

BENTHIFACE EXPEDITION

LEG 1

R/V MELVILLE

INFORMAL REPORT AND INDEX OF
NAVIGATION, DEPTH AND MAGNETIC DATA

San Diego, Calif. (22 May 1973)

To

Manzanilla, Mexico (3 June 1973)

Chief Scientist, Leg 1 - V. Vacquier

Computer Tech - M. Moore, J. Charters

Resident Marine Tech - D. Fornari

Post-Cruise Processing by - S. Smith, E. Albright, O. McConnell

Prepared by

Underway Data Processing Group

S.I.O. Geological Data Center

Scripps Institution of Oceanography

La Jolla, California

Preliminary Report and Index of Navigation, Depth, Magnetic and Subbottom Profiler Data*

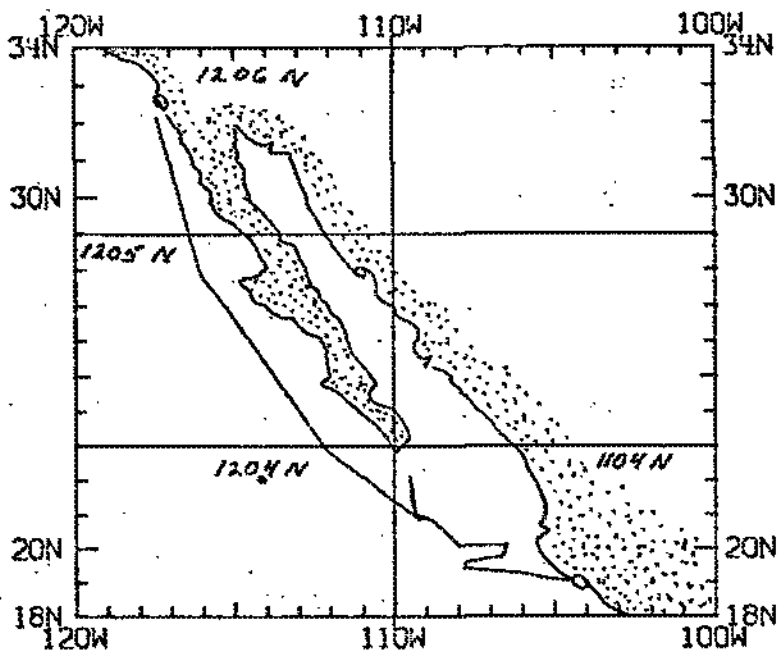
Contents:

- Index Chart - gives track of cruise leg and boundaries of depth compilation plots (see below).
- Track Charts - annotated with dates (day/month) and hour ticks. The scale (.3"/deg. long) is the same as the index charts of previous SIO cruises published as Report IMR TR-25.
- Profiles - Depth and magnetic anomaly vs. distance. Dates (day/month) and positions of major course changes (greater than 30 degrees) are annotated. Sections of track having subbottom profiler (airgun) records have a solid black line along the bottom of the profile.

For information on the availability and reproduction costs of data in the following forms, contact T. E. Chase, Curator, Geological Data Center, Scripps Institution of Oceanography, La Jolla, California 92037 (714-453-2000, Ext. 1534):

1. Navigation listing of times and positions of course and speed changes, fixes and drift velocity.
2. Depth compilation plots - in fathoms (assumed sound velocity of 800 fm./sec.) at approximately 1 mile spacing, plotted at .4" degree with standard U.S. Navy Oceanographic Office BC series boundaries (see index chart).
3. Plots of magnetic anomaly profiles along track-map scale = 1.2"/degree; anomaly scale between 15°N and 15°S latitude = 500 gamma/inch; anomaly scale north of 15°N and south of 15°S = 1000 gamma/inch from values retrieved at approximately 1 mile spacing and regional field removed using the 1965 IGRF.
4. Card Decks of navigation, depth and magnetics (for specific formats, contact S. M. Smith, Geological Data Center).
5. S.I.O. Sample Index - list of beginning and end times and positions of all underway records as well as all other samples (geology, biology, physical oceanography, etc.) collected on the cruise leg.
6. Microfilm or Xerox copies of:
 - a. Echosounder records - 12 and 3.5 kHz frequency
 - b. Subbottom profiler records (airgun)
 - c. Magnetometer records
 - d. Underway Data Log

