REPORT AND INDEX OF

UNDERWAY MARINE GEOPHYSICAL DATA

ALARCON EXPEDITION

LEG 2

(ALAR02RR)

R/V Revelle

(Issued January 1999)

Ports:

Pichilingue, Mexico (26 October 1998)

to

San Diego, California (3 November 1998)

Chief Scientist:

James Hawkins, Scripps Institution
email: jhawkins@ucsd.edu

Resident Marine Technician - Bob Wilson

Computer Technician - 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

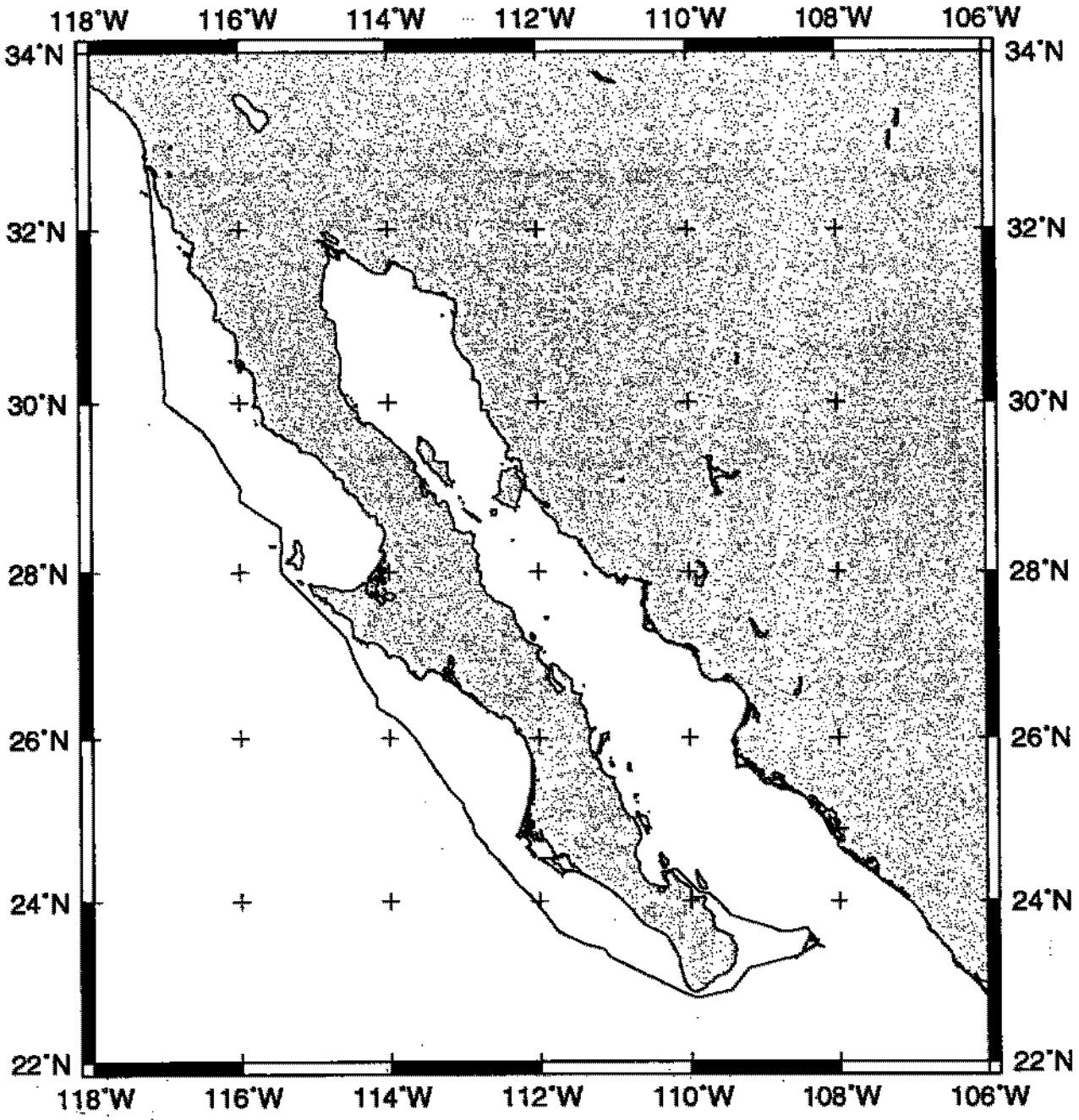
1. Files via ftp or on 8mm (Exabyte) and 4mm (DAT) magnetic tape:
   a) Separate time series ASCII files of navigation, single beam depth, gravity and magnetics.
   b) Above data in a single merged ASCII file in the MGD77 Exchange Format.
   c) SeaBeam depth data (binary, Sun byte order)
   d) SeaBeam 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 2 (ALAR02RR)

CHIEF SCIENTIST: James Hawkins, Scripps Institution

PORTS: Pichilingue, Mexico - San Diego, Calif.

