PRELIMINARY REPORT AND INDEX

0F

NAVIGATION, DEPTH, MAGNETIC AND SUBBOTTOM PROFILER DATA
SOUTHTOW EXPEDITION

LEG 5

R/V WASHINGTON

Callao, Peru (22 May 1972) To Guayaquil, Equador (12 June 1972)

Chief Scientist, Leg 5 - F. N. Spiess

Cruise Coordinator - J. Mudie

Airgun Tech. - D. McKinney

Computer Tech., - M. Elston

Resident Marine Tech. - J. Donovan

Data Processed by - U. Albright, O. McConnell, I. Bustillos

Geological Data Center

T. E. Chase - Curator

S. M. Smith - Data Processing Coordinator Scripps Institution of Oceanography La Jolla, California .

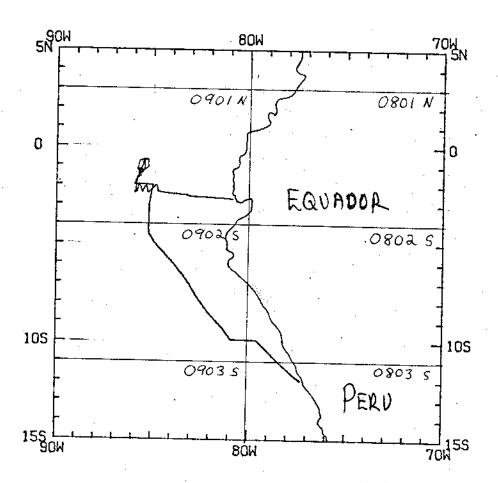
Contents:

- Track Charts annotated with dates (day/month) and hour ticks. The scale (.3"/deg.

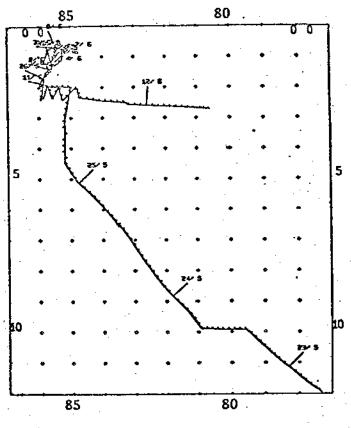
 long) is the same as the index charts of previous SIO cruises published
 as Report IMR TR-25.
- Profiles Depth and magnetic anomaly vs. distance. Dates (day/month) and positions of major course changes (greater than 30 degrees) are annotated. Sections of track having subbottom profiler (airgun) records 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):

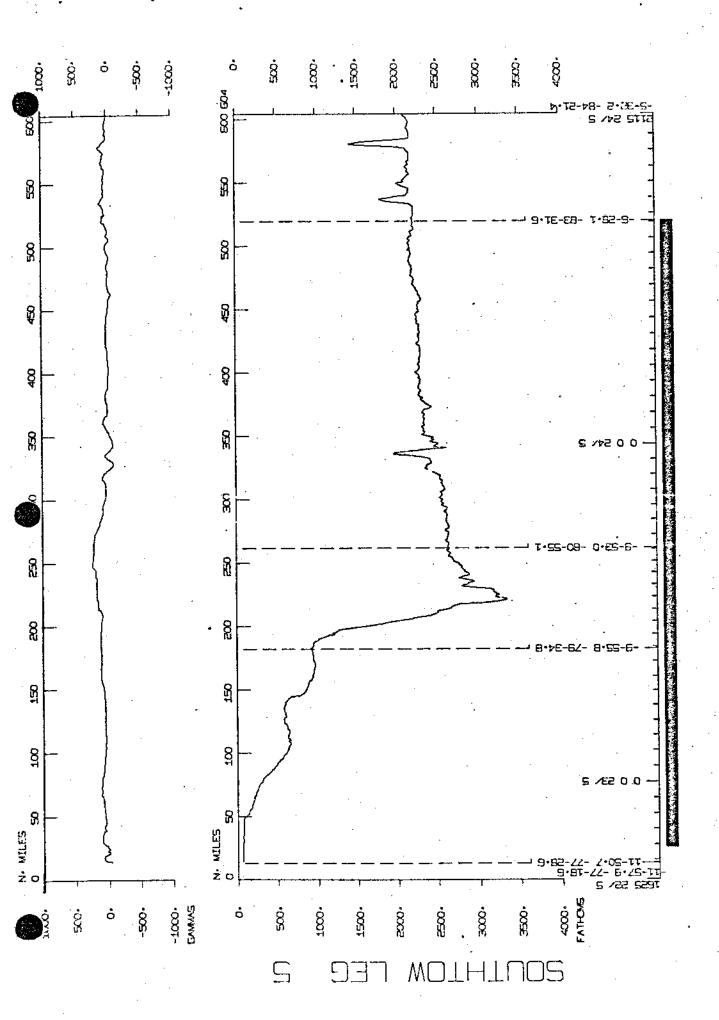
- Navigation listing of times and positions of course and speed changes, fixes and drift velocity.
- 2. Depth compilation plots in fathoms (assumed sound velocity of 800 fm./sec.) at approximately I mile spacing, plotted at 4"/degree with standard U.S. Navy Oceanographic Office BC series boundaries (see 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:
 - Echosounder records 12 and 3.5 kHz frequency.
 - Subbottom profiler records (airgun)
 - c. Magnetometer records
 - d. Underway Data Log