* no subbottom profiler data for this leg

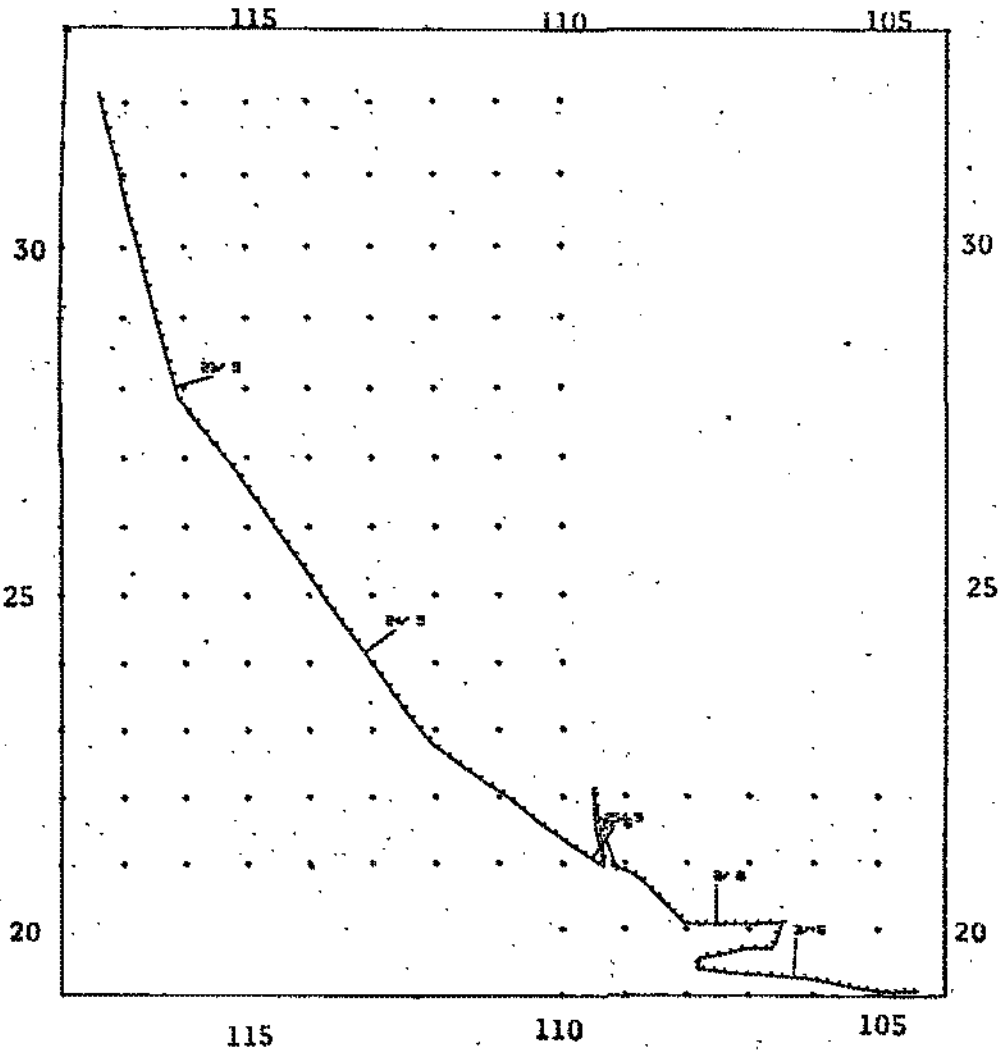


BENTHIFACE LEG 1

Chief scientist - V. Vacquier
 San Diego, California - Manzanilla, Mexico
 (22 May 1973 - 3 June 1973)

