REPORT AND INDEX OF

UNDERWAY MARINE GEOPHYSICAL DATA

ALARCON EXPEDITION

LEG 1

(ALAR01RR)

R/V Revelle

(Issued January 1999)

Ports:

San Diego, California (17 October 1998)

to

Pichilingue, Mexico (26 October 1998)

Chief Scientist:

Peter Lonsdale, Scripps Institution
email: plonsdale@ucsd.edu

Resident Marine Technician - Bob Wilson

Computer Technicians - Jim Charters, Dan Jacobson

Post-Cruise Processing and Report Preparation by the
Geological Data Center, Scripps Institution of Oceanography
La Jolla, California 92093-0223

GDC Cruise I.D.# 281

REPORT AND INDEX OF NAVIGATION
AND UNDERWAY GEOPHYSICAL DATA

Processed by the Geological Data Center
Scripps Institution of Oceanography

Contents:

Index Chart - gives track of cruise leg, dates, ports, and mileage of each type of data collected.

Track Charts - annotated with dates and hour ticks.

Profiles - depth, magnetic and gravity free air anomaly vs. distance. (Sections of track with seismic reflection data have a wide black line along the bottom of the profile.)

Sample Index - list of begin/end times and positions of all underway records as well as samples and measurements from other disciplines collected on the leg.

NOTE: One or more of the underway data types may not be collected on a given leg. For information on the availability and reproduction costs of data in the following forms, contact S.M. Smith, Curator, Geological Data Center, Scripps Institution of Oceanography, La Jolla, California 92093-0223. Phone: (619)534-2752, FAX: (619)534-6500, Internet email: ssmith@ucsd.edu

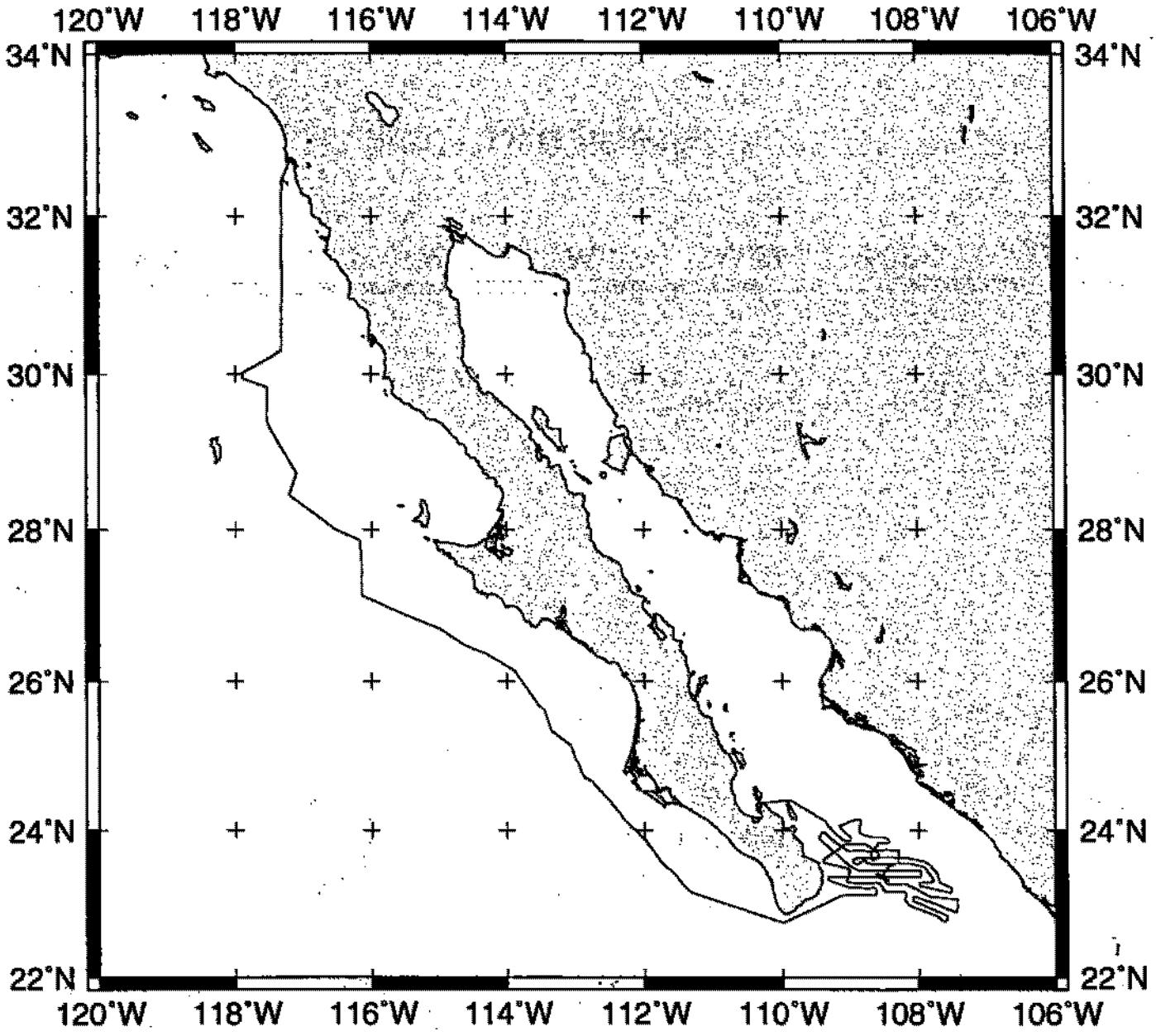
1. Files via ftp or on 8mm (Exabyte) and 4mm (DAT) magnetic tape:
   a) Separate time series ASCII files of navigation, single beam depth, gravity and magnetics.
   b) Above data in a single merged ASCII file in the MGD77 Exchange Format.
   c) SeaBeam depth data (binary, Sun byte order)
   d) SeaBeam Sidescan data.