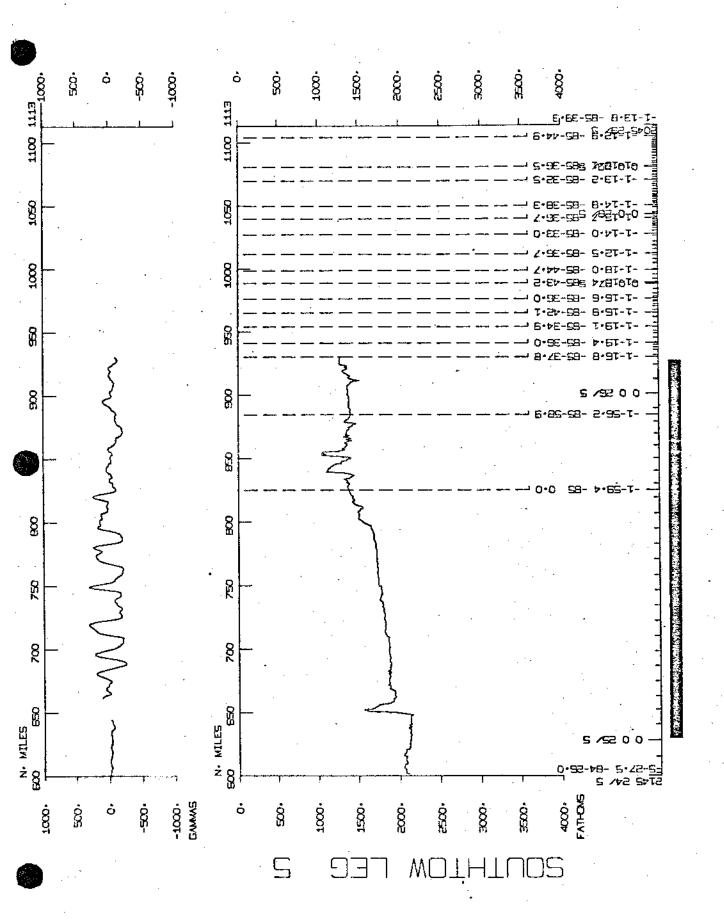


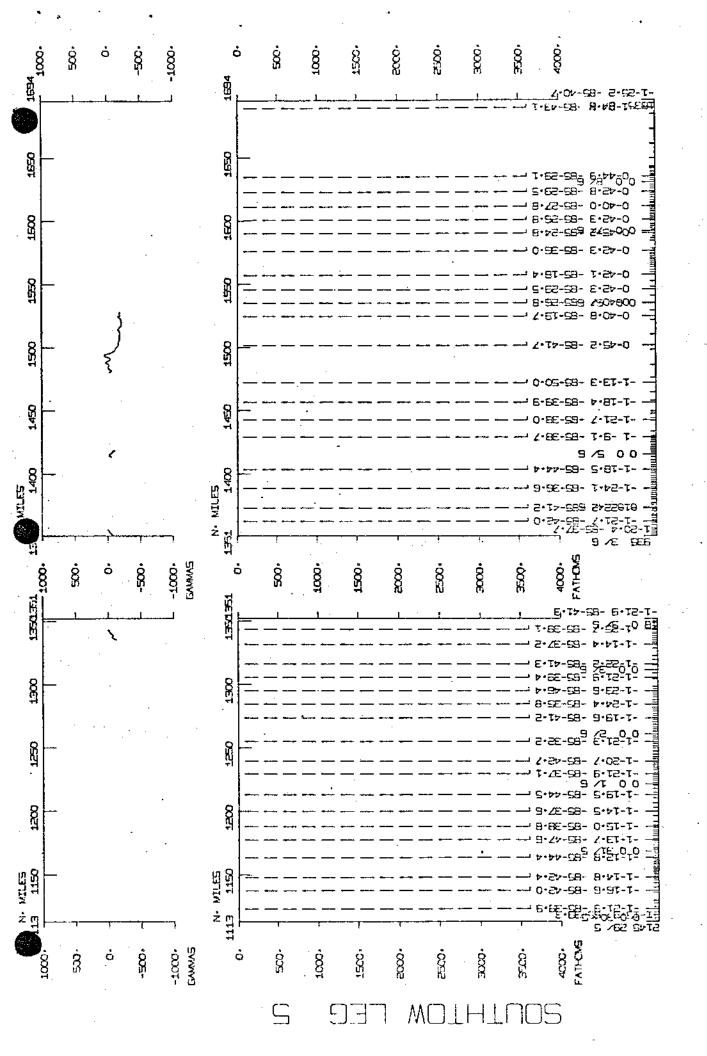
SOUTH-TOW LEG 5
R/V WASHINGTON
F.N.SPIESS, CHIEF SCIENTIST
CALLAO (MAY 22,1972)