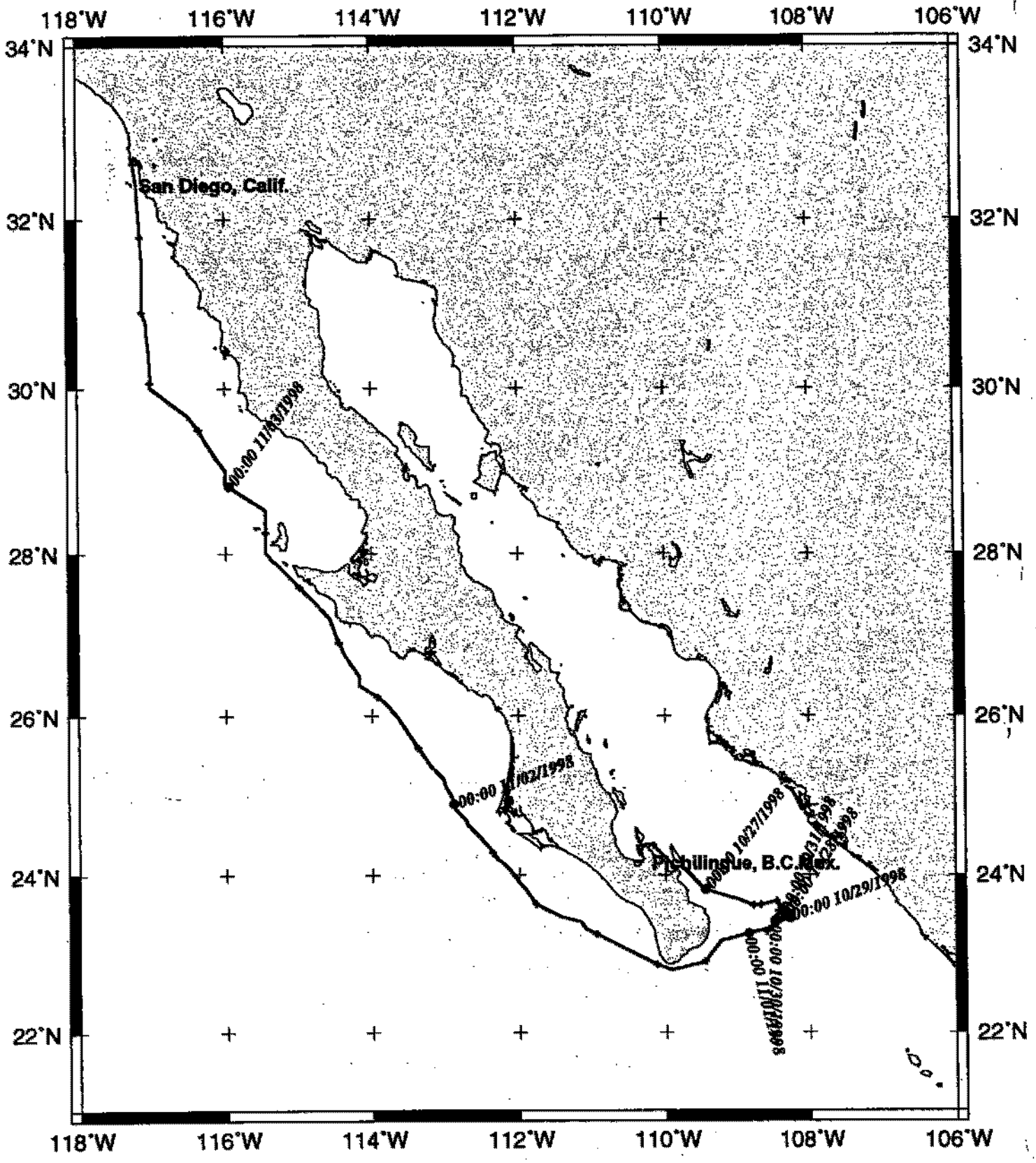
DATES: 26 October - 03 November 1998

SHIP: R/V Revelle

TOTAL MILEAGE OF UNDERWAY DATA COLLECTED

Cruise - 1146 miles	**Magnetics - none collected**
Bathymetry - 1104 miles	**Seismic Reflection - 15 miles**
Sea Beam - 1104 miles	**Gravity - none collected**