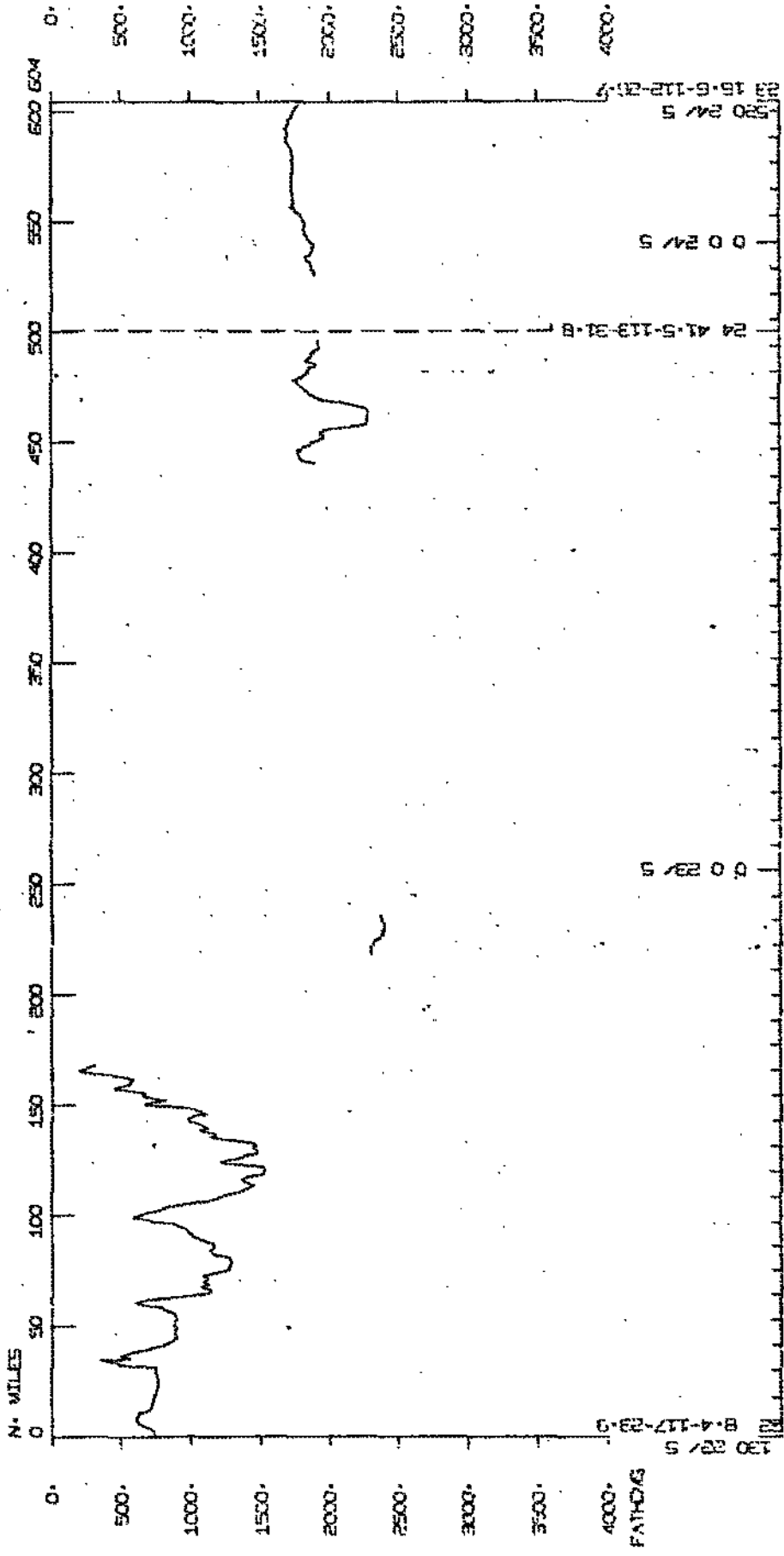
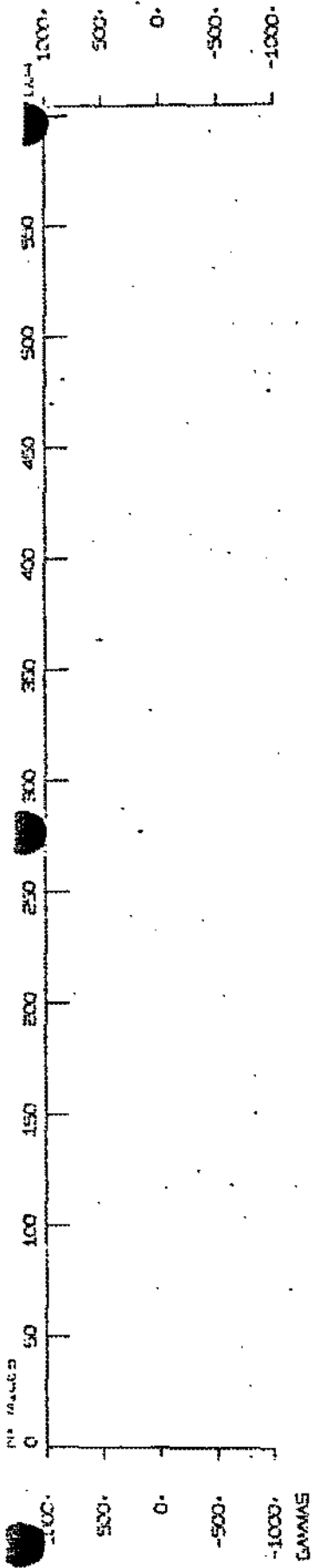
TOTAL MILEAGE