2. Microfilm (35 mm flowfilm) or hard copies of:
   a) Underway watch log book.
   b) SeaBeam vertical beam profile/Sidescan records.
   c) 3.5 kHz and 12 kHz echosounder records.
   d) Seismic reflection profiler records.

3. Navigation listing with times and positions of fixes and course and speed changes.

4. Custom plots in Mercator projection:
   a) Track plots.
   b) SeaBeam depth contour plots.
   c) Depth, magnetic or gravity values printed or profiled along track.

rev 4/98



ALARCON EXPEDITION LEG 1 (ALAR01RR)

CHIEF SCIENTIST: Peter Lonsdale, Scripps Institution

PORTS: San Diego - Pichilingue, Mexico

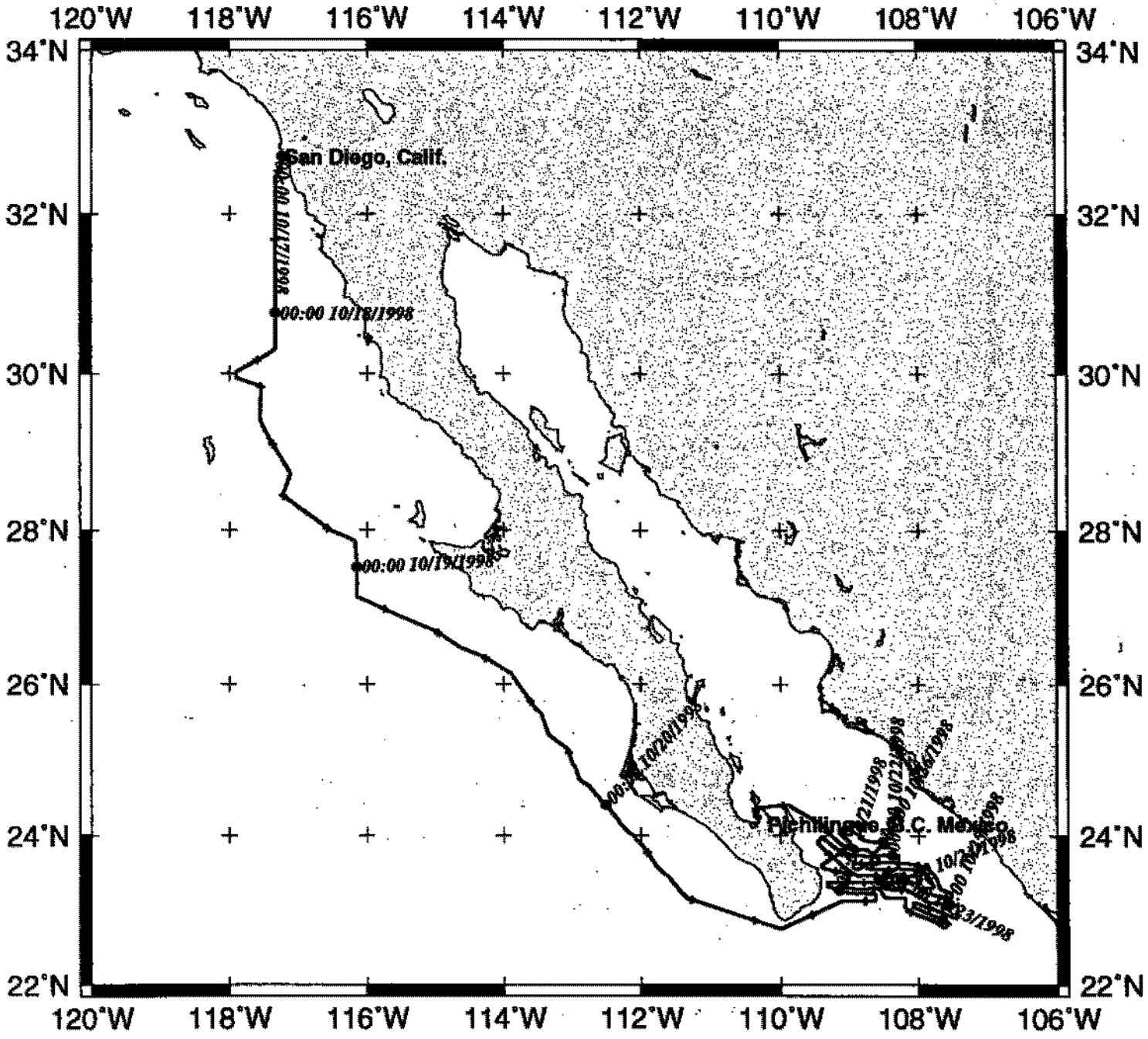
DATES: 17 - 26 October 1998

SHIP: R/V Revelle

TOTAL MILEAGE OF UNDERWAY DATA COLLECTED

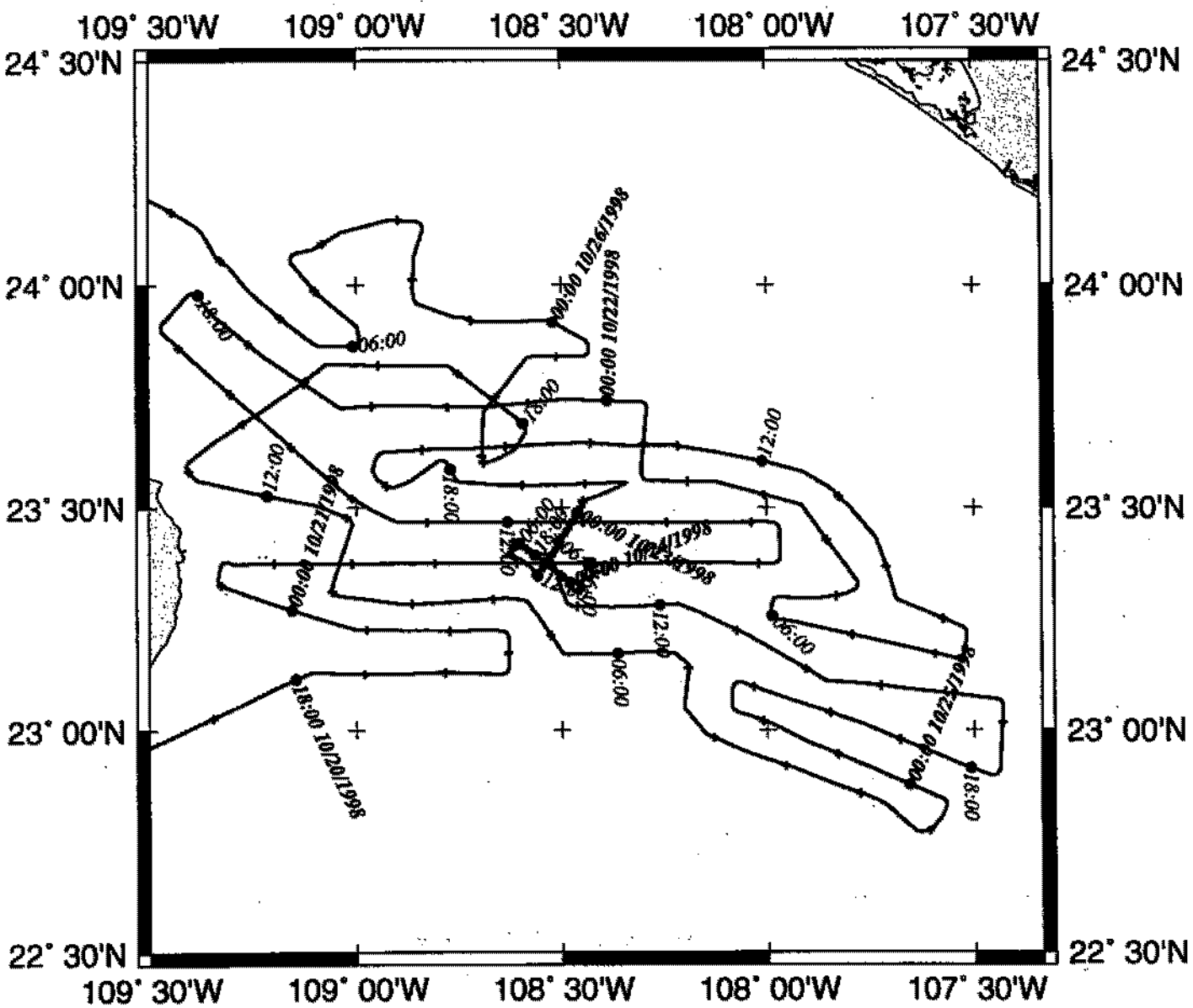
Cruise - 2029 miles	**Magnetics - 1787 miles**
Bathymetry - 2007 miles	**Seismic Reflection - 1915 miles**
Sea Beam - 2007 miles	**Gravity - none collected**

ALAR01RR Track



GMT Jan 8 13:13 :San Diego - Pichilingue, B.C. Mexico, 17 - 26 October 1998:

ALAR01RR Survey



GMT Feb 5 10:48 :San Diego - Pichilingue, B.C. Mexico, 17 - 26 October 1998: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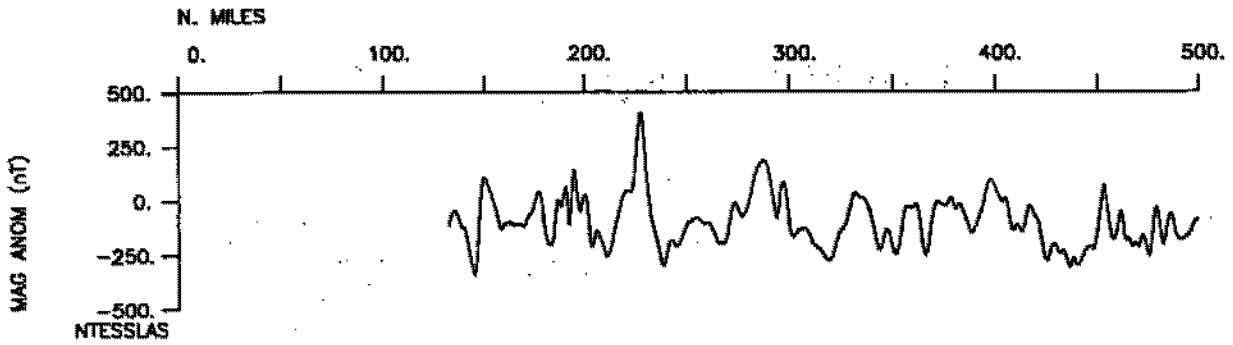
100.
200.
300.
400.
500.
GRAV FREE AIR (mgal)
200.
100.
0.
-100.
-200.
MGALS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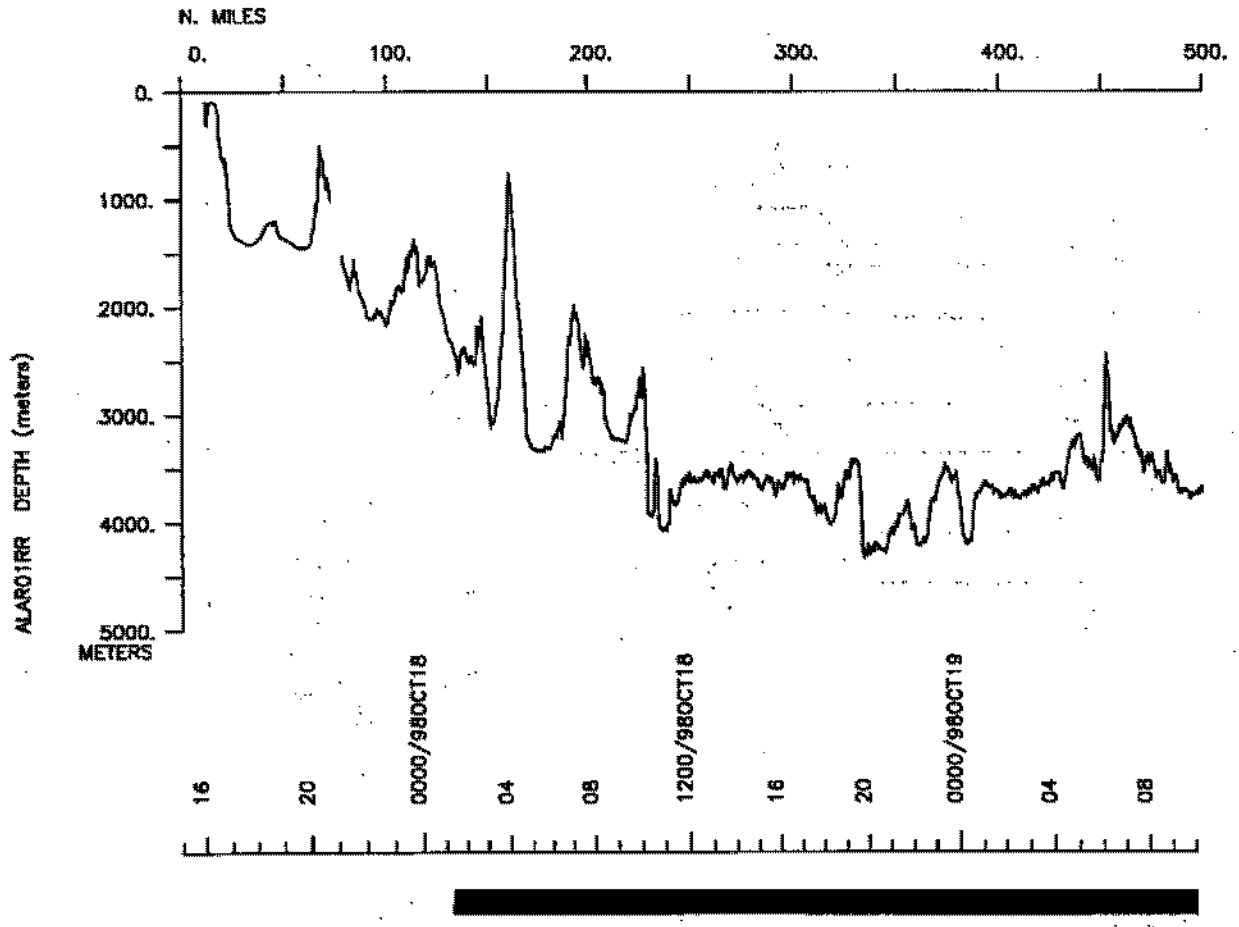
0.
-250.
-500.
NTESSLAS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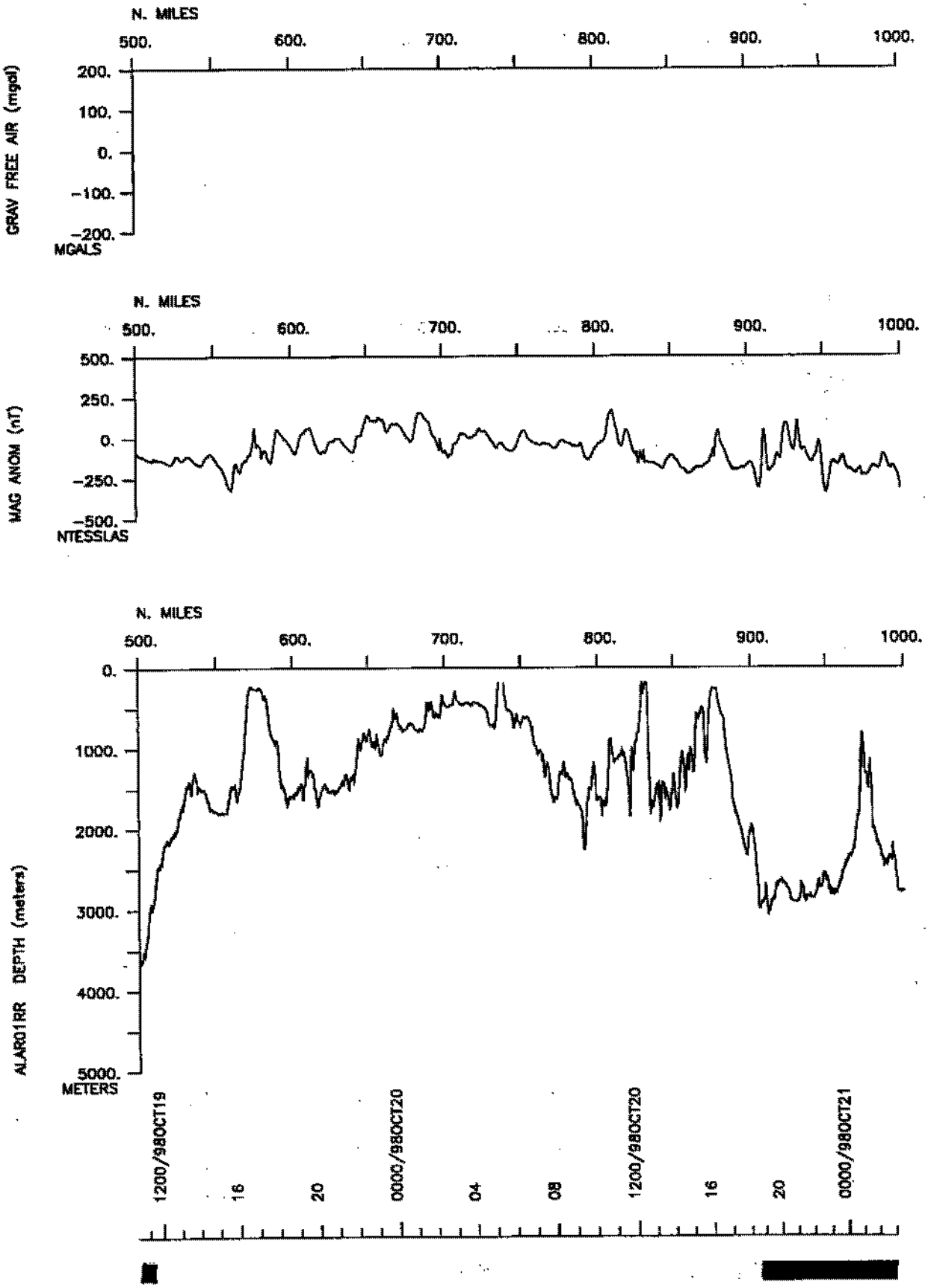
100.
200.
300.
400.
500.
ALAR01RR DEPTH (meters)
0.
1000.
2000.
3000.
4000.
5000.
METERS
16
20
0000/98OCT18
04
08
1200/98OCT18
16
20
0000/98OCT19