ALAR02RR Track



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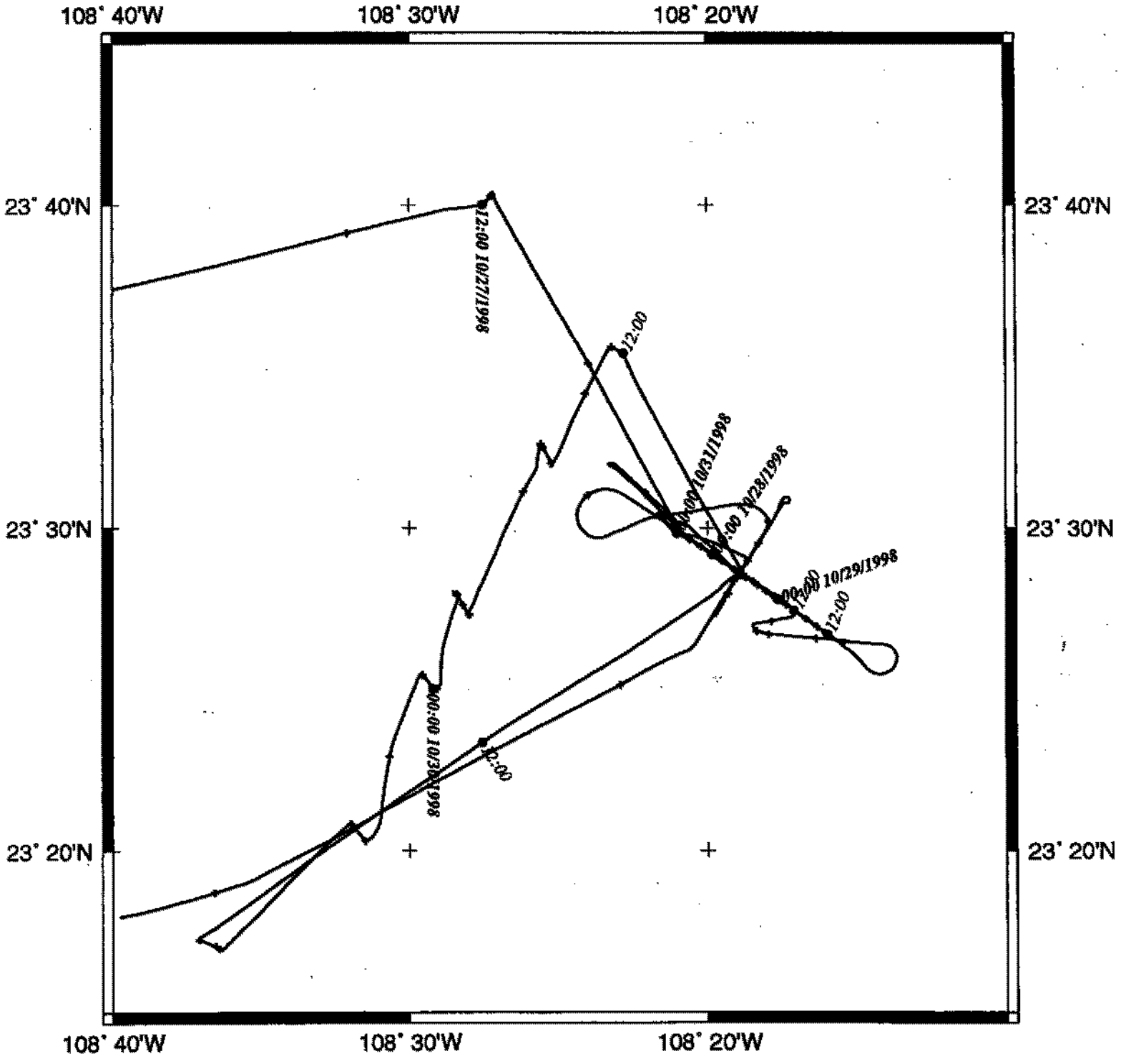
ALAR02RR Survey