GUAYAQUIL(JUNE 12,1972)

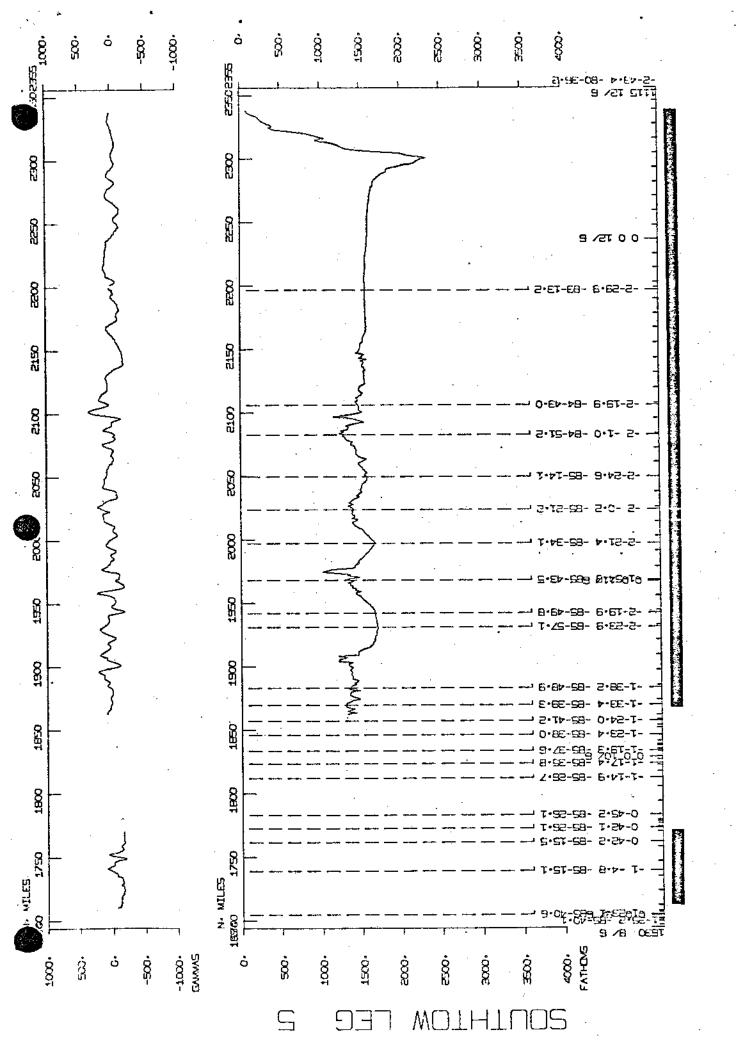


SOUTH-TOW LEG 5 track plot









UNDERHAY DATA - CURATOR T.E. CHASE 2ND FLOOR AQUARIUM (EXT.1534)