04
08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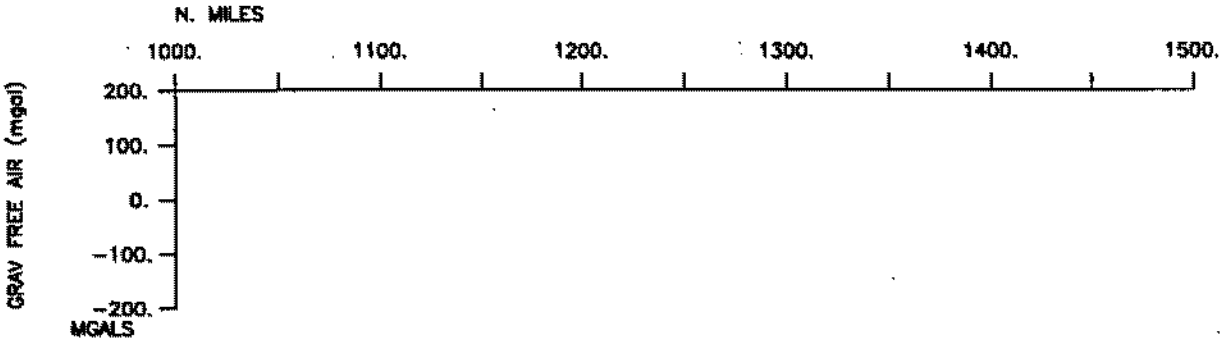
700.
800.
900.
1000.
GRAV FREE AIR (mgal)
200.
100.
0.
-100.
-200.
MGALS
N. MILES
500.
600.
700.
800.
900.
1000.
MAG ANOM (nT)
500.
250.
0.
-250.
-500.
NTESSLAS
N. MILES
500.
600.
700.
800.
900.
1000.
ALAR01RR DEPTH (meters)
0.
1000.
2000.
3000.
4000.
5000.
METERS
1200/980CT19
16
20
0000/980CT20
04
08
1200/980CT20
16
20
0000/980CT21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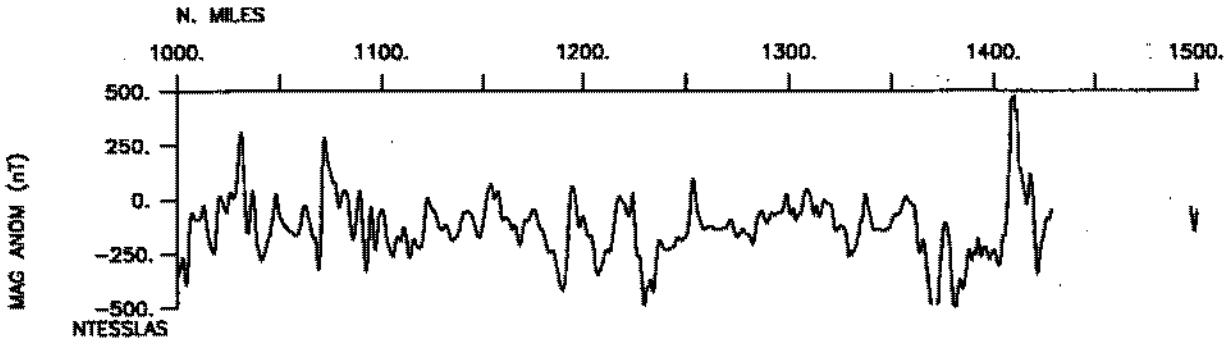
1100.
1200.
1300.
1400.
1500.
GRAV FREE AIR (mgal)
200.
100.
0.
-100.
-200.
MGALS