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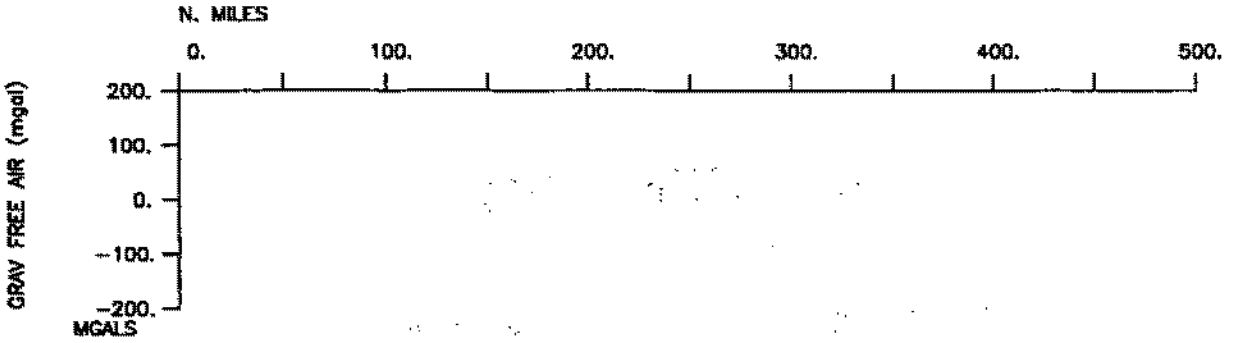
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400.
500.
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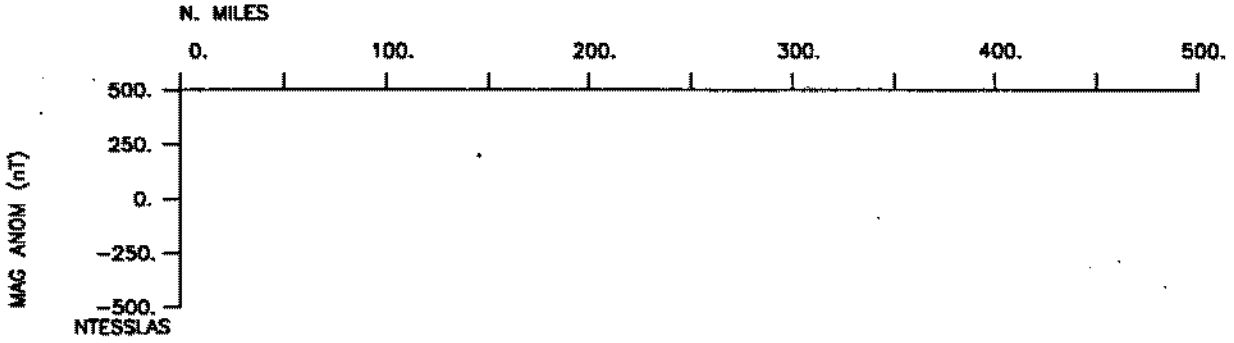
0.
-100.
-200.
MGALS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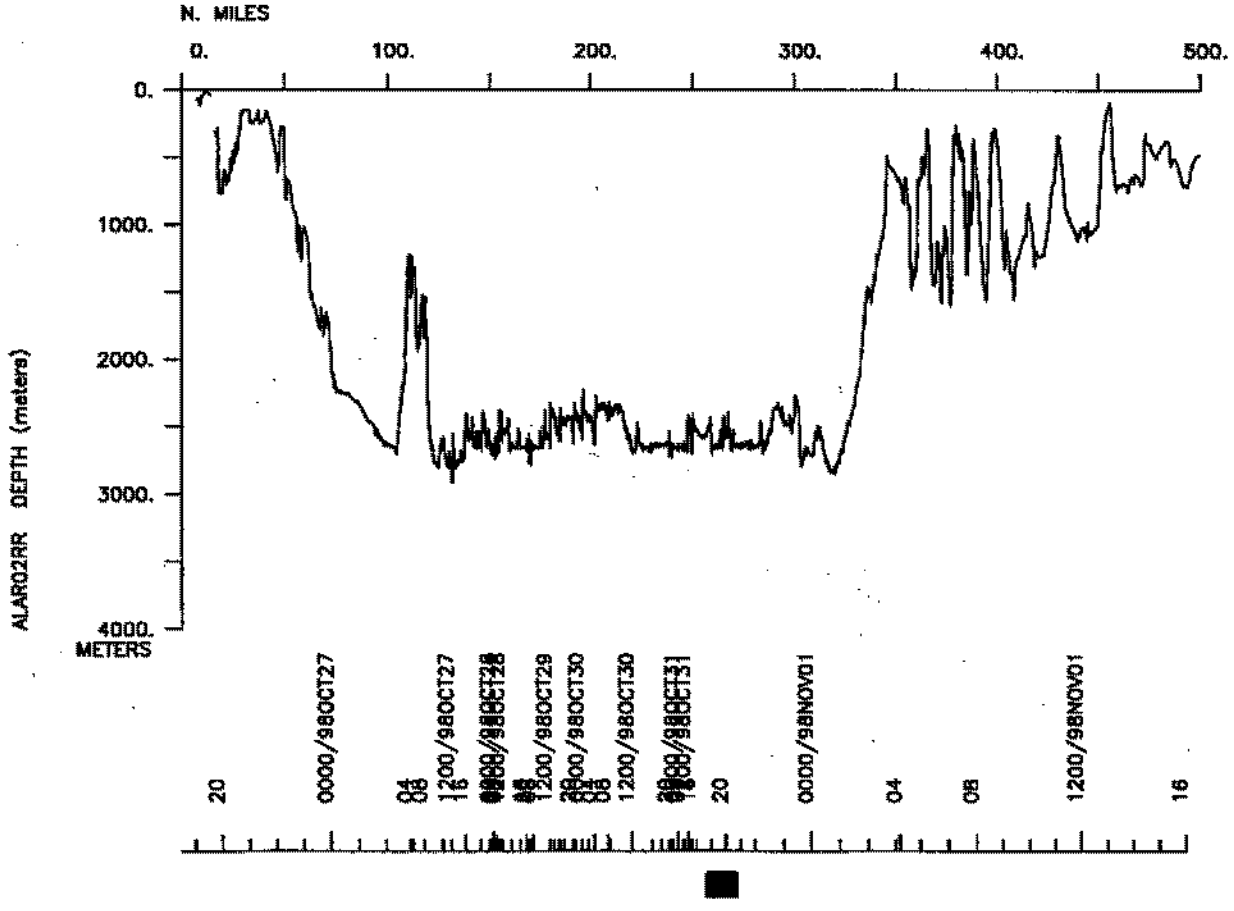
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3000.
4000.
METERS
20
0000/98OCT27
04
08
1200/98OCT27
