

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

**LEG 2**

**(WEST02MV)**

**R/V MELVILLE**

**(Issued May 1994)**

Papeete, Tahiti (04 January 1994)  
to  
Wellington, New Zealand (07 February 1994).

**Chief Scientist:**

Peter Lonsdale (Scripps Institution of Oceanography)

Resident Marine Technician - Seth Mogk

Computer Technician - Ronald Moe

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

Data Collection and Processing Funded by:  
NSF 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. This document is not to be reproduced or distributed outside Scripps without prior approval of the chief scientist or the Geological Data Center, Scripps Institution of Oceanography, La Jolla, California 92093-0223*

GDC Cruise I.D.# 266

**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 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, California 92093-0223.  
Phone: (619)534-2752, FAX: (619)534-5306, Internet email: [ssmith@ucsd.edu](mailto:ssmith@ucsd.edu)

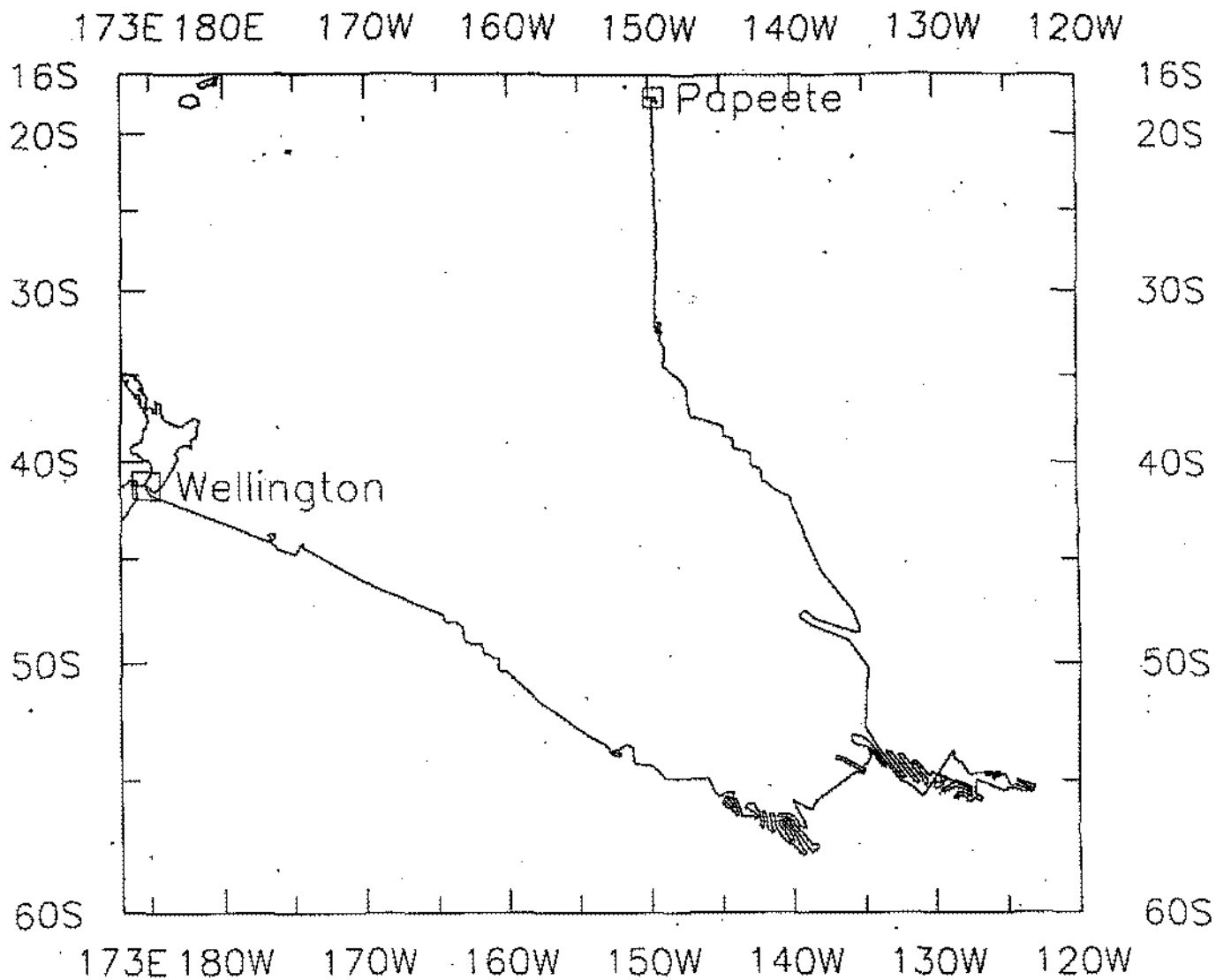
1. Files on Exabyte, DAT or 1/2 inch magnetic tape:
  - a) Separate time series ASCII files of navigation, single beam depth, gravity and magnetics.
  - b) These same data in a merged ASCII file in the MGD77 Exchange Format.
  - c) SeaBeam depth data (binary, Sun byte order) in SIO Swath Bathymetry Format (not available on 1/2" tape).
  - d) SeaBeam Sidescan data (not available on 1/2" tape).
2. Microfilm (35 mm flowfilm) or hard 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 track plots.
  - b) Copies of archived SeaBeam contour 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.

## SIO SEABEAM 2000 DATA INFORMATION

The following forms are available, subject to approval of the cruise leg chief scientist:

- 1) Hardcopy of realtime contour swath records and records with vertical beam and sidescan grayscale display are available for inspection at the data center.
- 2) Microfilm (35 mm flowfilm) of vertical beam/sidescan records.
- 3) SeaBeam merged tapes - SeaBeam data merged with GPS-based navigation. (Navigation is edited to the extent that DR courses and speeds are edited and poor fixes are removed after inspection of speeds and drift vectors between fix pairs. No editing is done on the basis of adjusting to overlapping SeaBeam swaths.)
- 4) Archive contour plots - 8 inches/degree chart scale, with contour interval nominally 50 m, are generated for all transit lines. Some survey areas are plotted at appropriate scales as well. Available for inspection at data center; additional copies may be generated from plot files stored on tape.
- 5) Custom generated plots of SeaBeam swaths on Mercator projection in four colors at variable plot scales and contour intervals. There are provisions to adjust positions of individual track lines and to edit out beams (bad data or overlapping data on inside of turns.)