- 1) bathymetry - 1170 miles
- 2) Magnetics - 575 miles
- 3) Seismic Reflection - 000 miles
- 4) Cruise - 1642.5 miles

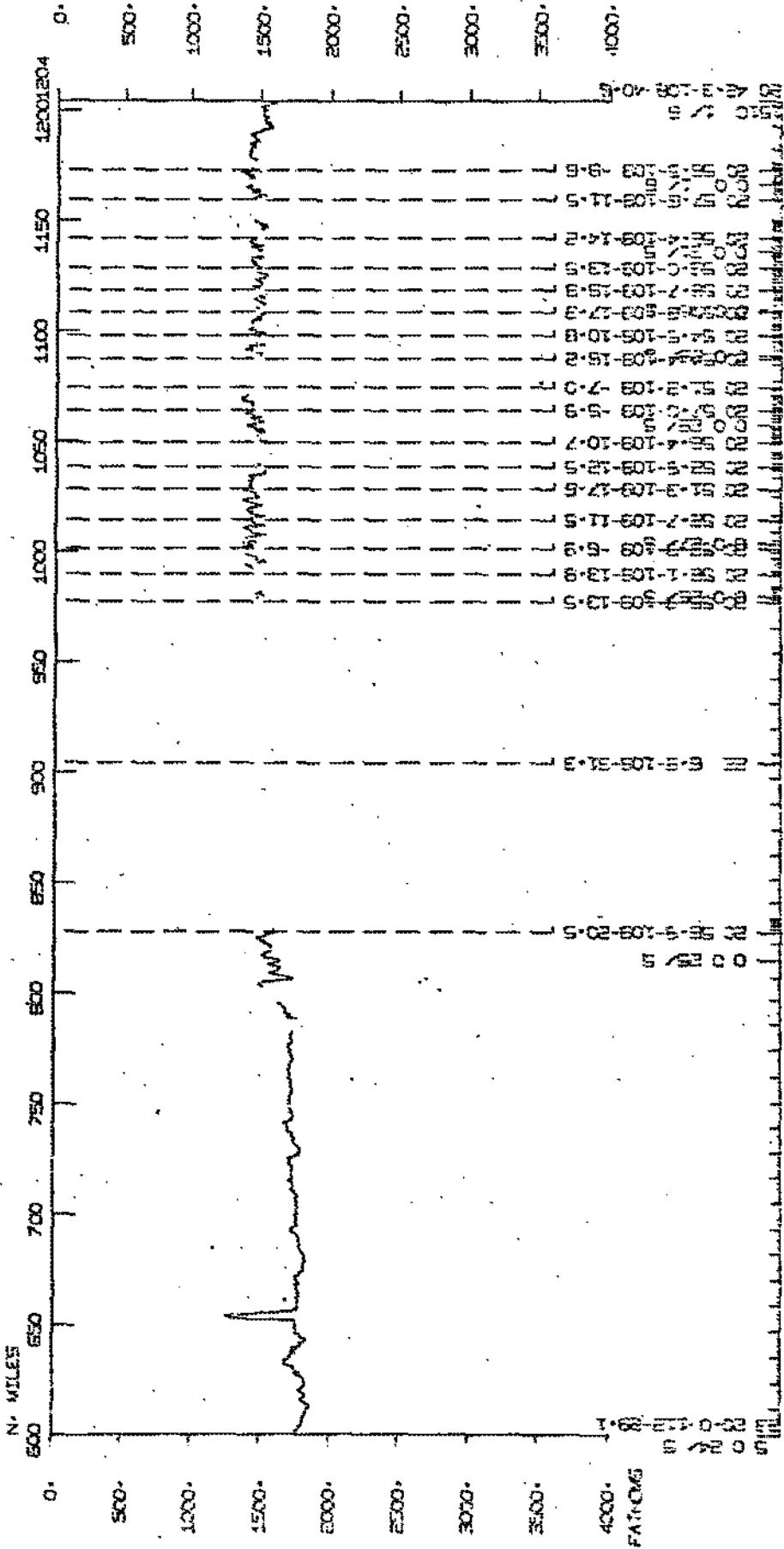
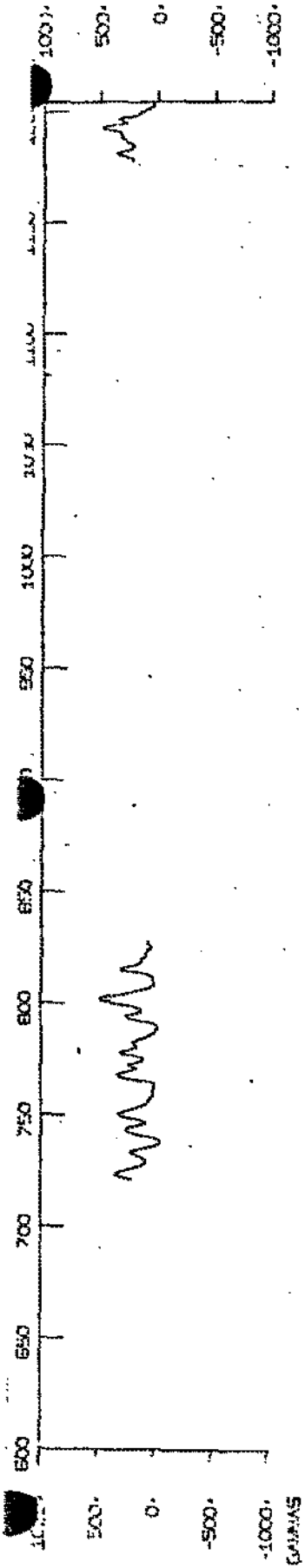