NAVIGAT	FION PLOTS	*		• .									
DATE D.M.Y.	TIME TZ	SAMP	į	SAMPLE	1DENT.	SEO	!	D ISP CODE	LAT	•	LONG	ļ	CRUISE LEG-SHIP
22 572 22 572		AVBP NVBP	மைய	BRIDGE 1 BRIDGE	PL01S PL01S		3.6	50C 1	0 1	NO 949	0 0E 78 1 04 W	S	SOTWOSWT SOTWOSWT
22 572 25 572		NV B P	æш	BRIDGE BRIDGE	PLOTS PLOTS	~ ~	O O	000 000	11 16 4 31	64S 19S	78 104W 85 100W	S 35	SOTW 05WT SOTW 05WT
25 572 29 572		NVBP NVBP	மைய	BRIDGE (BRIDGE)	PLOTS PLOTS	m m	0,0	3 3 3 3	4 31	9S 1.S	85 100W 85 412W	νν 3.34	SOTWO5WT SOTWO5WT
29 572 1 672		NV B P NV B P	. w m	BRIDGE BRIDGE	PLOTS PLOTS	4 4	0.0	၁၀	1 12 1	5.5 4.5	85 403W 85 419W	in in	SOTW 05WT SOTW 05WT
1 672		NVBP NVBP	Вm	BRIDGE BRIDGE	PLOTS PLOTS	N 40	00	ა ა ი	1 21 1 21	48 58	85 41 9W 85 418W	N N	SOTWOSWT SOTWOSWT
1 672 8 672		NVBP NVBP	பை	BRIDGE BRIDGE	PLOTS PLOTS	4 4		203	1 21 1 23	55	85 418W 85 394W	W W	SOTW 05WT SOTW 05WT
8 672 10 672		NV8P NV8P	В	BRIDGE BRIDGE	PLOTS PLOTS	مار مار	33	3 3 3 3 3	1 23	. 7S 3S	85 394W 85 381W	3.3. N N	SOTW 05 WT SOTW 05 WT
10 672 12 672	,	NV BP NV BP	ல் ய	BRIDGE BRIDGE	PLOTS PLOTS	10 40	00	3 3 3 3 3	1 23	335 025	85 381W 81 69W	N N	SOTWOSWT SOTWOSWT
22 572 24 572	- 1.5.	NVCP	良日	COM PUT ER COM PUTER	R PLOTS	,m ,m	90	1 009 109	5 53	55	77 244W 84 17W	N N	SOTWOSWT SOTWOSWT
24 572 26 572		NVCP	æ w	COMPUTER COMPUTER	R PLOTS	22		309 209	5 53	on su	84 17H 85 461W	S S	SOTWOSWT SOTWOSWT
5 672 6 672		NVCP	த ய	COMPUTER COMPUTER	R PLOTS	m m	0.0	3 2 2 2 3	1 14 0 42	415 245	85 429W 85 278W	W W	SOTW 05WT SOTW 05WT
8 672 8 672		NVCP	es en	COMPUTER COMPUTER	R PLOTS	4 4	00	3 3 3 3 3	0 43 1 24	.55 95	85 262W 85 397W	N N	SOTWOSWT SOTWOSWT
9 672 9 672		NVCP	40 m	COMPUTER COMPUTER	R PLOTS	មាស		309 209	1 23 0	45 55	85 389W 85 263W	N W	SOTH OSWT SOTH OSWT
9 672 9 672		NVCP	æш	COMPUTER COMPUTER	R PLOTS	20 -9		303 203	0 45	3S 1S	85 262W 85 358W	ωω 3.35	SOTH 05 WT SOTH 05 WT
10 672 11 672	2121	NVCP	മെല	COM PUT ER	R PLOTS	بر بر	66	203	1 26 2 23	05 86	85 407W 84 177W	S	SOTH 05WT SOTH 05WT
11 672 12 672	A: B!	NVCP	фW	COM MUTER COM PUTER	R ROTS	80 80	00	303 69 69 69	2 23	86 S	84 177W 80 461W	S	SOTWOSWT SOTWOSWT

