

**REPORT AND INDEX OF
UNDERWAY MARINE GEOPHYSICAL DATA**

REM EXPEDITION

LEG 2
=====

R/V Melville

(Issued November 1993)

Astoria, Oregon (9 September 1993)
to
San Diego, Calif. (6 October 1993)

Chief Scientist:

Spahr Webb (Scripps Institution)

Resident Marine Technician - John Boaz

Computer Technician - George Bouchard

No Sea Beam/Underway Processor on board

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

Data Collection and Processing Funded by:
NSF Grant Number OCE91-00522

NOTE: This is an index of underway geophysical data edited
and processed after the completion of the cruise leg and is
intended primarily for informal use within the institution.
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Geological Data Center, Scripps Institution of Oceanography,
La Jolla, California 92093.

GDC Cruise I.D.# 261

**INFORMAL 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 anomaly 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 if collected on the cruise leg.

NOTE: One or more of the underway data types may not be collected on a given cruise 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, CA 92093-0223. Phone (619)534-2752. Fax (619)534-5306. Internet Email:ssmith@ucsd.edu

1. Files on Exabyte, DAT or 1/2 inch magnetic tape:
 - a) Separate time series ASCII files of navigation, single beam depth, gravity and magnetics.
 - b) These same data in a merged ASCII file in the MGD77 Exchange format.
 - c) SeaBeam depth data (binary, Sun byte order) in SIO Swath Bathymetry format (not available on 1/2" tape).
 - d) SeaBeam Sidescan data (not available on 1/2" tape).

2. Microfilm (35mm flowfilm) or Xerox copies of:
 - a) Underway Watch log book.
 - b) SeaBeam vertical beam profile/Sidescan records.
 - c) Echosounder records - 3.5 kHz frequency.
 - d) Magnetometer records.
 - e) Seismic reflection profiler records.

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

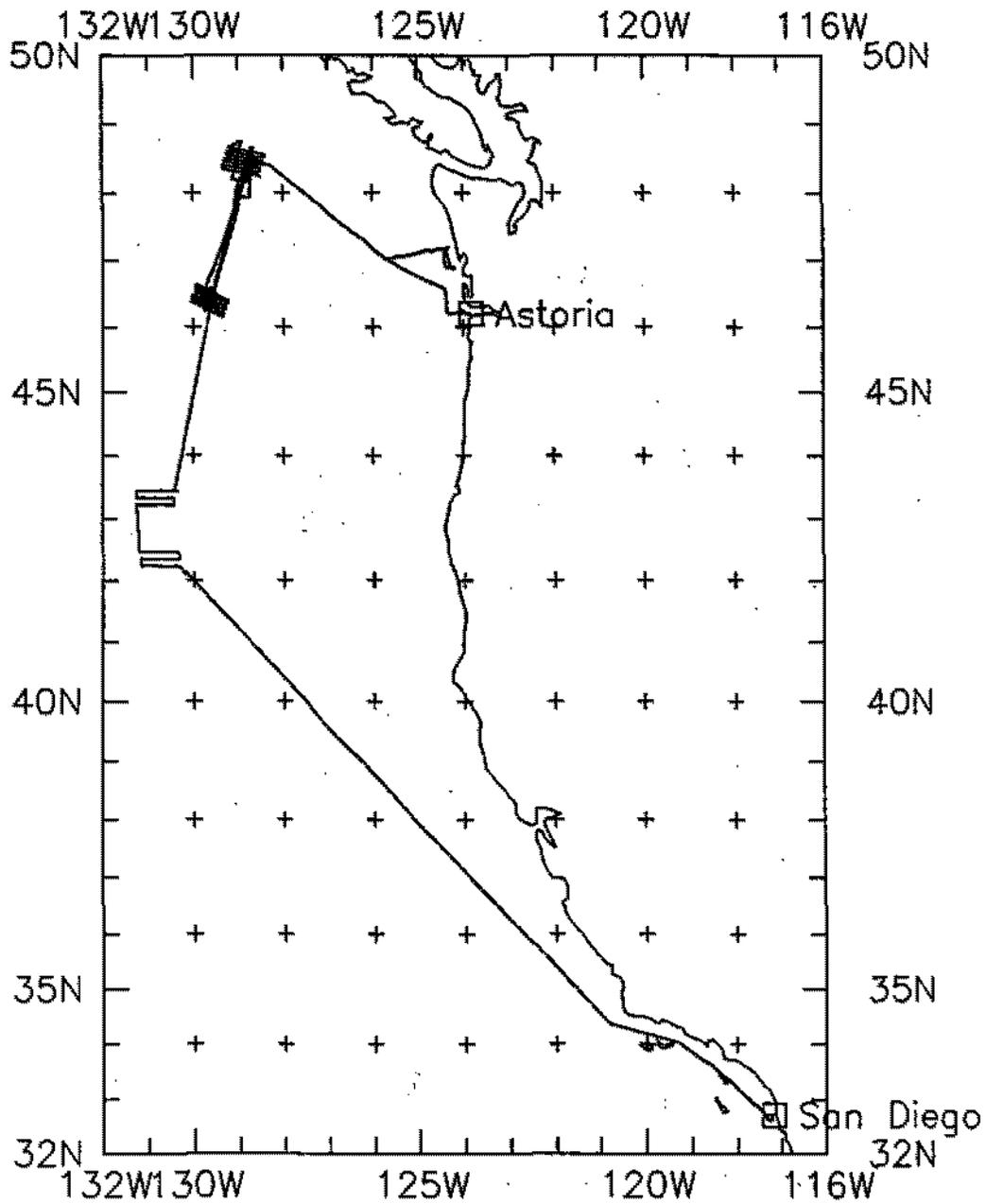
4. Plots:
 - a) Copies of archived 1.2"/degree scale trackplots.
 - b) Copies of archived 8"/degree scale SeaBeam depth plots.
 - c) Custom plots in Mercator projection:
 - 1) Track plots.
 - 2) SeaBeam depth contour plots.
 - 3) Depth, magnetic or gravity values printed or profiled along track.

SeaBeam 2000 Data Collected in Ancillary Mode

In the absence of funding for SeaBeam operations on this leg, SeaBeam data were collected in "ancillary mode". In this mode of operation, no Hardware Technician or SB/Underway Processor were on board and the types of realtime records and post-processed data products are reduced from those available under the fully funded mode.

The SeaBeam data remain proprietary to the SIO Shipboard Technical Support Group, not the chief scientist.

May 1993



REM EXPEDITION LEG 2

CHIEF SCIENTIST: Spahr Webb, Scripps Institution

PORTS: Astoria, Oregon - San Diego, Cal.

