42.525	6	6	32.213	-0.35	7.940	2193	2183	174	179	-5
18-6-02 11:06	59.801	42.353	7	6	33.286	0.64	7.911		2233	200	195	5
18-6-02 14:46	59.803	42.272	8	6	34.688	5.88	7.876	2299	2299	286	293	-8
18-6-02 18:14	59.801	42.008	9	6	34.878	6.89	7.886		2308	291	294	-3
18-6-02 21:46	59.796	41.723	10	7	34.863	6.85	7.876	2307	2307	298	301	-3
19-6-02 1:09	59.762	41.309	11	6	34.870	6.82	7.885		2308	291	294	-4
19-6-02 4:55	59.759	40.905	12	6	34.845	6.69	7.874	2307	2306	298	298	0
19-6-02 9:08	59.725	40.252	13	7	34.835	6.71	7.887		2306	287	288	0
19-6-02 13:45	59.686	39.602	14	8	34.818	6.82	7.871	2308	2305	302	308	-5
19-6-02 18:14	59.623	38.961	15	8	34.964	7.92	7.879		2312	311	317	-6
19-6-02 22:48	59.560	38.319	16	8	34.911	7.90	7.866	2306	2310	321	326	-5
20-6-02 3:29	59.495	37.678	17	7	34.919	8.16	7.887		2310	307	309	-3
20-6-02 8:01	59.431	37.043	18	7	34.911	8.13	7.879	2306	2310	313	315	-2
20-6-02 12:43	59.364	36.400	19	8	34.967	8.58	7.892		2312	309	313	-4
20-6-02 17:20	59.299	35.757	20	6	34.904	8.42	7.879	2307	2309	317	320	-3
21-6-02 2:06	59.159	34.468	23	8	34.926	8.76	7.888		2310	314	312	2
21-6-02 6:11	59.104	33.832	24	8	34.955	8.48	7.885	2312	2312	313	316	-3
21-6-02 13:52	58.977	32.575	26	7	35.097	9.52	7.912	2316	2318	304	312	-8
21-6-02 17:39	58.912	31.915	27	8	35.116	9.60	7.905		2319	311	312	0
21-6-02 21:09	58.844	31.283	28	9	35.131	9.62	7.921	2317	2320	299	315	-17
22-6-02 0:38	58.725	30.703	29	8	35.118	10.10	7.915		2319	310	313	-3
22-6-02 7:26	58.402	30.117	31	8.5	35.11	10.33	7.918		2319	311	308	3
22-6-02 19:20	57.669	28.718	33	8	35.152	10.36	7.921		2321	309	315	-7
22-6-02 23:45	57.355	28.157	34	7	35.135	10.47	7.930	2317	2320	302	311	-9
23-6-02 4:15	57.004	27.880	35	7	35.138	10.36	7.920		2320	309	313	-4
23-6-02 9:43	56.619	27.523	36	9	34.952	10.03	7.928	2308	2311	297	315	-18
23-6-02 14:40	56.242	27.281	37	7	34.885	9.94	7.907		2308	314	317	-3
23-6-02 19:30	55.884	27.003	38	7	35.133	10.53	7.913	2316	2320	318	323	-5
24-6-02 0:37	55.502	26.719	39	8	35.146	10.53	7.907		2321	323	324	-1
24-6-02 5:34	55.148	26.414	40	9	35.220	11.04	7.919	2323	2324	319	321	-1
24-6-02 11:03	54.753	26.129	41	12	35.254	11.16	7.918		2326	322	323	-1
24-6-02 15:47	54.386	25.830	42	9	35.127	10.72	7.913	2316	2320	320	325	-5
24-6-02 20:39	54.013	25.536	43	10	35.167	10.95	7.920		2322	317	320	-3
25-6-02 1:53	53.632	25.238	44	6	35.270	11.28	7.927	2327	2326	316	316	0
25-6-02 6:44	53.264	24.945	45	8	35.009	10.69	7.914		2314	318	317	1
25-6-02 11:48	52.875	24.651	46	10	35.075	10.95	7.923	2317	2317	314	316	-2
25-6-02 16:35	52.521	24.363	47	8	35.075	10.95	7.920		2317	316	317	-1
25-6-02 21:44	52.146	24.071	48	11	35.110	11.42	7.910	2310	2319	333	318	15
Time	Lat	Long	St	Depth	Sal.	T	pH _{25T}	TA	TA	Cal.	Meas.	$\Delta f\text{CO}_2$

