Report and Index of

Underway Marine Geophysical Data

Hahnaro Expedition

Leg 16

(HNRO16RR)

R/V Revelle

(Issued August 2000)

Ports:
Pusan, Korea (8 April 2000)
to
KaoHsiung, Taiwan (1 May 2000)

Chief Scientist:
James Lynch, Woods Hole Oceanographic Institution
jlynch@whoi.edu

Computer Tech – Ron Moe
Resident Marine Tech – Tammy Baiz

Post–Cruise processing and report preparation by the
Geological Data Center, Scripps Institution of Oceanography
La Jolla, CA 92093–0223

GDC Cruise ID# 285

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

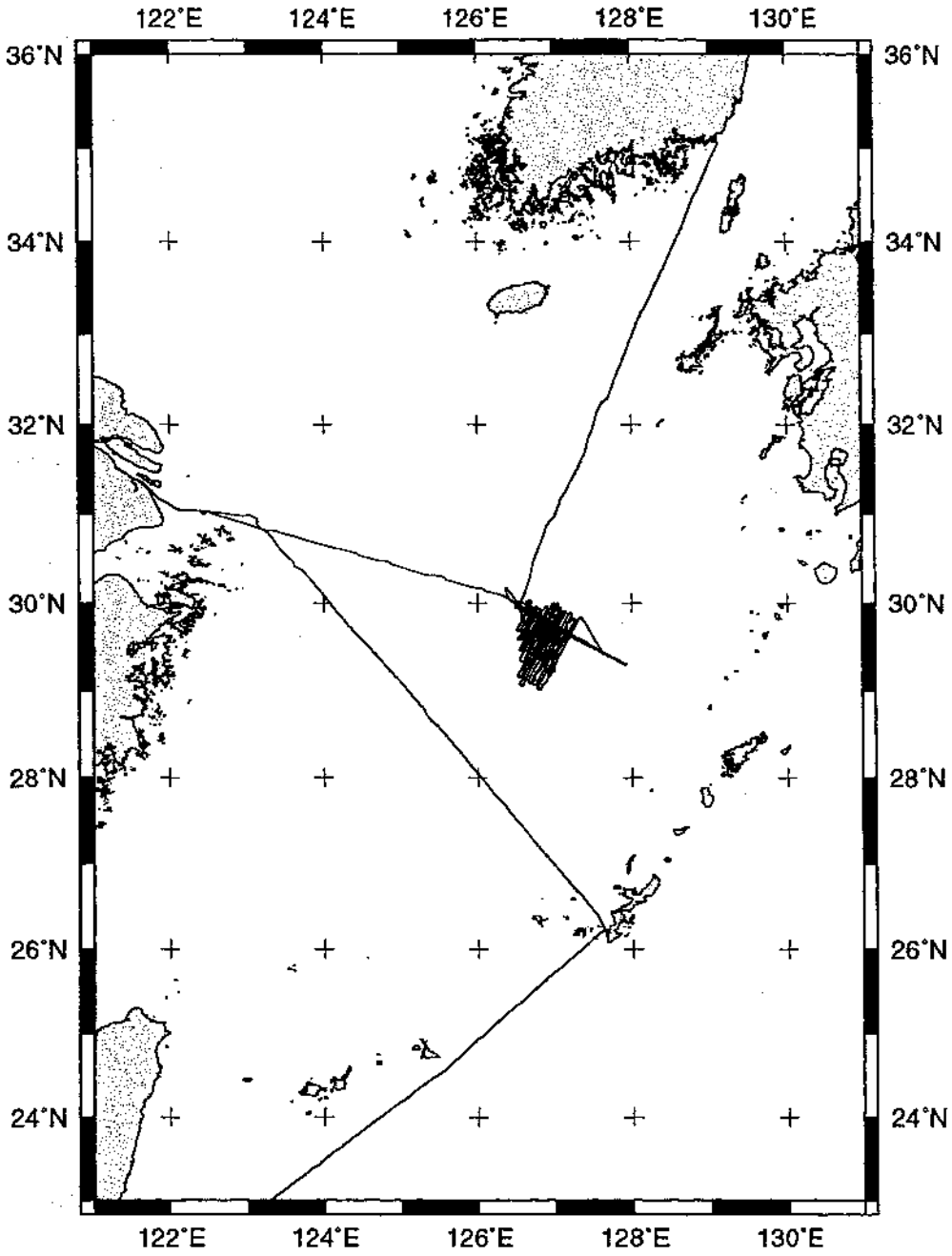
Profiles – depth, magnetic and gravity free air anomaly vs. distance. (Sections of track with seismic reflection data have a wide black line along the botttom of the profile.)