DATES: 9 September - 9 October 1993

SHIP: R/V Melville

TOTAL MILEAGE OF UNDERWAY DATA COLLECTED

Cruise - 3618 miles

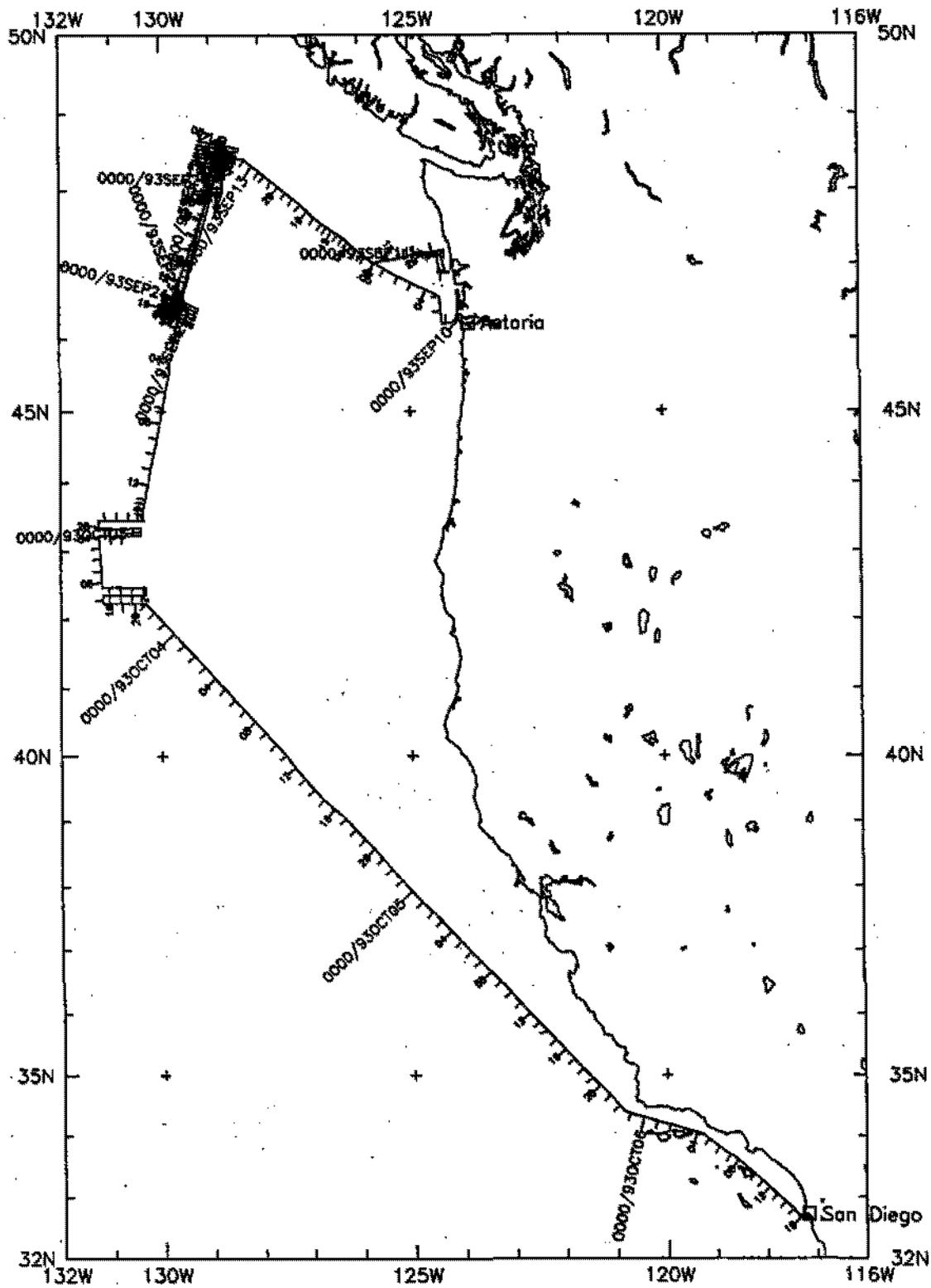
Magnetics - 303 miles

Bathymetry - 2888 miles

Seismic Reflection - 290 miles

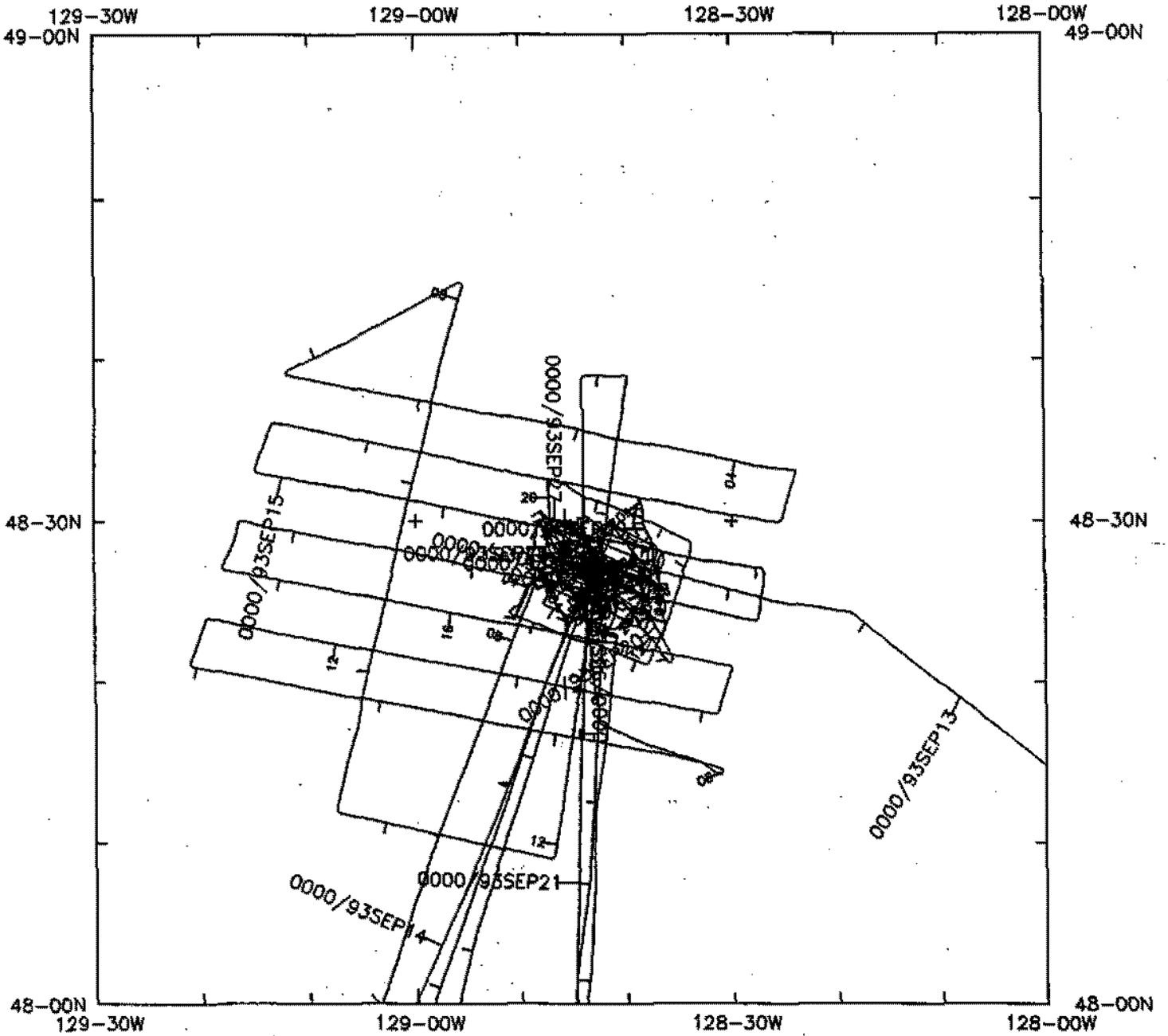
Sea Beam - 2888 miles

Gravity - none collected



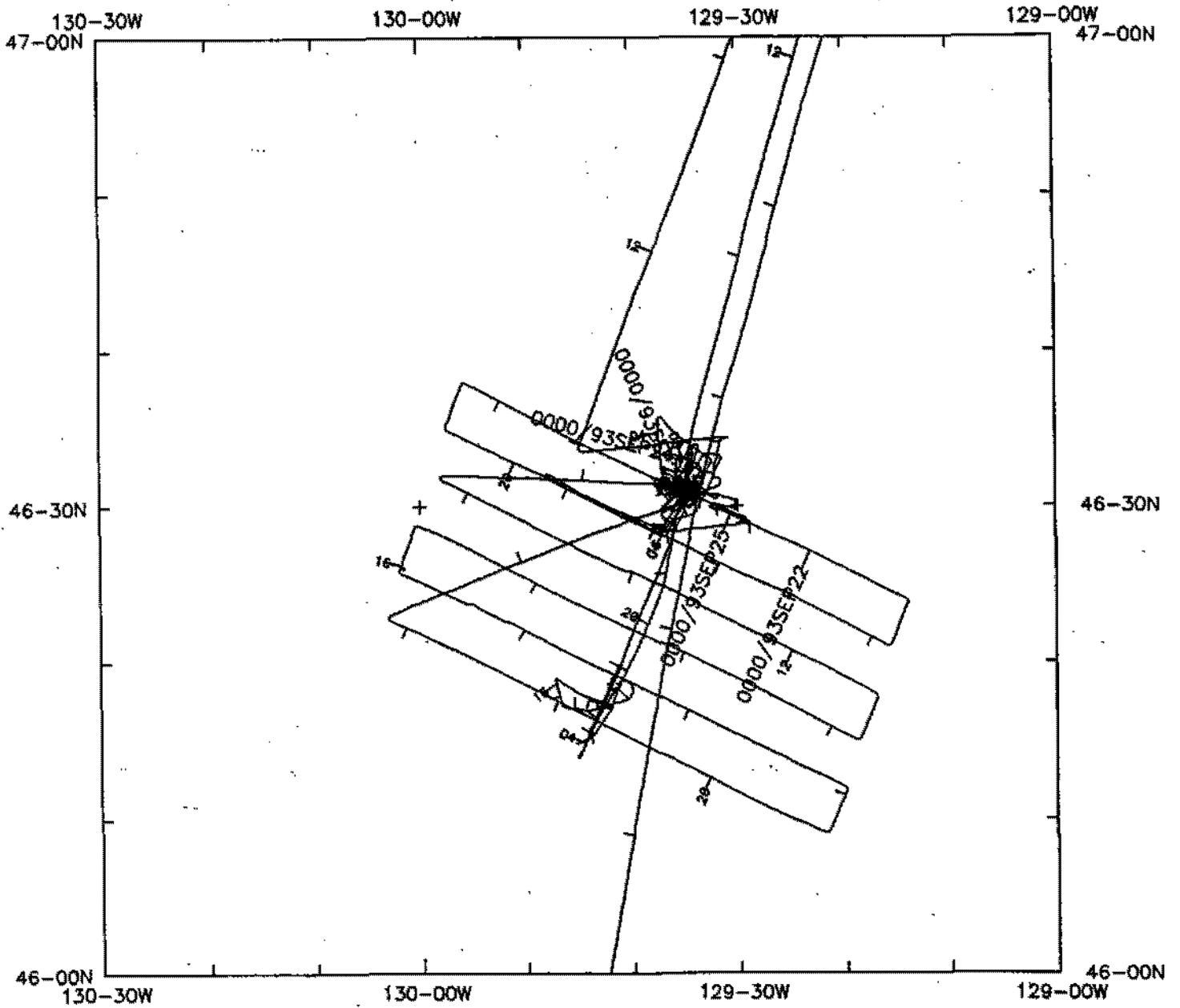
REM Leg 02 (REM-02MV)