Revised February 1993



**WESTWARD EXPEDITION LEG 2**

**CHIEF SCIENTIST: Peter Lonsdale, Scripps Institution**

**PORTS: Papeete, Tahiti - Wellington, New Zealand**

**DATES: 04 January - 07 February 1994**

**SHIP: R/V Melville**

**TOTAL MILEAGE OF UNDERWAY DATA COLLECTED**

**Cruise - 9200 miles**

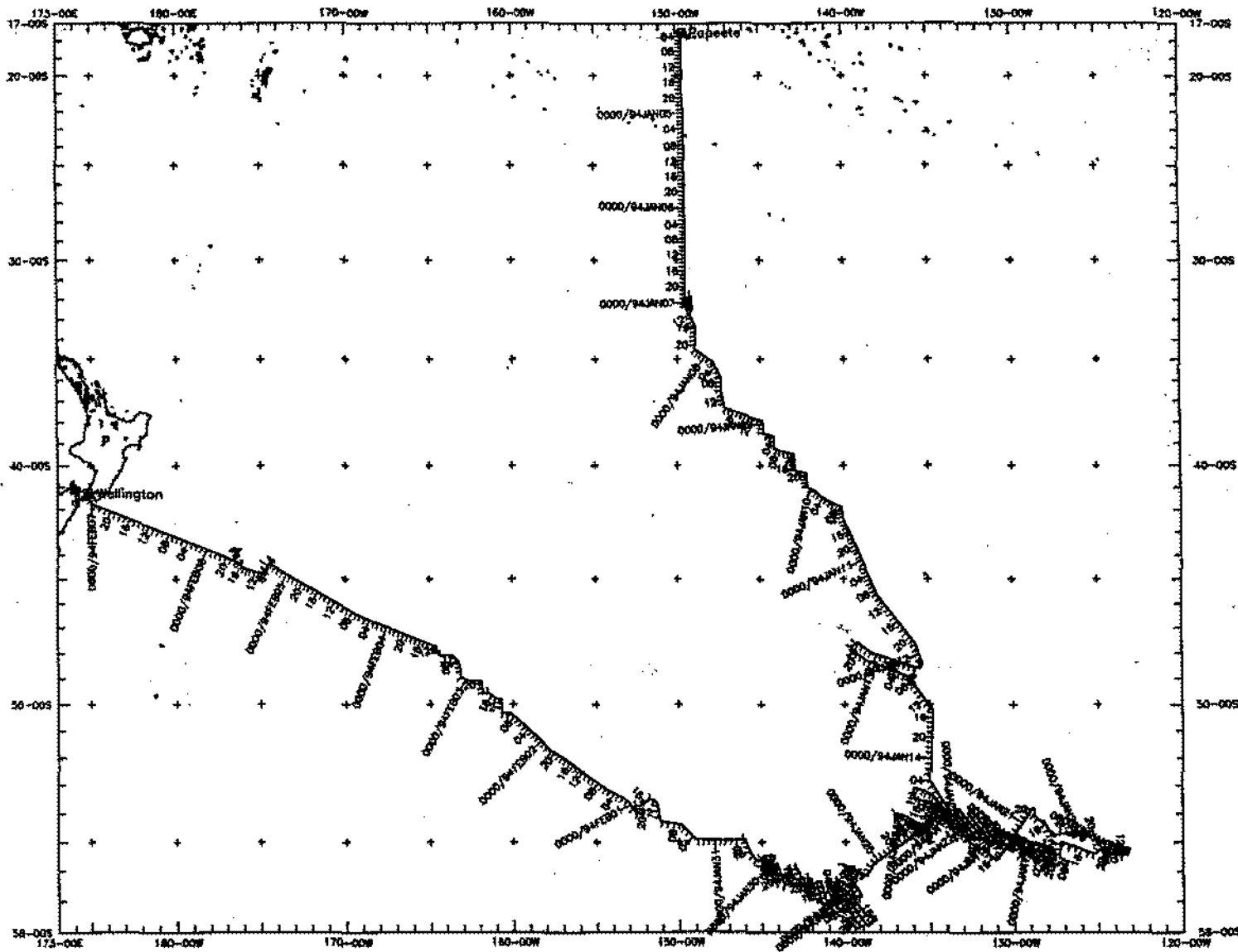
**Magnetics - 8680 miles**

**Bathymetry - 9200 miles**

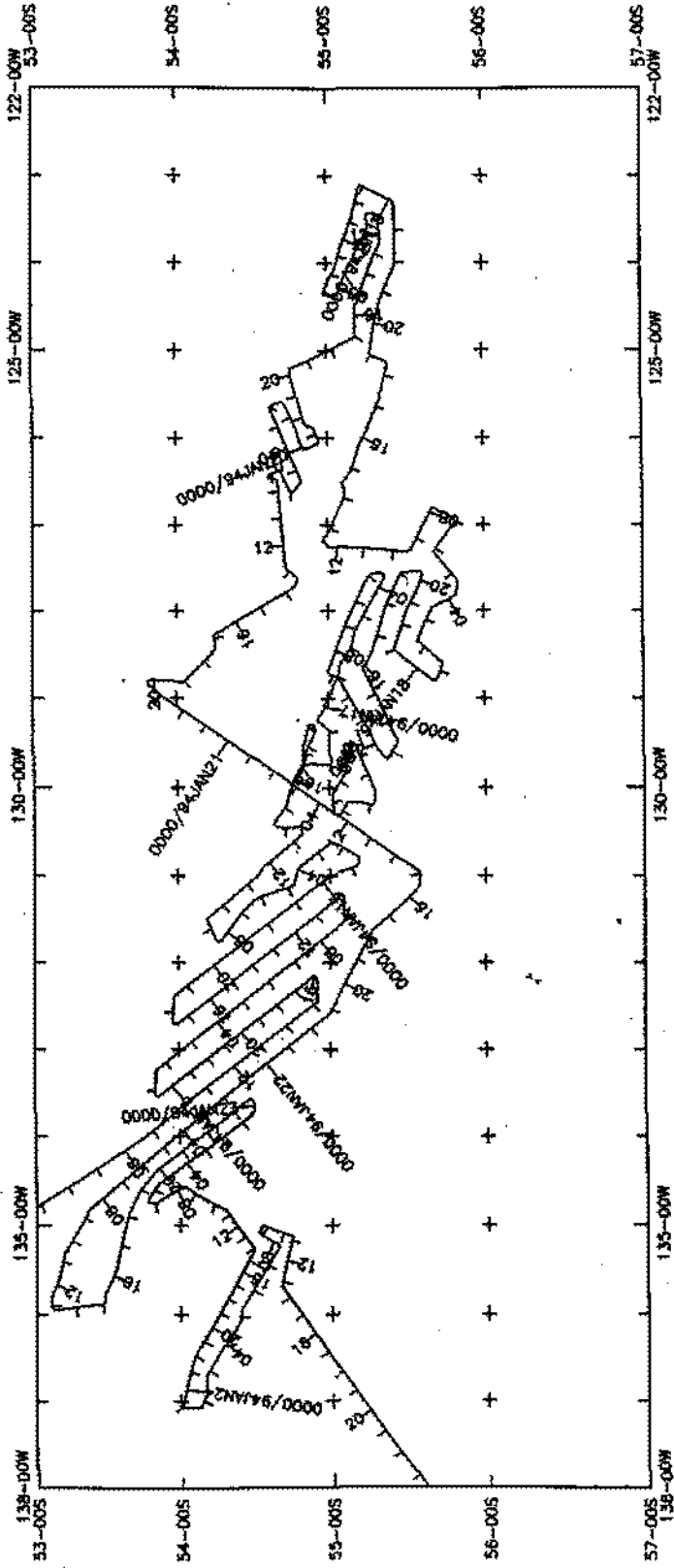
**Seismic Reflection - none collected**

**Sea Beam - 9200 miles**

**Gravity - 9245 miles**

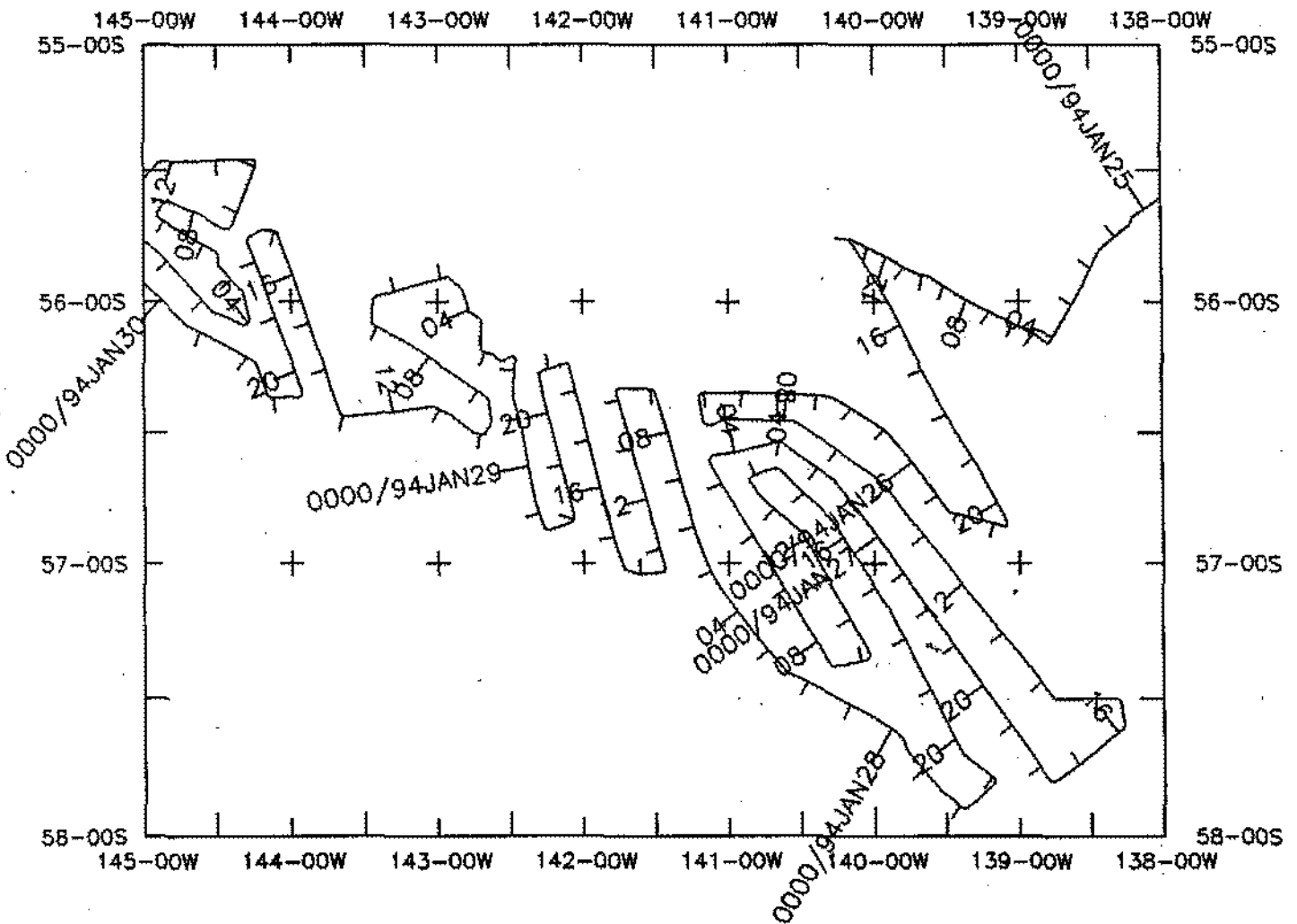


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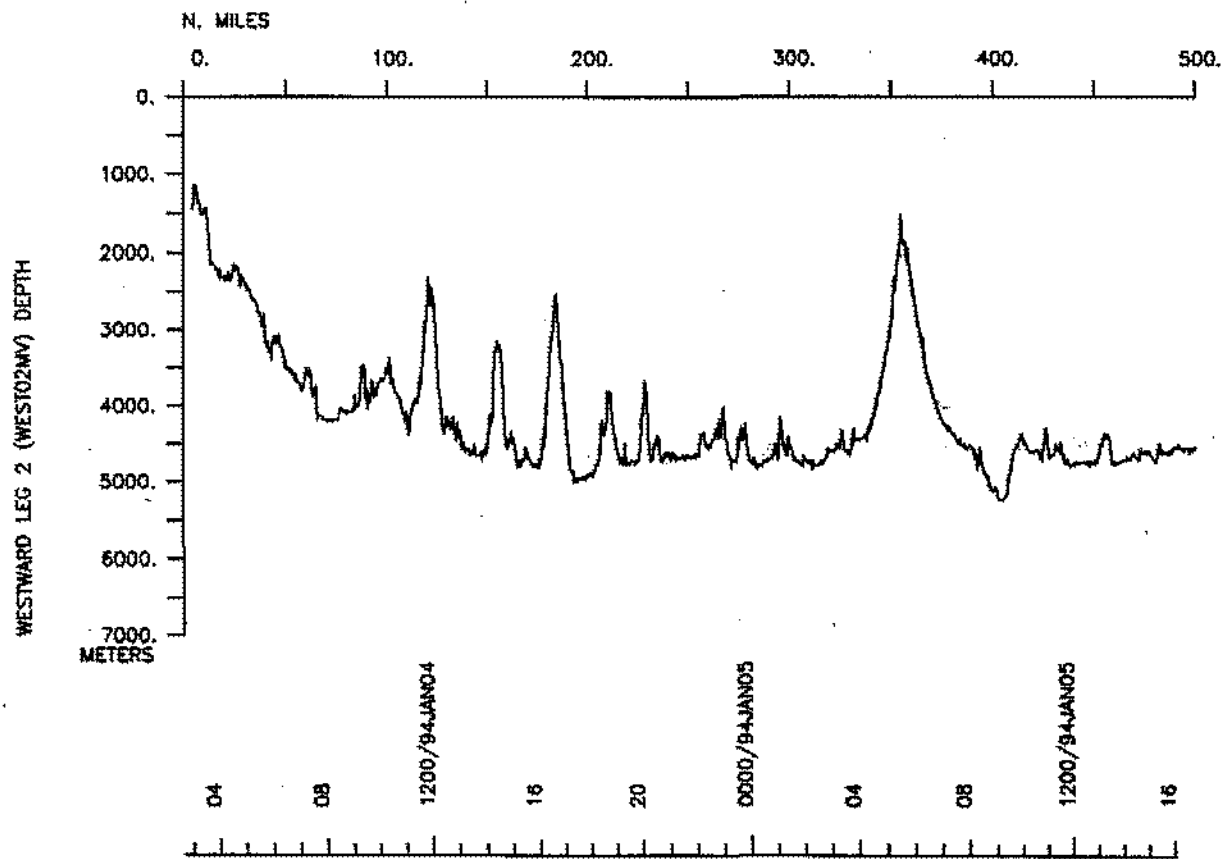
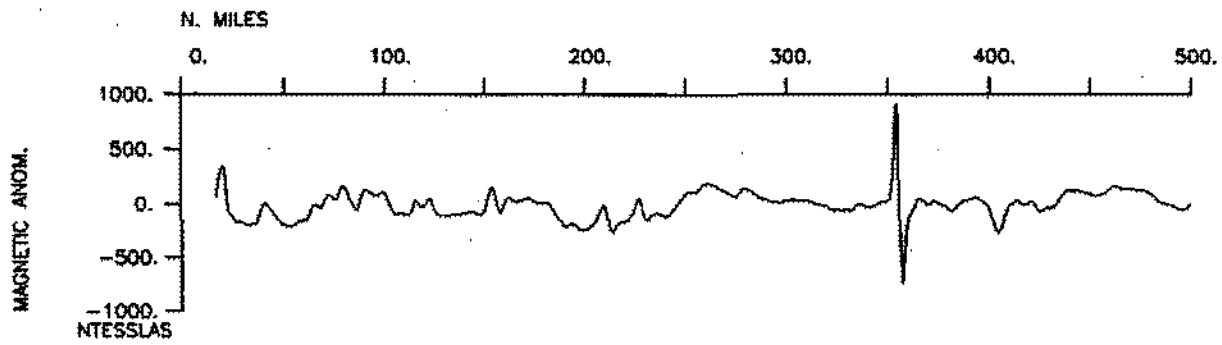
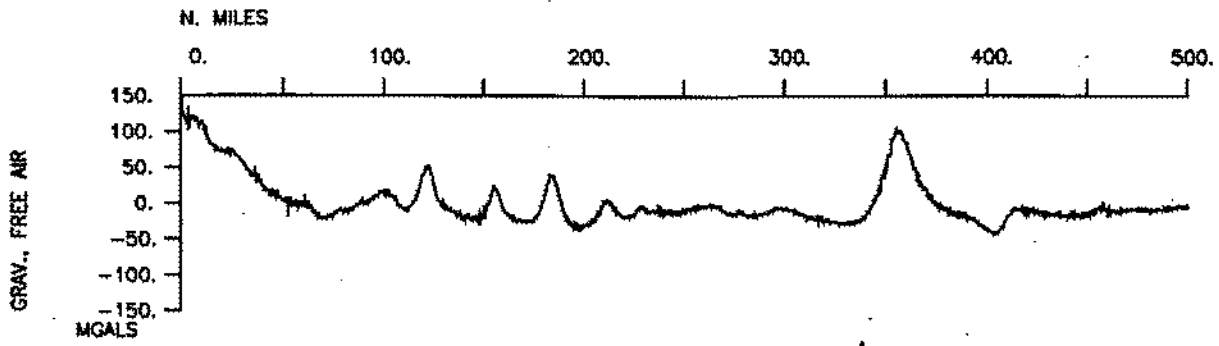
WESTWARD LEG 2 (WEST02MV)  
 Eitonin Survey Area

\*

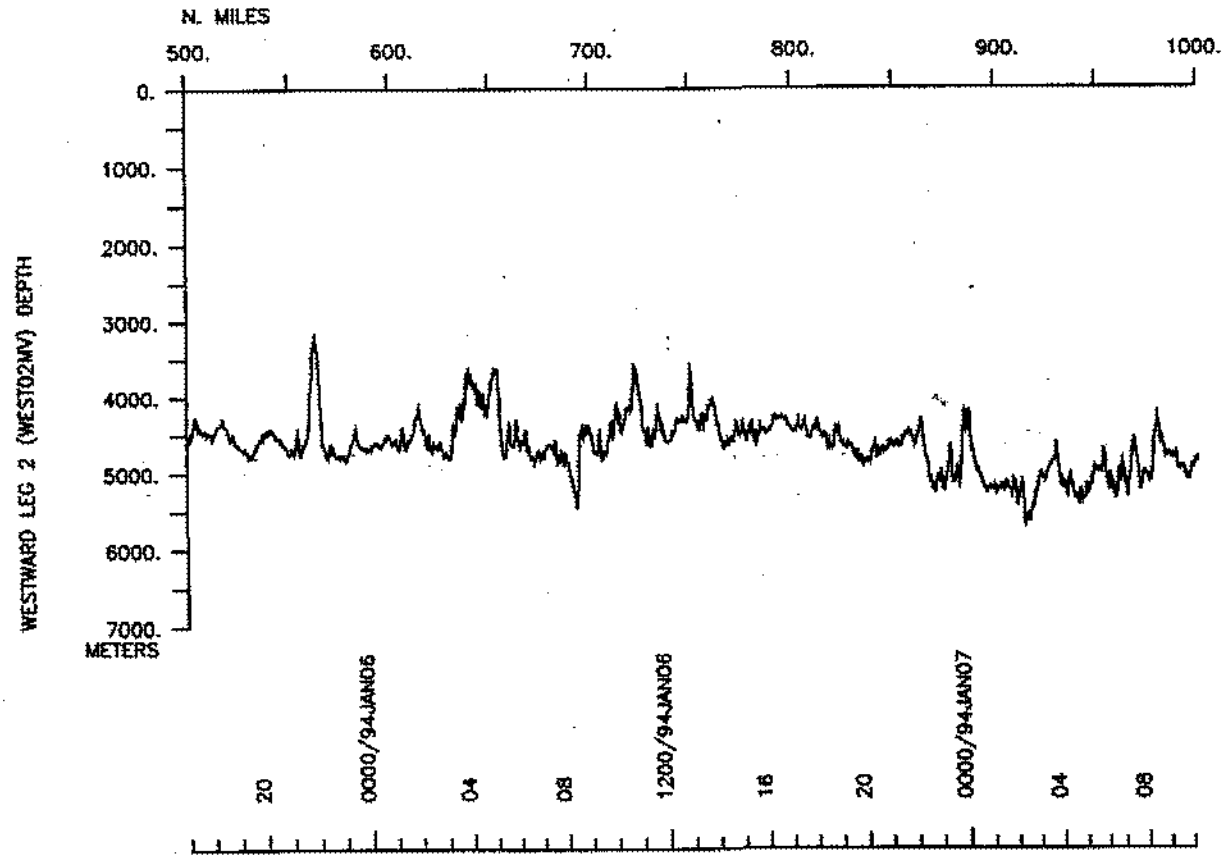
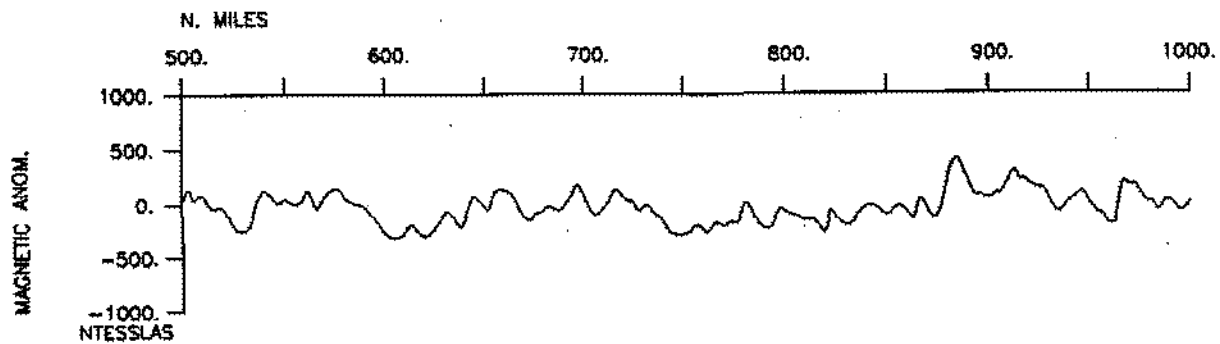
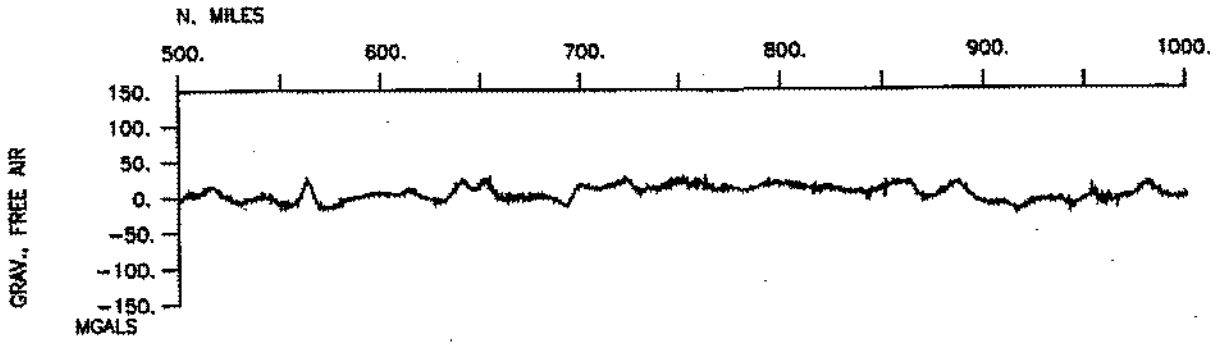


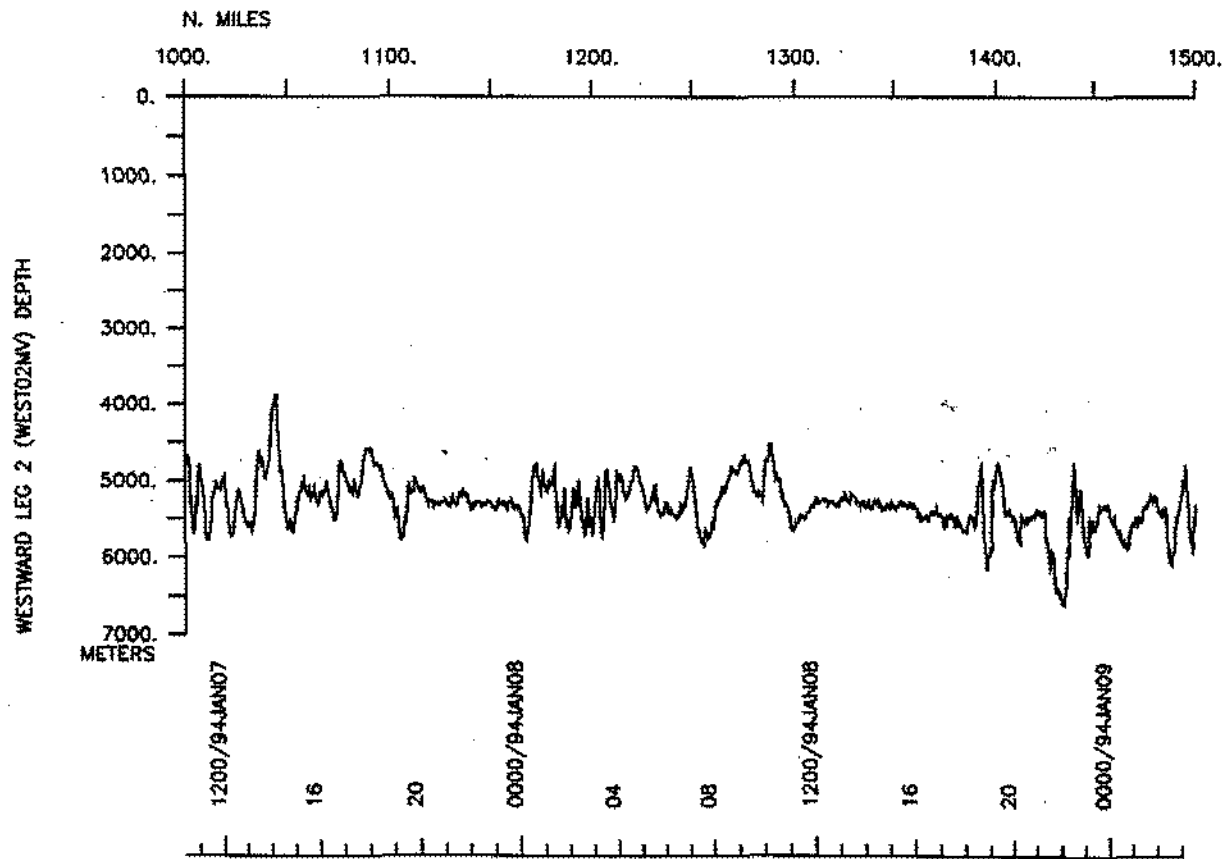
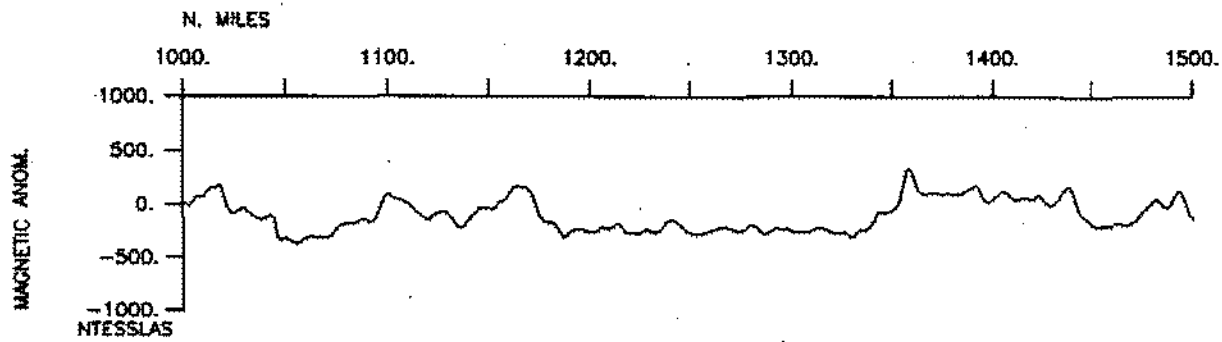
WESTWARD LEG 2 (WEST02MV)  
 Udintsev Survey Area