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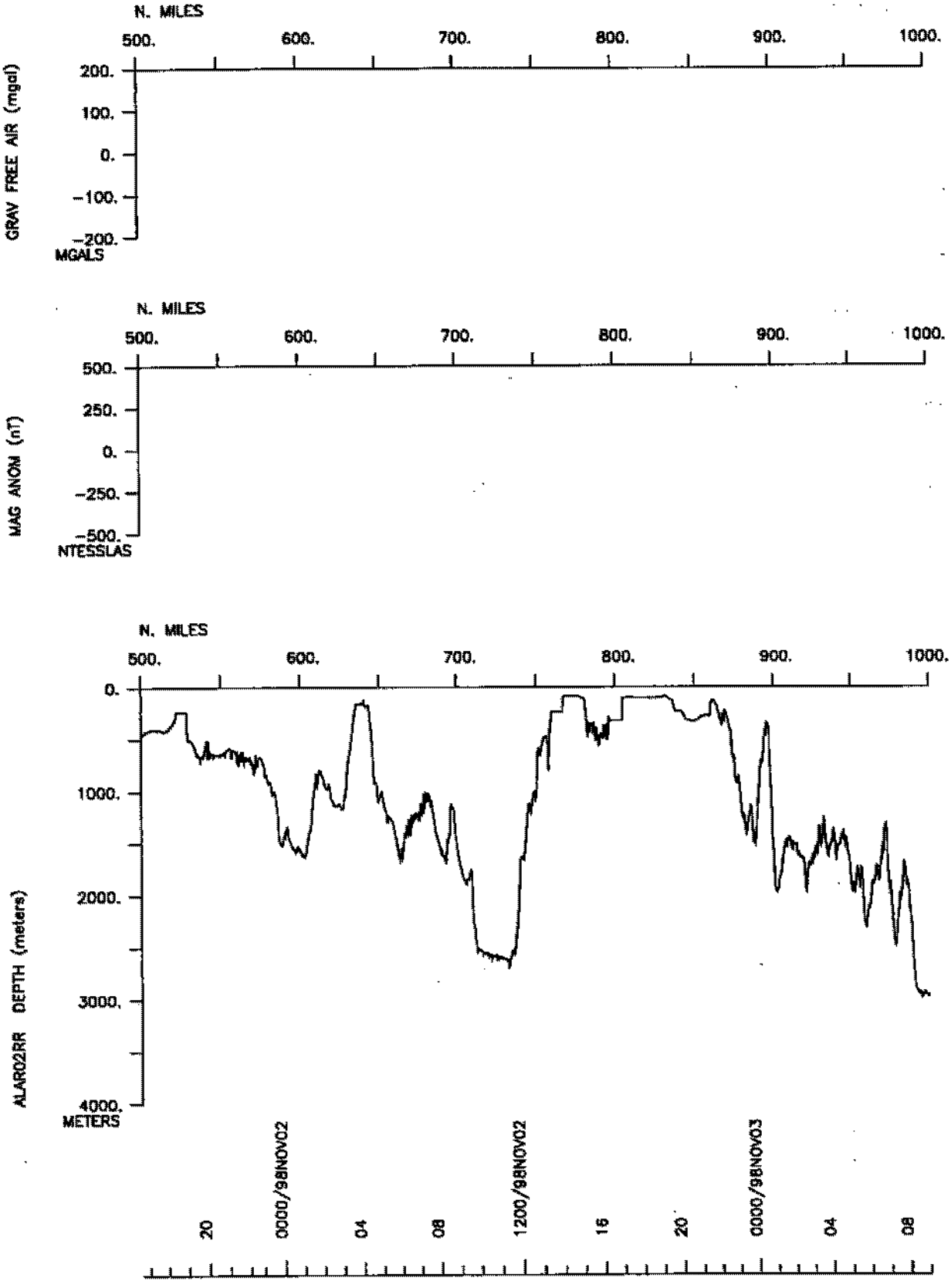
1200/98OCT29
1200/98OCT30
1200/98OCT30
20
0000/98NOV01
04
08
1200/98NOV01
16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1000.
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100.
0.
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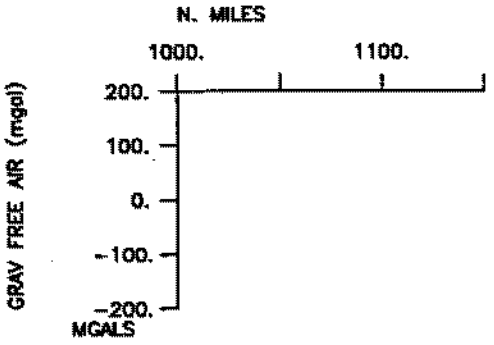
-200.
MGALS
N. MILES
500.
600.
700.
800.
900.
1000.
MAG ANOM (nT)
500.
250.
0.
-250.
-500.
NTESSLAS
N. MILES
500.