))					
###FAT TIME GMT D	**FATHOGRAMS *** INE DATE TIME T GMT D.M.Y. LOC L	MS *** TIME TZ LOC LOC	SAMP		SAMPL	œ.	J DENT.		SEO.	0.1SP CODE	LAT	•	LDNG.	٠	22	CRUISE LEG-SHIP
1900 2	22 572 23 572	 - - - -	DPRT OPRT	ωw	60 R 60 R	1 2K HZ 12K HZ	ROLL			60 000	11 9 4	494S 341S	77 3 81	1 0W 88M	S S0 S S0	SOTWOSWT SDTWOSWT
1910 2	23 572 26 572		DPRT DPRT	4 0 W	GDR GDR	12KHZ 1 2KHZ	ROLL ROLL	22		၁၉	ф. М. Щ.	33.S 455	81 85 4	94W 82H	S S0	SOTW OSWT SOTW OSWT
20 1 25 1	11 672 12 672		DPRT DPRT	យ ដា	608 ៩០೩	12KHZ 12KHZ	ROL L ROL L	9		309 209	3.5	566S 358S	85 4 82 3	424W 3	S S0	SOTW 05 WT SOTW 05 WT
900	12 672 12 672		DPRT DPRT	മധ	GDR	12KHZ 12KHZ	ROLL1 ROLL1	000)) (3)	0.0 w 4	359S 4135	82 2 80 5	9.9W	S SO S SC	SOTH OSWT. SOTH OSWT
130 2	22 672 23 572		DPR3 DPR3	்கைய	GDR3.5	3. 5K HZ	ROLL ROLL	,		303	10 5	0N 5685	0,0	동병	SSS	SOTW 05WT SOTW 05WT
	23 572 23 572		DPR3 OPR3	Вm	GOR3 GOR3	5. 5K HZ	ROLL Roll	. 70 70		303 303	10 2 9 5	263S 556S	79	4 ''W 8 BW	S SO	SOTWOSWT SOTWOSWT
938 2 307 2	23 572 . 25 572		OPR3 OPR3	с ш	GDR3.	3.5KHZ	ROLL	m m		309 209	Q. 4. Γ. W.	556 \$ 380\$	79 4 85	26H 64H	SSS	SOTH OSWT SOTH OSWT
1430 1	10 672 11 672	·	DPR3 0PR3	பை		GDR3. 5K HZ GDR3.5K HZ	ROLL ROLL	\$		ე <u>ი</u> ე ეეე	1 2 1 5	238S 5755	85 4 85 4	409W	S SC S SC	SOTW 05 WT SOTW 05WT
1450 1	10 672 11 672		DPR3 DPR3	பை	GDR3 GDR3	GDR3.5KHZ GDR3.5KHZ	ROLLI	13		202 203	2 2	52S 42S	85 4 84 5	4 08W 545W	S SC S SC	SOTH OSWT SOTH OSWT
945 1	11 672 11 672		DPR3 DPR3	由日	CDR3 GDR3	GDR3.5K HZ GDR3.5K HZ	ROLL1	14 14		ეიე ეიე	22	225	84 5 83 1	526W 198W	S SC	SOTWOSWT SOTWOSWT
1915	11 672 12 672	. •	DPR3 DPR3	கைய	60 80 80	3.5KHZ	ROLLIS	15		ეცე ეცე	2 2 4 4 4	2965 4145	83 1 80 5	169W 523W	S SC S SC	SOTW 05WT SOTW 05WT
S ##	SEISMIC #	REFLECTION	FION P	ğ	PROFILES	# # \$										
맞도	DATE TI	TIME TZ LOC LOC	SAMP C CODE	_	SAM	<u>.</u>	ID ENT.		SE O.	D ISP CODE	LAT	-	LONG.	.01	57	CRUISE LEG-SHIP
1945	22 572 12 672		SPRS	மைய	1 .	AIRGUN-RS-ROLL AIRGUN-RS-ROLL	-ROLL -ROLL			309 309	11 4 2 4	44 0S 413S	77 3 80 5	3 8 5 W	SS	SOTW OSWT SOTW OSWT
*	MAGNETOMETER		* *													
1900	22 572 10 672		X KGR	the su		MA GNET –ROLL MA GNET–ROLL	וני וני			ა ე ე	11 4 1 1	94.5	£ 68 € 68	310W	8 8	SOTW 05WT SOTW 05WT
1500	10 672 12 672		MGR MGR	& m		MA GNET-ROLL MAGNET-ROLL	ור רר 2	* 1 *1) 000 000	42	26 05 413 S	80 5	40 W 533W	S SS	SOTWOSWT SOTWOSWT