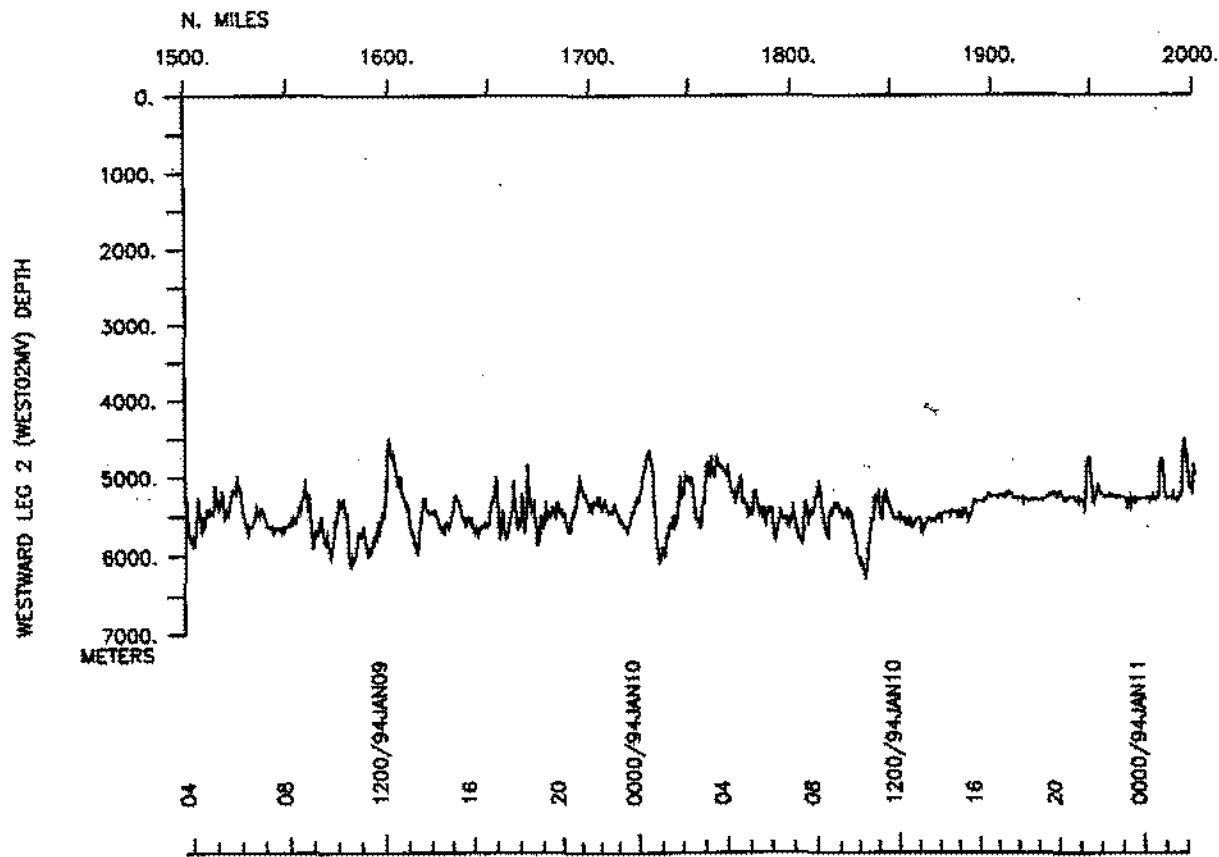
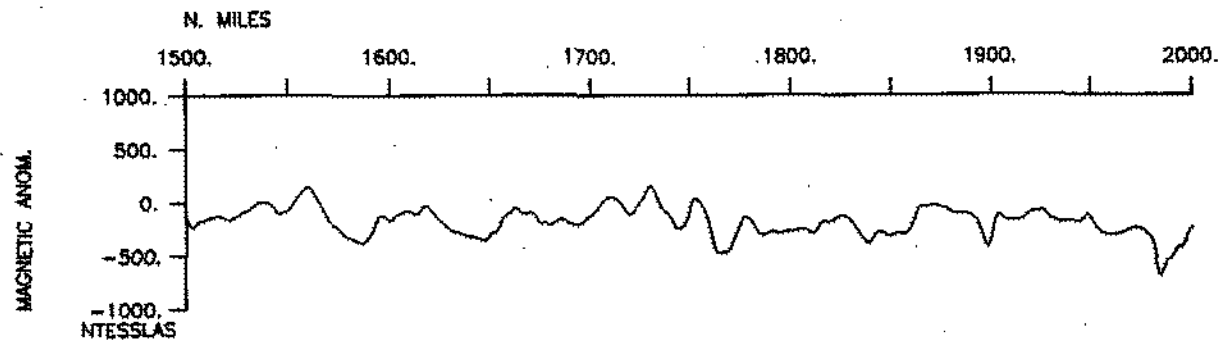
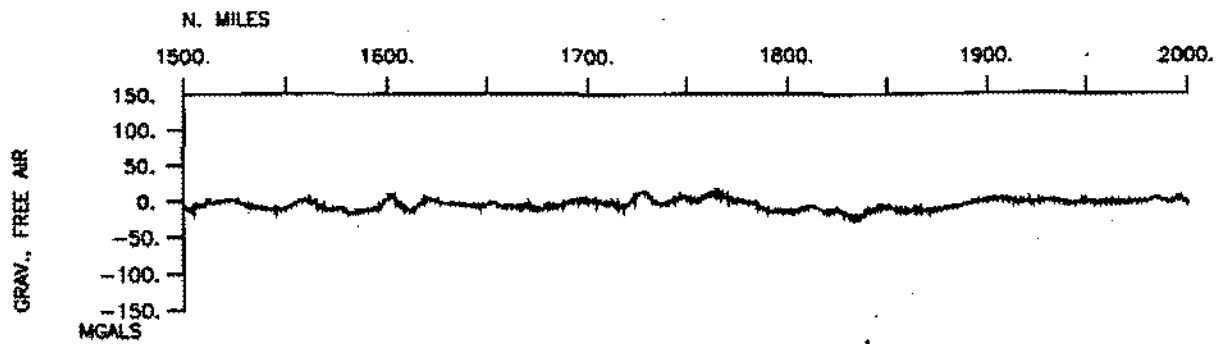


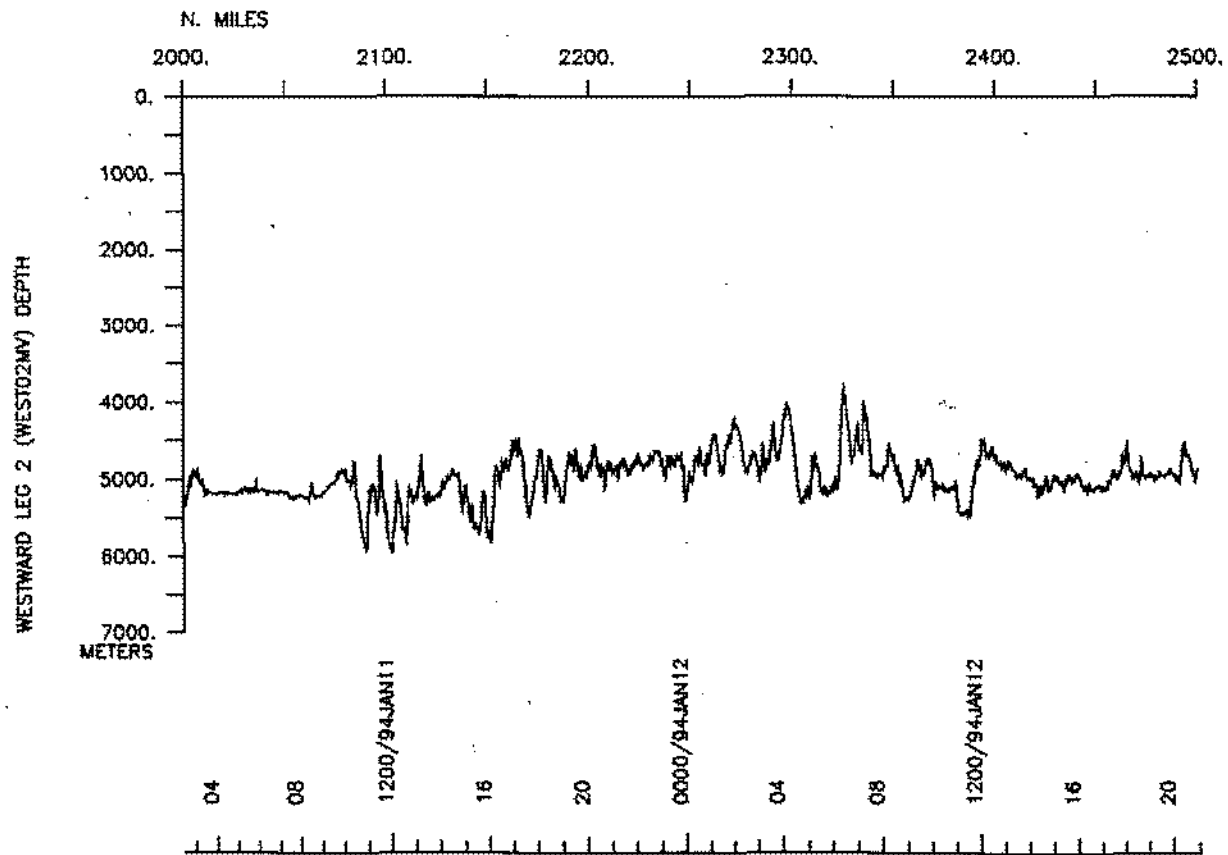
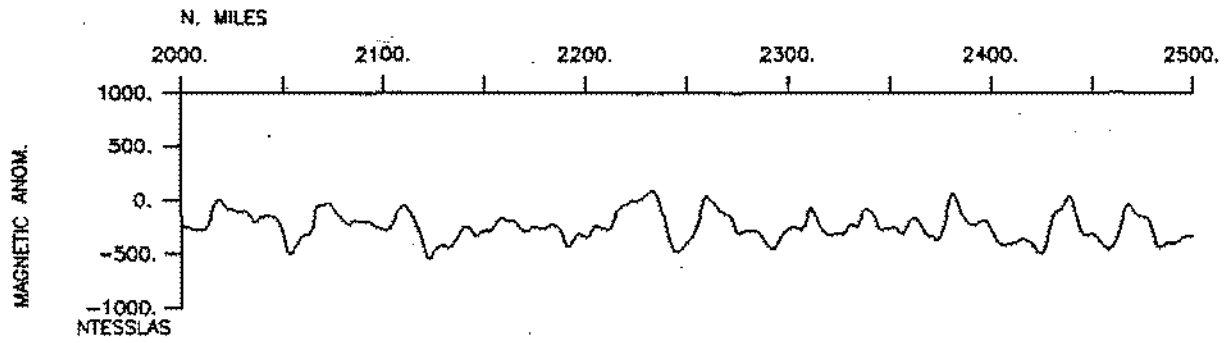


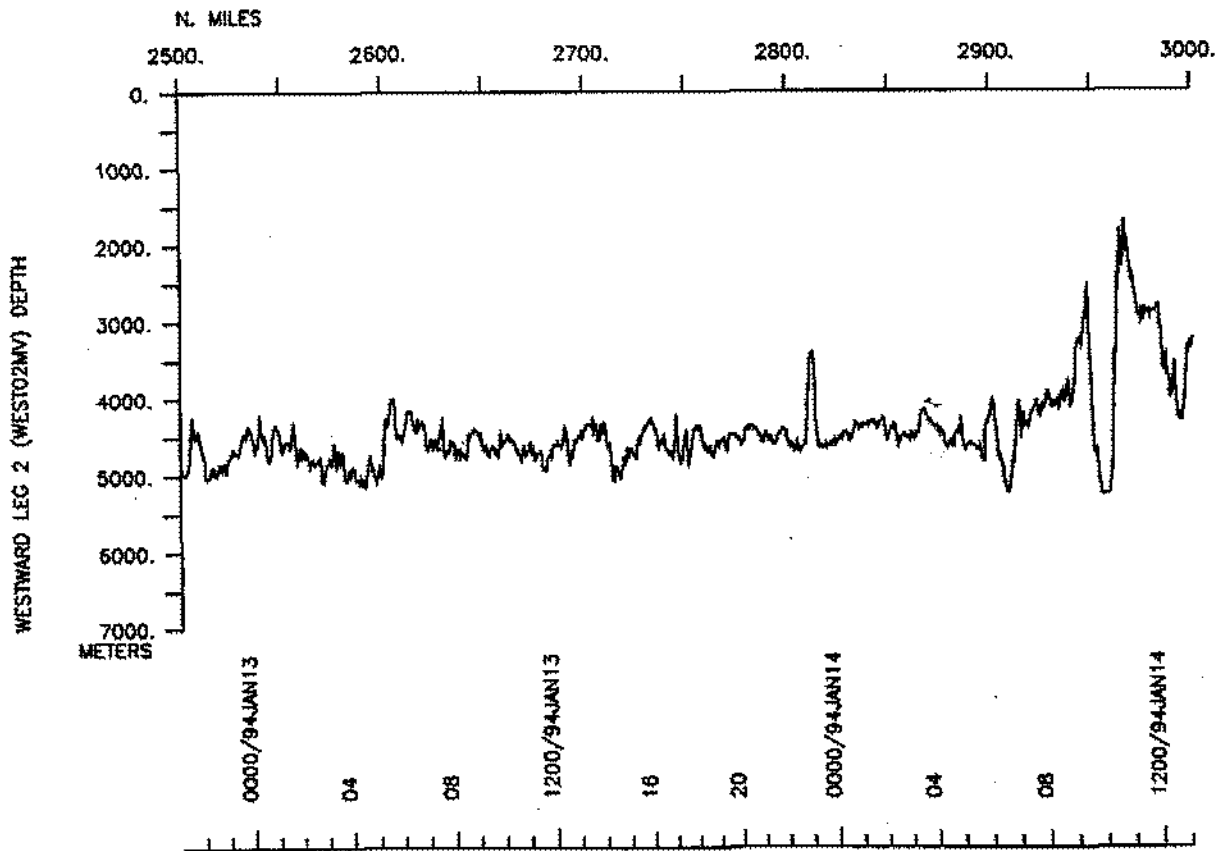
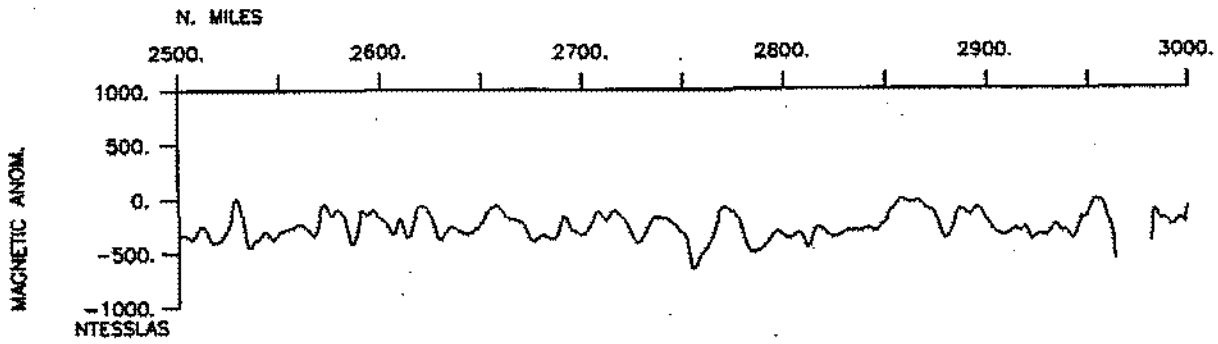
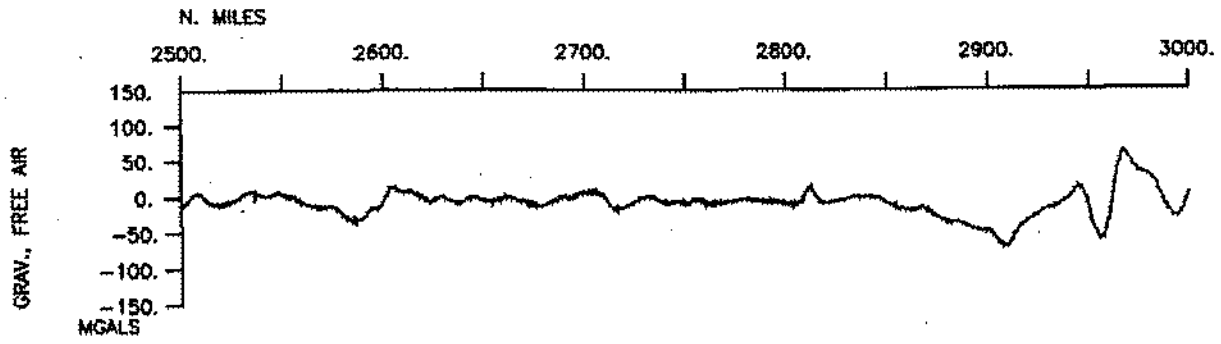


