## GEOSECS EXPEDITION

LEG D

# R/V MELVILLE

INFORMAL REPORT AND INDEX OF • NAVIGATION, DEPTH AND MAGNETIC DATA

Tokyo, Japan (31 October 1973)

to

Honolulu, Hawaii (29 November 1973)

Chief Scientist, Leg D -- D. Spencer

Resident Marine Tech -- S. Witherow

Post-Cruise Processing by -- S. Smith, U. Albright, G. Psaropulos, O. McConnell

## Prepared by

Underway Data Processing Group

S.I.O. Geological Data Center Scripps Institution of Oceanography

La Jolla, California

February 27, 1974

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.

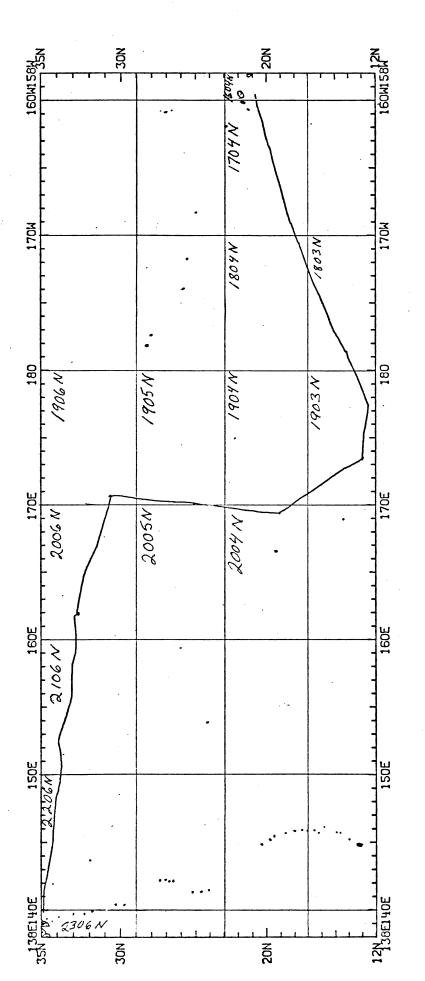
6. Microfilm or Xerox copies of:

a. Echosounder records - 12 and 3.5 kHz frequency

b. Subbottom profiler records (airgun)

c. Magnetometer records

d. Underway Data Log



GEOSECS EXPEDITION

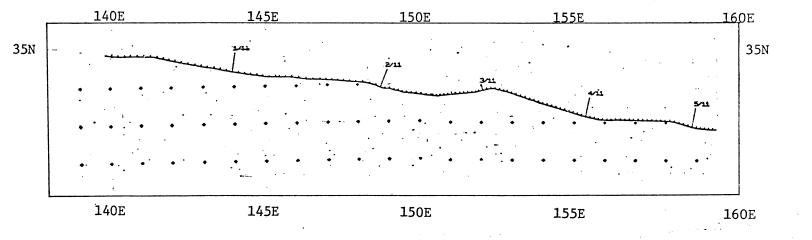
# R/V MELVILLE

# LEG D

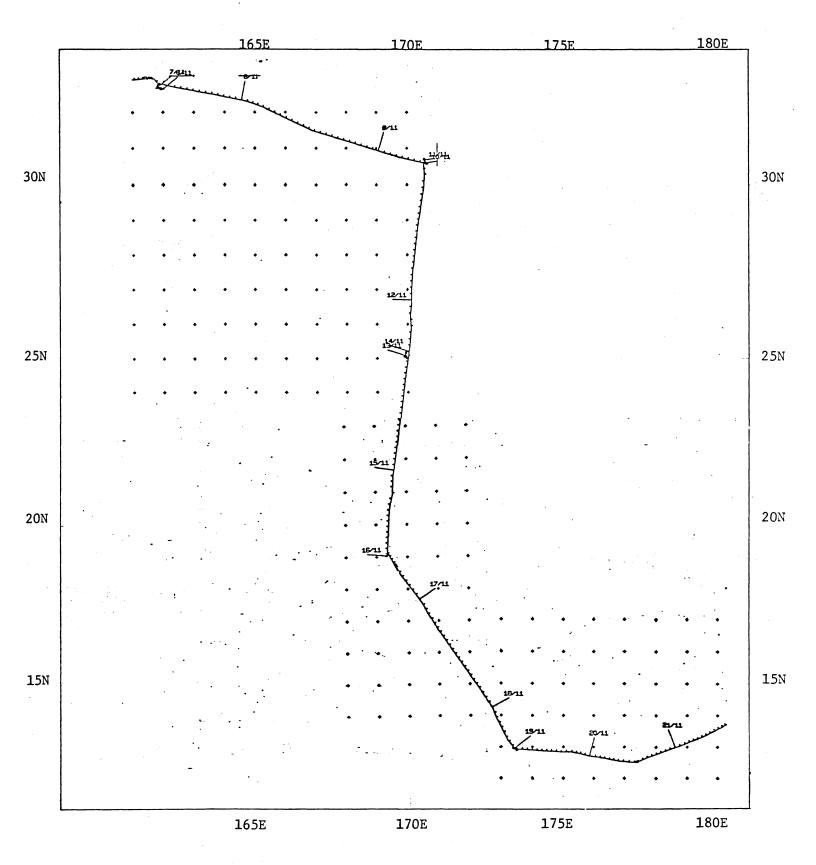
Chief Scientist - D.Spencer Tokyo - Honolulu (31 Oct. 1973 - 29 Nov. 1973)