*
#
*
*
æ
-
S
~
=
u
ğ
Φ
8
m
_
_
*

CRUISE LEG-SHIP	SOTW 05WT SOTW 05WT	S SOTHOSWT S SOTHOSWT	378W S SOTWOSWT 266W S SOTWOSWT	† † • •		CRUISE L5G-SHIP	SOTW 05WT SOTW 05WT	262W S SOTWOSWT 292W S SOTWOSWT
LONG.	0 OE 80 533W S	85 378W S 85 409W S	85 378W S 85 266W S	 		LONG	85 3 8 2 W S SOTW 05 WT 85 3 8 2 W S SOTW 05 WT	85 262W S 85 292W S
LAT	0 0N 2 413S	1 168S 1 238S	1 168S 0 429S			LAT	DTG 1 1685 DTG 1 995	0 436S 0 437S
SEO. DISP NUM. CODE	303 203	DTG DTG	016 016	į		SEG. DISP NUM. CODE	016 016	01G 01G
SAMPLE IDENT.	B UNDER/WAY LOG E UNDER/WAY LOG	LBUW B U/W DEEP TOW LOG	B DEEP TOW LOG E DEEP TOW LOG	DEEP TOW SURVEY-CURATOR JOHN MUDIE EXT.1091		SAMPLE IDENT.	B CARNEGIE R 10 GE S E CARNEGIE R 10 GE S	B CARNEGIE RIDGE N E CARNEGIE RIDGE N
DATE TIME TZ SAMP D.M.Y. LDC LOC CODE	LBUW	M081 M081	81 61	SURVEY-CURA	* * *	CHIE DATE TIME TZ SAMP	01 01	10 10
TIME DATE T	1520 22 572 900 12 672	230 26 572 1430 10 672	230 26 572 1429 9 672	DEEP TOW	*** DEEP TON ***	TIME DATE T	240 26 572 915 5 672	30 6 672 500 8 672
_	. ~		-	•	*	-	•	

						•						•		
CRUISE LEG-SHIP	S SOTWOSWT S SOTWOSWT	S SOTWOSWT S SOTWOSWT	S SOTWOSWT S SOTWOSWT	S SOTWOSWT S SOTWOSWT	S SOTWOSWI S SOTWOSWI	S SOTWOSHT S SOTWOSWI	S SOTW QSWT S SOTW OSWT	SOTWOSWT SOTWOSWT	SOTWOSWT SOTWOSWT	SOTWOSHT SOTWOSHT	SOTWOSWT SOTWOSWT		CRUISE LEG-SHIP	SQTM 05 WT SDTW 05 WT SQTW 05 WT SOTW 05 WT
LONG	85 261W 85 261W	85 261W 3	85 422W 985 401W	85 395W 3	85 395W 8	85 404W 8	85 35 7W S	85 26 OM S 85 26 IW S	85 261W S 85 260W S	85 399W S 85 403W S	85 404W S		LONG.	85 35 7W S 85 383W S 85 424W S 85 379W S
LAT.	0 4295 0 4285	0 4265 0 4225	1 2435 1 2435	1 242S 1 239S	1 234S 1 237S	1 24 05 1 23 85	1 1645 1 1685	0 43 0S 0 426S	0 4255 0 4225	1 243S 1 237S	1 2405 0 4215		LAT	1 1645 1 1505 1 2015 1 2515
0. 0.15 P	016 016	DTG DTG	01G 01G	01G	016 016	DTG DTG	01 G 01 G	680 680	GRD GRD	GRD GRD	GRO		0 ISP CODE	016 016 016
SEO. NUM.										•			SEO.	
SAMPLE IDENT.	8 SOTW 5-1 CG E SOTW 5-1 CG	8 SOTH 5-2 CG E SOTH 5-2 CG	8 SOTW 5-3 CG	8 SOTW 5-4 CG E SOTW 5-4 CG	8 SOTW 5-5 CG E SOTW 5-5 CG	8 SOTH 5-6 CG E SOTH 5-6 CG	B SOTW 5-4 CG E SOTW 5-7 CG	B GRAV.CORE 5-01 E GRAV.CORE 5-01	B GRAV, CORE 5-02 E GRAV, CORE 5-02	B GRAV.CORE 5-03 E GRAV.CORE 5-03	B GRAV.CORE 5-04 E GRAV.CORE 5-04		SAMPLE IDENT.	SOTW 5-1 CAMERA SOTW 5-2 CAMERA SOTW 5-3 CAMERA SOTW 5-4 CAMERA
TZ SAMP LOC CODE	ဖ ဖ ပပ	ဖစ ပပ	ဖ္ဖ ပပ	ဖဖ ပပ	99 UU	ဖ ဖ ပ ပ	ဖဖ ပပ	ဖြစ် ပူပ	ဖဖ ပပ _္	დ დ ს ს	ဖြစ ပပ		TZ SAMP LOC CODE	CAFS CAFS CAFS CAFS
DATE TIME D.M.Y. LOC		8 672 8 672	8 672 8 672	8 672 8 672	8 672 8 672	9 672 9 672	9 672 9 672	8. 672 8. 672	8 672 8 672	8 672 8 672	8 672 8 672	CAMERA ***	DATE TIME D.M.Y. LOC I	6 572 8 572 1 572 5 672
TIME	73 0 900	930	1720	1935	2140	110	2215	700	945	1920 2330	2350	*** CA!	TIME (500 20 430 28 2146 31