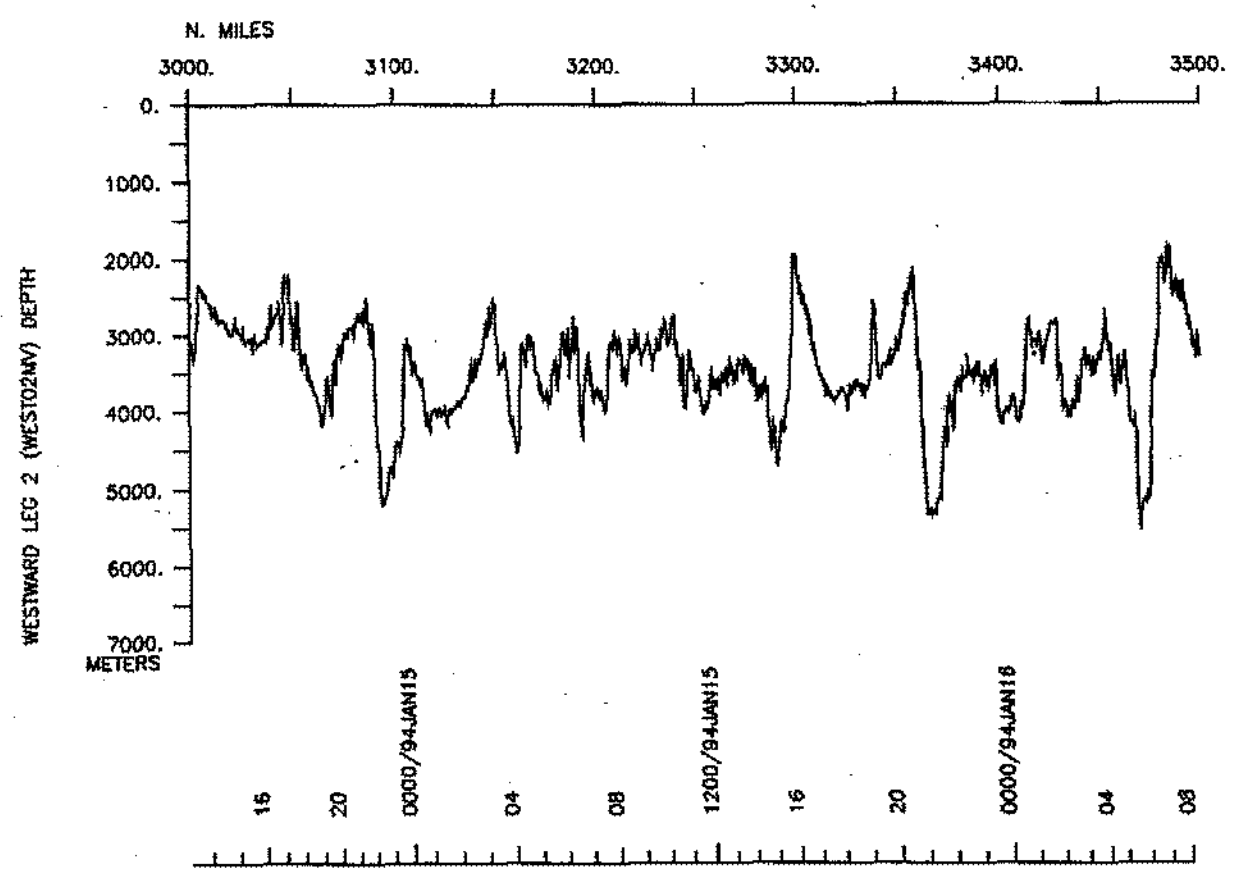
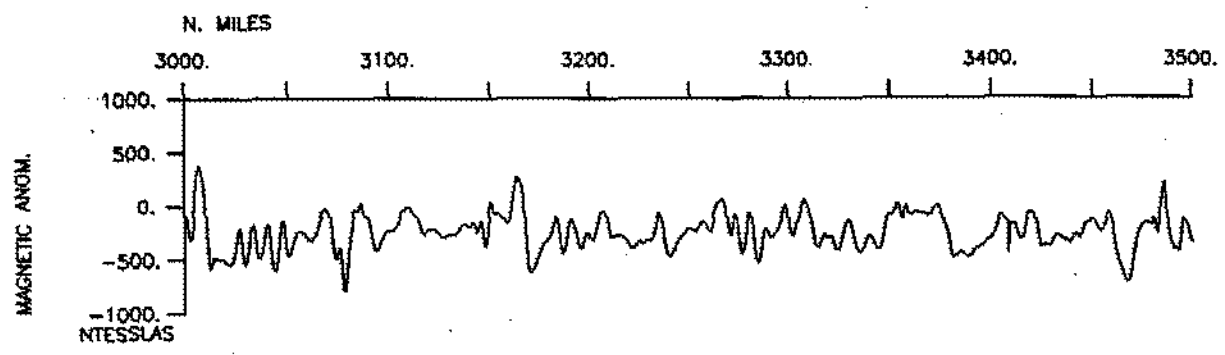
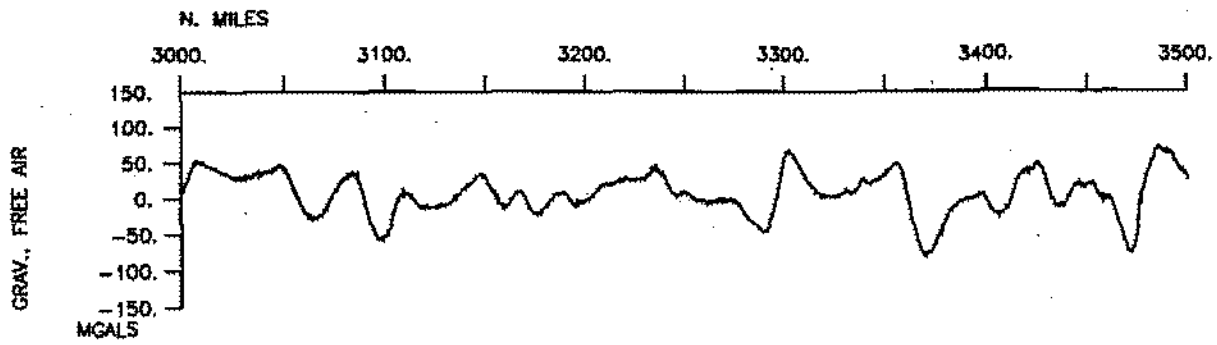


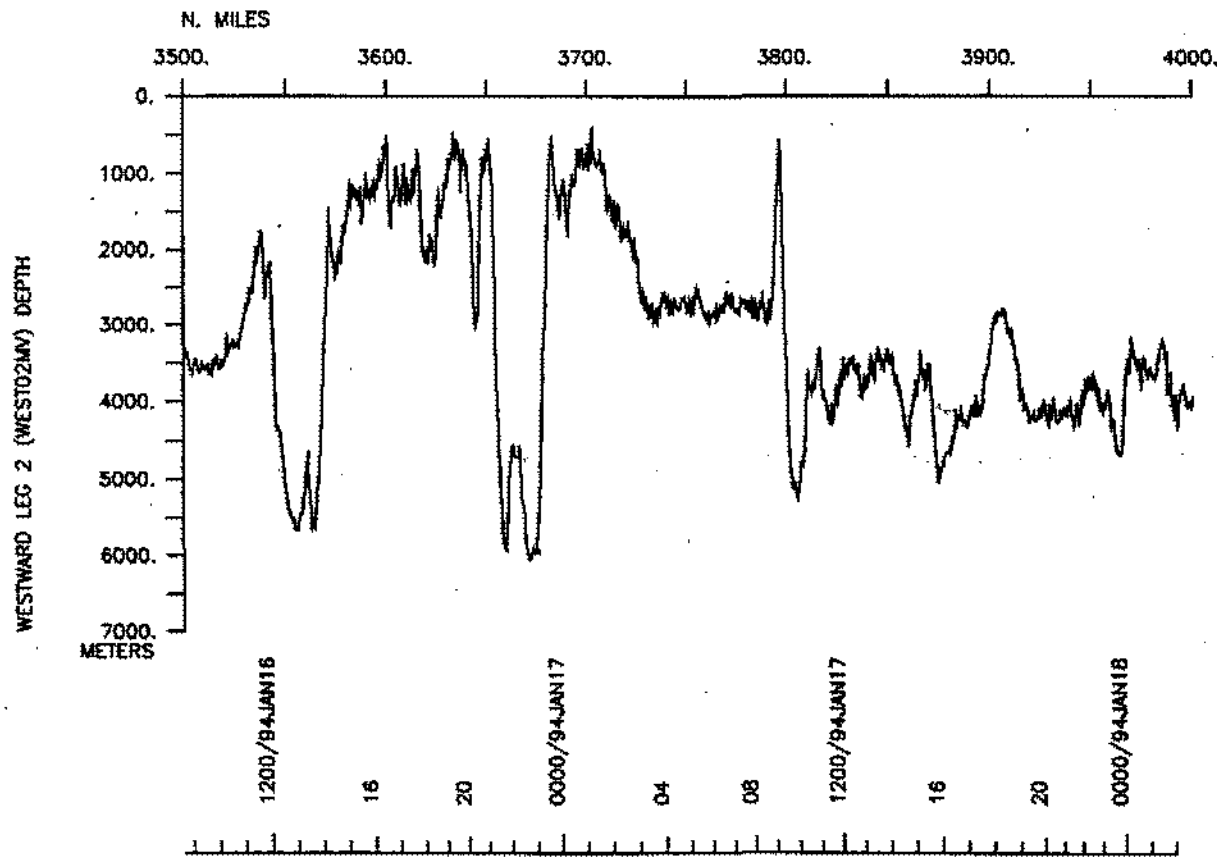
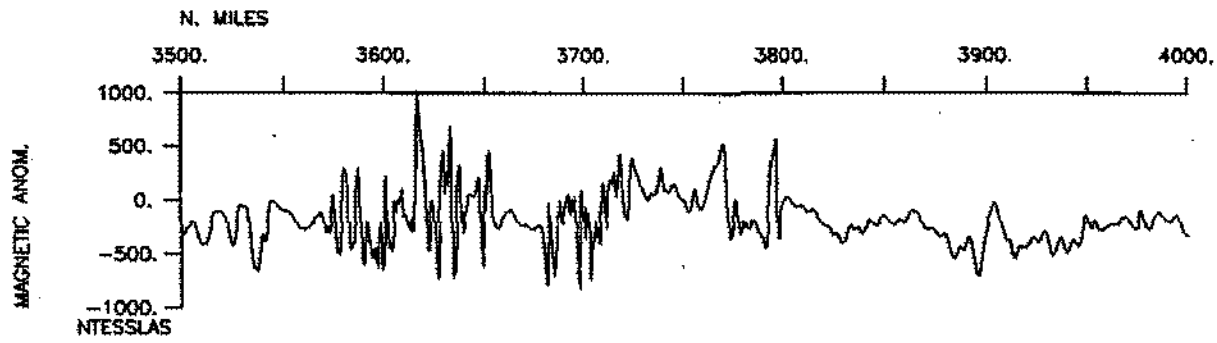
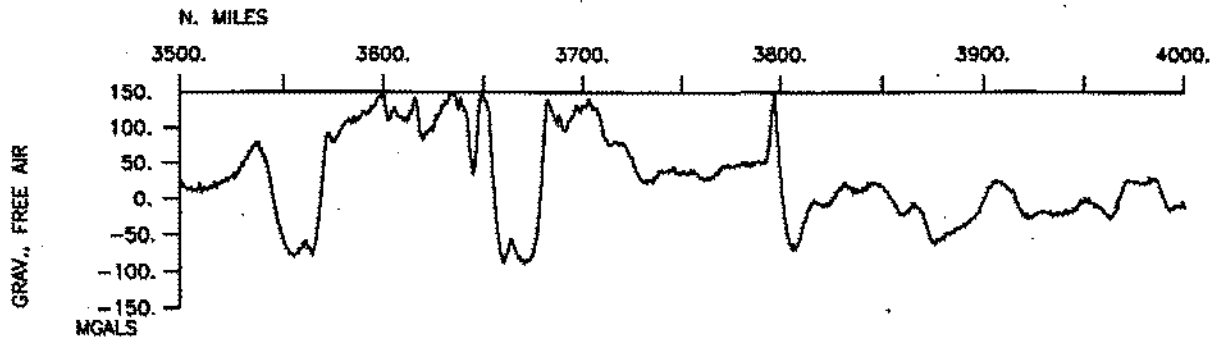


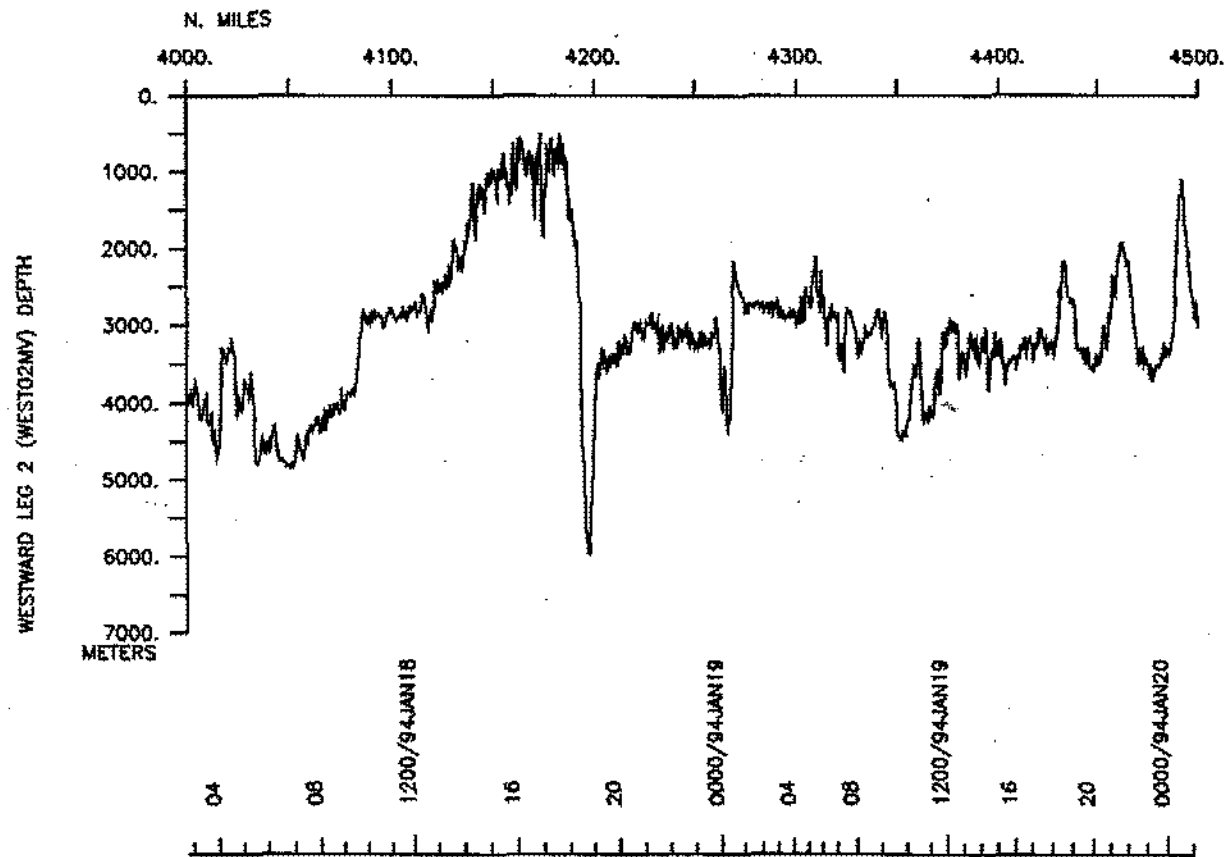
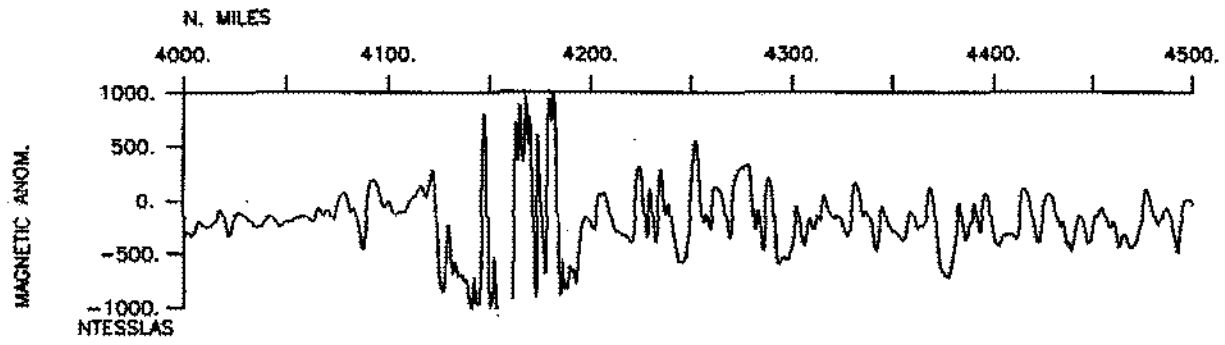
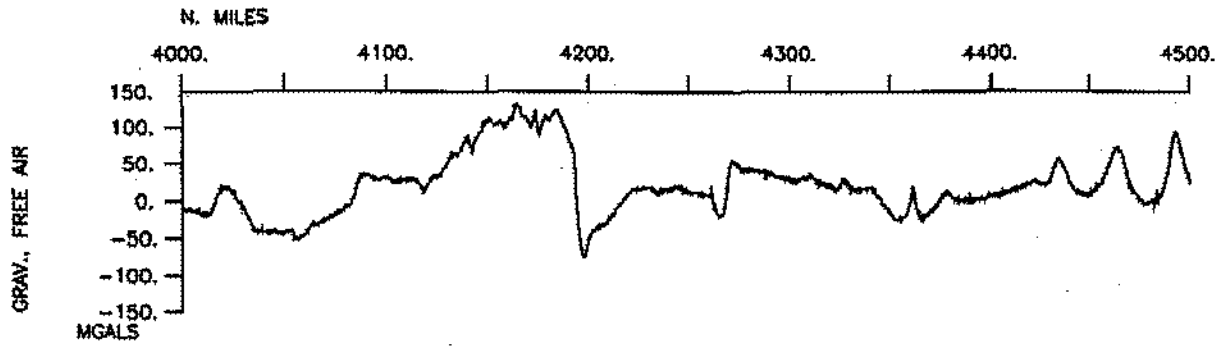