TOTAL MILEAGE

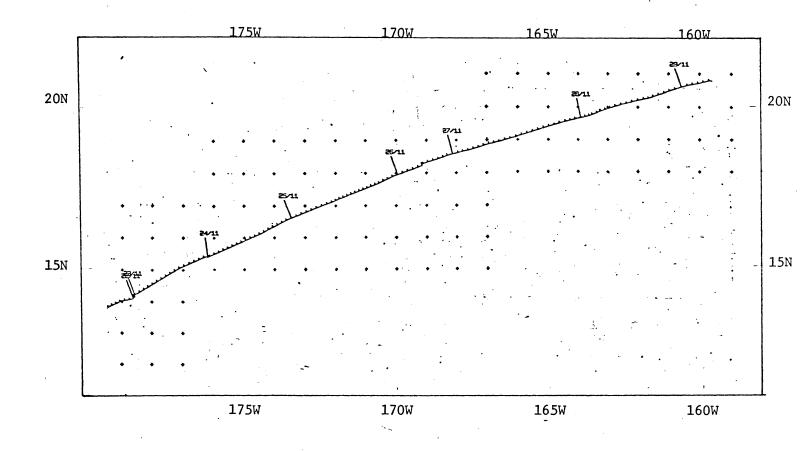
- Cruise 4551 miles
  Bathymetry 4355 miles
  Magnetics 4330 miles
  Seismic reflection 0 miles