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 the Geological Data Center, Scripps Institution of Oceanography, La Jolla, California 92093–0223. Phone: (858)534–2752, Fax: (858)534–6500, internet email: ualbright@ucsd.edu or gwells@ucsd.edu

1. Files via ftp or on 8mm (Exabyte) magnetic tape or CDrom:
   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 (35mm flowfilm) or hard copies of:
   a) Underway watch log
   b) SeaBeam vertical beam profile/Sidescan records.
   c) 3.5 kHz and 12 kHz echosounder records.
   d) Seismic reflection profiler records.
3. Navigation abstract listing with times and positions of major course and speed changes.
4. Custom plots in Mercator projection:
   a) Track plots.
   b) SeaBeam depth contour plots.
   c) Depths, magnetic or gravity values printed or profiled along track.

Rev 6/2000



HAHNARO EXPEDITION LEG 16 (HNRO16RR)

CHIEF SCIENTIST: James Lynch, Woods Hole

PORTS: Pusan, South Korea - KaoHsiung, Taiwan

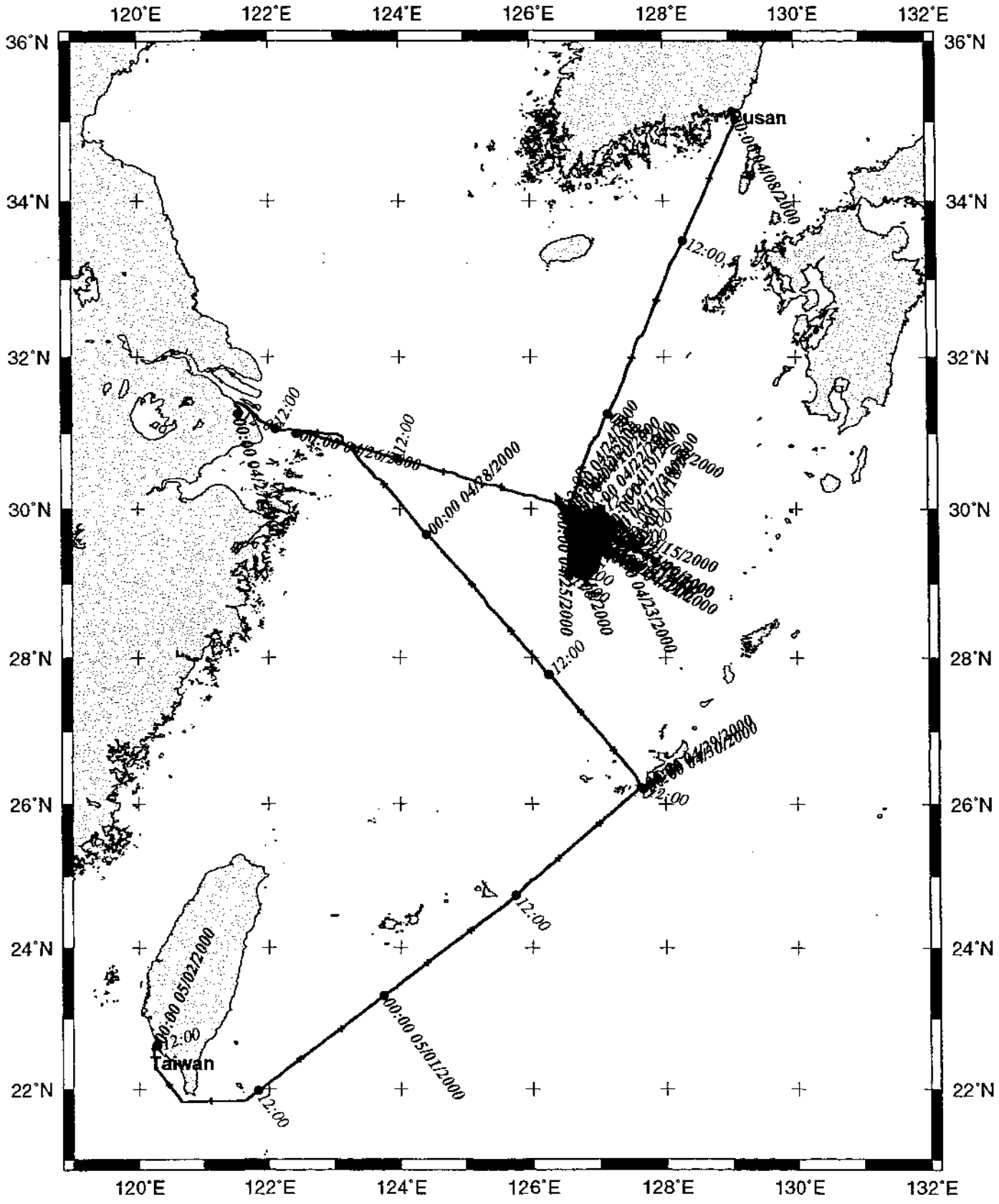
DATES: 08 April - 01 May 2000

SHIP: R/V Revelle

TOTAL MILEAGE OF UNDERWAY DATA COLLECTED

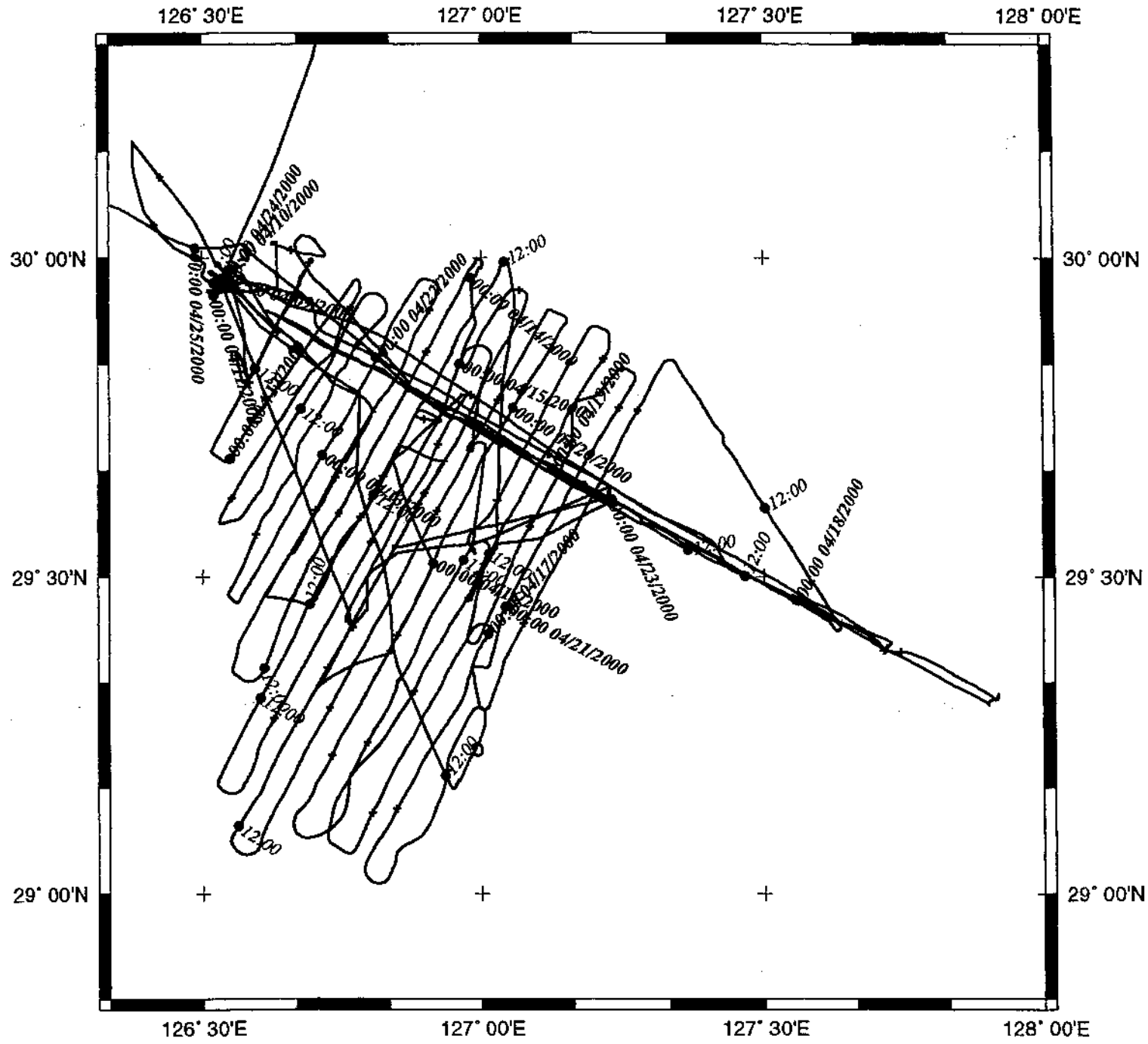
Cruise-3493 miles	**Magnetics-none collected**
Bathymetry-none collected	**Seismic Reflection-none collected**
Sea Beam-none collected	**Gravity-none collected**

HAHNARO Leg 16 Track



GMT Aug 7 10:18 :Pusan, South Korea - KaoHsiung, Taiwan 08 April - 01 May 2000:

HAHNARO Leg 16 survey



Sep 13 13:01 :Pusan, South Korea - KaoHsiung, Taiwan 08 April - 01 May 2000:

S.I.O. Sample Index

Hahnaro Expedition

Leg 16

(HNRO16RR)

R/V Revelle

(Issued August 2000)

PORTS:

Pusan, Korea (8 April 2000)
to
KaoHsiung, Taiwan (1 May 2000)

Chief Scientist:

James Lynch
Woods Hole Oceanographic Institution

The Sample Index is a first level interdisciplinary 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 ID# 285