N. MILES
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1100.
1200.
1300.
1400.
1500.
MAG ANOM (nT)
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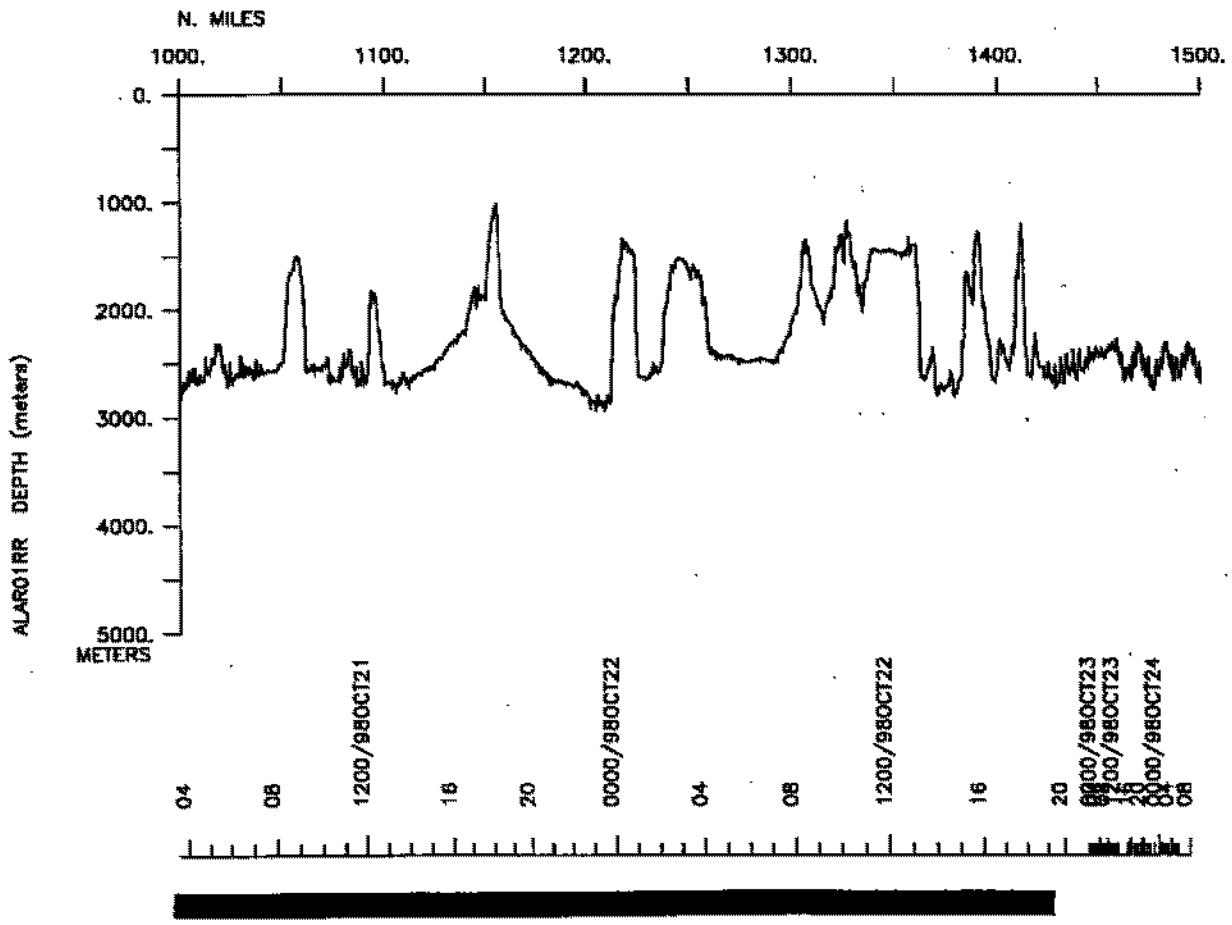
250.
0.
-250.
-500.
NTESSLAS