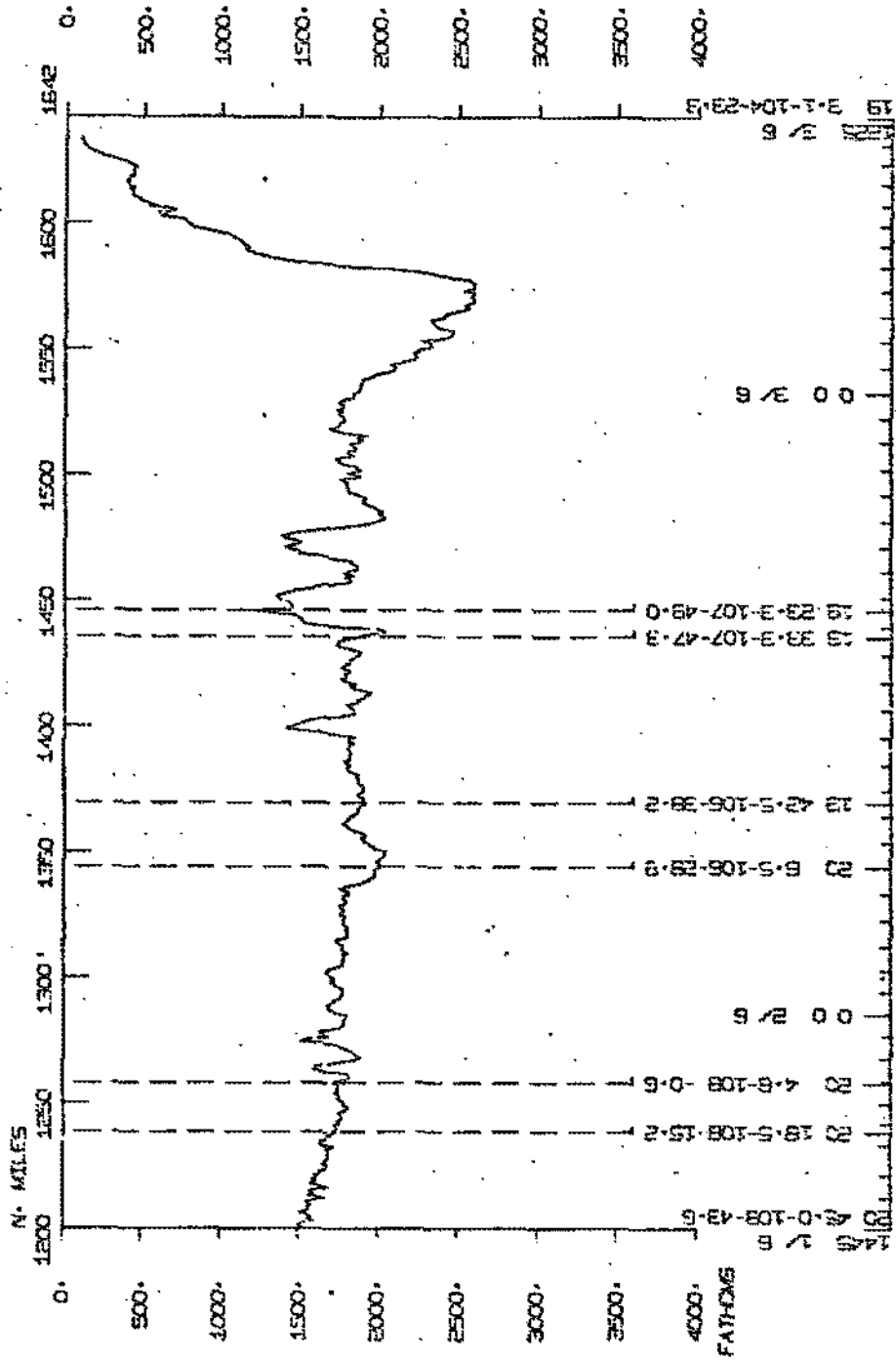
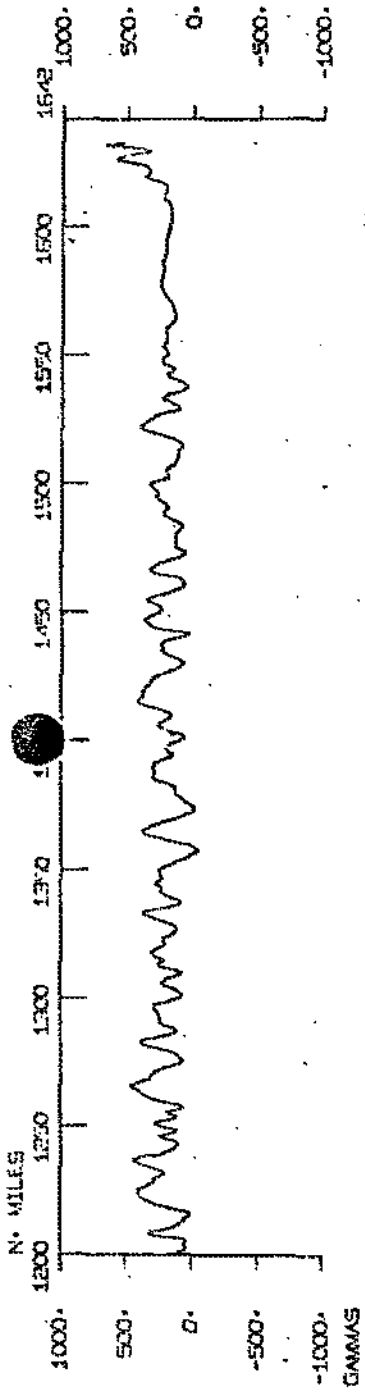
Benthiface
Leg 1
track plot