*



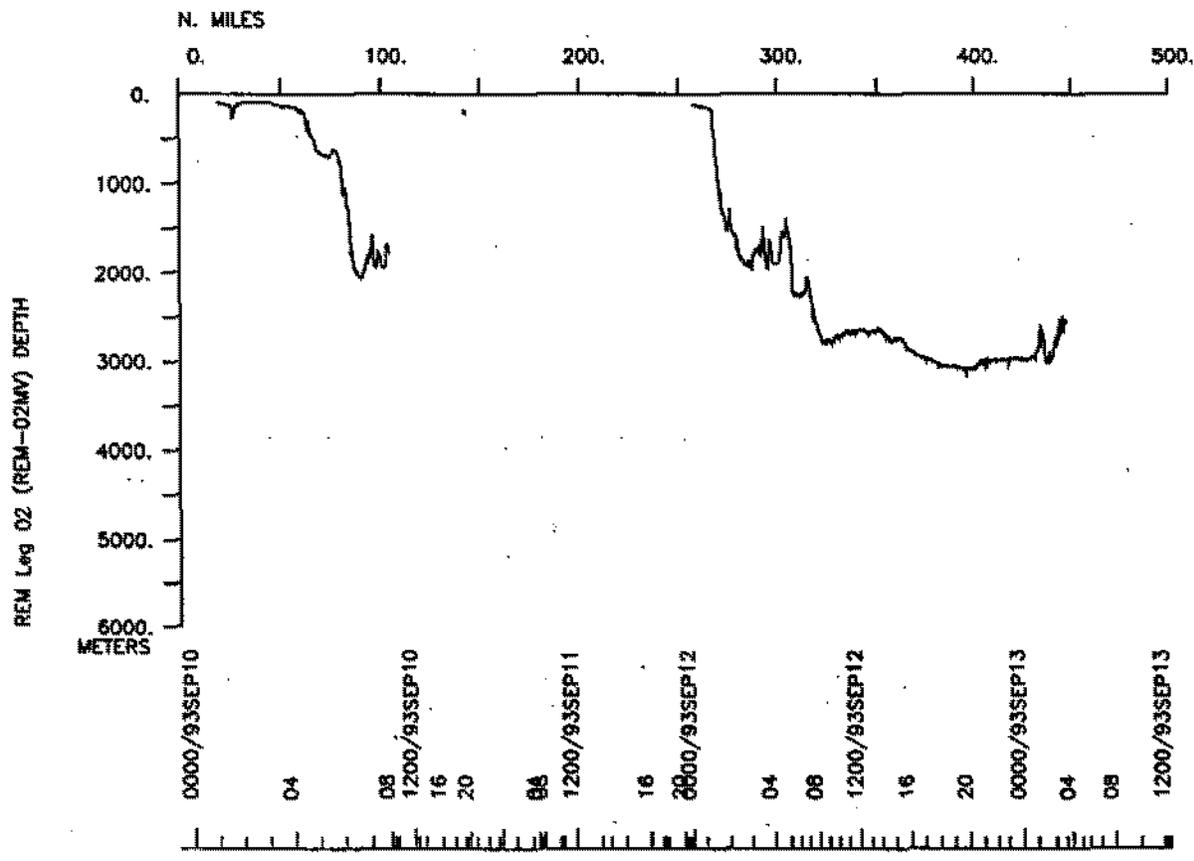
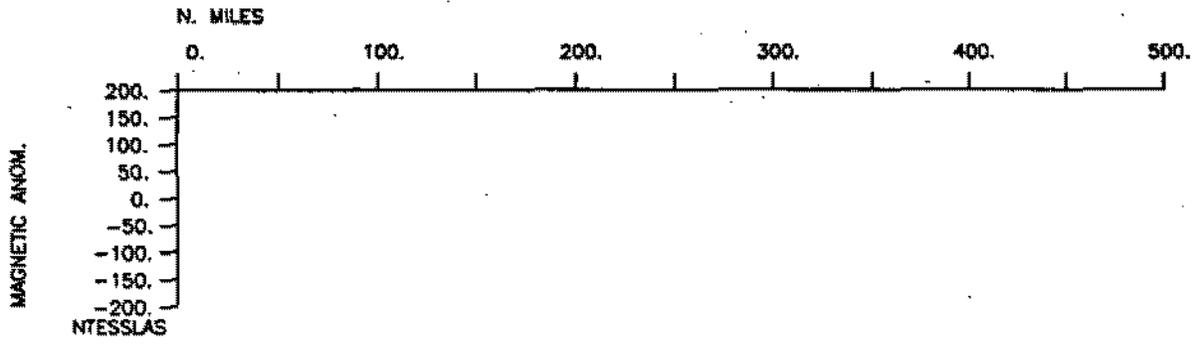
REM Leg 02 (REM-02MV) Survey 1