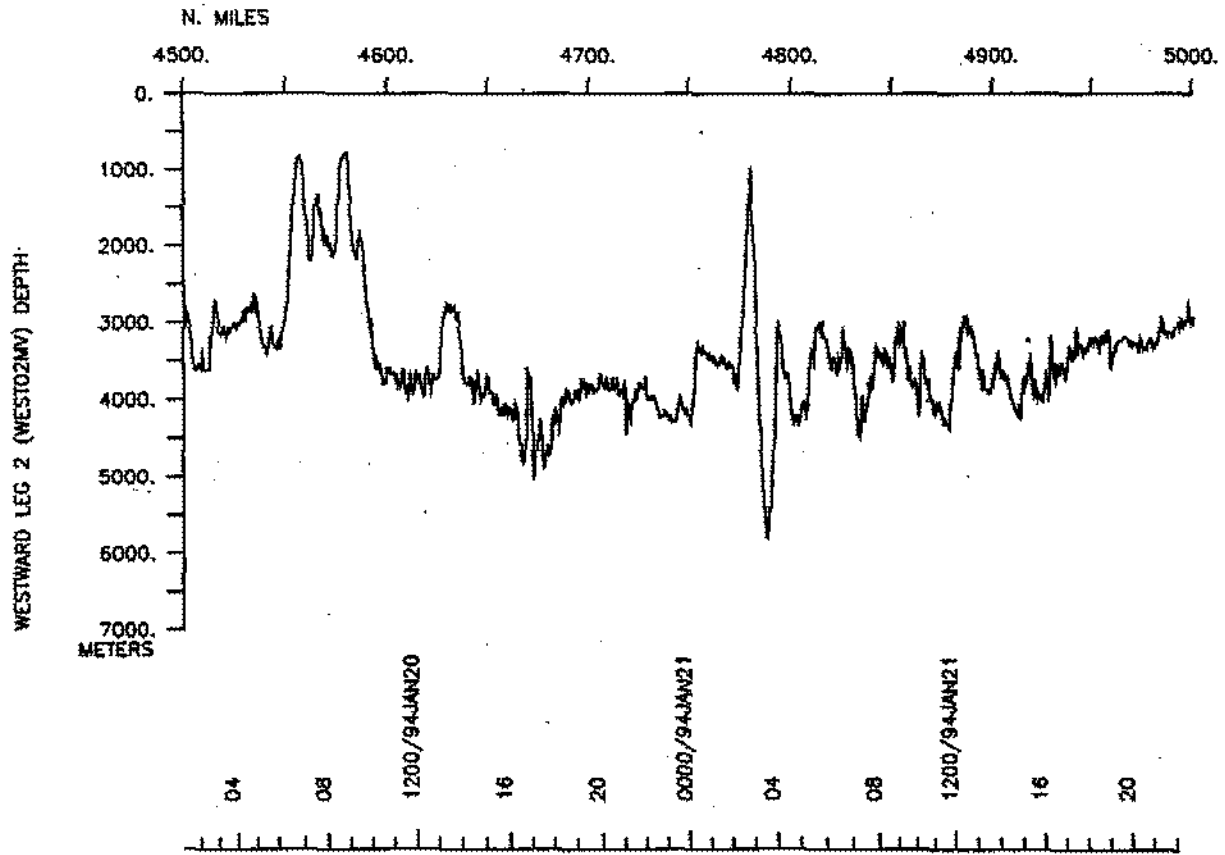
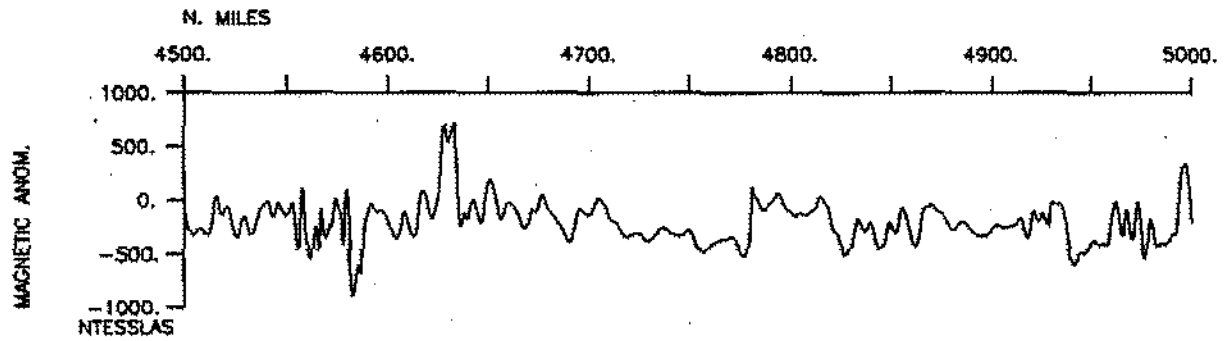
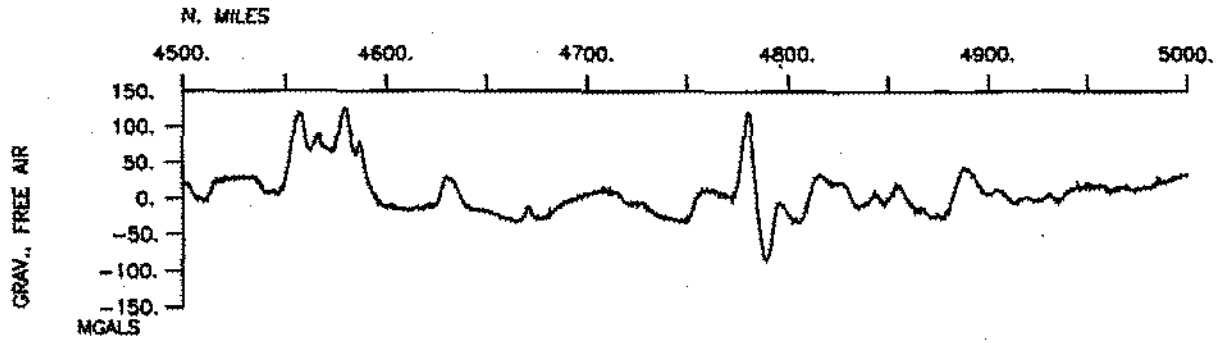


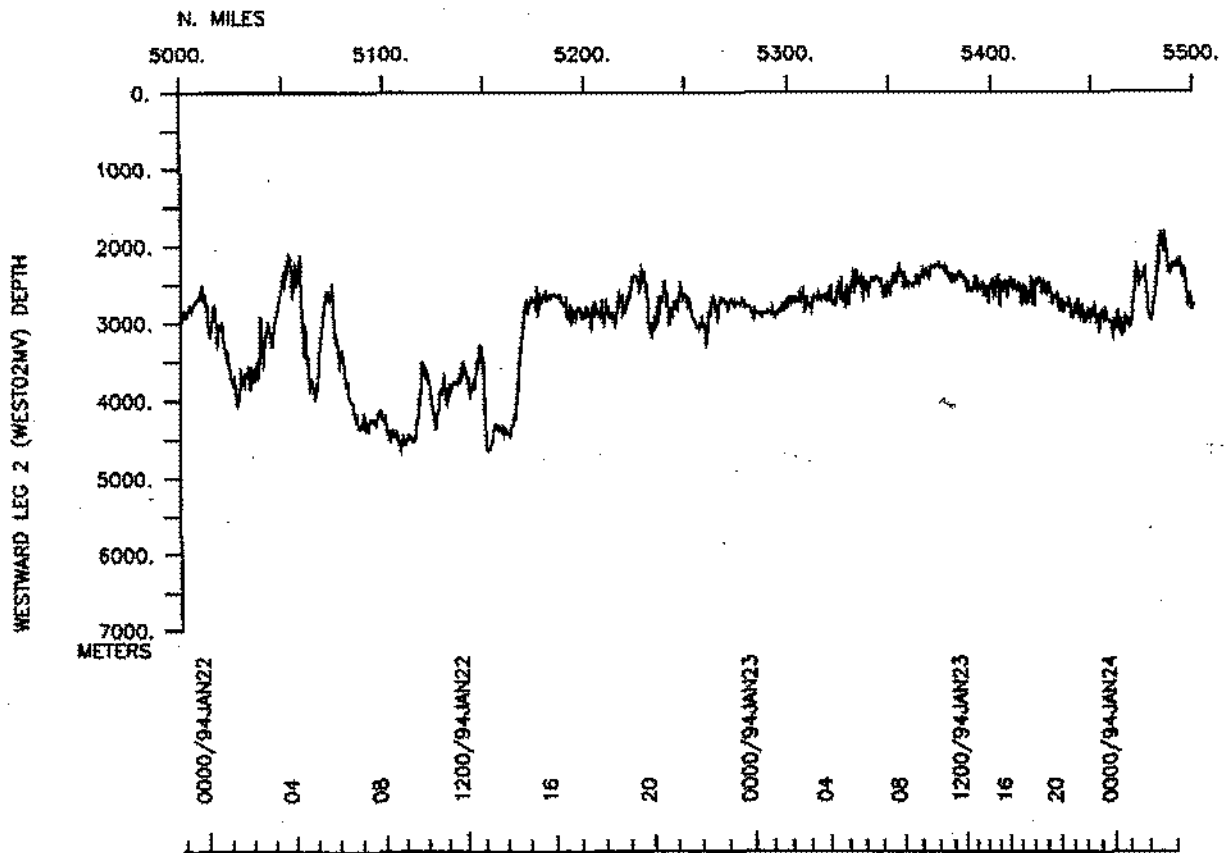
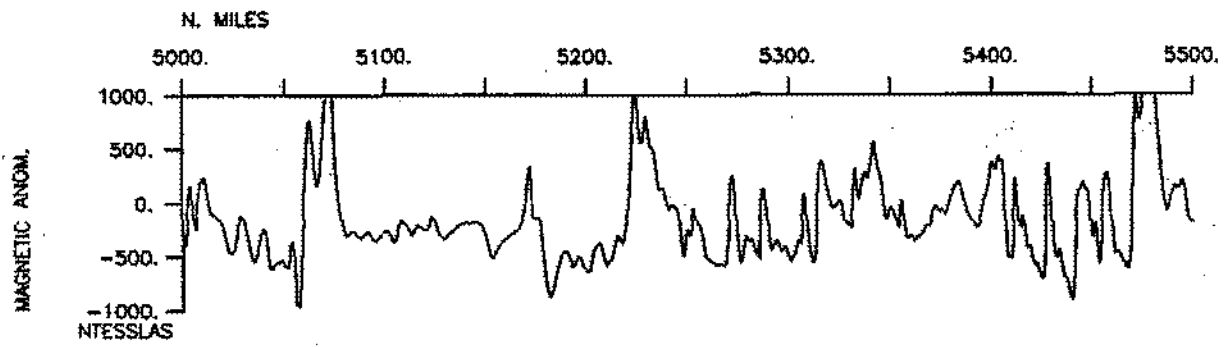
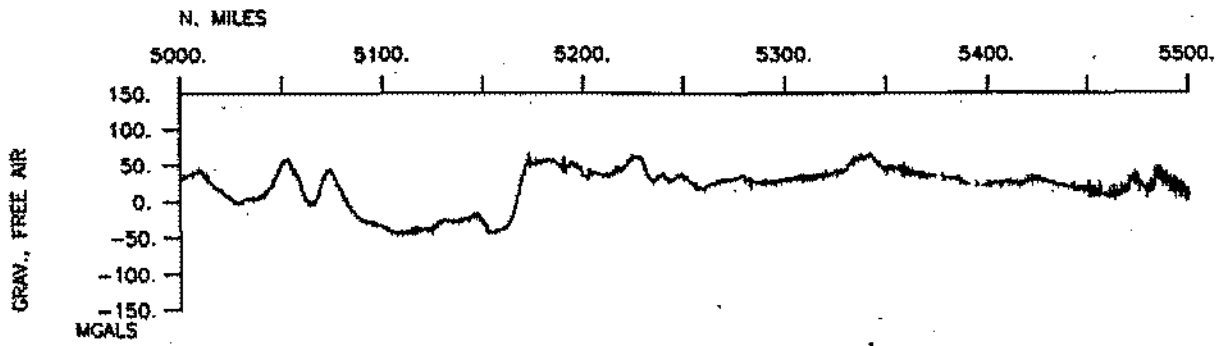


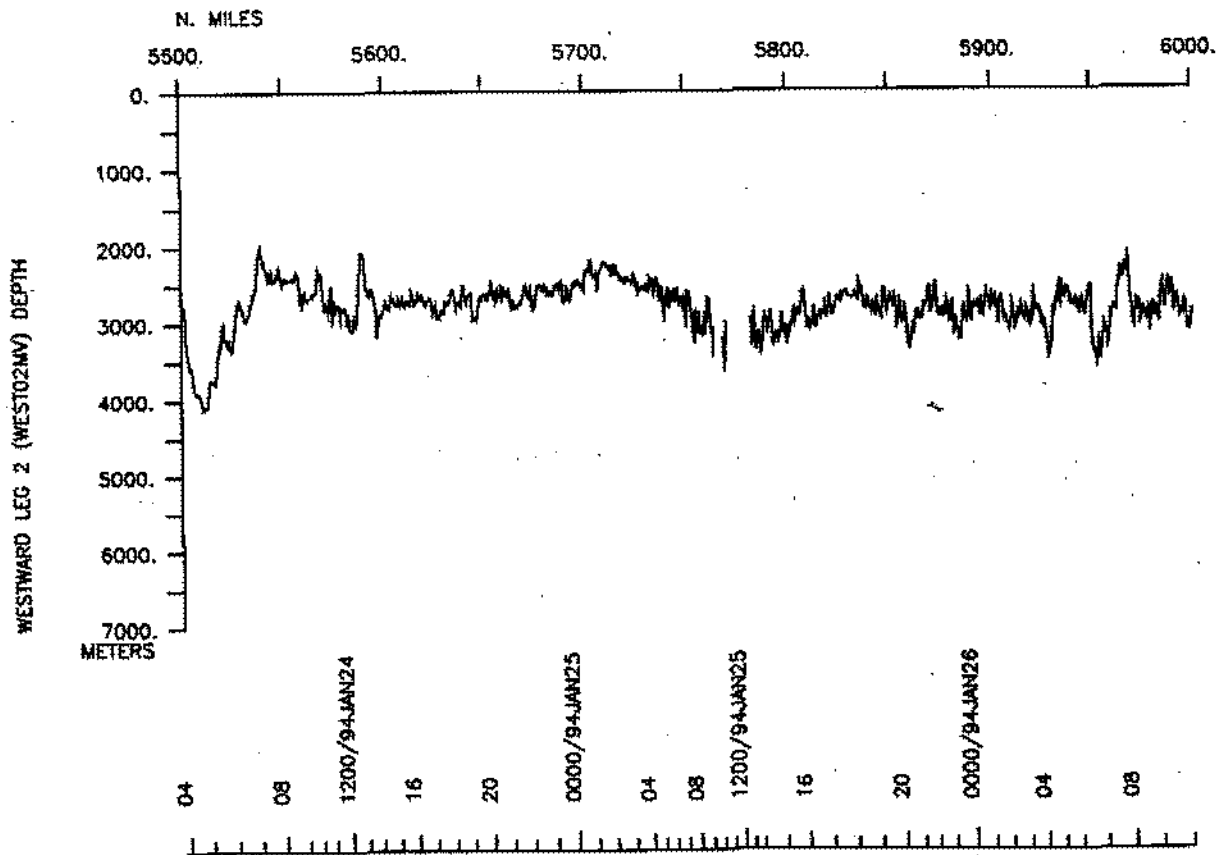
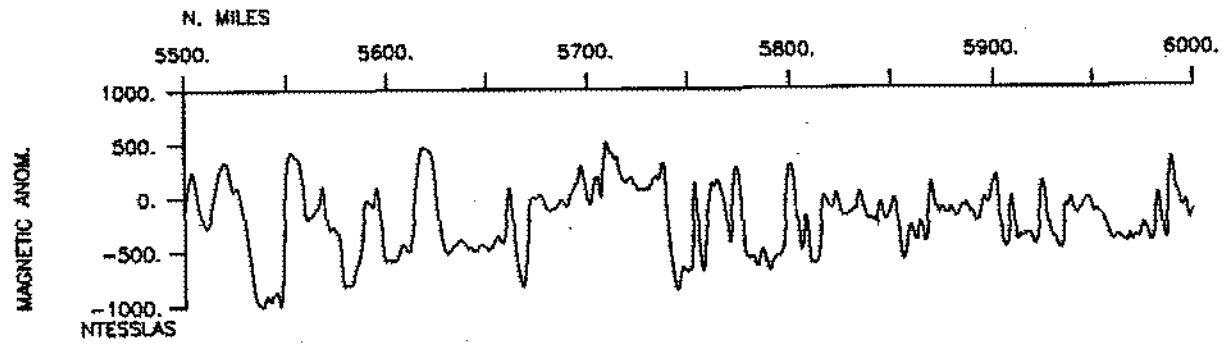
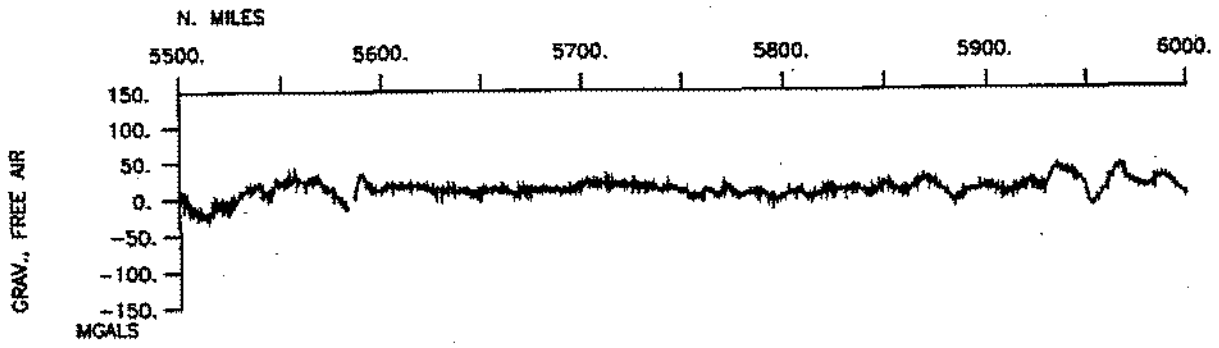