BENTHIFACE LEG 1



BENTHIFACE LEG 1





BENTHIFACE LEG 1

32 117 240W \$ BNFC01MV
 19 22N 104 226W \$ BNFC01MV

LG01 B SAN DIEGO
 LG01 E MANZANILLO,MEX.

21 573
 100 3 673

PERSONNEL

0 0 0 0	PECS	V. VACQUIER	SID 0	0	ON	0	0E	BNFC01MV
0 0 0 0	PERT	U. FORNAKI	GRD 0	0	ON	0	0E	BNFC01MV
0 0 0 0	PECT	M. HUDRE	SCG 0	0	ON	0	0E	BNFC01MV
0 0 0 0	PECT	J. CHARTERS	SCG 0	0	ON	0	0E	BNFC01MV
0 0 0 0	PE	D. BAXTER	CSS 0	0	ON	0	0E	BNFC02MV
0 0 0 0	PE	E. BOYLE	MIT 0	0	ON	0	0E	BNFC01MV
0 0 0 0	PE	A. CANTELOK	CSS 0	0	ON	0	0E	BNFC02MV
0 0 0 0	PE	M. FEIN	CSS 0	0	ON	0	0E	BNFC02MV
0 0 0 0	PEXN	S. HUMPHRIS	GDN 0	0	ON	0	0E	BNFC01MV
0 0 0 0	PE	L. LAWVER	SID 0	0	ON	0	0E	BNFC01MV
0 0 0 0	PEXN	A. NG	PRC 0	0	ON	0	0E	BNFC01MV
0 0 0 0	PE	P. ONEILL	SID 0	0	ON	0	0E	BNFC01MV
0 0 0 0	PE	R. PULLOCK	CSS 0	0	ON	0	0E	BNFC02MV
0 0 0 0	PEXN	M. SCHOBBER	WGR 0	0	ON	0	0E	BNFC01MV
0 0 0 0	PEXN	U. SCHOBBER	WGR 0	0	ON	0	0E	BNFC01MV
0 0 0 0	PE	S. SMITH	GRD 0	0	ON	0	0E	BNFC01MV