#*** Ports ***

```
0700 080400    LGPT B Pusan, Korea              35-06.00N 129-03.00E f HNRO16RR
2300 010500    LGPT E KaoHsiung, Taiwan         22-38.00N 120-16.00E f HNRO16RR

1210 260400    LGSS B Shanghai, China           31-15.00N 121-30.00E f HNRO16RR
0730 270400    LGSS E Shanghai, China           31-15.00N 121-30.00E f HNRO16RR

0021 290400    LGSS B Naha, Japan               26-13.00N 127-41.00E f HNRO16RR
2347 290400    LGSS E Naha, Japan               26-13.00N 127-41.00E f HNRO16RR
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#*** Personnel ***

#		********NAME********	******TITLE******	*****AFFILIATION****	**CRID**
PECS	WHOI	Lynch,J.	Chief Scientist	Woods Hole	HNRO16RR
PESP	WHOI	Duda,T.	Scientist	Woods Hole	HNRO16RR
PESP	WHOI	Kemp,J.	Technician	Woods Hole	HNRO16RR
PESP	SIX	Ramp,S.	Senior Scientist	Naval Post-Grad Schl	HNRO16RR
PESP	WHOI	Doutt,J.	Scientist	Woods Hole	HNRO16RR
PESP	SIX	Chiu,C-S.	Scientist	Naval Post-Grad Schl	HNRO16RR
PESP	SIX	Bahr,F.	Technician	Naval Post-Grad Schl	HNRO16RR
PESP	SIX	Bartek,L.	Scientist	U.of North Carolina	HNRO16RR
PEST	SIX	Warren,J.	Grad Student	U.of North Carolina	HNRO16RR
PESP	URI	Miller,J.	Scientist	Univ of Rhode Island	HNRO16RR
PEST	MPL	Rainville,L.	Grad Student	Scripps Institution	HNRO16RR
PEXN	SIX	Kim,H-S.	Korean Observer	Hanyang University	HNRO16RR
PEXN	SIX	Oh,T-H.	Korean Observer	Hanyang University	HNRO16RR
PEXN	SIX	Hahn,J.	Korean Observer	Hanyang University	HNRO16RR
PEST	SIX	Arizzi,E.	Grad Student	Florida Atlantic U.	HNRO16RR
PEST	SIX	Bauer,E.	Grad Student	Florida Atlantic U.	HNRO16RR
PEST	SIX	Moss,C.	Grad Student	U.of North Carolina	HNRO16RR
PEST	SIX	Wood,B.	Grad Student	U.of North Carolina	HNRO16RR
PEXN	SIX	Yan,J.	PRC Observer	Nat. Acoustic Lab.	HNRO16RR
PEXN	SIX	Wu,L.	PRC Observer	Nat. Acoustics Lab.	HNRO16RR
PEXN	SIX	Hwa,H-W.	Taiwan observer	Nat'l Taiwan Univ.	HNRO16RR
PESP	SIX	Johnson,M.	Airgun Tech	Non-Scripps employee	HNRO16RR
PESP	SIX	Johnson,D.	Airgun Tech	Non-Scripps employee	HNRO16RR
PEMT	ODF	Schmitt,J.	Ctd Tech	Scripps Institution	HNRO16RR
PECT	STS	Moe,R.	Computer Tech	Scripps Institution	HNRO16RR
PERT	STS	Baiz,T.	Resident Tech	Scripps Institution	HNRO16RR

#*** 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 - Geological Data Center  ext. 42752 ***


#*** Log Books ***

0056 090400   0 LBSC B CTD Log Book          ODF  31-05.06N 127-03.53E g HNRO16RR
1908 240400   0 LBSC E CTD Log Book          ODF  29-36.36N 127-17.74E g HNRO16RR

0854 110400   0 LBSC B Seismics Log-UNC      SIX  29-48.99N 126-34.74E g HNRO16RR
1840 230400   0 LBSC E Seismics Log-UNC      SIX  29-29.11N 126-46.96E g HNRO16RR

0854 110400   0 LBSC B Sub-bttm Log-FAU      SIX  29-48.99N 126-34.74E g HNRO16RR
1840 230400   0 LBSC E Sub-bttm Log-FAU      SIX  29-29.11N 126-46.96E g HNRO16RR


#*** Echo Sounder Record ***

0650 180400   0 DPR3 B 3.5khz record r-01    GDC  29-25.53N 127-38.34E g HNRO16RR
1058 250400   0 DPR3 E 3.5khz record r-01    GDC  30-37.45N 124-08.29E g HNRO16RR


#*** Acoustic Doppler Current Profiler ***

0700 080400   0 ADCP B Accoustic Doppler     GDC  34-28.72N 128-49.09E g HNRO16RR
2300 010500   0 ADCP E Current Profiler      GDC  22-33.76N 120-13.11E g HNRO16RR


#*** Intergrated Meteorological Acquisition System ***

0700 080400   0 IMET B Weather data coll.    GDC  34-28.72N 128-49.09E g HNRO16RR
2300 010500   0 IMET E Weather data coll.    GDC  22-33.76N 120-13.11E g HNRO16RR


#*** Current Meter with Doppler ***

0700 080400   0 CMXX B Hydrographic Doppler SIO  34-28.72N 128-49.09E g HNRO16RR
2300 010500   0 CMXX E Sonar System          SIO  22-33.76N 120-13.11E g HNRO16RR


#*** Conductivity, Temperature, Depth ***
#*** Samples shared by SIO, WHOI and Naval Post-Graduate School ***

1511 090400   0 TDCT B CTD101      02    94M SIO  29-58.01N 126-32.01E g HNRO16RR
1527 090400   0 TDCT E  S                   SIO  29-58.00N 126-32.00E g HNRO16RR

1715 090400   0 TDCT B CTD201-229 00    94M WHOI 29-58.00N 126-32.00E g HNRO16RR
2115 090400   0 TDCT E  Yo-Yo CTDs          WHOI 29-57.94N 126-31.97E g HNRO16RR

0445 100400   0 TDCT B CTD601      00    96M SIO  29-52.99N 126-38.00E g HNRO16RR
0455 100400   0 TDCT E                     SIO  29-53.00N 126-38.01E g HNRO16RR

0155 180400   0 TDCT B CTDA16      04  1067M WHOI 29-17.99N 127-54.04E g HNRO16RR
0254 180400   0 TDCT E  S                   WHOI 29-18.60N 127-55.03E g HNRO16RR

0430 180400   0 TDCT B CTDA15      01  1000M SIO  29-23.00N 127-43.03E g HNRO16RR
0513 180400   0 TDCT E  S                   SIO  29-23.62N 127-43.70E g HNRO16RR

0600 180400   0 TDCT B CTDA14      01   925M WHOI 29-25.48N 127-38.23E g HNRO16RR
0642 180400   0 TDCT E  S                   WHOI 29-25.44N 127-38.52E g HNRO16RR
```