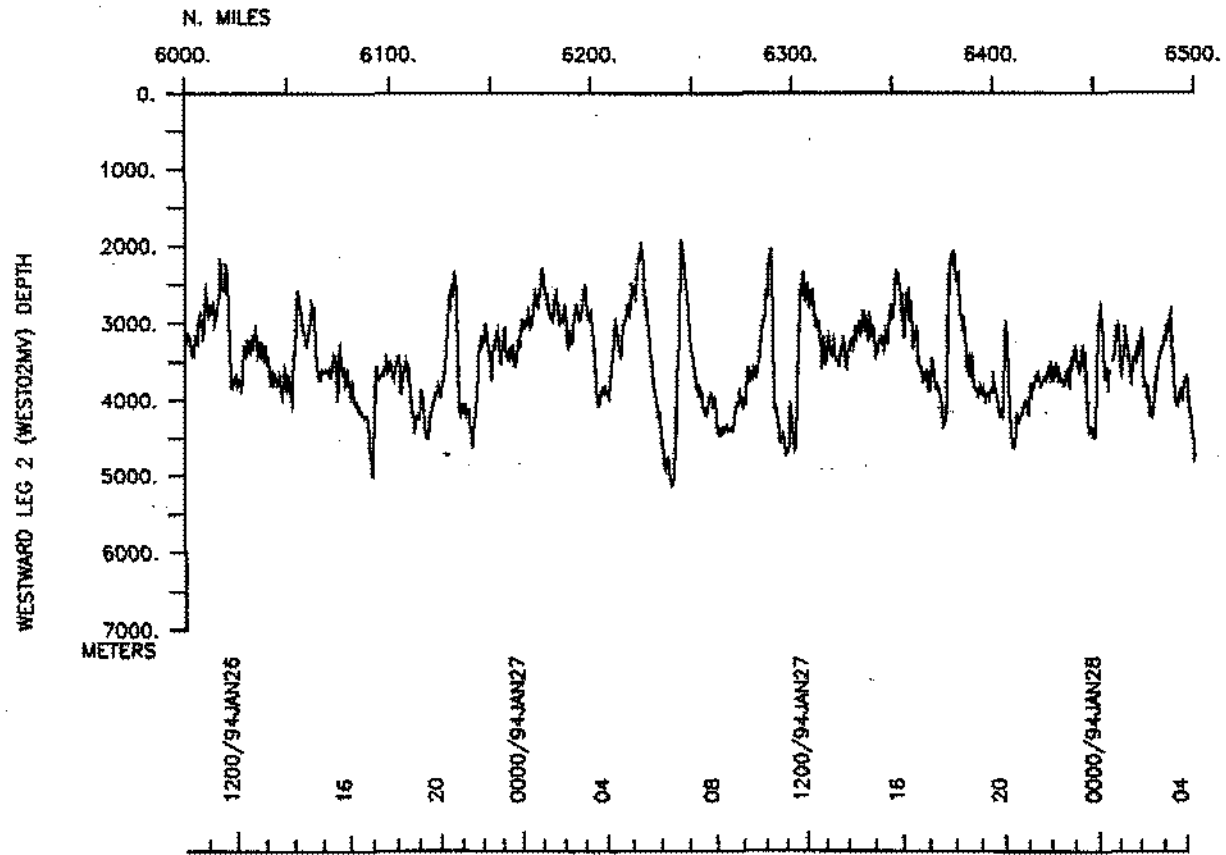
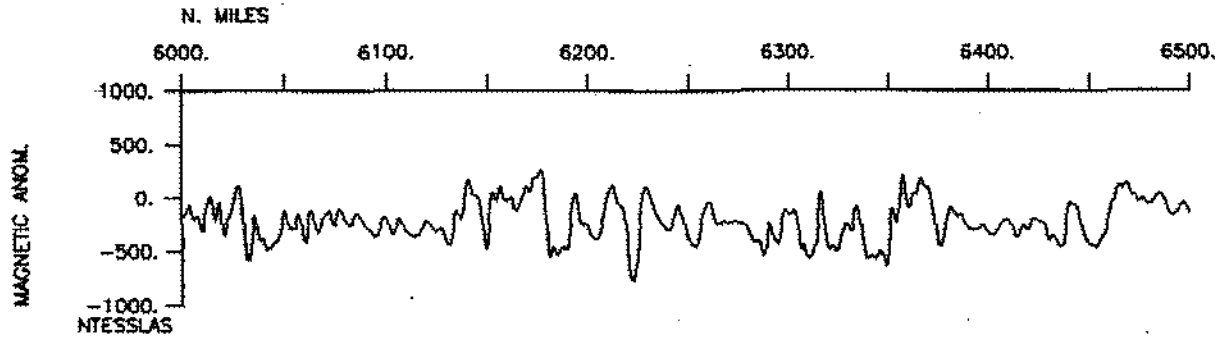
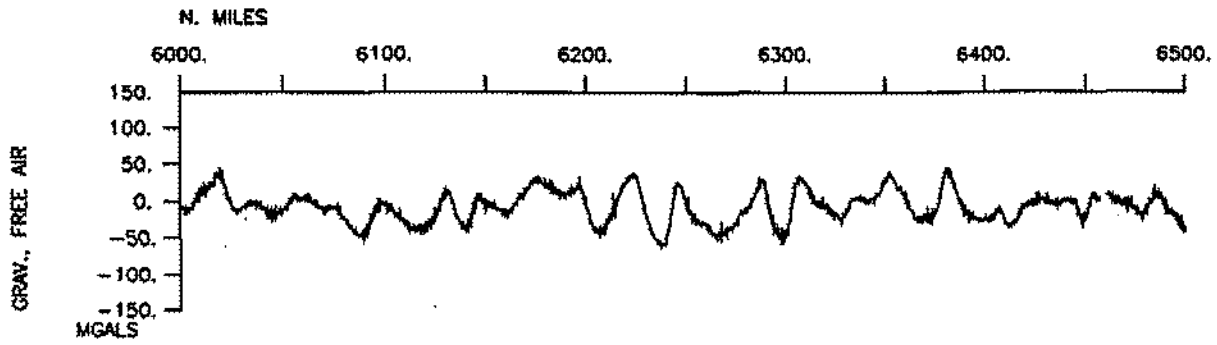


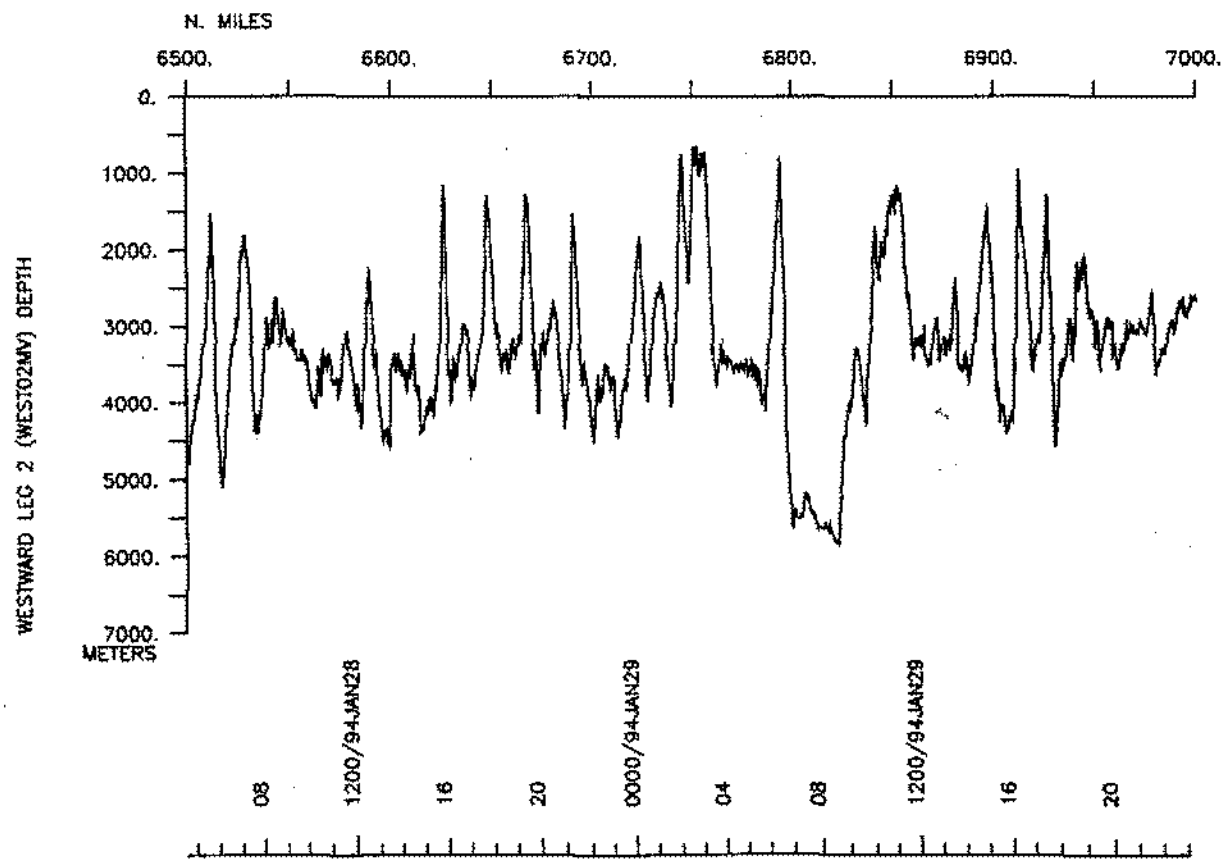
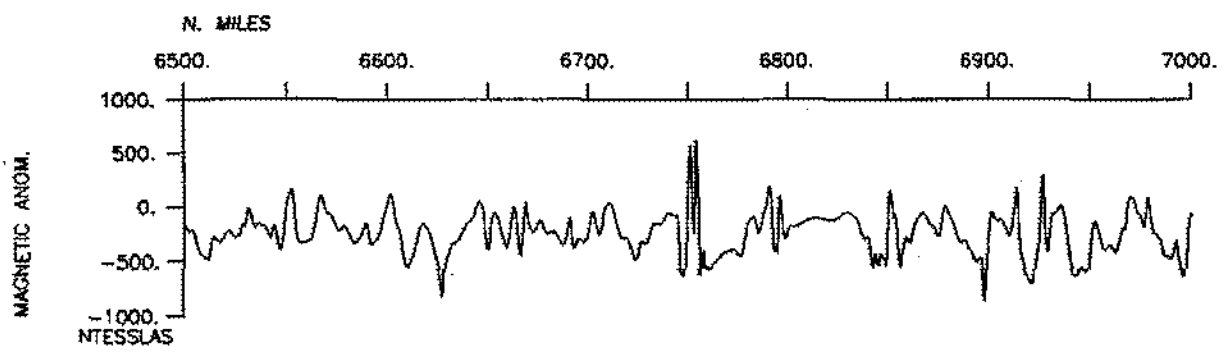
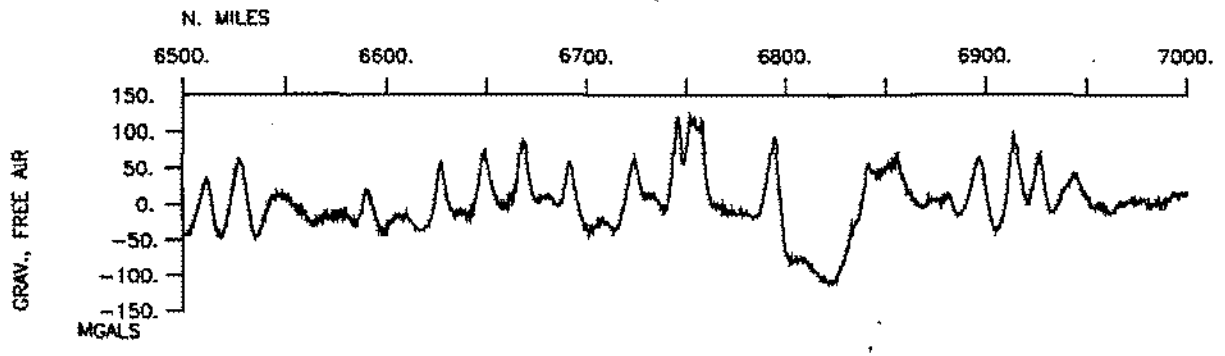


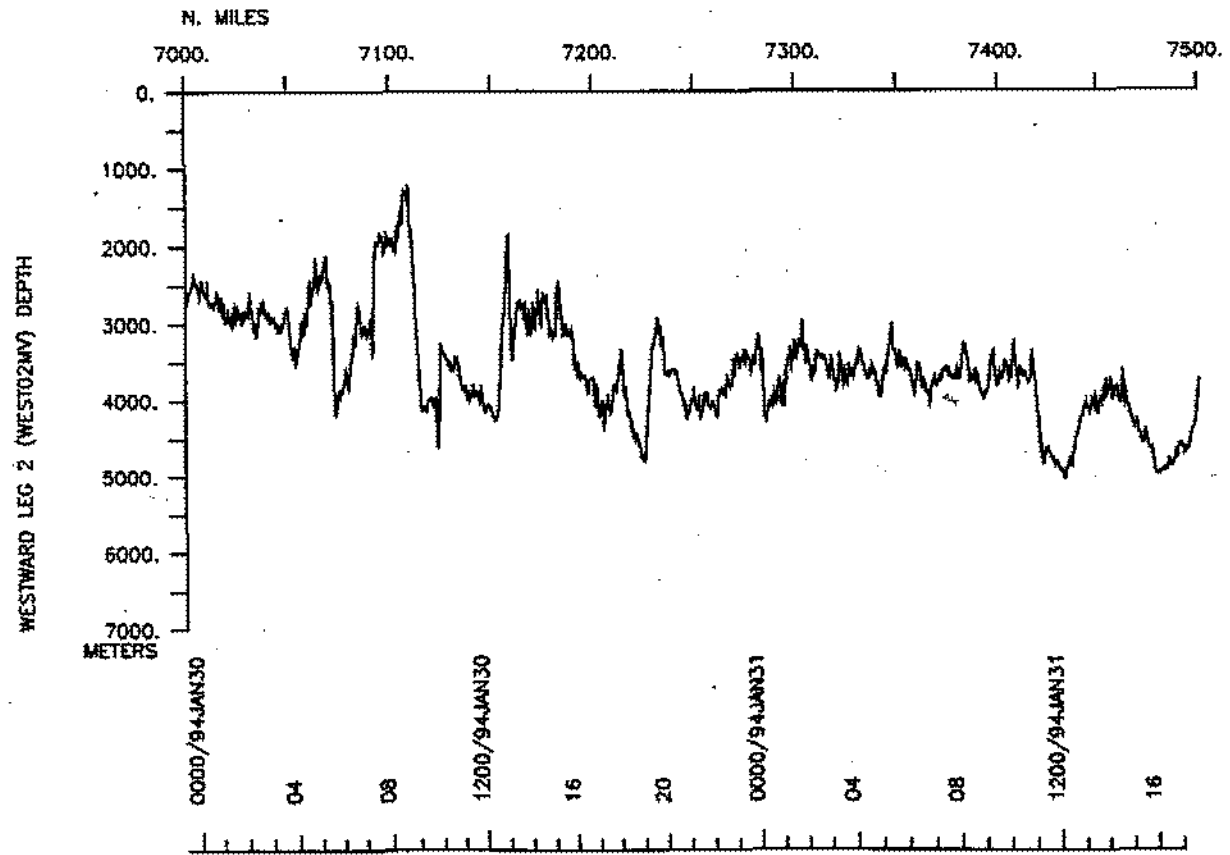
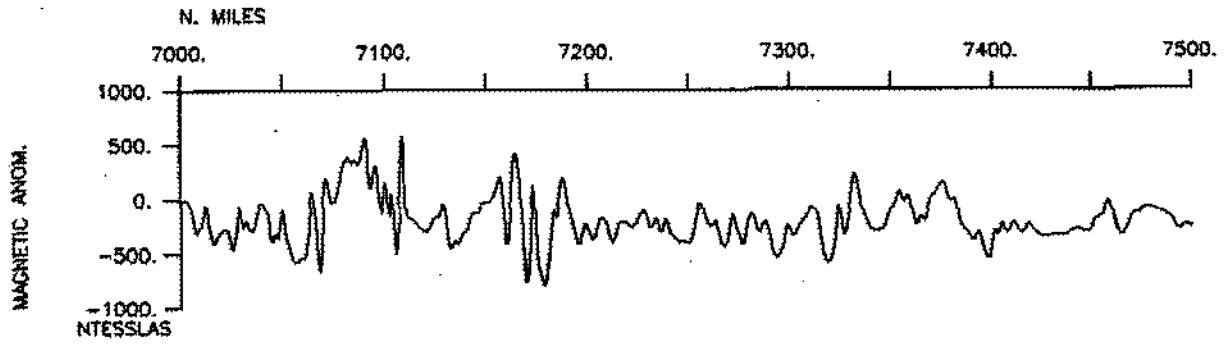
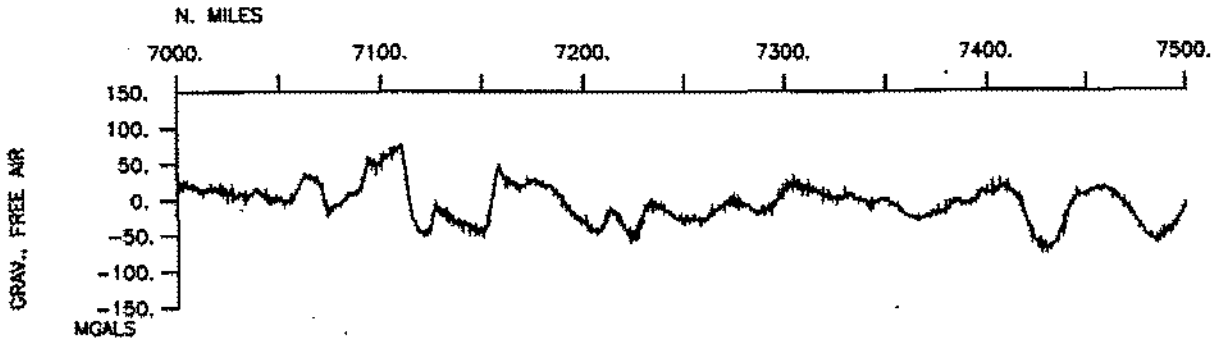