						(°C)			Cal	fCO ₂	fCO ₂	
6-6-02 3:10	51.771	23.777	49	9	35.181	11.92	7.945		2322	309	307	2
26-6-02 8:18	51.400	23.484	50	12	35.289	12.23	7.895	2327	2327	359	358	1
26-6-02 13:35	51.028	23.190	51	12	35.599	13.76	7.960		2342	322	326	-5
27-6-02 4:09	50.641	22.902	52	8	35.653	14.22	7.953	2346	2344	335	338	-3
27-6-02 9:39	50.280	22.606	53	8	35.683	14.03	7.959		2346	327	328	-1
27-6-02 15:01	49.906	22.312	54	6	35.608	14.14	7.954	2340	2342	333	333	-1
27-6-02 20:32	49.532	22.022	55	8	35.642	14.86	7.947		2344	349	353	-3
28-6-02 2:12	49.160	21.729	56	7	35.692	15.32	7.973	2345	2346	332	333	-1
28-6-02 7:40	48.785	21.434	57	8	35.715	15.03	8.004		2347	300	305	-5
28-6-02 13:21	48.410	21.139	58	8	35.709	15.49	8.023	2350	2347	290	298	-8
28-6-02 19:12	48.039	20.849	59	7	35.716	15.37	7.999		2347	309	315	-6
29-6-02 1:05	47.663	20.554	60	7	35.720	15.84	7.970	2348	2347	342	342	0
29-6-02 12:13	46.916	19.970	62	9	35.751	16.04	8.013	2352	2349	306	314	-9
29-6-02 17:35	46.542	19.677	63	7	35.890	16.93	8.035		2355	298	313	-15
29-6-02 23:15	46.166	19.384	64	8	35.854	16.62	8.028	2358	2354	300	311	-11
30-6-02 4:43	45.797	19.089	65	8	35.771	16.10	8.010		2350	309	319	-10
30-6-02 10:17	45.421	18.796	66	8	35.770	16.15	8.020	2356	2350	301	312	-11
30-6-02 15:53	45.050	18.504	67	8	35.875	16.84	7.990		2355	338	347	-9
30-6-02 21:50	44.673	18.215	68	11	35.866	16.78	7.988	2357	2354	339	347	-8
1-7-02 3:35	44.381	17.818	69	8	35.827	16.53	7.976		2352	347	346	1
1-7-02 8:49	44.077	17.427	70	12	35.829	16.44	7.981	2355	2353	340	341	-1
1-7-02 14:06	43.777	17.031	71	8	35.852	16.29	7.995		2354	325	328	-3
1-7-02 19:34	43.475	16.643	72	10	35.825	16.38	7.996	2355	2352	326	332	-6
5-7-02 17:17	43.181	-16.244	74	9	35.891	17.51	7.988	2357	2355	349	350	-1
5-7-02 22:38	42.883	-15.854	75	8	35.903	17.59	7.991		2356	347	352	-5
6-7-02 4:29	42.582	-15.457	76	6	35.944	17.76	7.990	2363	2358	351	354	-4
6-7-02 10:23	42.281	-15.070	77	10	35.885	17.51	7.987		2355	350	353	-3
6-7-02 16:24	41.983	-14.672	78	7	35.838	17.71	7.984	2353	2353	356	358	-2
6-7-02 22:22	41.684	-14.281	79	8	35.922	17.99	7.997		2357	347	354	-7
7-7-02 4:21	41.384	-13.890	80	7	36.031	18.22	7.996	2362	2362	352	357	-5
7-7-02 10:18	41.082	-13.495	81	12	35.858	17.56	7.992		2354	346	353	-7
7-7-02 16:30	40.787	-13.101	82	7	35.872	17.81	7.991	2355	2355	350	355	-5
7-7-02 22:29	40.552	-12.646	83	8	35.957	17.91	7.994		2359	349	355	-6
8-7-02 4:20	40.335	-12.220	84	6	35.946	17.88	7.993	2359	2358	350	355	-5
8-7-02 9:51	40.333	-11.780	85	11	35.855	17.75	7.993		2354	348	353	-5
8-7-02 15:22	40.333	-11.343	86	8	35.680	17.61	7.988	2344	2346	349	352	-3
8-7-02 20:34	40.334	-10.904	87	9	35.933	18.08	7.995		2357	350	354	-4
9-7-02 1:12	40.334	-10.574	88	8	35.890	17.94	7.994	2356	2355	350	352	-2
9-7-02 5:41	40.333	-10.300	89	7	35.887	17.79	7.988		2355	353	350	3
9-7-02 10:22	40.333	-10.033	90	9	35.791	17.64	7.997	2350	2351	342	346	-4
9-7-02 13:47	40.334	-9.943	91	9	35.738	17.19	7.996		2348	336	344	-8
9-7-02 16:38	40.334	-9.877	92	7	35.679	16.78	7.992	2347	2346	334	337	-3
9-7-02 19:15	40.335	-9.803	93	11	35.668	16.75	7.993	2348	2345	332	337	-5
9-7-02 21:01	40.333	-9.766	94	8	35.672	16.66	7.993	2344	2345	332	339	-7
9-7-02 22:47	40.335	-9.641	95	5	35.612	16.35	7.977		2342	342	351	-9
10-7-02 0:31	40.334	-9.454	96	7	35.615	15.63	7.969	2345	2343	339	349	-10