N. MILES
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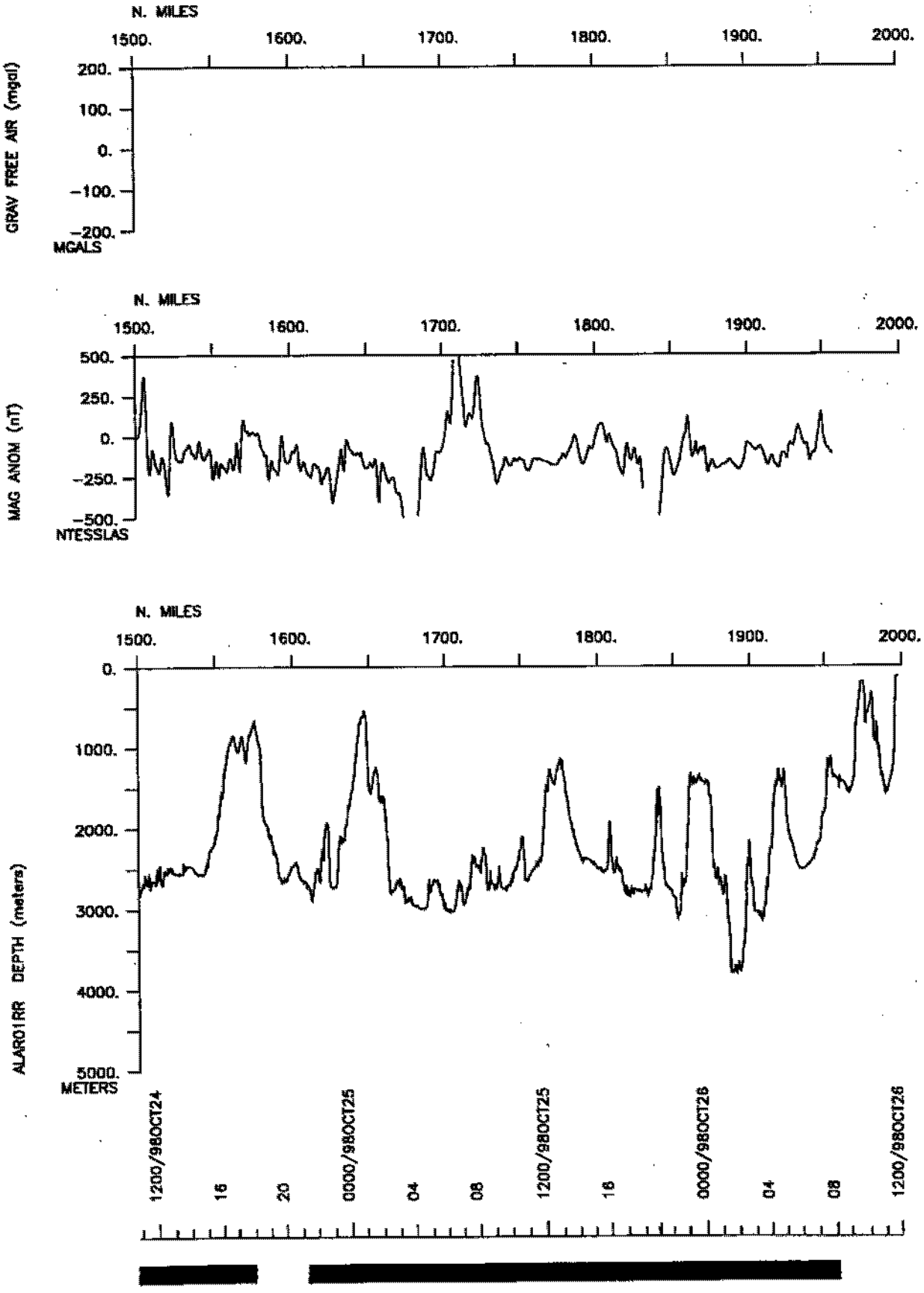
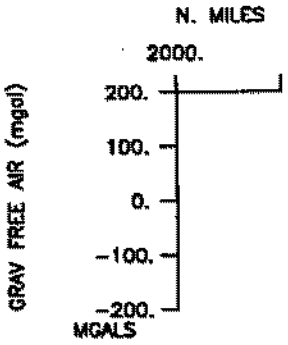
1100.
1200.
1300.
1400.
1500.
ALAR01RR DEPTH (meters)
0.
1000.
2000.
3000.
4000.
5000.
METERS
04
08
1200/98OCT21
16
20
0000/98OCT22
04
08
1200/98OCT22
16
20
0000/98OCT23
1200/98OCT23
0000/98OCT24
08