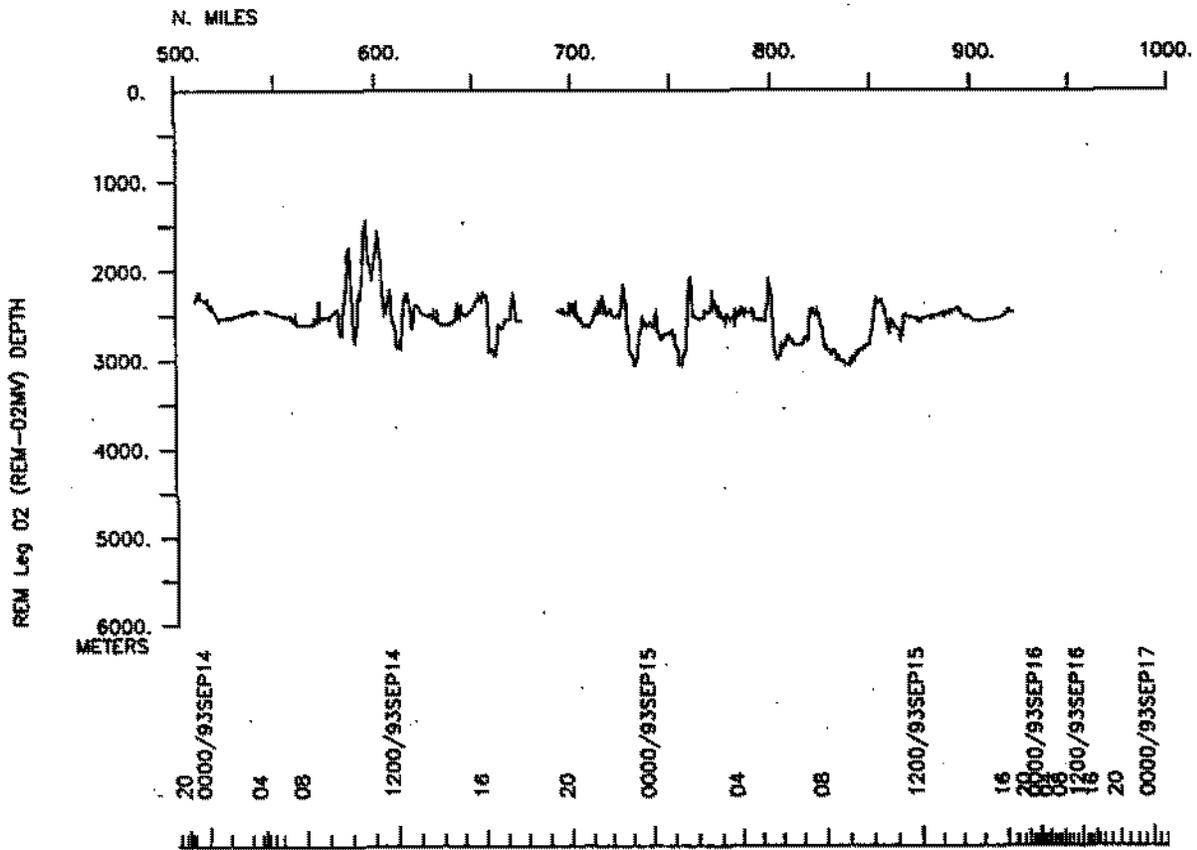
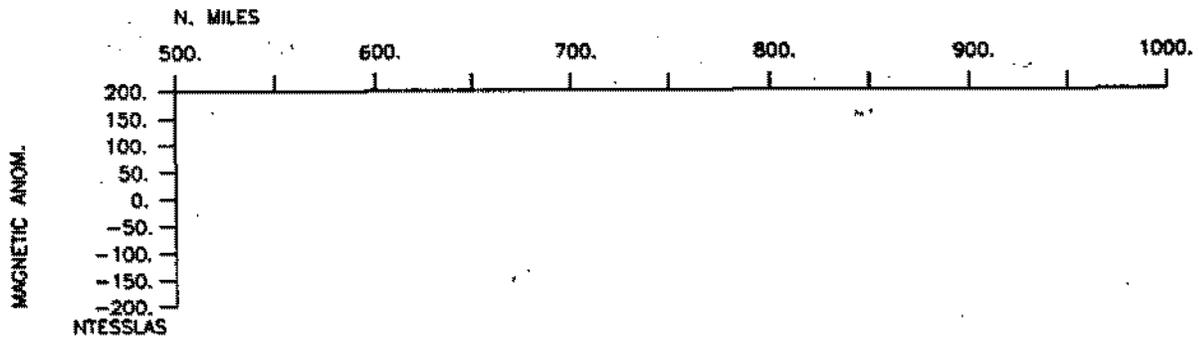
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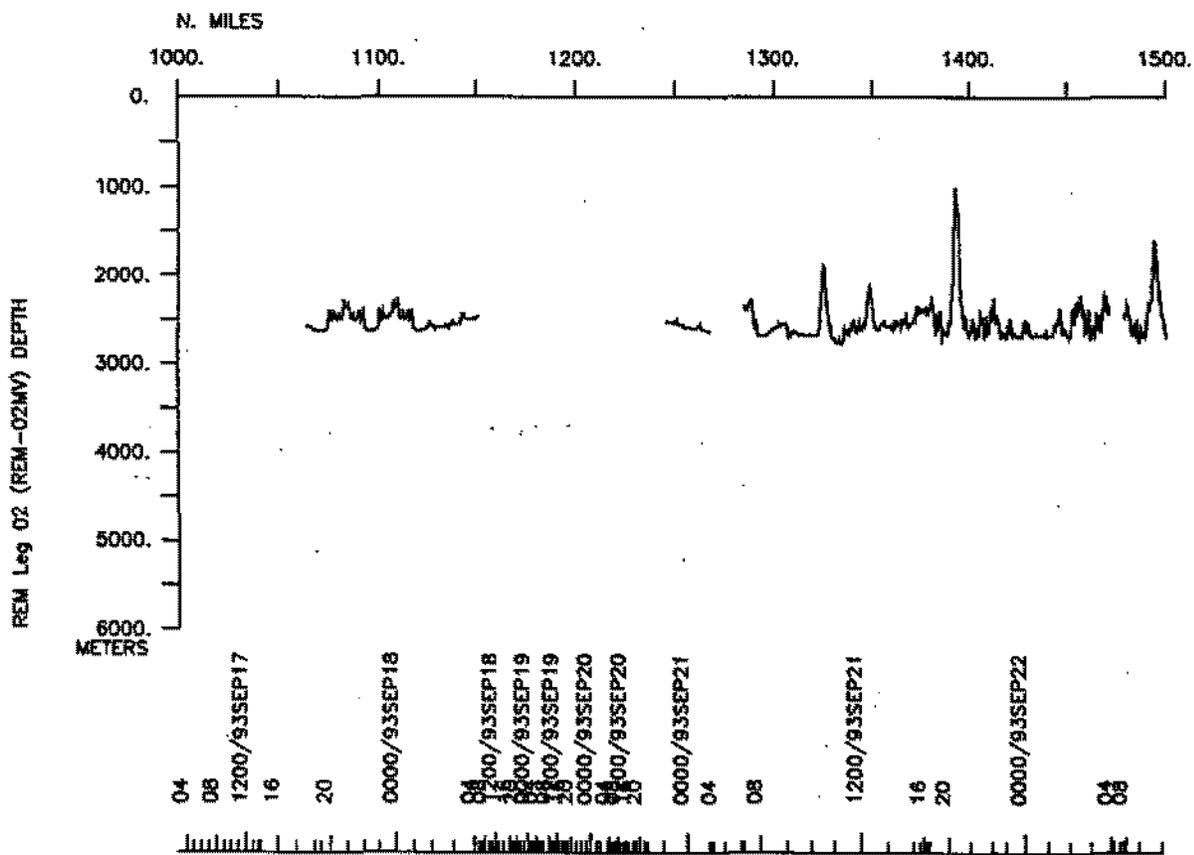
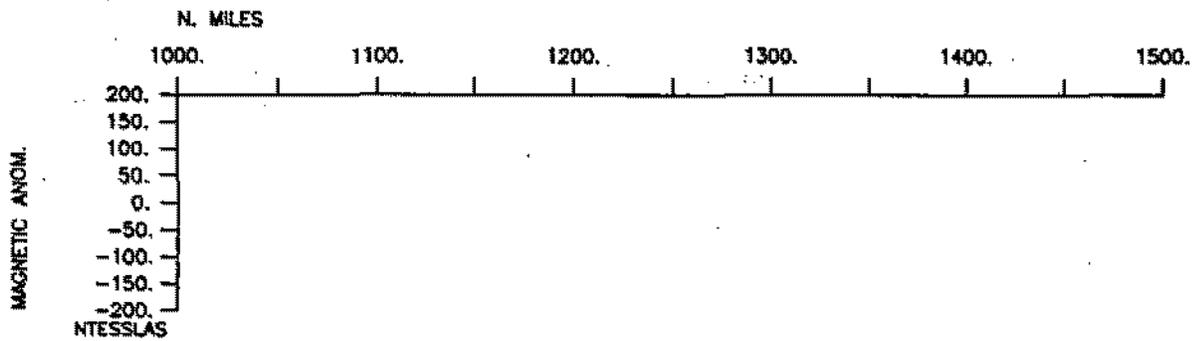


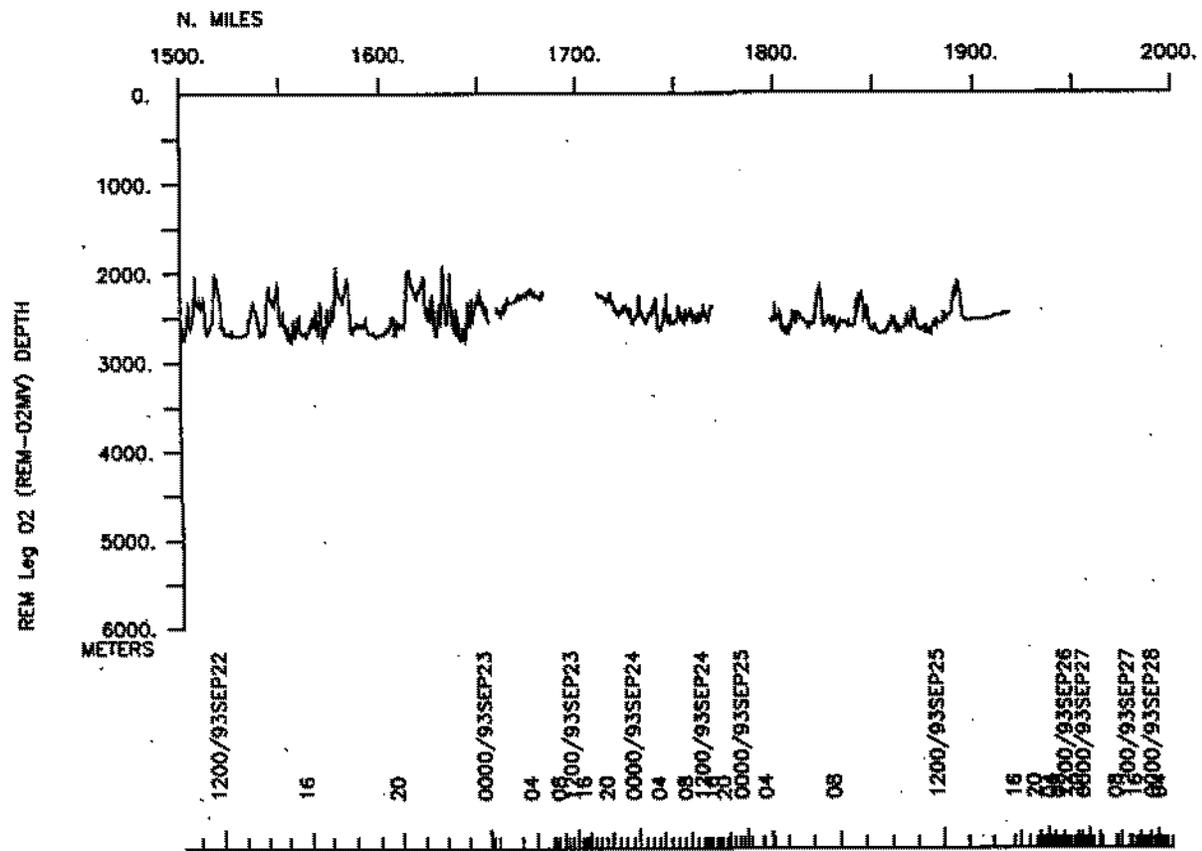
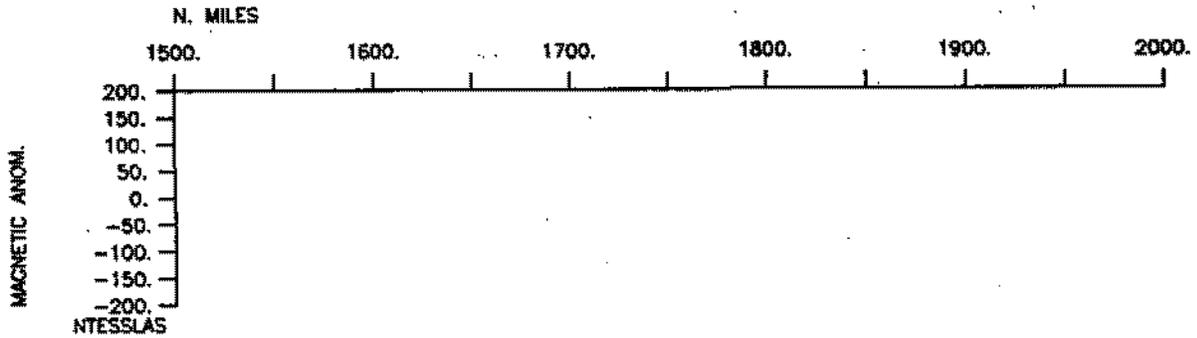
REM Leg 02 (REM-02MV) Survey 2