#GMT TIME	DDMMYY DATE	TZ	SAMP CODE	B E	SAMPLE IDENTIFIER			DISP CODE	LATITUDE	LONGITUDE	p c	CRUISE LEG-SHIP
0726	180400	0	TDCT	B	CTDA13	01	625M	SIO	29-28.00N	127-33.02E	g	HNRO16RR
0756	180400	0	TDCT	E	S			SIO	29-27.99N	127-33.04E	g	HNRO16RR
1023	180400	0	TDCT	B	CTDA12	01	390M	WHOI	29-30.05N	127-28.04E	g	HNRO16RR
1042	180400	0	TDCT	E	S			WHOI	29-30.05N	127-28.04E	g	HNRO16RR
1149	180400	0	TDCT	B	CTDA11	01	160M	SIO	29-32.49N	127-22.03E	g	HNRO16RR
1230	180400	0	TDCT	E	S			SIO	29-32.84N	127-21.78E	g	HNRO16RR
1309	180400	0	TDCT	B	CTDA10	01	123M	WHOI	29-35.00N	127-17.04E	g	HNRO16RR
1326	180400	0	TDCT	E	S			WHOI	29-35.26N	127-17.15E	g	HNRO16RR
1410	180400	0	TDCT	B	CTDA09	01	112M	SIO	29-37.51N	127-12.04E	g	HNRO16RR
1420	180400	0	TDCT	E	S			SIO	29-37.51N	127-12.03E	g	HNRO16RR
1510	180400	0	TDCT	B	CTDA08	01	115M	WHOI	29-39.98N	127-07.04E	g	HNRO16RR
1522	180400	0	TDCT	E	S			WHOI	29-39.99N	127-07.02E	g	HNRO16RR
1608	180400	0	TDCT	B	CTDA07	01	110M	SIO	29-42.50N	127-02.02E	g	HNRO16RR
1619	180400	0	TDCT	E	S			SIO	29-42.51N	127-02.03E	g	HNRO16RR
1704	180400	0	TDCT	B	CTDA06	01	101M	WHOI	29-45.00N	126-57.00E	g	HNRO16RR
1714	180400	0	TDCT	E	S			WHOI	29-45.00N	126-57.02E	g	HNRO16RR
1800	180400	0	TDCT	B	CTDA05	01	102M	SIO	29-47.50N	126-51.99E	g	HNRO16RR
1811	180400	0	TDCT	E	S			SIO	29-47.50N	126-51.99E	g	HNRO16RR
1910	180400	0	TDCT	B	CTDA04	01	101M	WHOI	29-50.00N	126-47.00E	g	HNRO16RR
1922	180400	0	TDCT	E	S			WHOI	29-50.00N	126-47.00E	g	HNRO16RR
2007	180400	0	TDCT	B	CTDA03	01	83M	SIO	29-52.50N	126-41.98E	g	HNRO16RR
2018	180400	0	TDCT	E	S			SIO	29-52.50N	126-42.00E	g	HNRO16RR
2103	180400	0	TDCT	B	CTDA02	01	90M	WHOI	29-54.98N	126-36.94E	g	HNRO16RR
2115	180400	0	TDCT	E	S			WHOI	29-54.99N	126-37.00E	g	HNRO16RR
0610	220400	0	TDCT	B	CTD C6	01	90M	SIO	29-45.59N	126-48.21E	g	HNRO16RR
0623	220400	0	TDCT	E	S			SIO	29-45.59N	126-48.21E	g	HNRO16RR
0712	220400	0	TDCT	B	CTD C7	01	90M	WHOI	29-40.83N	126-44.89E	g	HNRO16RR
0722	220400	0	TDCT	E	S			WHOI	29-40.78N	126-44.90E	g	HNRO16RR
0845	220400	0	TDCT	B	CTD C8	01	90M	SIO	29-36.32N	126-42.10E	g	HNRO16RR
0854	220400	0	TDCT	E	S			SIO	29-36.32N	126-42.11E	g	HNRO16RR
0933	220400	0	TDCT	B	CTD C9	01	95M	WHOI	29-32.07N	126-39.29E	g	HNRO16RR
0943	220400	0	TDCT	E	S			WHOI	29-32.07N	126-39.29E	g	HNRO16RR
1110	220400	0	TDCT	B	CTDC10	01	95M	SIO	29-28.11N	126-36.56E	g	HNRO16RR
1119	220400	0	TDCT	E	S			SIO	29-28.11N	126-36.56E	g	HNRO16RR
1157	220400	0	TDCT	B	CTDC11	01	95M	WHOI	29-27.34N	126-41.39E	g	HNRO16RR
1216	220400	0	TDCT	E	S			WHOI	29-27.33N	126-41.39E	g	HNRO16RR
1344	220400	0	TDCT	B	CTDC12	00	95M	SIO	29-31.59N	126-43.93E	g	HNRO16RR
1358	220400	0	TDCT	E				SIO	29-31.59N	126-43.93E	g	HNRO16RR
1443	220400	0	TDCT	B	CTDC13	01	100M	WHOI	29-35.62N	126-46.91E	g	HNRO16RR
1452	220400	0	TDCT	E	S			WHOI	29-35.61N	126-46.92E	g	HNRO16RR
1613	220400	0	TDCT	B	CTDC14	01	100M	SIO	29-39.46N	126-49.25E	g	HNRO16RR
1624	220400	0	TDCT	E	S			SIO	29-39.47N	126-49.25E	g	HNRO16RR