One of the final aims of measuring TA and pH during the OVIDE cruise is the estimation of the total inorganic carbon (C_T) concentration. The error incurred in TA ($\pm 1 \mu\text{mol}\cdot\text{kg}^{-1}$) and pH (± 0.0014) causes a maximum error in C_T of $2 \mu\text{mol}\cdot\text{kg}^{-1}$. Decreasing the pH values in 0.004 pH units to adjust the pH values to the $f\text{CO}_2$ values measured on the surface, would suppose a mean increase of the final C_T values of $1.8 \mu\text{mol}\cdot\text{kg}^{-1}$. The latter negative bias in the C_T calculations is within the range of $\pm 2 \mu\text{mol}\cdot\text{kg}^{-1}$ due to uncertainties in the determination of pH or TA. A recent synthesis of the Pacific Ocean CO_2 data from twenty-five WOCE/JGOFS/OACES cruises showed that the best data coverage was for coulometric C_T measurements which had an estimated overall accuracy of $3 \mu\text{mol}\cdot\text{kg}^{-1}$ (Lamb *et al.*, 2002). Accordingly, the second most common carbon parameter analysed, TA, had an estimated overall accuracy of $5 \mu\text{mol}\cdot\text{kg}^{-1}$. Intercomparisons of CO_2 system variables in deep waters of the North Atlantic from different cruises will be done to check the consistency of the measurements. Multilinear regressions of CO_2 variables as a function of temperature, salinity, oxygen and nutrients will help us to discern if applying any final adjustment over the pH measurements during the OVIDE cruise.