*** NOTE *** TIME ZONES AND MINUTES OF LATITUDE AND LONGITUDE ARE LISTED IN TENTHS (E.G. 10.6 IS LISTED AS 106)

***FATHOGRAMS ***

TIME GMT	DATE D.M.Y.	TIME TZ	LOC	SAMP	LOC CODE	SAMP IDENT.	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
0 22	573			OPRT B	GDR	12KHZ R-01	GDC 32	88N	117 240W	S BNFC01MV
2035	24	573		OPRT E	GUR	12KHZ R-01	GDC 21	228N	110 13W	S BNFC01MV
2100	24	573		OPRT B	GDR	12KHZ R-02	GDC 21	201N	109 571W	S BNFC01MV
1950	28	573		OPRT E	GDR	12KHZ R-02	GDC 20	545N	109 179W	S BNFC01MV
1220	1	673		OPRT B	GDR	12KHZ R-03	GDC 20	555N	109 58W	S BNFC01MV
1132	3	673		OPRT E	GUR	12KHZ R-03	GDC 19	28N	104 305W	S BNFC01MV
342	25	573		OPIL B	HEAT	TOW RUN R-1	GDC 20	578N	109 220W	S BNFC02MV
354	28	573		OPIL E	HEAT	TOW RUN R-1	GDC 20	570N	109 60W	S BNFC02MV
606	28	573		OPIL B	HEAT	TOW RUN R-2	GDC 20	564N	109 46W	S BNFC02MV
1121	1	673		OPIL E	HEAT	TOW RUN R-2	GDC 20	557N	109 68W	S BNFC02MV

*** MAGNETOMETER ***

TIME GMT	DATE D.M.Y.	TIME TZ	LOC	SAMP	LOC CODE	SAMP IDENT.	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
1535	24	573		MGR B	MGR	MAGNETICS R-01	GDC 21	591N	110 506W	S BNFC01MV
1118	3	673		MGR E	MGR	MAGNETICS R-01	GDC 19	29N	104 324W	S BNFC01MV

GEOLOGICAL SAMPLES - CURATOR W.R. RIEDEL (EXT. 1579)

*** CORES ***

TIME GMT	DATE D.M.Y.	TIME TZ	LOC	SAMP	LOC CODE	SAMP IDENT.	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
930	25	573		C G	C G	CORE 1GC 2973M	GCR 21	102N	109 234W	S BNFC01MV
1251	26	573		C G	C G	CORE 2GC 2753M	GCR 20	554N	109 117W	S BNFC01MV
552	28	573		C G	C G	CORE 3GC 2813M	GCR 20	565N	109 48W	S BNFC01MV
2019	28	573		C G	C G	CORE 4GC 2802M	GCR 20	546N	109 179W	S BNFC01MV

HYDROGRAPHIC CAST ***

TIME GMT	DATE D.M.Y.	TIME TZ LOC	SAMP CODE	SAMPLE IDENT.	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
400	26	573	HCNA	HYDCST-01	DCP	20 538N	109 150W	S BNFCO1MV
630	26	573	HCNA	HYDCST-02	DCP	20 536N	109 146W	S BNFCO1MV
1625	28	573	HCNA	HYDCST-03	DCP	20 508N	109 67W	S BNFCO1MV
2240	28	573	HCNA	HYDCST-04	DCP	20 545N	109 174W	S BNFCO1MV
800	31	573	HCNA	HYDCST-05	DCP	20 562N	109 135W	S BNFCO1MV
1635	31	573	HCNA	HYDCST-06	DCP	20 544N	109 202W	S BNFCO1MV
145	1	673	HCNA	HYDCST-07	DCP	20 545N	109 75W	S BNFCO1MV