600.
700.
800.
900.
1000.
ALAR02RR DEPTH (meters)
0.
1000.
2000.
3000.
4000.
METERS
20
0000/98NOV02
04
08
1200/98NOV02
16
20
0000/98NOV03
04
08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GRAV FREE AIR (mgal)
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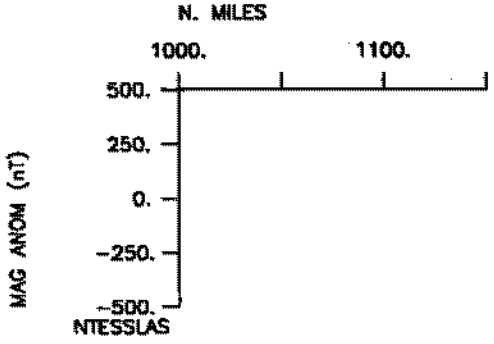
MGALS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MAG ANOM (nT)
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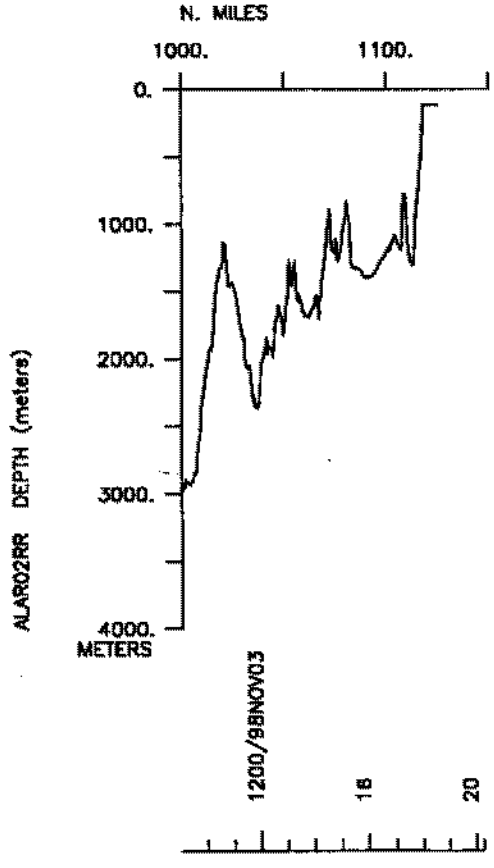
NTESSLAS