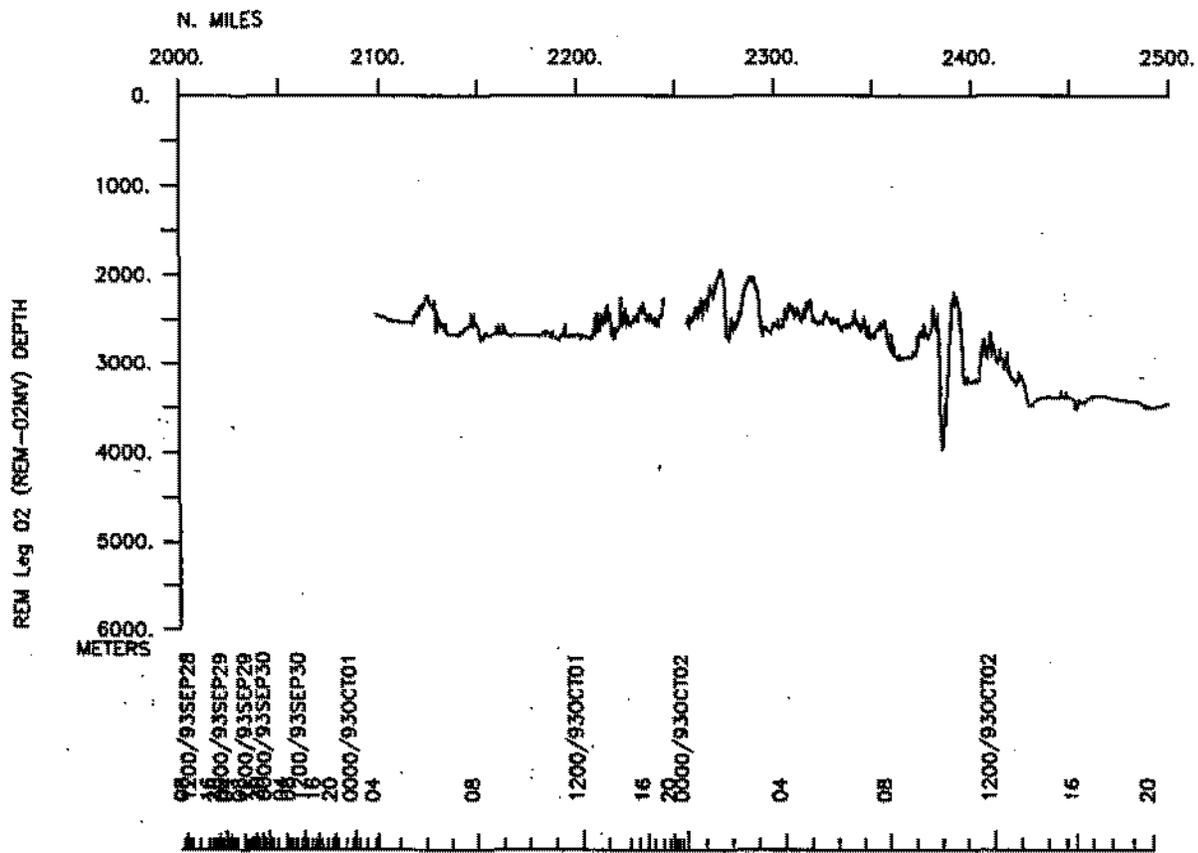
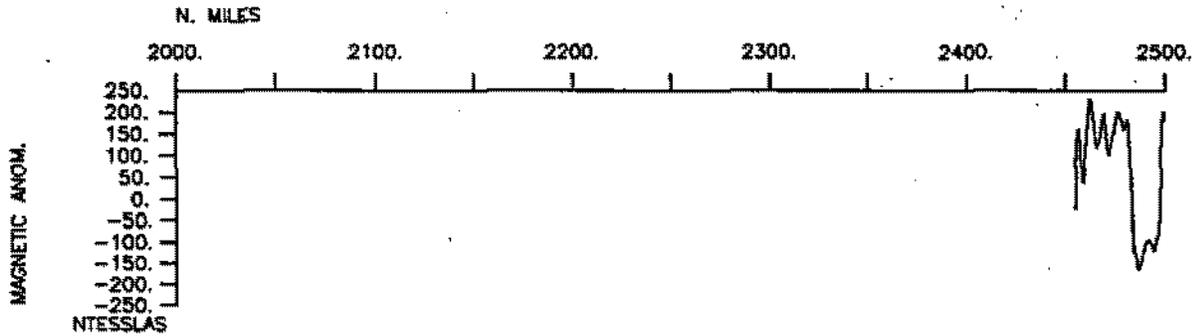
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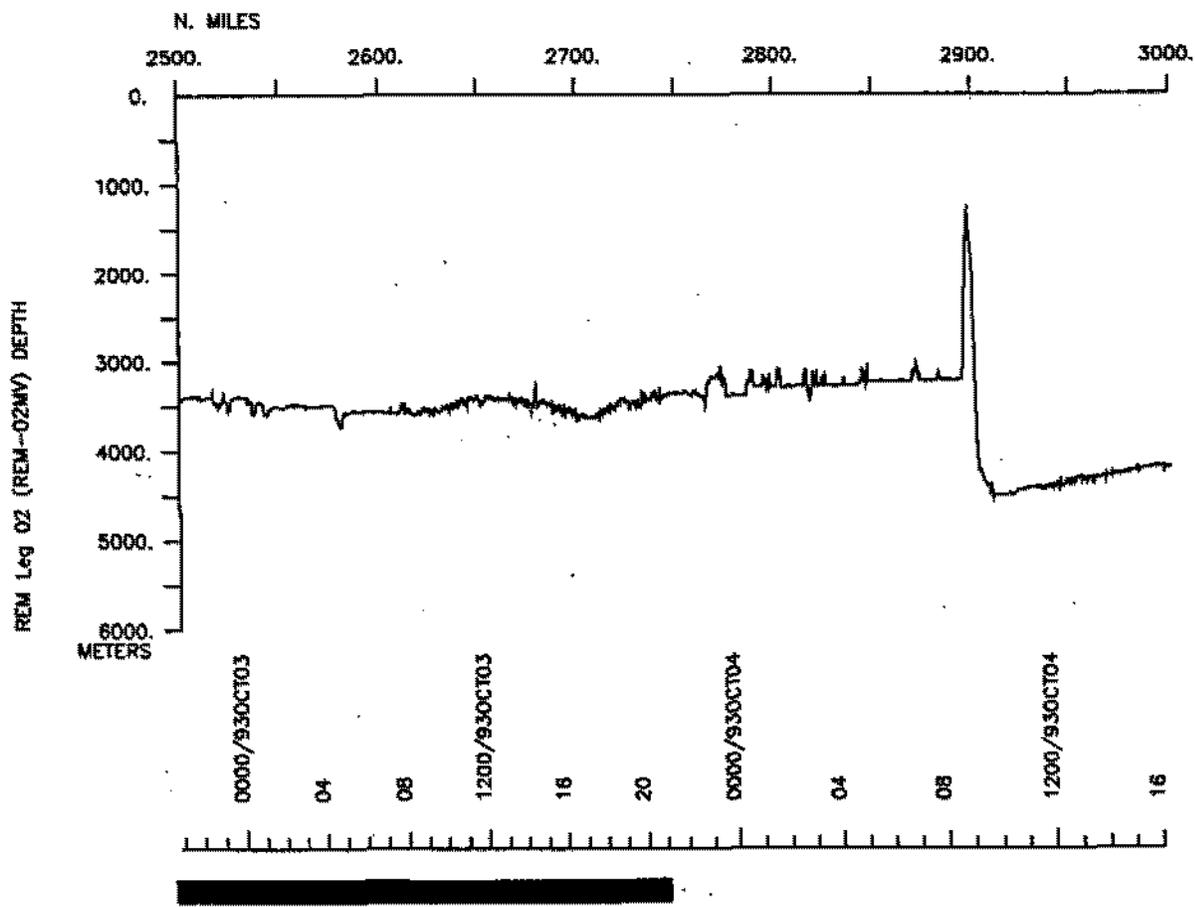
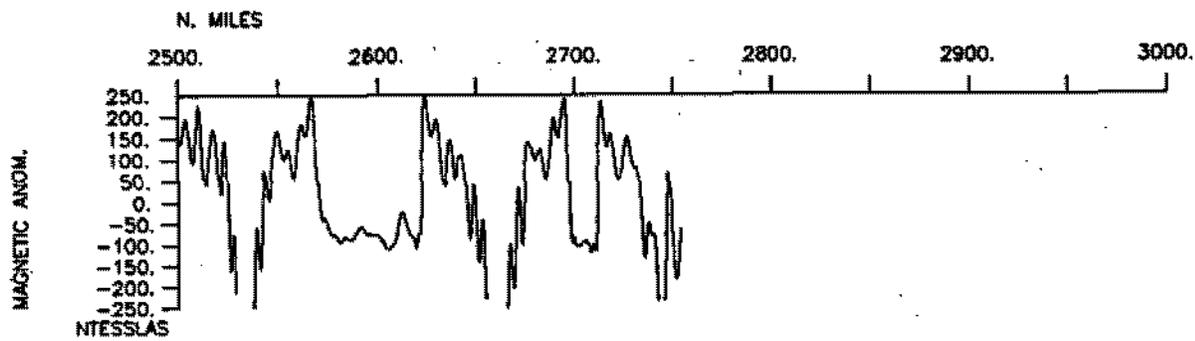