#GMT TIME	DDMMYY DATE	TZ	SAMP CODE	B E	SAMPLE IDENTIFIER			DISP CODE	LATITUDE	LONGITUDE	p c	CRUISE LEG-SHIP
1706	220400	0	TDCT	B	CTDC15	01	100M	WHOI	29-42.30N	126-51.03E	g	HNRO16RR
1716	220400	0	TDCT	E	S			WHOI	29-42.30N	126-51.02E	g	HNRO16RR
1851	220400	0	TDCT	B	CTDC16	01	100M	SIO	29-40.93N	126-56.01E	g	HNRO16RR
1903	220400	0	TDCT	E	S			SIO	29-40.93N	126-56.01E	g	HNRO16RR
1946	220400	0	TDCT	B	CTDC17	01	100M	WHOI	29-37.88N	126-53.83E	g	HNRO16RR
1958	220400	0	TDCT	E	S			WHOI	29-37.88N	126-53.82E	g	HNRO16RR
0633	240400	0	TDCT	B	CTDB01	01	95M	SIO	29-47.50N	126-52.01E	g	HNRO16RR
0647	240400	0	TDCT	E	S			SIO	29-47.50N	126-52.01E	g	HNRO16RR
0748	240400	0	TDCT	B	CTDB02	01	100M	WHOI	29-42.49N	127-02.06E	g	HNRO16RR
0806	240400	0	TDCT	E	S			WHOI	29-42.50N	127-02.00E	g	HNRO16RR
0904	240400	0	TDCT	B	CTDB03	01	116M	SIO	29-37.34N	127-12.23E	g	HNRO16RR
0924	240400	0	TDCT	E	S			SIO	29-37.51N	127-11.99E	g	HNRO16RR
1000	240400	0	TDCT	B	CTDB04	01	125M	WHOI	29-35.01N	127-17.00E	g	HNRO16RR
1016	240400	0	TDCT	E	S			WHOI	29-35.00N	127-17.00E	g	HNRO16RR
1054	240400	0	TDCT	B	CTDB05	01	160M	SIO	29-32.53N	127-21.99E	g	HNRO16RR
1115	240400	0	TDCT	E	S			SIO	29-32.65N	127-21.97E	g	HNRO16RR
1156	240400	0	TDCT	B	CTDB06	01	400M	WHOI	29-30.01N	127-28.02E	g	HNRO16RR
1229	240400	0	TDCT	E	S			WHOI	29-30.03N	127-28.02E	g	HNRO16RR
1304	240400	0	TDCT	B	CTDB07	01	625M	SIO	29-28.00N	127-33.02E	g	HNRO16RR
1343	240400	0	TDCT	E	S			SIO	29-28.01N	127-33.02E	g	HNRO16RR
1424	240400	0	TDCT	B	CTDB08	01	915M	WHOI	29-25.64N	127-38.25E	g	HNRO16RR
1511	240400	0	TDCT	E	S			WHOI	29-25.69N	127-38.31E	g	HNRO16RR
1552	240400	0	TDCT	B	CTDB09	04	995M	SIO	29-23.01N	127-43.01E	g	HNRO16RR
1647	240400	0	TDCT	E	S			SIO	29-23.03N	127-43.02E	g	HNRO16RR
#*** Cores ***												
#*** Samples shared by U. of Rhode Is. & University of North Carolina ***												
0314	100400	0	COGV		Core 1		97M	URI	29-53.00N	126-38.01E	g	HNRO16RR
0351	100400	0	COGV		Core 2A bagged		97M	URI	29-53.00N	126-37.99E	g	HNRO16RR
0411	100400	0	COGV		Core 3		631M	URI	29-53.00N	126-38.00E	g	HNRO16RR
0827	180400	0	COGV		Core 4 bagged		412M	URI	29-28.02N	127-33.04E	g	HNRO16RR
0547	220400	0	COGV		Core 6 bagged		102M	URI	29-45.60N	126-48.21E	g	HNRO16RR
0736	220400	0	COGV		Core 7		101M	URI	29-40.86N	126-44.90E	g	HNRO16RR
0828	220400	0	COGV		Core 8		104M	URI	29-36.32N	126-42.10E	g	HNRO16RR
0953	220400	0	COGV		Core 9 bagged		106M	URI	29-32.07N	126-39.29E	g	HNRO16RR
1008	220400	0	COGV		Core 9B		106M	URI	29-32.07N	126-39.29E	g	HNRO16RR
1056	220400	0	COGV		Core 10		107M	URI	29-28.11N	126-36.56E	g	HNRO16RR
1233	220400	0	COGV		Core 11		109M	URI	29-27.33N	126-41.39E	g	HNRO16RR
1328	220400	0	COGV		Core 12		106M	URI	29-31.59N	126-43.93E	g	HNRO16RR
1501	220400	0	COGV		Core 13		107M	URI	29-35.61N	126-46.92E	g	HNRO16RR
1555	220400	0	COGV		Core 14		107M	URI	29-39.47N	126-49.26E	g	HNRO16RR
1727	220400	0	COGV		Core 15		107M	URI	29-42.30N	126-51.02E	g	HNRO16RR
1821	220400	0	COGV		Core 16 bagged		108M	URI	29-40.93N	126-56.02E	g	HNRO16RR
2018	220400	0	COGV		Core 17		106M	URI	29-37.88N	126-53.82E	g	HNRO16RR
1315	230400	0	COGV		Core 20 bagged		114M	URI	29-41.96N	126-51.81E	g	HNRO16RR
1429	230400	0	COGV		Core 32			URI	29-47.00N	126-57.84E	g	HNRO16RR
2018	230400	0	COGV		Core 33		113M	URI	29-25.44N	126-45.90E	g	HNRO16RR
0602	230400	0	COXX		grab #1 (31)		106M	URI	29-19.54N	126-42.19E	g	HNRO16RR
0736	230400	0	COXX		bottom grab #21G			URI	29-22.86N	126-49.89E	g	HNRO16RR