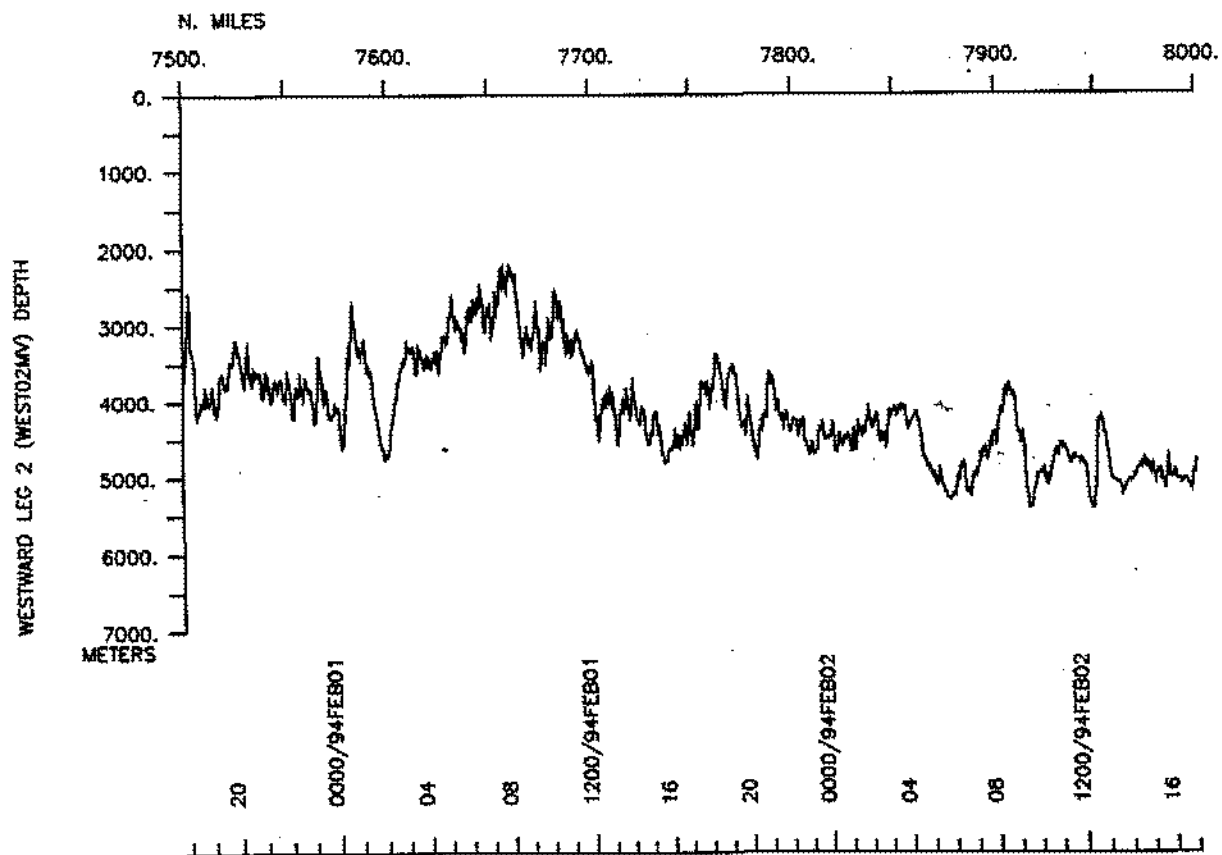
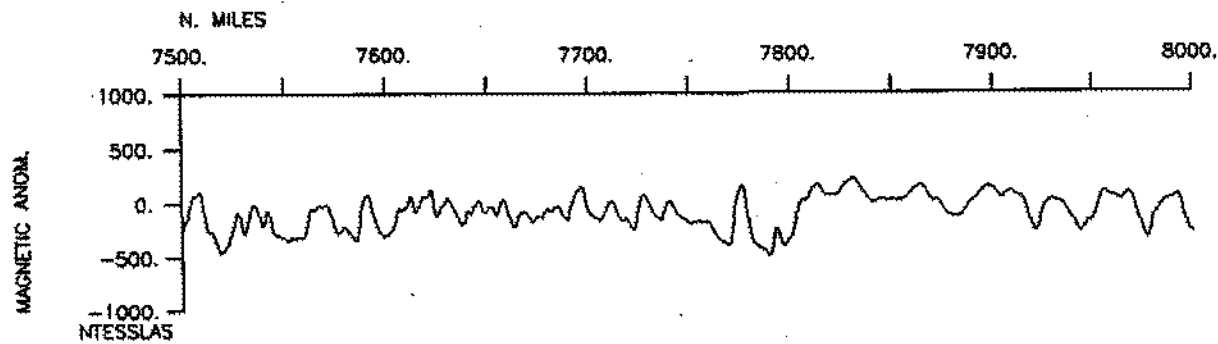
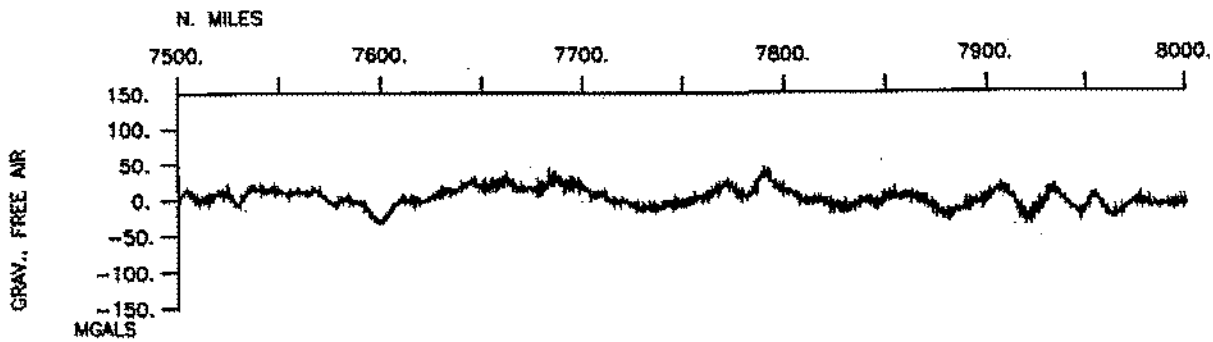


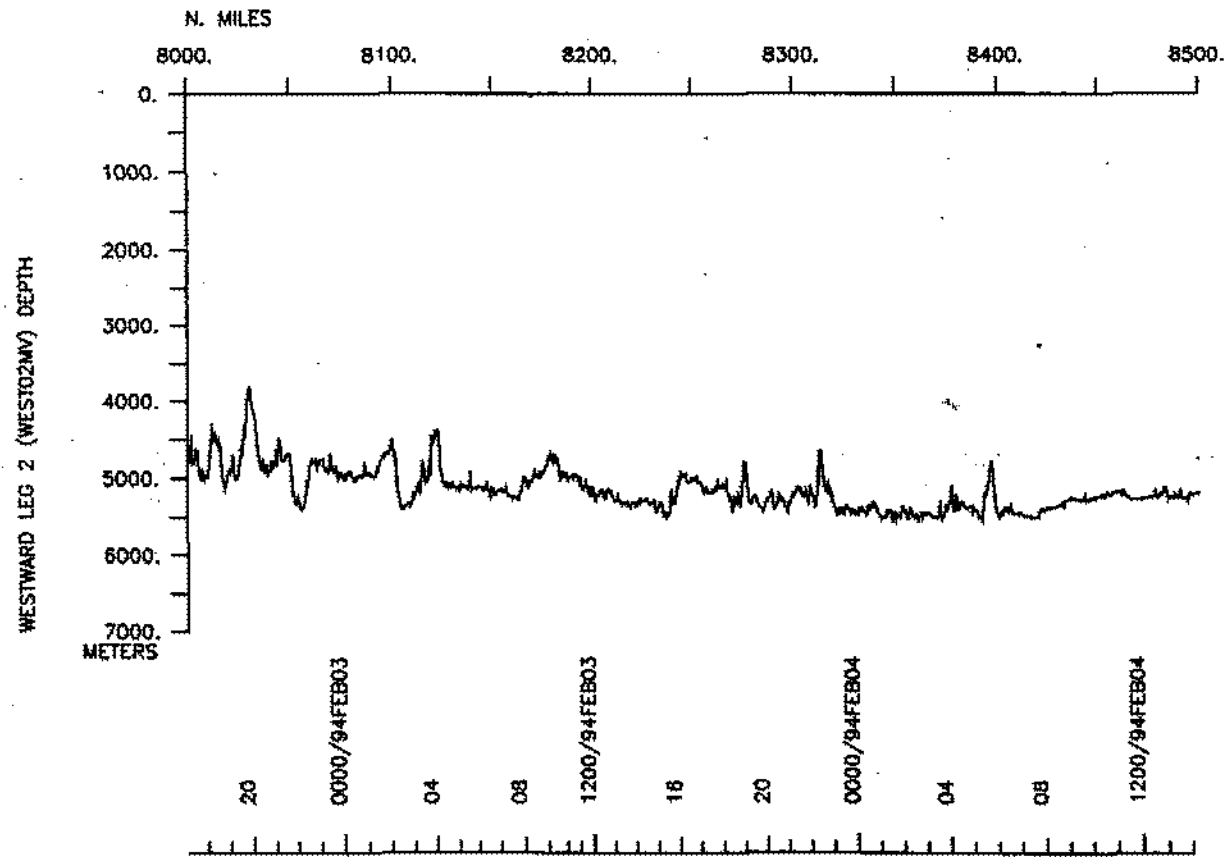
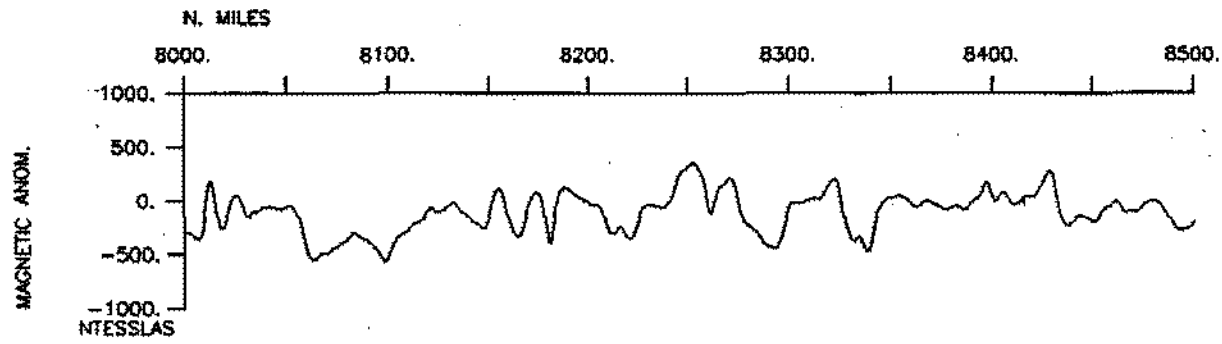
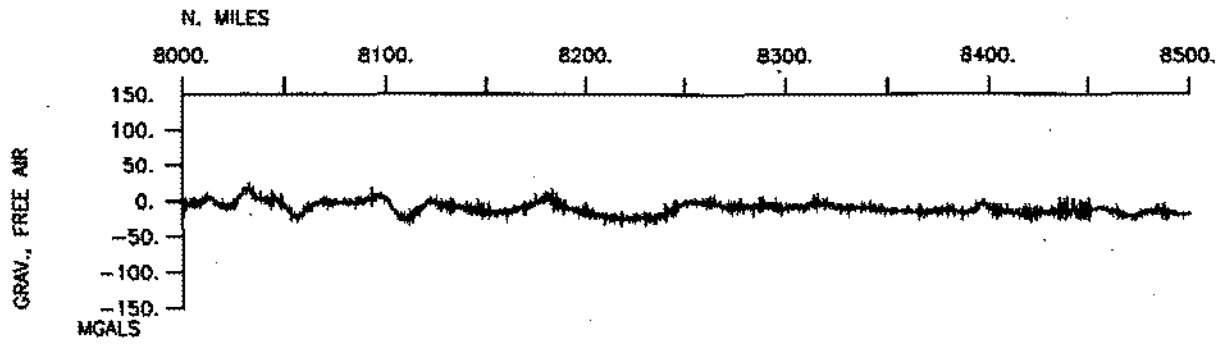




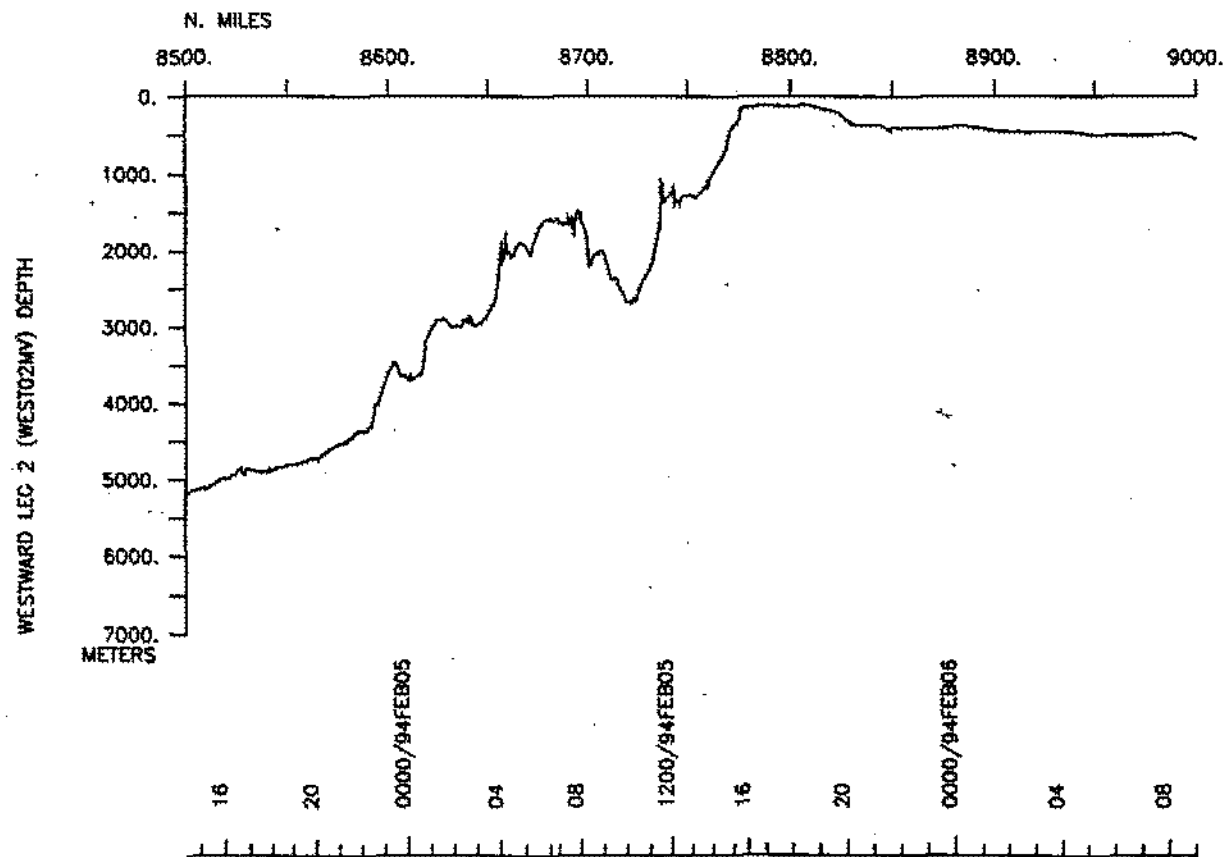
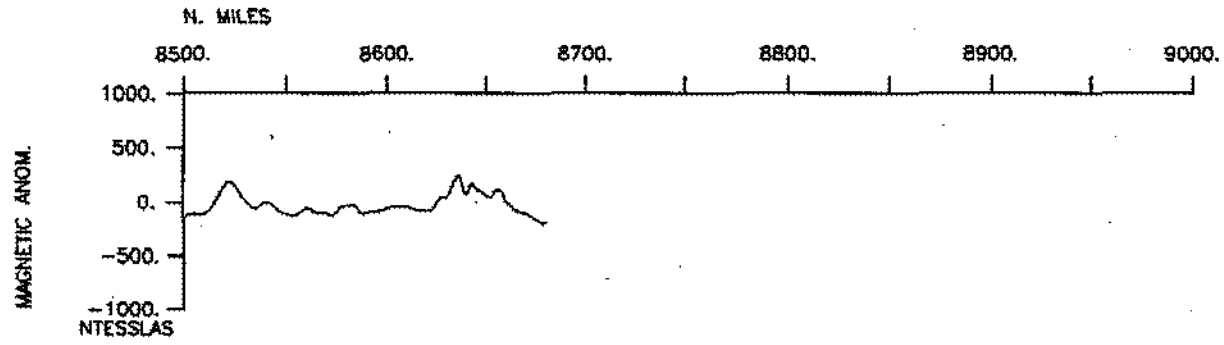
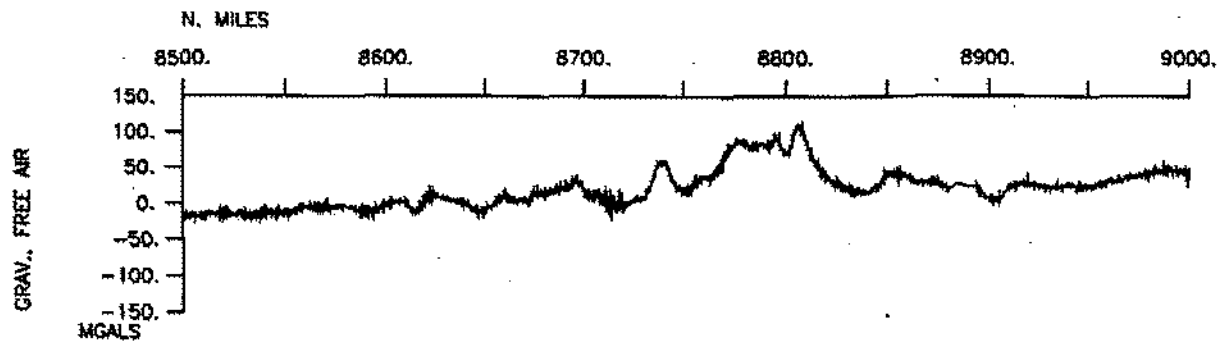