N. MILES
1500.
1600.
1700.
1800.
1900.
2000.
GRAV FREE AIR (mgal)
200.
100.
0.
−100.
−200.
MGALS
N. MILES
1500.
1600.
1700.
1800.
1900.
2000.
MAG ANOM (nT)
500.
250.
0.
−250.
−500.
NTESSLAS
N. MILES
1500.
1600.
1700.
1800.
1900.
2000.
ALAR01RR DEPTH (meters)
0.
1000.
2000.
3000.
4000.
5000.
METERS
1200/98OCT24
16
20
0000/98OCT25
04
08
1200/98OCT25
16
0000/98OCT26
04
08
1200/98OCT26


N. MILES
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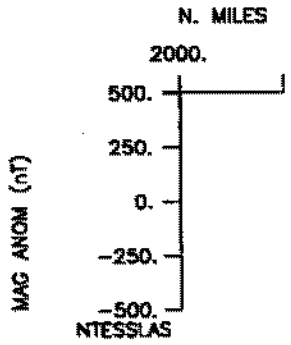
200.
100.
0.
-100.
-200.
MGALS
GRAV FREE AIR (mgal)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250.
0.
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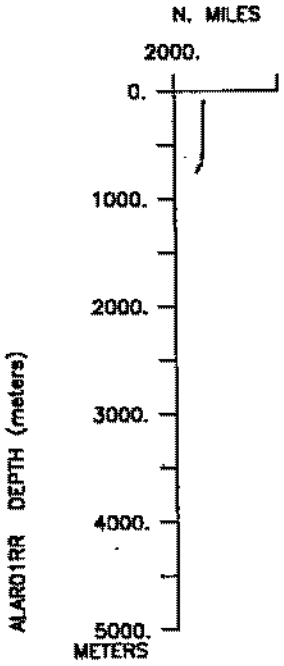
-500.
NTESSLAS
MAG ANOM (nT)


N. MILES
2000.
0.
1000.
2000.
3000.
4000.
5000.
METERS
ALAR01RR DEPTH (meters)

16

S.I.O. SAMPLE INDEX

ALARCON EXPEDITION

LEG 1

(ALAR01RR)

R/V Revelle

(Issued January 1999)

Ports:

San Diego, California (17 October 1998)
to
Pichilingue, Mexico (26 October 1998)

Chief Scientist:

Peter Lonsdale, Scripps Institution

The Sample Index is a first level interdisiplinary listing of time, position, sample identification and disposition of all samples, records and measurements collected on this cruise leg. The index data are encoded at sea by the resident marine technician and processed on shore by the S.I.O. Geological Data Center shortly after the completion of the cruise leg.

Positions are interpolated on the basis of sample time by comparison to a single, edited navigation file. Samples beginning at one time and position and ending at another are entered on two consecutive lines. Disposition and sample type are represented by three and four character codes to permit future computer searches on these parameters. (Listings defining these codes are available from the Geological Data Center.)

GDC Cruise I.D.# 281

#*** Ports ***

1500 171098 0 LGPT B San Diego, California 32-43.00N 117-11.00W f ALAR01RR
1759 261098 0 LGPT E Pichilingue, Mexico 24-15.15N 110-19.51W g ALAR01RR