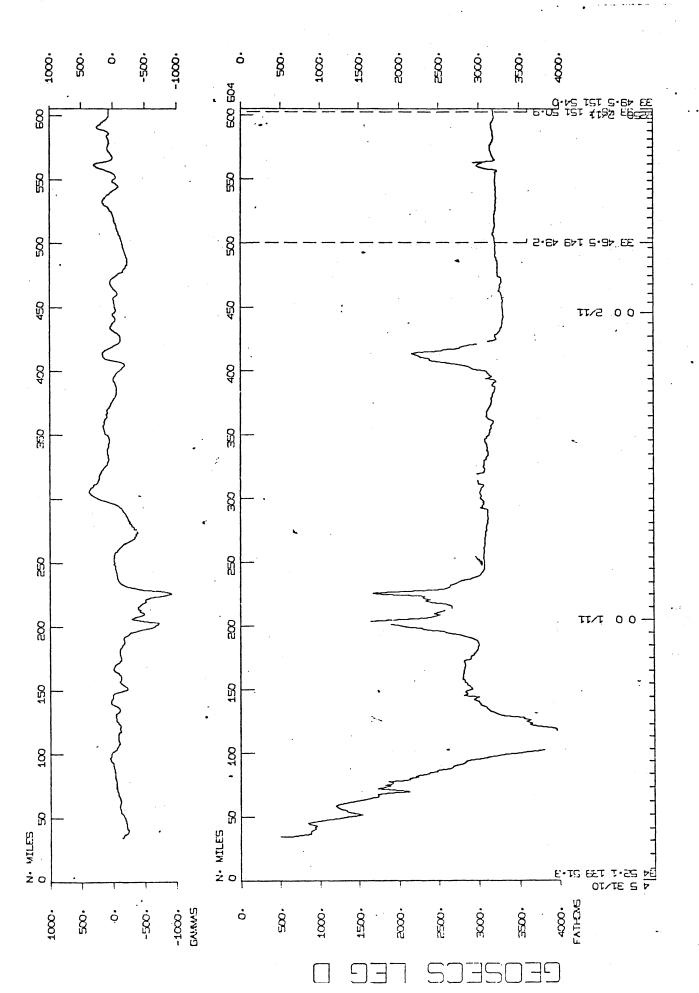
# GEOSECS LEG D TRACK PLOT 1 of 3



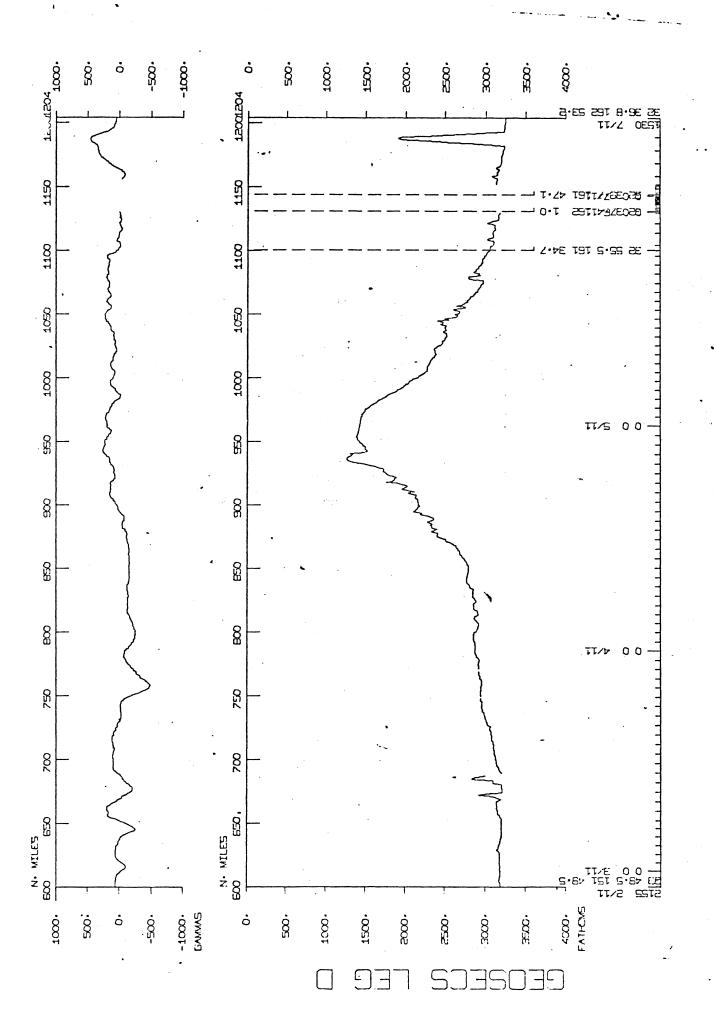
GEOSECS LEG D TRACK PLOT 2 of 3