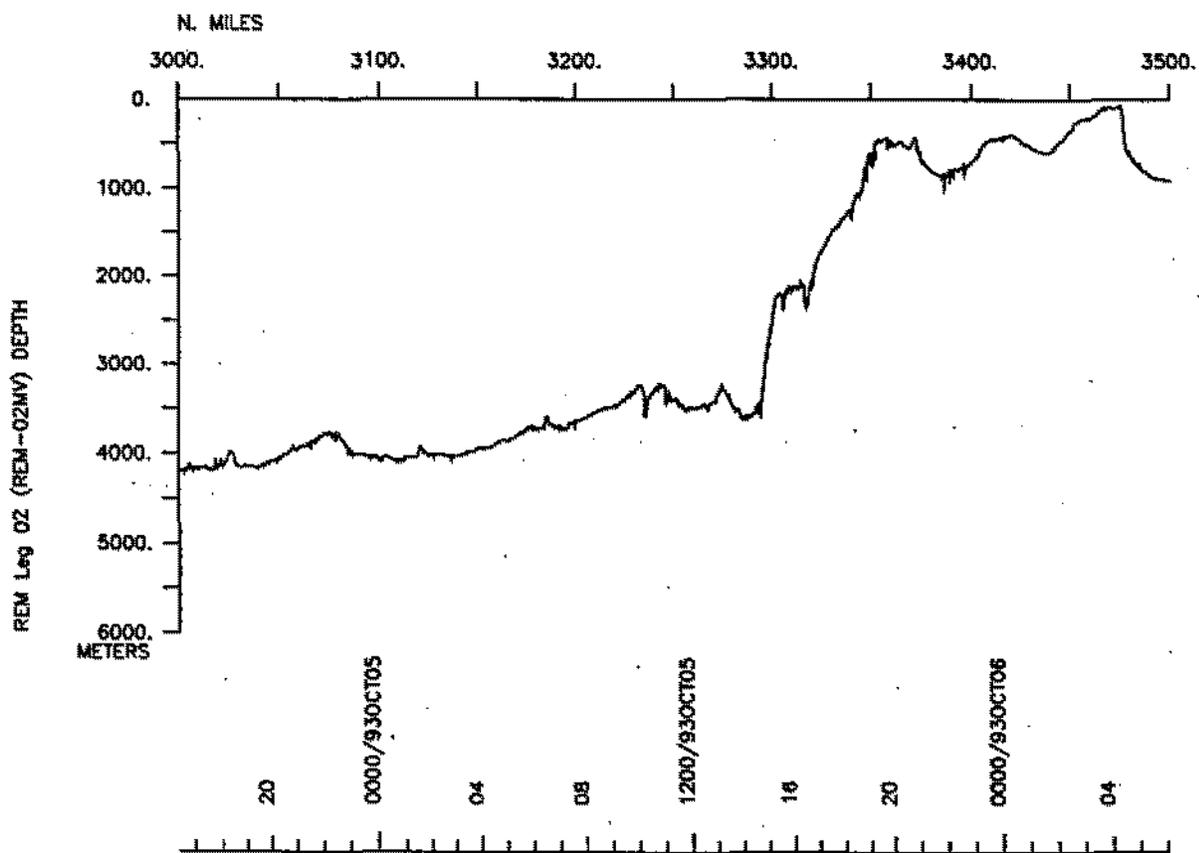
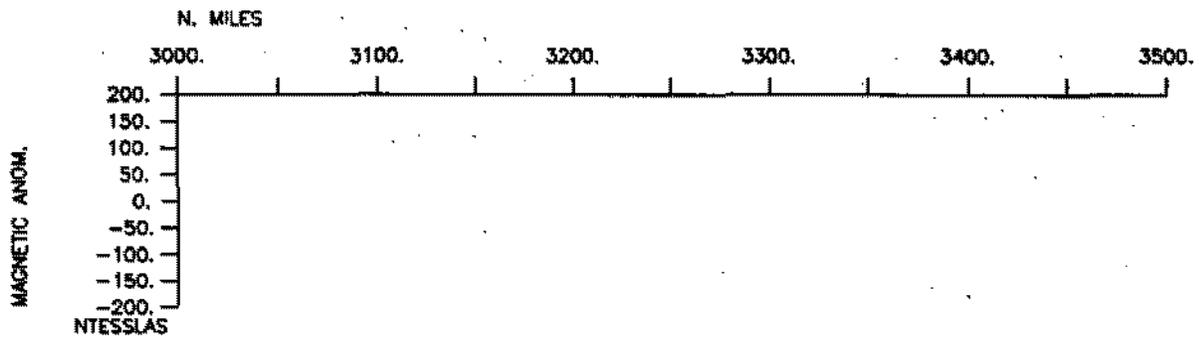


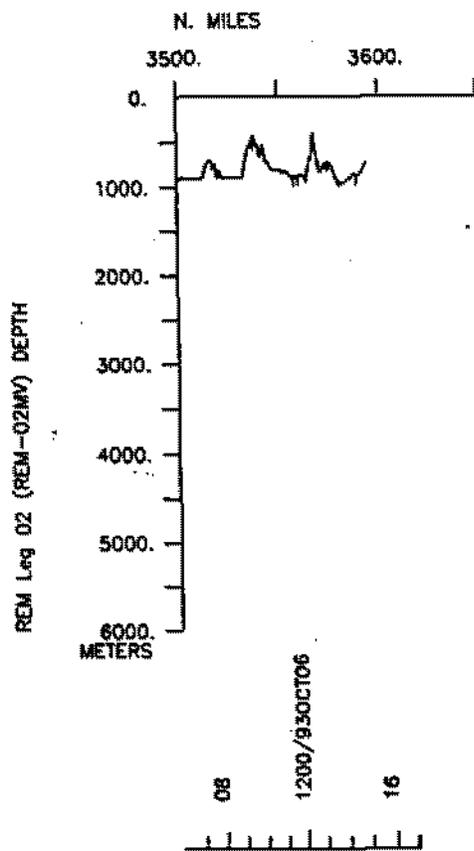
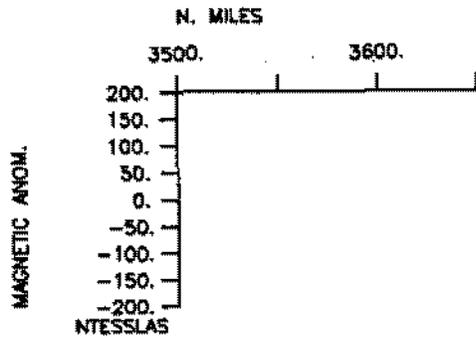












S.I.O. SAMPLE INDEX

(Issued November 1993)

REM EXPEDITION

Leg 2

R/V Melville

Astoria, Oregon (9 September 1993)
to
San Diego, Calif. (6 October 1993)

Chief Scientist:

Spahr Webb (Scripps 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 further computer searches on these parameters. (Listings defining these codes are available from the Geological Data Center.)