#*** Personnel ***

#	********NAME********	******TITLE******	*****AFFILIATION****	**CRID**
PECS MPL	Lonsdale, P.	Chief scientist	Scripps Institution	ALAR01RR
PECT STS	Charters, J.	Computer tech	Scripps Institution	ALAR01RR
PECT STS	Jacobson, D.	Computer tech	Scripps Institution	ALAR01RR
PEAT STS	Mogk, S.	Airgun tech	Scripps Institution	ALAR01RR
PERT STS	Wilson, R.	Resident tech	Scripps Institution	ALAR01RR
PESP SIO	Sclater, J.	Scientist	Scripps Institution	ALAR01RR
PESP SIO	Ridgway, J.	Student	Scripps Institution	ALAR01RR
PESP IGPP	Sasagawa, G.	Scientist	Scripps Institution	ALAR01RR
PESP SIX	Volpe, A.	Scientist	L.Livermore Lab	ALAR01RR
PESP SIX	Esser, B.	Scientist	L.Livermore Lab	ALAR01RR
PESP SIO	Hussman, E.	Technician	Scripps Institution	ALAR01RR
PESP STS	Mattson, C.	Electronics tech	Scripps Institution	ALAR01RR
PESP USGS	Hendrickson, G.	Technician	U.S.Geologic Survey	ALAR01RR
PEST MEX	Vasquez, M.	Student	CICESE, Mexico	ALAR01RR
PEST MEX	Noyola, C.	Student	CICESE, Mexico	ALAR01RR
PEST MEX	Escalona, F.	Student	CICESE, Mexico	ALAR01RR
PEST MEX	Gonzalez, A.	Student	CICESE, Mexico	ALAR01RR
PEST SIO	Eakins, B.	Student	Scripps Institution	ALAR01RR
PEST SIO	Massell, C.	Student	Scripps Institution	ALAR01RR
PEST UCB	Gurewitz, H.	Student	U.C. Berekley	ALAR01RR
PEST SIO	Luskin, C.	Student	Scripps Institution	ALAR01RR
PESP SIX	Bianchini, G.	Technician	L.Livermore Lab	ALAR01RR

#*** NOTES ***
#An 'X' in the (B)egin/(E)nd column following the sample code indicates no
#sample or data recovered. A 'C' indicates continuation of data collection
#from before the beginning or after the end of a particular leg. (Moored
#bottom instruments, for example.) The number appearing in the columns
#between the sample identifier and the disposition code, for many sample
#entries, is the water depth in corrected meters.

#GMT DDMMYY #TIME DATE TZ	SAMP CODE	B E	SAMPLE IDENTIFIER	DISP CODE	LATITUDE	LONGITUDE	p c	CRUISE LEG-SHIP

#*** Underway Data Curator - S. M. Smith ext. 42752 ***

#*** Log Books ***

0035 181098 0 LBUW B Underway watch log GDC 30-37.65N 117-19.82W g ALAR01RR
0707 261098 0 LBUW E Underway watch log GDC 23-56.41N 109-12.04W g ALAR01RR

#GMT TIME	DDMMYY DATE	TZ	SAMP CODE	B E	SAMPLE IDENTIFIER		DISP CODE	LATITUDE	LONGITUDE	p c	CRUISE LEG-SHIP
#*** Sea Beam Records (vertical beam and side scan) ***											
1820	171098	0	MBSR	B	v.beam&sscan r-01		GDC	32-02.10N	117-19.89W	g	ALAR01RR
0707	261098	0	MBSR	E	v.beam&sscan r-01		GDC	23-56.41N	109-12.04W	g	ALAR01RR
#*** Echo Sounder Records - Bathy 2000 ***											
1721	181098	0	DPR3	B	Knudsen 3.5kHz r-01		GDC	28-18.18N	117-00.45W	g	ALAR01RR
0955	261098	0	DPR3	E	Knudsen 3.5kHz r-01		GDC	24-15.76N	109-37.21W	g	ALAR01RR
#*** Seismic Reflection Records ***											
0230	181098	0	SPRS	B	airgun 4sec r-01		GDC	30-19.32N	117-19.83W	g	ALAR01RR
1100	191098	0	SPRS	E	airgun 4sec r-01		GDC	26-23.79N	114-24.58W	g	ALAR01RR
1823	201098	0	SPRS	B	airgun 4sec r-02		GDC	23-07.77N	109-06.10W	g	ALAR01RR
1912	221098	0	SPRS	E	airgun 4sec r-02		GDC	23-32.96N	108-33.39W	g	ALAR01RR
1030	241098	0	SPRS	B	airgun 4sec r-03		GDC	23-20.94N	108-30.68W	g	ALAR01RR
0800	261098	0	SPRS	E	airgun 4sec r-03		GDC	24-03.31N	109-19.57W	g	ALAR01RR
#*** Digital Magnetics (Earth Total Field) ***											
0133	181098	0	MGDR	B	digital magnetics		GDC	30-29.23N	117-19.76W	g	ALAR01RR
0800	261098	0	MGDR	E	digital magnetics		GDC	24-03.31N	109-19.57W	g	ALAR01RR
# Gravity ***											
1408	231098	0	GVXX	B	Towed gravity meter		IGPP	23-23.66N	108-37.38W	g	ALAR01RR
0715	241098	0	GVXX	E	Towed gravity meter		IGPP	23-25.39N	108-36.97W	g	ALAR01RR
# Expendable Bathythermographs ***											
1822	171098	0	BTXP	B	6 XBTs (62-70)		GDC	32-43.75N	117-11.93W	g	ALAR01RR
1015	241098	0	BTXP	E	6 XBTs (62-70)		GDC	23-19.91N	108-28.67W	g	ALAR01RR
#*** Conductivity, Temperature, Depth ***											
2245	221098	0	TDXX	B	Tow Yo CTD		ODF	23-30.29N	108-26.97W	g	ALAR01RR
1209	231098	0	TDXX	E	Tow Yo CTD		ODF	23-20.85N	108-33.46W	g	ALAR01RR
0800	241098	0	TDCT	B	CTD	2350m	ODF	23-23.42N	108-31.46W	g	ALAR01RR
1000	241098	0	TDCT	E	CTD	2350m	ODF	23-23.42N	108-31.46W	g	ALAR01RR
1920	251098	0	TDCT	B	CTD	1818m	ODF	23-36.88N	108-41.51W	g	ALAR01RR
2057	251098	0	TDCT	E	CTD	1818m	ODF	23-36.90N	108-41.50W	g	ALAR01RR
#*** Dredge ***											
0318	261098	0	DRRO	B	dredge 1 1260-1536m		GRD	24-15.15N	110-19.51W	g	ALAR01RR
0504	261098	0	DRRO	E	dredge 1 1260-1536m		GRD	24-15.15N	110-19.51W	g	ALAR01RR