N. MILES
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1100.
ALAR02RR DEPTH (meters)
0.
1000.
2000.
3000.
4000.
METERS
1200/98NOV03
16
20

S.I.O. SAMPLE INDEX

ALARCON EXPEDITION

LEG 2

(ALAR02RR)

R/V Revelle

(Issued January 1999)

Ports:

Pichilingue, Mexico (26 October 1998)

to

San Diego, California (3 November 1998)

Chief Scientist:

James Hawkins, 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 ***

1800 261098 0  LGPT B Pichilingue, Mexico       24-15.15N 110-19.51W g ALAR02RR
2000 031198 0  LGPT E San Diego, California     32-43.00N 117-11.00W f ALAR02RR


#*** Personnel ***
#         ********NAME******** ******TITLE****** *****AFFILIATION**** **CRID**
#--- ---- -------------------- ----------------- -------------------- --------

PECS GRD  Hawkins, J.          Chief scientist   Scripps Institution  ALAR02RR
PESP GRD  Castillo, P.         Scientist         Scripps Institution  ALAR02RR
PESP GRD  Hilton, D.           Scientist         Scripps Institution  ALAR02RR
PESP GRD  Kastner, M.          Scientist         Scripps Institution  ALAR02RR
PESP UCSC Fisher, A.           Scientist         U.C. Santa Cruz      ALAR02RR
PESP GRD  Craven, J.           Scientist         Scripps Institution  ALAR02RR
PECT STS  Jacobson, D.         Computer tech     Scripps Institution  ALAR02RR
PEAT STS  Mogk, S.             Airgun tech       Scripps Institution  ALAR02RR
PERT STS  Wilson, R.           Resident tech     Scripps Institution  ALAR02RR
PESP GRD  Sclater, J.          Scientist         Scripps Institution  ALAR02RR
PEST GRD  Ransom, B.           Student           Scripps Institution  ALAR02RR
PESP MEX  Forsythe, L.         Scientist         CISESE, Mexico       ALAR02RR
PEST MEX  Franco, G.           Student           CISESE, Mexico       ALAR02RR
PESP MEX  Herguera, J.         Scientist         CISESE, Mexico       ALAR02RR
PEST MEX  Salami, B.           Student           CISESE, Mexico       ALAR02RR
PESP GRD  Robertson, G.        Research Asso.    Scripps Institution  ALAR02RR
PESP SIX  Volpe, A.            Scientist         L.Livermore Lab      ALAR02RR
PESP SIX  Esser, B.            Scientist         L.Livermore Lab      ALAR02RR
PESP SIO  Hoger, M.            Technician        Scripps Institution  ALAR02RR
PESP SIO  Weinstein, Y.        Technician        Scripps Institution  ALAR02RR
PESP USGS Hendrickson, G.      Technician        U.S.Geologic Survey  ALAR02RR
PEST MEX  Vasquez, M.          Student           CISESE, Mexico       ALAR02RR
PEST MEX  Escalona, F.         Student           CISESE, Mexico       ALAR02RR
PEST SIO  Massell, C.          Student           Scripps Institution  ALAR02RR


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

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


#*** Log Books ***

1800 261098  0 LBUW B Underway watch log   GDC  24-15.15N 110-19.51W g ALAR02RR
2000 031198  0 LBUW E Underway watch log   GDC  32-38.93N 117-13.47W g ALAR02RR

0318 171098  0 LBSC B Hawkins' rock log    GRD  24-15.15N 110-19.51W g ALAR02RR
1625 311098  0 LBSC E Hawkins' rock log    GRD  23-26.70N 108-18.00W g ALAR02RR

1717 281098  0 LBSC B Kastner's core log   GRD  23-28.47N 108-18.76W g ALAR02RR
1322 311098  0 LBSC E Kastner's core log   GRD  23-27.43N 108-17.14W g ALAR02RR

0318 271098  0 LBSC B CISESE log book      MEX  23-36.98N 108-47.53W g ALAR02RR
0436 011198  0 LBSC E CISESE log book      MEX  22-54.43N 109-27.89W g ALAR02RR
```

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

#*** Sea Beam Records (vertical beam and side scan) ***

2002 261098  0 MBSR B v.beam&sscan r-01     GDC  24-22.10N 110-09.87W g ALAR02RR
1825 031198  0 MBSR E v.beam&sscan r-01     GDC  32-19.10N 117-10.63W g ALAR02RR

#*** Echo Sounder Records - Bathy 2000 ***

1916 261098  0 DPR3 B Knudsen 3.5kHz r-01  GDC  24-22.14N 110-20.10W g ALAR02RR
1756 271098  0 DPR3 E Knudsen 3.5kHz r-01  GDC  23-30.24N 108-21.24W g ALAR02RR

1757 271098  0 DPR3 B Knudsen 3.5kHz r-02  GDC  23-30.19N 108-21.19W g ALAR02RR
0156 281098  0 DPR3 E Knudsen 3.5kHz r-02  GDC  23-28.72N 108-19.14W g ALAR02RR

0424 281098  0 DPR3 B Knudsen 3.5kHz r-03  GDC  23-28.11N 108-18.20W g ALAR02RR
1558 281098  0 DPR3 E Knudsen 3.5kHz r-03  GDC  23-28.47N 108-18.76W g ALAR02RR

1658 281098  0 DPR3 B Knudsen 3.5kHz r-04  GDC  23-28.47N 108-18.76W g ALAR02RR
1300 311098  0 DPR3 E Knudsen 3.5kHz r-04  GDC  23-27.44N 108-17.14W g ALAR02RR

1342 311098  0 DPR3 B Knudsen 3.5kHz r-05  GDC  23-27.43N 108-17.14W g ALAR02RR
1825 011198  0 DPR3 E Knudsen 3.5kHz r-05  GDC  24-02.15N 112-06.11W g ALAR02RR

2010 011198  0 DPR3 B Knudsen 3.5kHz r-06  GDC  24-18.60N 112-22.68W g ALAR02RR
1740 031198  0 DPR3 E Knudsen 3.5kHz r-06  GDC  32-09.45N 117-09.87W g ALAR02RR

#***  Seismic Reflection Airguns ***

1833 311098  0 SPRS B airgun 4sec r-01     GDC  23-25.55N 108-14.56W g ALAR02RR
2136 311098  0 SPRS E airgun 4sec r-01     GDC  23-26.52N 108-20.33W g ALAR02RR

#*** Continuous Surface Seawater Sample - Lawrence Livermore Lab. ***

1800 261098  0 CSXX B surface H2O sample   SIX  24-15.15N 110-19.51W g ALAR02RR
2100 031198  0 CSXX E surface H2O sample   SIX  32-42.40N 117-14.17W g ALAR02RR

#*** Dredges ***

0733 271098  0 DRRO B dredge 2 1563-1524m  GRD  23-37.00N 108-41.30W g ALAR02RR
0829 271098  0 DRRO E dredge 2 1563-1524m  GRD  23-37.30N 108-41.10W g ALAR02RR

1156 271098  0 DRRO B dredge 3 2824-2677m  GRD  23-40.00N 108-27.50W g ALAR02RR
1330 271098  0 DRRO E dredge 3 2824-2677m  GRD  23-40.30N 108-27.18W g ALAR02RR

1208 291098  0 DRRO B dredge 4 2610-2383m  GRD  23-35.40N 108-22.80W g ALAR02RR
1251 291098  0 DRRO E dredge 4 2610-2383m  GRD  23-35.60N 108-23.20W g ALAR02RR

1515 291098  0 DRRO B dredge 5 2567-2428m  GRD  23-32.00N 108-25.20W g ALAR02RR
1646 291098  0 DRRO E dredge 5 2567-2428m  GRD  23-32.59N 108-25.57W g ALAR02RR
```