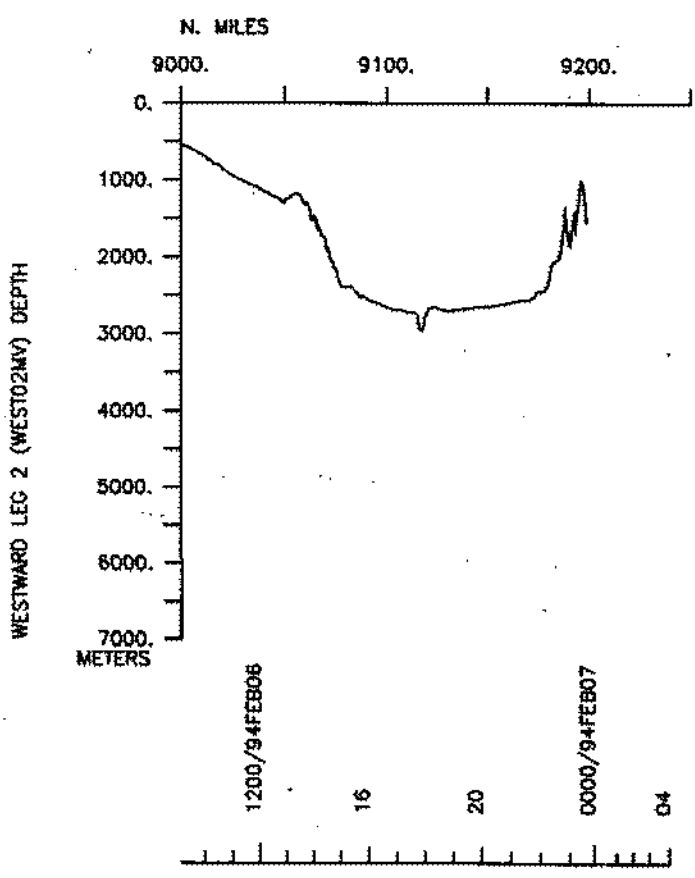
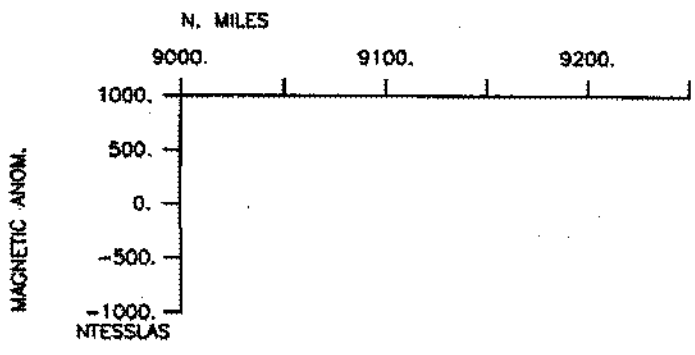
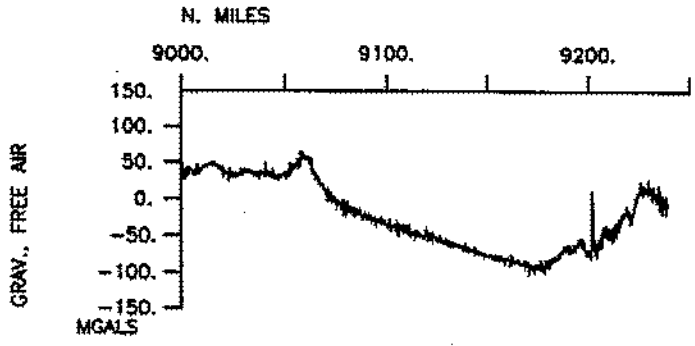












**S.I.O. SAMPLE INDEX**

**(Issued May 1994)**

**WESTWARD EXPEDITION**

**Leg 2**

**(WEST02MV)**

**R/V Melville**

**Papeete, Tahiti (04 January 1994)**

**to**

**Wellington, New Zealand (07 February 1994)**

**Chief Scientist:**

**Peter Lonsdale (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 future computer searches on these parameters. (Listings defining these codes are available from the Geological Data Center.)*

**GDC Cruise I.D.# 266**

\*\*\*\* Ports \*\*\*

0200 040194 0 LGPT B Papeete, Tahiti 17-32.00S 149-34.00W f WEST02MV  
 0400 070294 0 LGPT E Wellington, New Zealand 41-17.00S 174-47.00E f WEST02MV

\*\*\*\* Personnel \*\*\*

# \*\*\*\*\*NAME\*\*\*\*\* \*\*\*\*\*TITLE\*\*\*\*\* \*\*\*\*\*AFFILIATION\*\*\*\*\* \*\*CRID\*\*  
 #-----

PECS MFL	Lonsdale, P.	Chief Scientist	Scripps Institution	WEST02MV
PESP GRD	Sandwell, D.	Professor	Scripps Institution	WEST02MV
PECT STS	Moe, R.	Computer tech	Scripps Institution	WEST02MV
PESP STS	Skinner, J.	Hardware tech	Scripps Institution	WEST02MV
PERT STS	Mogk, S.	Resident tech	Scripps Institution	WEST02MV
PEST SIO	Baker, E.	Grad student	Scripps Institution	WEST02MV
PEST SIO	Bowers, N.	Grad student	Scripps Institution	WEST02MV
PESP SIO	Tikku, A.	Research Asst.	Scripps Institution	WEST02MV
PEST SIO	Williams, K.	Grad student	Scripps Institution	WEST02MV
PEST SIO	Perez, M.E.	Undergrad	Scripps Institution	WEST02MV
PEST SIX	Dunham, A.	Undergrad	Connecticut College	WEST02MV
PEVL SIX	Butler, L.	Volunteer	Non-SIO employee	WEST02MV
PEVL SIX	Rivers, J.	Volunteer	Non-SIO employee	WEST02MV
PEVL SIX	Root, E.	Volunteer	Non-SIO employee	WEST02MV

\*\*\*\* 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 the current 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\*\*\*

0350	040194	0	LBUW	B Underway watch log	GDC	17-42.46S	149-39.87W	g	WEST02MV
1500	050294	0	LBUW	E Underway watch log	GDC	44-32.62S	176-01.54W	g	WEST02MV

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

0300	040194	0	MBSB	B v.beam&sidescan r-01	GDC	17-31.78S	149-40.02W	g	WEST02MV
2045	100194	0	MBSR	E v.beam&sidescan r-01	GDC	43-42.26S	139-15.65W	g	WEST02MV
2045	100194	0	MBSR	B v.beam&sidescan r-02	GDC	43-42.26S	139-15.65W	g	WEST02MV
1230	180194	0	MBSR	E v.beam&sidescan r-02	GDC	54-58.88S	127-11.89W	g	WEST02MV
1230	180194	0	MBSR	B v.beam&sidescan r-03	GDC	54-58.88S	127-11.89W	g	WEST02MV
0055	240194	0	MBSR	E v.beam&sidescan r-03	GDC	54-00.91S	137-02.60W	g	WEST02MV
0055	240194	0	MBSR	B v.beam&sidescan r-04	GDC	54-00.91S	137-02.60W	g	WEST02MV
0925	290194	0	MBSR	E v.beam&sidescan r-04	GDC	56-24.86S	142-38.50W	g	WEST02MV
0930	290194	0	MBSR	B v.beam&sidescan r-05	GDC	56-25.94S	142-38.24W	g	WEST02MV
2359	060294	0	MBSR	E v.beam&sidescan r-05	GDC	41-44.89S	175-00.05E	g	WEST02MV

\*\*\* Continuous Recorded Gravity \*\*\*

0300	040194	0	GVCR	B digital gravity	GDC	17-31.78S	149-40.02W	g	WEST02MV
0030	070294	0	GVCR	B digital gravity	GDC	41-41.65S	175-01.13E	g	WEST02MV

\*\*\* Magnetics (Earth Total Field) Records \*\*\*

0350	040194	0	MGRA	B Magnetics roll 01	GDC	17-42.46S	149-39.87W	g	WEST02MV
0339	060194	0	MGRA	E Magnetics roll 01	GDC	28-02.66S	149-30.25W	g	WEST02MV
0339	060194	0	MGRA	B Magnetics roll 02	GDC	28-02.66S	149-30.25W	g	WEST02MV
2002	170194	0	MGRA	E Magnetics roll 02	GDC	55-35.76S	127-39.80W	g	WEST02MV
2002	170194	0	MGRA	B Magnetics roll 03	GDC	55-35.76S	127-39.80W	g	WEST02MV
1822	290194	0	MGRA	E Magnetics roll 03	GDC	55-55.79S	144-11.24W	g	WEST02MV
1822	290194	0	MGRA	B Magnetics roll 04	GDC	55-55.79S	144-11.24W	g	WEST02MV
0559	050294	0	MGRA	E Magnetics roll 04	GDC	44-15.22S	174-23.62W	g	WEST02MV

#GMT	DDMMYY	SAMP	B	SAMPLE	DISP			p	CRUISE
#TIME	DATE	TZ	CODE	E IDENTIFIER	CODE	LATITUDE	LONGITUDE	c	LEG-SHIP
#									
#*** Drifting Seismic Sonobouy ***									
#*** Samples went to Cornell University ***									
0331	140194	0	SBSD	B SONOBUOY 01	SIX	52-44.80S	134-58.60W	g	WEST02MV
0431	140194	0	SBSD	E SONOBUOY 01	SIX	52-56.12S	134-52.24W	g	WEST02MV
1306	160194	0	SBSD	B SONOBUOY 02	SIX	54-46.94S	130-34.85W	g	WEST02MV
1423	160194	0	SBSD	E SONOBUOY 02	SIX	54-38.52S	130-24.80W	g	WEST02MV
1708	200194	0	SBSD	B SONOBUOY 03	SIX	54-15.25S	128-21.26W	g	WEST02MV
1750	200194	0	SBSD	E SONOBUOY 03	SIX	54-12.41S	128-32.42W	g	WEST02MV
1639	210194	0	SBSD	B SONOBUOY 04	SIX	55-25.96S	131-23.76W	g	WEST02MV
1726	210194	0	SBSD	E SONOBUOY 04	SIX	55-19.61S	131-33.73W	g	WEST02MV
0401	260194	0	SBSD	B SONOBUOY 05	SIX	56-21.07S	140-38.93W	g	WEST02MV
0440	260194	0	SBSD	E SONOBUOY 05	SIX	56-20.86S	140-49.06W	g	WEST02MV
0354	270194	0	SBSD	B SONOBUOY 06	SIX	56-34.39S	140-55.56W	g	WEST02MV
0444	270194	0	SBSD	E SONOBUOY 06	SIX	56-38.42S	141-06.41W	g	WEST02MV
1934	280194	0	SBSD	B SONOBUOY 07	SIX	56-20.37S	142-16.67W	g	WEST02MV
2019	280194	0	SBSD	E SONOBUOY 07	SIX	56-29.29S	142-12.80W	g	WEST02MV
1645	290194	0	SBSD	B SONOBUOY 08	SIX	55-46.29S	144-04.35W	g	WEST02MV
1750	290194	0	SBSD	E SONOBUOY 08	SIX	55-48.96S	144-15.74W	g	WEST02MV
2037	290194	0	SBSD	B SONOBUOY 09	SIX	56-21.90S	143-58.82W	g	WEST02MV
2125	290194	0	SBSD	E SONOBUOY 09	SIX	56-18.14S	144-11.39W	g	WEST02MV
0501	300194	0	SBSD	B SONOBUOY 10	SIX	55-54.89S	144-24.24W	g	WEST02MV
0550	300194	0	SBSD	E SONOBUOY 10	SIX	55-47.88S	144-32.77W	g	WEST02MV
1624	310194	0	SBSD	B SONOBUOY 11	SIX	53-40.54S	152-07.05W	g	WEST02MV
1715	310194	0	SBSD	E SONOBUOY 11	SIX	53-44.71S	152-22.22W	g	WEST02MV
0553	050294	0	SBSD	X SONOBUOY 12	SIX	44-14.62S	174-22.29W	g	WEST02MV
0557	050294	0	SBSD	B SONOBUOY 13	SIX	44-15.00S	174-23.16W	g	WEST02MV
0713	050294	0	SBSD	E SONOBUOY 13	SIX	44-19.31S	174-30.51W	g	WEST02MV
0633	060294	0	SBSD	B SONOBUOY 14	SIX	43-12.78S	179-56.02E	g	WEST02MV
0714	060294	0	SBSD	E SONOBUOY 14	SIX	43-09.69S	179-44.15E	g	WEST02MV
1747	060294	0	SBSD	B SONOBUOY 15	SIX	42-17.12S	176-47.10E	g	WEST02MV
1817	060294	0	SBSD	E SONOBUOY 15	SIX	42-14.43S	176-38.43E	g	WEST02MV

#GMT	DDMMYY	SAMP	B	SAMPLE	DISP			p	CRUISE
#TIME	DATE	TZ	CODE	E IDENTIFIER	CODE	LATITUDE	LONGITUDE	c	LEG-SHIP
#*** Expendable Bathythermographs ***									
2000	040194	0	BTXP	XBT 01	GDC	21-13.79S	149-38.49W	g	WEST02MV
1826	050194	0	BTXP	XBT 02	GDC	26-05.10S	149-29.58W	g	WEST02MV
1811	060194	0	BTXP	X XBT 03	GDC	31-00.12S	149-30.13W	g	WEST02MV
1819	060194	0	BTXP	XBT 04	GDC	31-01.76S	149-30.14W	g	WEST02MV
1805	070194	0	BTXP	XBT 05	GDC	33-55.70S	148-56.03W	g	WEST02MV
1818	070194	0	BTXP	XBT 06	GDC	33-58.36S	148-56.23W	g	WEST02MV
1830	070194	0	BTXP	XBT 07	GDC	34-00.82S	148-56.36W	g	WEST02MV
1830	080194	0	BTXP	XBT 08	GDC	37-39.91S	145-59.79W	g	WEST02MV
1810	090194	0	BTXP	XBT 09	GDC	40-19.02S	142-28.70W	g	WEST02MV
1807	100194	0	BTXP	XBT 10	GDC	43-17.60S	139-30.81W	g	WEST02MV
1819	100194	0	BTXP	XBT 11	GDC	43-19.49S	139-29.63W	g	WEST02MV
1826	110194	0	BTXP	XBT 12	GDC	47-06.61S	136-23.26W	g	WEST02MV
1814	120194	0	BTXP	XBT 13	GDC	47-48.34S	139-34.87W	g	WEST02MV
1821	130194	0	BTXP	XBT 14	GDC	50-56.92S	134-50.04W	g	WEST02MV
1810	140194	0	BTXP	XBT 15	GDC	54-37.88S	132-30.92W	g	WEST02MV
1820	140194	0	BTXP	XBT 16	GDC	54-36.73S	132-32.58W	g	WEST02MV
1832	140194	0	BTXP	XBT 17	GDC	54-35.21S	132-34.54W	g	WEST02MV
0121	150194	0	BTXP	XBT 18	GDC	53-50.46S	133-20.79W	g	WEST02MV
1640	160194	0	BTXP	XBT 19	GDC	54-50.83S	129-39.81W	g	WEST02MV
1835	170194	0	BTXP	XBT 20	GDC	55-26.21S	127-43.17W	g	WEST02MV
2040	180194	0	BTXP	XBT 21	GDC	55-21.25S	124-27.71W	g	WEST02MV
1833	190194	0	BTXP	XBT 22	GDC	54-57.34S	125-03.00W	g	WEST02MV
2040	200194	0	BTXP	XBT 23	GDC	53-50.78S	128-54.50W	g	WEST02MV
1941	210194	0	BTXP	XBT 24	GDC	55-07.44S	132-10.15W	g	WEST02MV
1819	220194	0	BTXP	XBT 25	GDC	53-39.75S	134-48.38W	g	WEST02MV
1855	240194	0	BTXP	XBT 26	GDC	55-09.05S	136-52.19W	g	WEST02MV
1912	240194	0	BTXP	XBT 27	GDC	55-10.57S	136-56.19W	g	WEST02MV
1904	250194	0	BTXP	XBT 28	GDC	56-36.70S	139-18.02W	g	WEST02MV
1842	260194	0	BTXP	XBT 29	GDC	57-38.44S	138-59.84W	g	WEST02MV
0753	280194	0	BTXP	XBT 30	GDC	56-31.23S	141-24.38W	g	WEST02MV
1857	290194	0	BTXP	XBT 31	GDC	56-03.08S	144-06.82W	g	WEST02MV
1949	300194	0	BTXP	XBT 32	GDC	54-55.01S	146-27.93W	g	WEST02MV
1912	310194	0	BTXP	XBT 33	GDC	53-51.84S	152-27.77W	g	WEST02MV
1823	010294	0	BTXP	XBT 34	GDC	51-57.78S	157-10.58W	g	WEST02MV
1810	020294	0	BTXP	XBT 35	GDC	49-32.48S	161-45.41W	g	WEST02MV
2130	020294	0	BTXP	XBT 36	GDC	49-06.22S	162-09.85W	g	WEST02MV
2225	020294	0	BTXP	XBT 37	GDC	49-06.20S	162-25.10W	g	WEST02MV
1850	030294	0	BTXP	XBT 38	GDC	47-18.18S	166-17.51W	g	WEST02MV
1910	040294	0	BTXP	XBT 39	GDC	45-15.75S	172-21.15W	g	WEST02MV

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End Sample Index