GDC Cruise I.D.# 261

*** Ports ***

2300	090993	0	LGPT	B	Astoria, Oregon	46-11.40N	123-51.77W	f	REM-02MV
1730	061093	0	LGPT	E	San Diego	32-42.39N	117-14.17W	f	REM-02MV
1300	121093	0	LGSS	B	Gray's Harbor, Wa.	32-42.41N	117-14.19W	f	REM-02MV
1400	121093	0	LGSS	E	Gray's Harbor, Wa.	32-42.41N	117-14.19W	f	REM-02MV

*** Personnel ***

#	*****NAME*****	*****TITLE*****	*****AFFILIATION*****	**CRID**
PESP MPL	Webb, S.	Chief Scientist	Scripps Institution	REM-02MV
PESP MPL	Hildebrand, J.	Professor	Scripps Institution	REM-02MV
PERT STS	Boaz, J.	Resident Tech	Scripps Institution	REM-02MV
PEAT STS	Crampton, P.	Airgun Tech	Scripps Institution	REM-02MV
PECT STS	Bouchard, G.	Computer Tech	Scripps Institution	REM-02MV
PESP CCS	Harvey, P.	Mooring Tech	Scripps Institution	REM-02MV
PEST MPL	Sohn, R.	Student	Scripps Institution	REM-02MV
PEST MPL	Crawford, W.	Student	Scripps Institution	REM-02MV
PEST MPL	Prescott, R.	Student	Scripps Institution	REM-02MV
PEST MPL	Tikku, A.	Student	Scripps Institution	REM-02MV
PESP SIX	Edwards, R.	Professor	Univ. of Toronto	REM-02MV
PESP SIX	Evans, R.	Post-Doc	Univ. of Toronto	REM-02MV
PEST SIX	Jegen, M.	Student	Univ. of Toronto	REM-02MV
PEST SIX	Yu, L.	Student	Univ. of Toronto	REM-02MV
PEST SIX	Yang, J.	Student	Univ. of Toronto	REM-02MV
PEST SIX	Cairnes, G.	Student	Univ. of Toronto	REM-02MV

*** 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 ***

2300	090993	0	LBSC	B scientific log book	MPL	46-11.40N	123-51.77W	g	REM-02MV
1730	061093	0	LBSC	E scientific log book	MPL	32-42.39N	117-14.17W	g	REM-02MV

*** Magnetotelluric Free Vehicles) ***

2234	170993	0	MTFV	B magnetometer f.v.	MPL	47-56.02N	128-45.01W	g	REM-02MV
0400	210993	0	MTFV	E magnetometer f.v.	MPL	47-55.80N	128-44.97W	g	REM-02MV
2242	210993	0	MTFV	B magnetometer f.v.	MPL	46-28.98N	129-28.94W	g	REM-02MV
0100	250993	0	MTFV	E magnetometer f.v.	MPL	46-28.95N	129-28.86W	g	REM-02MV

*** NOTE: These magnetotelluric free vehicles were launched sometime in
 *** July from the R/V Wacoma. The exact date, location and cruise
 *** i.d. are not known at this time.
 *** They have been given the begin time/location of this cruise leg.

2300	090993	0	MTFV	C mag f.v. #jethro	MPL	46-11.40N	123-51.77W	g	REM-02MV
1059	100993	0	MTFV	E mag f.v. #jethro	MPL	47-01.02N	125-41.97W	g	REM-02MV
2300	090993	0	MTFV	C mag f.v. #6	MPL	46-11.40N	123-51.77W	g	REM-02MV
1302	100993	0	MTFV	E mag f.v. #6	MPL	47-03.26N	125-27.94W	g	REM-02MV
2300	090993	0	MTFV	C mag f.v. #5	MPL	46-11.40N	123-51.77W	g	REM-02MV
1545	100993	0	MTFV	E mag f.v. #5	MPL	47-04.96N	125-12.41W	g	REM-02MV
2300	090993	0	MTFV	C mag f.v. #orange	MPL	46-11.40N	123-51.77W	g	REM-02MV
2005	100993	0	MTFV	E mag f.v. #orange	MPL	47-06.85N	124-58.10W	g	REM-02MV
2300	090993	0	MTFV	C mag f.v. #mono	MPL	46-11.40N	123-51.77W	g	REM-02MV
0200	100993	0	MTFV	E mag f.v. #mono	MPL	46-21.68N	124-22.13W	g	REM-02MV
2300	090993	0	MTFV	C mag f.v. #green	MPL	46-11.40N	123-51.77W	g	REM-02MV
0918	110993	0	MTFV	E mag f.v. #green	MPL	47-11.78N	124-18.68W	g	REM-02MV
2300	090993	0	MTFV	C mag f.v. #cayuga	MPL	46-11.40N	123-51.77W	g	REM-02MV
1732	110993	0	MTFV	E mag f.v. #cayuga	MPL	47-10.70N	124-28.83W	g	REM-02MV
2300	090993	0	MTFV	C mag f.v. #yellow	MPL	46-11.40N	123-51.77W	g	REM-02MV
2001	110993	0	MTFV	E mag f.v. #yellow	MPL	47-08.79N	124-41.64W	g	REM-02MV

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

#*** Electro-Magnetic Wire Lowered Instrument ***

2318	150993	0	EMWL	B magnetic source	MPL	48-24.23N	128-38.07W	g	REM-02MV
1405	160993	0	EMWL	E magnetic source	MPL	48-24.72N	128-42.53W	g	REM-02MV
0700	180993	0	EMWL	B magnetic source	MPL	48-24.36N	128-42.36W	g	REM-02MV
1405	180993	0	EMWL	E magnetic source	MPL	48-30.26N	128-47.58W	g	REM-02MV
1752	190993	0	EMWL	B magnetic source	MPL	48-28.44N	128-45.80W	g	REM-02MV
2200	190993	0	EMWL	E magnetic source	MPL	48-26.64N	128-41.75W	g	REM-02MV

#*** Electro-Magnetic Free Vehicle ***

0634	230993	0	EMFV	B electric field f.v.	MPL	46-17.21N	129-42.01W	g	REM-02MV
1830	230993	0	EMFV	E electric field f.v.	MPL	46-17.97N	129-41.57W	g	REM-02MV
0800	230993	0	EMFV	B electric field f.v.	MPL	46-15.22N	129-43.81W	g	REM-02MV
1736	230993	0	EMFV	E electric field f.v.	MPL	46-17.39N	129-42.86W	g	REM-02MV

#*** Electric Field Towed Vehicle ***

0850	230993	0	EFXX	B towed elec. source	MPL	46-15.51N	129-43.95W	g	REM-02MV
1525	230993	0	EFXX	E towed elec. source	MPL	46-18.36N	129-47.06W	g	REM-02MV
1541	240993	0	EFXX	B towed elec. source	MPL	46-30.11N	129-35.17W	g	REM-02MV
2238	240993	0	EFXX	E towed elec. source	MPL	46-30.04N	129-31.59W	g	REM-02MV

#*** Electric Field Free Vehicle ***

1332	240993	0	EFFV	B electric field f.v.	MPL	46-31.46N	129-34.61W	g	REM-02MV
0503	250993	0	EFFV	E electric field f.v.	MPL	46-31.35N	129-34.54W	g	REM-02MV
1415	240993	0	EFFV	B electric field f.v.	MPL	46-31.21N	129-33.77W	g	REM-02MV
0520	250993	0	EFFV	E electric field f.v.	MPL	46-31.03N	129-33.86W	g	REM 02MV

JGMT	DDMMYY	SAMP	B	SAMPLE	DISP				P	CRUISE
#TIME	DATE	TZ	CODE	E IDENTIFIER	CODE	LATITUDE	LONGITUDE		C	LEG-SHIP

*** Current Meters ***

*** NOTE: These currentmeter moorings were also deployed from R/V Wacoma
 and have been given the begin time/location of this cruise leg.

2300	090993	0	CMAB	C vmcm mooring #1	MPL	46-11.40N	123-51.77W	g	REM-02MV
1755	100993	0	CMAB	E vmcm mooring #1	MPL	47-07.01N	124-57.92W	g	REM-02MV
2300	090993	0	CMAB	C vmcm mooring #2	MPL	46-11.40N	123-51.77W	g	REM-02MV
0100	110993	0	CMAB	E vmcm mooring #2	MPL	47-08.74N	124-41.55W	g	REM-02MV
2300	090993	0	CMAB	C vmcm mooring #3	MPL	46-11.40N	123-51.77W	g	REM-02MV
0350	110993	0	CMAB	E vmcm mooring #3	MPL	47-10.88N	124-29.00W	g	REM-02MV
2300	090993	0	CMAB	C vmcm mooring #4	MPL	46-11.40N	123-51.77W	g	REM-02MV
0755	110993	0	CMAB	E vmcm mooring #4	MPL	47-10.22N	124-29.49W	g	REM-02MV
2300	090993	0	CMAB	C vmcm mooring #5	MPL	46-11.40N	123-51.77W	g	REM-02MV
2242	110993	0	CMAB	E vmcm mooring #5	MPL	47-08.82N	124-41.73W	g	REM-02MV