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

1938 291098  0 DRRO B dredge 6 2545-2363m  GRD  23-27.30N 108-28.00W g ALAR02RR
2134 291098  0 DRRO E dredge 6 2545-2363m  GRD  23-27.94N 108-28.41W g ALAR02RR

0100 301098  0 DRRO B dredge 7 2390-2285m  GRD  23-25.45N 108-29.56W g ALAR02RR
0137 301098  0 DRRO E dredge 7 2390-2285m  GRD  23-25.45N 108-29.56W g ALAR02RR

0421 301098  0 DRRO B dredge 8 2530-2487m  GRD  23-20.30N 108-31.50W g ALAR02RR
0605 301098  0 DRRO E dredge 8 2530-2487m  GRD  23-20.83N 108-31.98W g ALAR02RR

0847 301098  0 DRRO B dredge 9 2665-2385m  GRD  23-17.00N 108-36.40W g ALAR02RR
1008 301098  0 DRRO E dredge 9 2665-2385m  GRD  23-17.25N 108-37.10W g ALAR02RR

1516 311098  0 DRRO B dredge10             GRD  23-26.80N 108-18.40W g ALAR02RR
1625 311098  0 DRRO E dredge10             GRD  23-26.70N 108-18.00W g ALAR02RR


# Expendable Bathythermographs ***

1545 271098  0 BTXP B 5 XBTs (71-76)       GDC  23-37.35N 108-25.38W g ALAR02RR
0100 031198  0 BTXP E 5 XBTs (71-76)       GDC  28-59.93N 115-59.73W g ALAR02RR


#*** Cores ***

1718 281098  0 COXX   Multi-Core 01 2640m  GRD  23-28.47N 108-18.76W g ALAR02RR

2100 281098  0 COXX   Multi-Core 02 2672m  GRD  23-27.89N 108-17.84W g ALAR02RR

2340 281098  0 COXX   Multi-Core 03 2680m  GRD  23-27.79N 108-17.69W g ALAR02RR

0320 291098  0 COGV   Gravity    04 2652m  GRD  23-27.79N 108-17.69W g ALAR02RR

0601 291098  0 COGV   Gravity    05 2686m  GRD  23-27.89N 108-17.84W g ALAR02RR

0906 291098  0 COGV   Gravity    06 2642m  GRD  23-28.47N 108-18.76W g ALAR02RR

0116 311098  0 COGV   Gravity    07 2652m  GRD  23-29.90N 108-20.98W g ALAR02RR

0357 311098  0 COXX   Multi-Core 08 2657m  GRD  23-29.90N 108-20.98W g ALAR02RR

0711 311098  0 COXX   Multi-Core 09 2655m  GRD  23-28.97N 108-19.53W g ALAR02RR

0855 311098  0 COXX   Multi-Core 10 2639m  GRD  23-28.60N 108-18.96W g ALAR02RR

1233 311098  0 COXX   Multi-Core 11 2453m  GRD  23-27.44N 108-17.14W g ALAR02RR


0358 011198  0 COPS   Piston core-01 659m  GRD  22-54.43N 109-27.89W g ALAR02RR


#*** Heat Flow ***

1836 271098  0 HFME B Heatflow multi 1     UCSC 23-29.93N 108-20.98W g ALAR02RR
1300 281098  0 HFME E Heatflow multi 1     UCSC 23-26.69N 108-15.98W g ALAR02RR

1520 301098  0 HFME B Heatflow multi 2     UCSC 23-27.96N 108-19.32W g ALAR02RR
2223 301098  0 HFME E Heatflow multi 2     UCSC 23-28.96N 108-18.71W g ALAR02RR

#                          End Sample Index                          ALAR02RR
```