*** DREDGES ***

		-			
CRUISE L5G-SHIP	405W S SOTWOSWT 403W S SOTWOSWT	264W S SOTWOSWT 266W S SOTWOSWT	3.75W S SOTWOSWT	85 3734 S SOTWOSHT 85 3704 S SOTWOSHT	85 406W S SOTWOSWT 85 403W S SOTWOSWT
i	SO	SO	SO	S	S
LONG.	405W	7664W	3 75W 369W	MO.2 E	4 00 A W 03 W
ן ב	85 85	85	85	85 85	. 25 G
LAT	1 2355 1 2425	0 420S 0 429S	1 1 92 5 1 2 005	1 1925 1 2065	1 2355 1 2425
	~ ~	00		-	
SEQ. DISP NUM. CODE	org org	076 076	01 G 01 G	016 016	GRD GRD
SEO					
• •	8 SOTH 5-1 RK DRDG E SOTH 5-1 RK DRDG	O RO G DRO G	B SOTH 5-3 RK DRDG E SOTH 5-3 RK DRDG	DRD G DRD G	
DE	똤똤	* *	莱뽔	X X	
SAMPLE IDENT.	5-1 5-1	5-2	57 - 7 0 - 3 0 - 3	5-4	· He
SAM	8 SOTH 5-1 RK DR(E SOTH 5-1 RK DR(SOTW 5-2 F SOTW 5-2 F	SOTW SOTW	8 SOTW 5-4 E SOTW 5-4	B DREDGE E DREDGE
Ì	ໝາ	மைய	பூய	ច្ច ឃ	សម
SAMP	90 88	∝ ∞	0 8 0 8	0 C 8 R	00 * *
	۵۵		0	00	
12 LOC					
DATE TIME D.M.Y. LOC					
ш >-	572 572	672 672	672 672	672 672	572
O.A.	9 672 9 672	0.0	100	10	9 672 9 672
	124	1300	430	915	200 400

PHYSICAL OCEANOGRAPHY

BATHYTHERMOGRAPHS - CURATOR MARGARET ROBINSON (EXT.1135)

# # #	BATHYTHERMOGRAPH ***	ERMO(SRAP	* * * * * * * * * * * * * * * * * * *								:
TIME GMT	DATE 1	T1 WE	12 L0C	SAMP	SAMPLE	IDENT.	SEO.	0.15 P CDDE	LAT.	LONG.	- .	CRUISE LSG-SHIP
		į		1			1		 			1 ·
2135	22 572			8TX	X87.5-01		_				S	SOTWOSWT
530				BIX	X8T . 5~02				10 2365	79 . 73W	S	SOTWOSWT
200	26 572			ВТХ	XBT.5-03			815	1 1645	85 357W	S	SOTWOSMT
1720				BIX	XBT 5-04				01-1805	085-34 OM	Ŋ	SDIWOSWI
2100				BTX	XBT 5-05				1-1505	085-36 OM	S	SOTW 05 WT
2100	28 572			BIX	XBT.5-06			BTS	1 1465	85 366W	'n	SDTW 05WT
2121	29 572			B TX	X8T.5-07			818	1 15 0S	85 393W	S	SOTW 05 WT
2100				BTX	X87.5-08	· ·		818	1 1305	85 441W	S	SDIMOSMI
2100				BTX	XBT.5-09	_		BTS	1 191S	85 436W	s,	SOTWOSMI
2300	1 672			BTX	X81.5-10		. •	818	1 2245	85 356W	Ŋ	SOTWOSWI
200	3 672			ω X	X6 T + 5-11		•	8TS	1 1445	85 371W	v)	SOTHOSMI
C	4 672			BTX	X87.5-12			818	1 2185	85 41 W	S.	SOTMOSWI
2330	4 672			8 TX	X8T.5-13			BTS	1 2335	85 397W	Ŋ,	SOTWOSWT
2330	5 672			BTX	X81.5-14			BTS	0 4185	85 2 73W	Ś	SOIMOSMI
) C	7 672			BTX	XBT.5-15			BTS	D 439S	85 24 TH	v)	SD120521
100	8 672			BTX	XBT.5-16	.0		BTS	0 4345	85 2.70W	'n	SOTWOSWI
210	9 672			8 T X	XBT.5-17			BTS	1 23 15	85 406W	S	SOTMOSWI
0	10 672			81×	XBT.5-18	an		BTS	1 1 7 0S		'n	SOTWOSWI
500				BTX	XBT.5-19			818	1 2 03 \$	85 366W	S	SOTWOSMI
2006	100672			×	XBT 5-20			BTS C	11-2 005	085-4 00W	S	SOTWOSWI
2007	110672			B T X	XBT 5-21				02-24 05	081-570M	S	SOTHOSWI
00.00	110672			×	X8T 5-22				2-1305	085-170M	S	SOTWOSMI
1300	110672			BTX		_			02-2108	084-310%	ردي	SO THE OS MI
2100	110672			BTX	XBT 5-24				2-33 05	1	Ų.	S
0500	120672			BTX	XBT 5-25			8.15	.7 3 90S	081-39⊍		TWOSHI