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CCHDO Data Processing Notes

Date	Person	Data Type	Action	Summary
2008-03-05	<i>Dr. Robert M. Key</i>	BTL	Submitted	csv file
<p>Detailed Notes</p> <p>OVIDE '02 (35TH20020611) Ch. Sci. H. Mercier OVIDE '04 (35TH20040605) Ch. Sci. T. Huck</p> <p>I have a README and other metadata for both cruises. I do not have CTD data. If you have difficulty getting the CTD data from the Ch.Sci, contact Fiz Perez (fiz.perez@iim.csic.es) who has been extremely helpful on these cruises.</p> <p>I have all the OVIDE bottle data ('02, '04, '06). The most recent is still proprietary (CARBOOCEAN release rules). All parameters have been flagged, etc. I will provide as part of CARINA. Kozyr already has a "CLIVAR" repeat set up for these cruises. High quality carbon on all three lines (Fiz Perez).</p> <p>Data rcd from F. Perez and this file initialized 8/18/06</p> <p>Cruise dates:6/11/02 - 7/11/02 Chief Scientist: Herle Mercier Ship and cruise designation:R/V Thalassa (Ovide02 Expedition) EXPCODE 35TH20020611 (Ovide 2002) Region: Spain to Greenland 90 full depth stations with 28 bottle Rosette;</p> <p>Hydro: Who - H. Mercier; Status - final; S Plus - up to date Notes: Calibrated data from A. Billant 9/25/06</p> <p>Nuts/O2: Who - P. Morin; Status - final; S Plus - up to date Notes: Nice quality data Oxygen (deep) compare favorably with WOCE for for same region Nitrate (deep) compare favorably with WOCE for for same region Phosphate (deep) compare favorably with WOCE for for same region Silicate (deep) compare favorably with WOCE for for same region, but may be very slightly higher (<=1umol/kg) CTDOxy from A. Billant 9/25/06</p> <p>TCO2: Who - ; Status - not measured; S Plus - Notes:</p> <p>TA: Who - F.Perez, M. Alvarez; Status - final; S Plus - Notes: Automatic potentiometric titrator Values adjusted to CRM Precision and accuracy of reported values about 1umol/kg See Perez and Alvarez, 2002 (final report)</p> <p>pCO2: Who - ; Status - ; S Plus - Notes: underway only System similar to that described by Kortzinger et al. (1996) only two stds used (zero and high) system included measurement of T,S,O2, fluorometer</p> <p>pH25: Who - F.Perez, M. Alvarez; Status - final; S Plus - Notes: Spectrophotometric, Total H+ scale</p>				

CRM Batch 54 and 55; Lueker, et al. (2000) constants
no correction necessary

CFC: Who - P. Morin; Status - unknown; S Plus -
Notes: No data in file.

C-14: Who - ; Status - not measured; S Plus -
Notes:

C-13: Who - ; Status - not measured; S Plus -
Notes:

H-3/He-3: Who - not measured; Status - ; S Plus -
Notes:

Other: LADCP mounted on Rosette (P. Lhermenier)

References:

Perez, F.F. and M. Alvarez, Mesures de pH et d'Alcalinité lors de la campagne OVIDE 2002, Final Scientific Rpt., Instituto de Investigaciones Marinas, (CSIC), C/ Eduardo Cabello, N° 6, 36208 VIGO.

2008-03-05	<i>Dr. Robert M. Key</i>	Cruise Report	Submitted	Word Doc
2009-02-11	<i>Dr. Robert M. Key</i>	CTD	Submitted	Ready to go online

Detailed Notes

Action: Place Online

Notes: Direct quote from PI, Herle Mercier (Herle.Mercier@ifremer.fr) regarding these data (report will be submitted separately):

I AGREE to a public release of the OVIDE 2002 CTD data and reports via the CCHDO. Note that we would appreciate that anyone using these data cites the following paper: Lherminier Pascale, Herlé Mercier, Claire Gourcuff, Marta Alvarez, Sheldon Bacon, Catherine Kermabon, 2007: Transports across the 2002 Greenland-Portugal OVIDE section and comparison with 1997. J. Geophys. Res., 112(C7), C07003, doi:10.1029/2006JC003716.

2010-09-21	<i>Justin Fields</i>	BTL	Website Update	Copied from CARINA collection
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Detailed Notes

This bottle file was part of the CARINA collection compiled by Bob Key.

2013-02-06	Andrew Barna	expocode	Website Update	ExpoCode Changed, files updated
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Detailed Notes

I have changed the expocode on CCHDO and in the exchange bottle file from 35TH20020611 to 35TH20020610. The dates listed on CCHDO have also been corrected. The old expocode is now listed as an alias.

2013-02-07	Jerry Kappa	Cruise Report	Website Update	Final PDF version online
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Detailed Notes

I've placed 1 new version of the cruise report:

35TH20020610do.pdf

into the directory: co2clivar/atlantic/ovide/ovide2_35TH20020610/

It includes the final CTD report in French, the final CO2 report in English, summary pages and CCHDO data processing notes as well as a linked Table of Contents and links to figures, tables and appendices.