#GMT TIME	DDMMYY DATE	TZ	SAMP CODE	B E	SAMPLE IDENTIFIER		DISP CODE	LATITUDE	LONGITUDE	p c	CRUISE LEG-SHIP
#*** Conductivity, Temperature, Pressure ***											
2339	100400	0	TDXX	B	Loco #2free vehicle		WHOI	29-57.23N	126-33.60E	g	HNRO16RR
0000	240400	0	TDXX	X	no recover		WHOI	29-57.63N	126-32.72E	g	HNRO16RR
0015	110400	0	TDXX	B	Loco #1 free vehicle		WHOI	29-56.61N	126-31.07E	g	HNRO16RR
0000	240400	0	TDXX	X	no recover		WHOI	29-57.63N	126-32.72E	g	HNRO16RR
0405	110400	0	TDXX	B	moored CTD	90m	WHOI	29-58.03N	126-32.00E	g	HNRO16RR
0000	240400	0	TDXX	X	no recover		WHOI	29-57.63N	126-32.72E	g	HNRO16RR
0405	190400	0	TDXX	B	moored CTD	125m	WHOI	29-37.18N	127-13.50E	g	HNRO16RR
0108	230400	0	TDXX	E	mooring recovered		WHOI	29-38.35N	127-13.80E	g	HNRO16RR
#*** Current Meter ***											
1410	110400	0	CMAB	B	moored ADCP	90m	WHOI	29-55.58N	126-39.15E	g	HNRO16RR
0000	240400	0	CMAB	X	no recover		WHOI	29-57.63N	126-32.72E	g	HNRO16RR
0504	190400	0	CMAB	B	moored ADCP	125m	WHOI	29-37.05N	127-13.78E	g	HNRO16RR
0002	230400	0	CMAB	E	ADCP recovered		WHOI	29-37.31N	127-14.00E	g	HNRO16RR
#*** 4-15 kHz Subbottom Profiler Towed Vehicle ***											
#*** Data shared by Univ. of No. Carolina and Florida Atlantic Univ. ***											
0854	110400	0	DPXX	B	4-15kHz subbottom		SIX	29-48.99N	126-34.74E	g	HNRO16RR
1708	110400	0	DPXX	E	4-15kHz subbottom		SIX	29-58.05N	126-40.45E	g	HNRO16RR
1115	120400	0	DPXX	B	4-15kHz subbottom		SIX	29-42.45N	126-38.27E	g	HNRO16RR
1601	120400	0	DPXX	E	4-15kHz subbottom		SIX	29-51.71N	126-46.44E	g	HNRO16RR
1323	130400	0	DPXX	B	4-15kHz subbottom		SIX	29-28.04N	126-39.62E	g	HNRO16RR
2318	130400	0	DPXX	E	4-15kHz subbottom		SIX	29-59.07N	126-59.84E	g	HNRO16RR
0143	140400	0	DPXX	B	4-15kHz subbottom		SIX	29-51.05N	126-56.80E	g	HNRO16RR
0410	140400	0	DPXX	E	4-15kHz subbottom		SIX	29-44.76N	126-54.27E	g	HNRO16RR
0620	140400	0	DPXX	B	4-15kHz subbottom		SIX	29-41.62N	126-50.55E	g	HNRO16RR
1128	170400	0	DPXX	E	4-15kHz subbottom		SIX	29-10.49N	126-57.35E	g	HNRO16RR
0657	190400	0	DPXX	B	4-15kHz subbottom		SIX	29-32.07N	127-01.13E	g	HNRO16RR
0915	190400	0	DPXX	E	4-15kHz subbottom		SIX	29-32.73N	127-01.66E	g	HNRO16RR
1156	190400	0	DPXX	B	4-15kHz subbottom		SIX	29-59.61N	127-02.69E	g	HNRO16RR
0318	220400	0	DPXX	E	4-15kHz subbottom		SIX	29-58.42N	126-31.07E	g	HNRO16RR
1510	230400	0	DPXX	B	4-15kHz subbottom		SIX	29-46.56N	126-58.02E	g	HNRO16RR
1840	230400	0	DPXX	E	4-15kHz subbottom		SIX	29-29.11N	126-46.96E	g	HNRO16RR