*** HEAT FLOW ***

TIME GMT	DATE D.M.Y.	TIME TZ LOC	SAMP CODE	SAMPLE IDENT.	DISP CODE	LAT.	LONG.	CRUISE LEG-SHIP
445	25	573	HFTV	B HEAT TOW RUN-01	VAC	20 576N	109 210W	S BNFCO1MV
643	25	573	HFTV	E HEAT TOW RUN-01	VAC	20 573N	109 201W	S BNFCO1MV
2255	25	573	HFTV	B HEAT TOW RUN-02	VAC	20 560N	109 195W	S BNFCO1MV
200	26	573	HFTV	E HEAT TOW RUN-02	VAC	20 544N	109 166W	S BNFCO1MV
955	26	573	HFTV	B HEAT TOW RUN-03	VAC	20 568N	109 138W	S BNFCO1MV
1415	26	573	HFTV	E HEAT TOW RUN-03	VAC	20 551N	109 100W	S BNFCO1MV
1545	26	573	HFTV	B HEAT TOW RUN-04	VAC	20 549N	109 96W	S BNFCO1MV
1746	26	573	HFTV	E HEAT TOW RUN-04	VAC	20 546N	109 93W	S BNFCO1MV
1935	26	573	HFTV	B HEAT TOW RUN-05	VAC	20 542N	109 83W	S BNFCO1MV
30	27	573	HFTV	E HEAT TOW RUN-05	VAC	20 554N	109 99W	S BNFCO1MV
725	27	573	HFTV	B HEAT TOW RUN-06	VAC	20 535N	109 128W	S BNFCO1MV
1225	27	573	HFTV	E HEAT TOW RUN-06	VAC	20 559N	109 79W	S BNFCO1MV
1500	27	573	HFTV	B HEAT TOW RUN-07	VAC	20 561N	109 110W	S BNFCO1MV
1656	27	573	HFTV	E HEAT TOW RUN-07	VAC	20 546N	109 117W	S BNFCO1MV
1745	27	573	HFTV	B HEAT TOW RUN-08	VAC	20 546N	109 112W	S BNFCO1MV
2015	27	573	HFTV	E HEAT TOW RUN-08	VAC	20 550N	109 117W	S BNFCO1MV
2237	27	573	HFTV	B HEAT TOW RUN-09	VAC	20 544N	109 102W	S BNFCO1MV
355	28	573	HFTV	E HEAT TOW RUN-09	VAC	20 570N	109 60W	S BNFCO1MV
605	28	573	HFTV	B HEAT TOW RUN-10	VAC	20 564N	109 46W	S BNFCO1MV
1100	28	573	HFTV	E HEAT TOW RUN-10	VAC	20 520N	109 53W	S BNFCO1MV
1330	28	573	HFTV	B HEAT TOW RUN-11	VAC	20 513N	109 75W	S BNFCO1MV
1430	28	573	HFTV	E HEAT TOW RUN-11	VAC	20 512N	109 72W	S BNFCO1MV
20	29	573	HFTV	B HEAT TOW RUN-12	VAC	20 544N	109 171W	S BNFCO1MV
503	29	573	HFTV	E HEAT TOW RUN-12	VAC	20 528N	109 123W	S BNFCO1MV

TIME	DATE	TIME	TZ	SAMP	SAMPLE IDENT.	DISP	CRUISE
GMT	D.M.Y.	LOC	LOC	CODE		CODE	LEG-SHIP
						LAT.	LONG.
837	29	573		HFTV B	HEAT TOW RUN-13	VAC 20 545N	109 109W S BNFC01MV
1334	29	573		HFTV E	HEAT TOW RUN-13	VAC 20 555N	109 140W S BNFC01MV
1621	29	573		HFTV B	HEAT TOW RUN-14	VAC 20 562N	109 133W S BNFC01MV
2115	29	573		HFTV E	HEAT TOW RUN-14	VAC 20 556N	109 170W S BNFC01MV
2310	29	573		HFTV B	HEAT TOW RUN-15	VAC 20 556N	109 163W S BNFC01MV
505	30	573		HFTV E	HEAT TOW RUN-15	VAC 20 590N	109 217W S BNFC01MV
900	30	573		HFTV B	HEAT TOW RUN-16	VAC 20 593N	109 196W S BNFC01MV
1300	30	573		HFTV E	HEAT TOW RUN-16	VAC 20 572N	109 135W S BNFC01MV
1548	30	573		HFTV B	HEAT TOW RUN-17	VAC 20 583N	109 131W S BNFC01MV
2045	30	573		HFTV E	HEAT TOW RUN-17	VAC 20 560N	109 104W S BNFC01MV
115	31	573		HFTV B	HEAT TOW RUN-18	VAC 20 566N	109 88W S BNFC01MV
630	31	573		HFTV E	HEAT TOW RUN-18	VAC 20 564N	109 141W S BNFC01MV
1032	31	573		HFTV B	HEAT TOW RUN-19	VAC 20 560N	109 168W S BNFC01MV
1500	31	573		HFTV E	HEAT TOW RUN-19	VAC 20 549N	109 203W S BNFC01MV
1845	31	573		HFTV B	HEAT TOW RUN-20	VAC 20 579N	109 113W S BNFC01MV
2320	31	573		HFTV E	HEAT TOW RUN-20	VAC 20 540N	109 80W S BNFC01MV
330	1	673		HFTV B	HEAT TOW RUN-21	VAC 20 546N	109 66W S BNFC01MV
740	1	673		HFTV E	HEAT TOW RUN-21	VAC 20 565N	109 96W S BNFC01MV

END SAMPLE INDEX