*** Free Vehicle Gravity Instruments ***

1010	130993	0	GVFV	B gravimeter f.v.	MPL	47-59.99N	129-03.68W	g	REM-02MV
1545	130993	0	GVFV	E gravimeter f.v.	MPL	48-00.00N	129-03.75W	g	REM-02MV
1823	130993	0	GVFV	B gravimeter f.v.	MPL	47-57.67N	129-02.17W	g	REM-02MV
2032	130993	0	GVFV	E gravimeter f.v.	MPL	47-57.66N	129-02.15W	g	REM-02MV
0628	140993	0	GVFV	B gravimeter f.v.	MPL	48-24.01N	128-43.98W	g	REM-02MV
1748	150993	0	GVFV	E gravimeter f.v.	MPL	48-23.91N	128-43.89W	g	REM-02MV
0811	140993	0	GVFV	B gravimeter f.v.	MPL	48-15.05N	128-33.45W	g	REM-02MV
1500	150993	0	GVFV	E gravimeter f.v.	MPL	48-38.98N	128-42.63W	g	REM-02MV
1926	150993	0	GVFV	B gravimeter f.v.	MPL	48-25.50N	128-41.09W	g	REM-02MV
1340	170993	0	GVFV	E gravimeter f.v.	MPL	48-25.37N	128-40.96W	g	REM-02MV
2100	170993	0	GVFV	B gravimeter f.v.	MPL	47-56.47N	129-02.84W	g	REM-02MV
0650	210993	0	GVFV	E gravimeter f.v.	MPL	47-56.47N	129-03.00W	g	REM-02MV

#GMT #TIME #	DDMMYY DATE	SAMP TZ	B CODE	SAMPLE E IDENTIFIER	DISP CODE	LATITUDE	LONGITUDE	P C	CRUISE LEG-SHIP
1514	210993	0	GVFV	B gravimeter f.v.	MPL	46-28.59N	129-37.00W	g	REM-02MV
0207	250993	0	GVFV	E gravimeter f.v.	MPL	46-28.45N	129-36.77W	g	REM-02MV
1633	250993	0	GVFV	B gravimeter f.v.	MPL	48-29.76N	128-45.01W	g	REM-02MV
0500	270993	0	GVFV	E gravimeter f.v.	MPL	48-29.46N	128-45.18W	g	REM-02MV
0622	280993	0	GVFV	B gravimeter f.v.	MPL	48-27.39N	128-42.72W	g	REM-02MV
0059	011093	0	GVFV	E gravimeter f.v.	MPL	48-26.72N	128-43.08W	g	REM-02MV

#*** Wire Lowered Gravimeter ***

0430	200993	0	GVXX	B wire lower gravimeter	MPL	48-25.54N	128-41.13W	g	REM-02MV
1602	200993	0	GVXX	E wire lower gravimeter	MPL	48-27.46N	128-43.41W	g	REM-02MV
1820	250993	0	GVXX	B wire lower gravimeter	MPL	48-27.40N	128-38.03W	g	REM-02MV
0244	270993	0	GVXX	E wire lower gravimeter	MPL	48-30.45N	128-47.90W	g	REM-02MV
0911	270993	0	GVXX	B wire lower gravimeter	MPL	48-23.99N	128-42.10W	g	REM-02MV
0600	280993	0	GVXX	E wire lower gravimeter	MPL	48-28.18N	128-43.22W	g	REM-02MV
0800	290993	0	GVXX	B wire lower gravimeter	MPL	48-26.23N	128-40.58W	g	REM-02MV
0239	300993	0	GVXX	E wire lower gravimeter	MPL	48-27.18N	128-44.30W	g	REM-02MV

#*** Gravity Survey ***

0830	220993	0	GVSV	B gravity survey	MPL	46-31.48N	129-36.36W	g	REM-02MV
2350	220993	0	GVSV	E gravity survey	MPL	46-29.67N	129-37.67W	g	REM-02MV

#GMT	DDMMYY	SAMP	B	SAMPLE	DISP	LATITUDE	LONGITUDE	p	CRUISE
#TIME	DATE	TZ	CODE	E IDENTIFIER	CODE			C	LEG-SHIP
*** Sea Beam Survey ***									
0300	230993	0	MBSV	B seabeam survey	STS	46-19.76N	129-41.23W	g	REM-02MV
0601	230993	0	MBSV	E seabeam survey	STS	46-17.42N	129-42.84W	g	REM-02MV
*** Seismic Runs ***									
1842	160993	0	SRCS	B airgun to OBS run 01	MPL	48-25.91N	128-49.23W	g	REM-02MV
1228	170993	0	SRCS	E airgun to OBS run 01	MPL	48-25.40N	128-38.54W	g	REM-02MV
1922	230993	0	SRCS	B airgun to OBS run 02	MPL	46-20.50N	129-39.82W	g	REM-02MV
0940	240993	0	SRCS	E airgun to OBS run 02	MPL	46-30.78N	129-31.93W	g	REM-02MV
1720	180993	0	SRXX	B thump with weight	MPL	48-25.93N	128-43.05W	g	REM-02MV
1234	190993	0	SRXX	E as seismic source	MPL	48-27.39N	128-42.89W	g	REM-02MV
*** Seismic Reflection Survey ***									
1530	021093	0	SPSV	B seismic reflection	GDC	43-27.01N	130-25.17W	g	REM-02MV
2136	031093	0	SPSV	E seismic reflection	GDC	42-07.57N	130-11.82W	g	REM-02MV
*** Seismic Reflection Records ***									
1540	021093	0	SPRS	B slow record r-01	GDC	43-27.00N	130-26.36W	g	REM-02MV
2100	031093	0	SPRS	E slow record r-01	GDC	42-13.39N	130-19.02W	g	REM-02MV
1540	021093	0	SPRF	B fast record(2 sec)	GDC	43-27.00N	130-26.36W	g	REM-02MV
2100	031093	0	SPRF	E fast record(2 sec)	GDC	42-13.39N	130-19.02W	g	REM-02MV
1600	021093	0	SPRF	B fast record(1 sec)	GDC	43-27.08N	130-29.32W	g	REM-02MV
2100	031093	0	SPRF	E fast record(1sec)	GDC	42-13.39N	130-19.02W	g	REM-02MV
*** Magnetism (Earth Total Field) Records ***									
1539	021093	0	MGRA	B magnetism r-01	GDC	43-27.00N	130-26.24W	g	REM-02MV
2120	031093	0	MGRA	E magnetism r-01	GDC	42-10.20N	130-15.11W	g	REM-02MV

#GMT	DDMMYY	SAMP	B	SAMPLE	DISP				p	CRUISE
#TIME	DATE	TZ	CODE	E IDENTIFIER	CODE	LATITUDE	LONGITUDE		C	LEG-SHIP
#*** Depth Instrument Lowering ***										
0745	100993	0	DPIL	B mpl acoustics r-01	MPL	47-00.88N	125-41.25W	g		REM-02MV
2335	100993	0	DPIL	E mpl acoustics r-01	MPL	47-08.92N	124-40.89W	g		REM-02MV
2335	100993	0	DPIL	B mpl acoustics r-02	MPL	47-08.92N	124-40.89W	g		REM-02MV
1800	110993	0	DPIL	E mpl acoustics r-02	MPL	47-10.62N	124-28.87W	g		REM-02MV
1800	110993	0	DPIL	B mpl acoustics r-03	MPL	47-10.62N	124-28.87W	g		REM-02MV
2015	180993	0	DPIL	E mpl acoustics r-03	MPL	48-26.70N	128-43.15W	g		REM-02MV
2015	180993	0	DPIL	B mpl acoustics r-04	MPL	48-26.70N	128-43.15W	g		REM-02MV
1720	200993	0	DPIL	E mpl acoustics r-04	MPL	48-26.42N	128-42.62W	g		REM-02MV
1730	200993	0	DPIL	B mpl acoustics r-05	MPL	48-26.22N	128-42.73W	g		REM-02MV
1300	240993	0	DPIL	E mpl acoustics r-05	MPL	46-31.44N	129-34.61W	g		REM-02MV
1300	240993	0	DPIL	B mpl acoustics r-06	MPL	46-31.44N	129-34.61W	g		REM-02MV
0200	250993	0	DPIL	E mpl acoustics r-06	MPL	46-28.50N	129-36.85W	g		REM-02MV
0200	250993	0	DPIL	B mpl acoustics r-07	MPL	46-28.50N	129-36.85W	g		REM-02MV
2320	270993	0	DPIL	E mpl acoustics r-07	MPL	48-27.74N	128-46.51W	g		REM-02MV
2325	270993	0	DPIL	B mpl acoustics r-08	MPL	48-27.77N	128-46.52W	g		REM-02MV
1000	300993	0	DPIL	E mpl acoustics r-08	MPL	48-26.95N	128-41.10W	g		REM-02MV
0140	160993	0	DPIL	B mpl navigation r-01	MPL	48-25.41N	128-41.95W	g		REM-02MV
1610	160993	0	DPIL	E mpl navigation r-01	MPL	48-25.78N	128-47.31W	g		REM 02MV
1610	160993	0	DPIL	B mpl navigation r-02	MPL	48-25.78N	128-47.31W	g		REM-02MV
0200	250993	0	DPIL	E mpl navigation r-02	MPL	46-28.50N	129-36.85W	g		REM-02MV
0200	250993	0	DPIL	B mpl navigation r-03	MPL	46-28.50N	129-36.85W	g		REM-02MV
0300	021093	0	DPIL	E mpl navigation r-03	MPL	45-55.97N	129-43.41W	g		REM-02MV

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End Sample Index

REM-02MV