#GMT DDMMYY #TIME DATE	TZ	SAMP CODE	B E	SAMPLE IDENTIFIER	DISP CODE	LATITUDE	LONGITUDE	p c	CRUISE LEG-SHIP
#*** Water gun with Digital Recorder ***									
#*** University of North Carolina ***									
0854 110400	0	SPDR	B	seismic reflection	SIX	29-48.99N	126-34.74E	g	HNRO16RR
1708 110400	0	SPDR	E	seismic reflection	SIX	29-58.05N	126-40.45E	g	HNRO16RR
2007 110400	0	SPDR	B	seismic reflection	SIX	29-56.26N	126-39.87E	g	HNRO16RR
1300 130400	0	SPDR	E	seismic reflection	SIX	29-27.11N	126-39.11E	g	HNRO16RR
1330 130400	0	SPDR	B	seismic reflection	SIX	29-28.18N	126-39.73E	g	HNRO16RR
2357 130400	0	SPDR	E	seismic reflection	SIX	29-58.18N	126-59.01E	g	HNRO16RR
0009 140400	0	SPDR	B	seismic reflection	SIX	29-57.81N	126-58.93E	g	HNRO16RR
1113 170400	0	SPDR	E	seismic reflection	SIX	29-11.02N	126-57.77E	g	HNRO16RR
1206 190400	0	SPDR	B	seismic reflection	SIX	29-59.47N	127-02.35E	g	HNRO16RR
0324 220400	0	SPDR	E	seismic reflection	SIX	29-58.59N	126-30.81E	g	HNRO16RR
#*** Multi-Beam Echosounder ***									
#*** University of North Carolina ***									
1803 110400	0	MBSS	B	towed sidescan fish	SIX	29-57.59N	126-40.41E	g	HNRO16RR
0610 120400	0	MBSS	E	towed sidescan fish	SIX	29-45.42N	126-38.78E	g	HNRO16RR
#				End Sample Index					HNRO16RR