삼 상
XEASUREMENT
CURRENT

							•		
	CRUISE LEG-SHIP	SOTWOSWT SOTWOSWT SOTWOSWT SOTWOSWT SOTWOSWT		CRUISE LSG-SHIP	SOTWOSWT SOTWOSWT SOTWOSWT		 	CRUISE LEG-SHIP	SOTWOSWY SOT
	LONG	85 357M S 85 382M S 85 424M S 85 379W S 85 278W S		· CONG.	78 138W S 81 443W S 85 543W S		 	-9 NO 1	0.00 77.299W S 78.1289W S 79.291W S 79.291W S 80.111W S 80.1
) .	LAT	1 1638 1 1608 1 2018 1 2518 0 4248	•	LAT	11 1335 8 5455 1 4655	846		LAT	0 0N 0 0N 11 510S 11 508S 11 90S 10 195S 9 443S 9 443S 9 443S 11 195S 11 186S 11 154S 11 154S 11 156S 11 156S 11 156S
	SEQ. DISP NUM. CODE	010 010 010 010		SEQ. DISP NUM. CODE	<u> </u>	H EXT. 2	! ! ! !	SEO. DISP NUM. CODE	A A A A A A A A A A A A A A A A A A A
	ID ENT.	CURR.MT. CURR.MT. CURR.MT. CURR.MT.		IDENT.	HALOBATES HALOBATES HALOBATES	.COATSWORT	144111	IDENT.	
*	SAMPLE	SOTWS-1 SOTWS-2 SOTWS-3 SOTWS-4 SOTWS-4	8 I OL O GY	SAMPLE	LEWIN PA	SSOR J.L	<u> </u>	SAMPLE	AEROSOL AEROSOL AEROSOL AEROSOL AEROSOL AEROSOL AEROSOL AEROSOL AEROSOL AEROSOL AEROSOL AEROSOL AEROSOL
SUREMENT ***	TZ SAMP LOC CODE	C C C C C C C C C C C C C C C C C C C		*** TZ SAMP LOC CODE	SNS	OGRAMS-PROCES	 	TZ SAMP LOC CODE	A S S N U A S N U A S S N U A
CURRENT MEA	DATE TIME D.M.Y. LOC	26 572 26 572 31 572 5 672 6 672		DATE TIME	22 572 23 572 25 572	NON-SIO PRO	AMPLE	DATE TIME D.M.Y. LOC	00000000000000000000000000000000000000
*	# 1 % E	457 926 2143 1349 201		### S TIME GMT	2330 2330 2330		*	TIME GMT	600 1200 1800 1836 1200 1200 1800 1800 1800 1800 1800 1800

Э

TIME DATE TIME TZ SAMP CRUISE GMT D.M.Y. LOC LOC CODE SAMPLE IDENT. NUM. CODE LAT. LONG. LEG-SH								١.		. !
SAMPLE IDENT. NUM. CODE LAT. LONG.	E DATE TIME	71	SAMP			SEQ.	0 TS P			CRUISE
r	T D.M.Y. LOC	207	CODE	SAMPLE	10 ENT.	NOW .	CODE	LAT.	LONG.	LEG-SH
	1	-					11.	1		<u> </u>

ō.

END SAMPLE INDEX