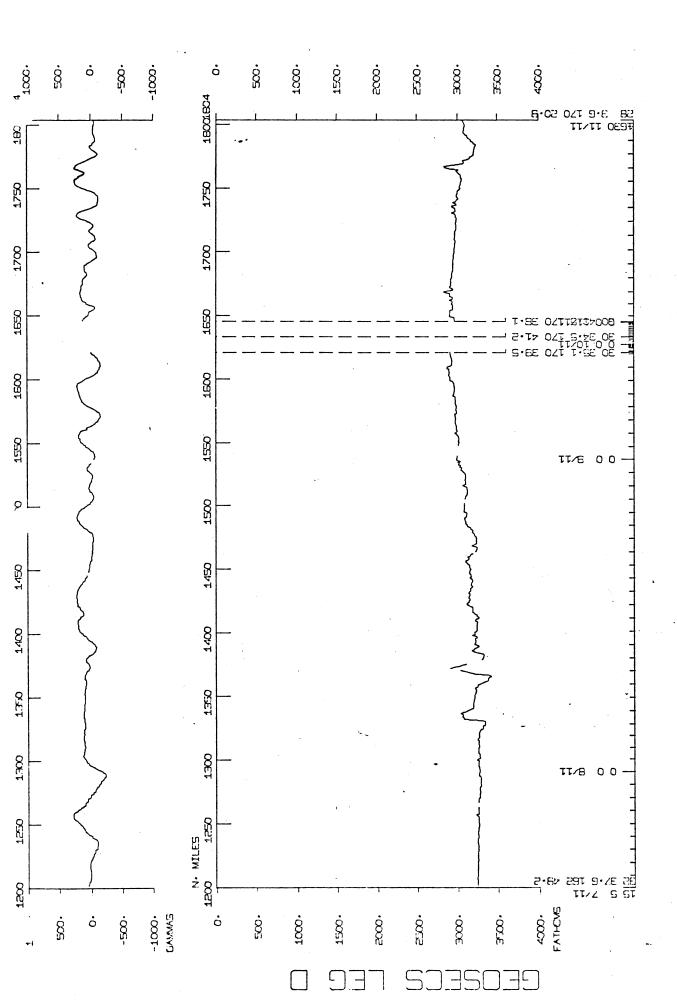


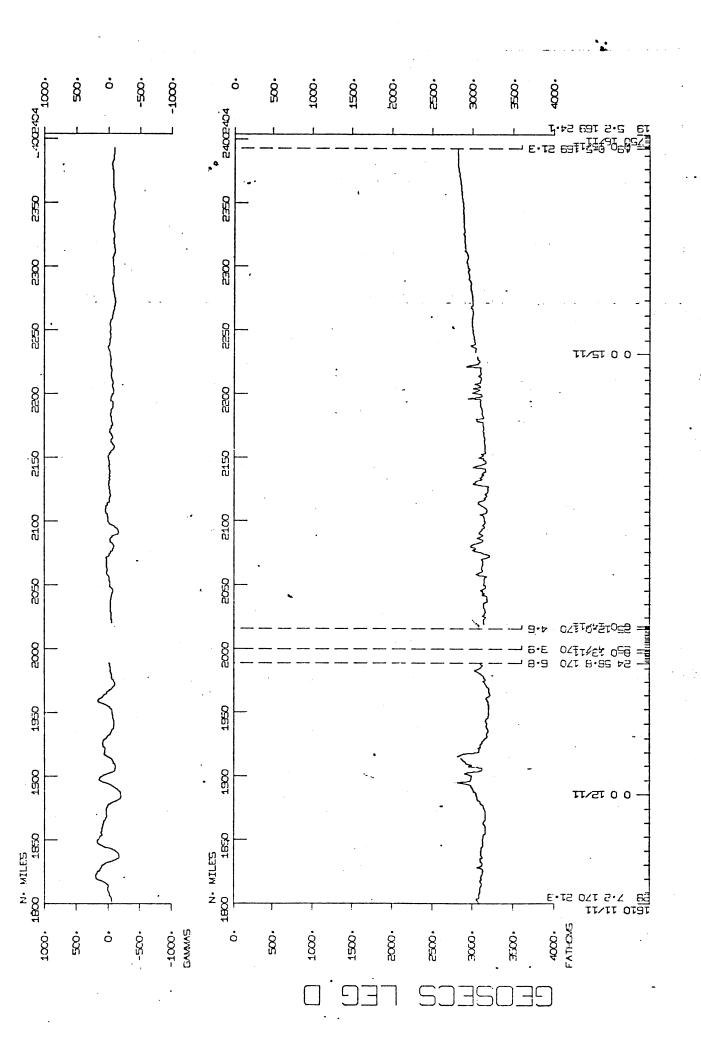
# GEOSECS LEG D TRACK PLOT 3 of 3

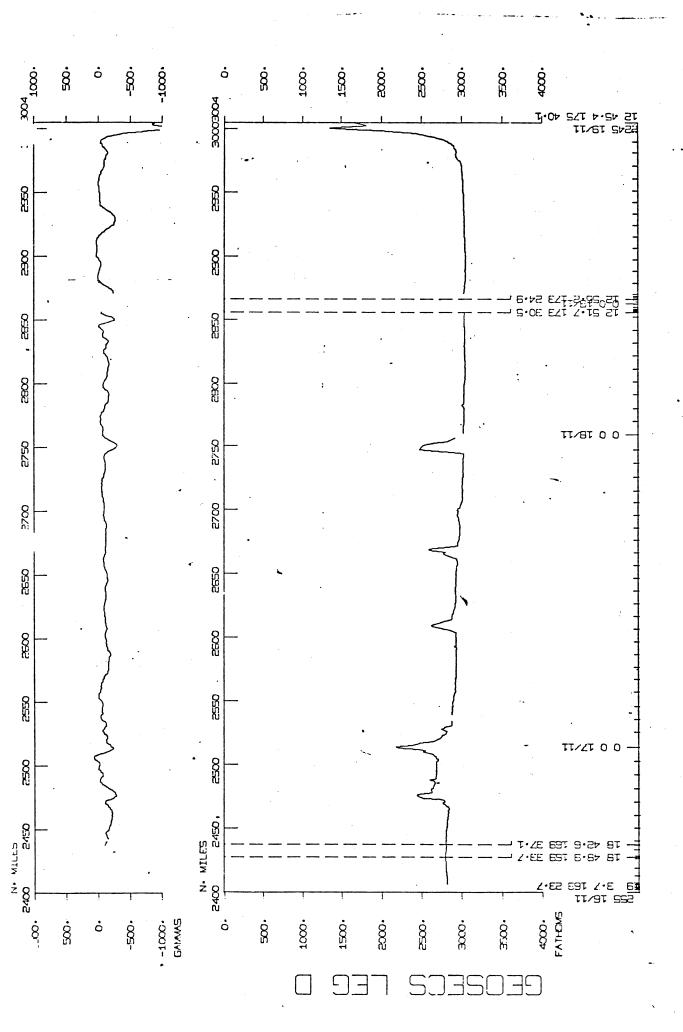


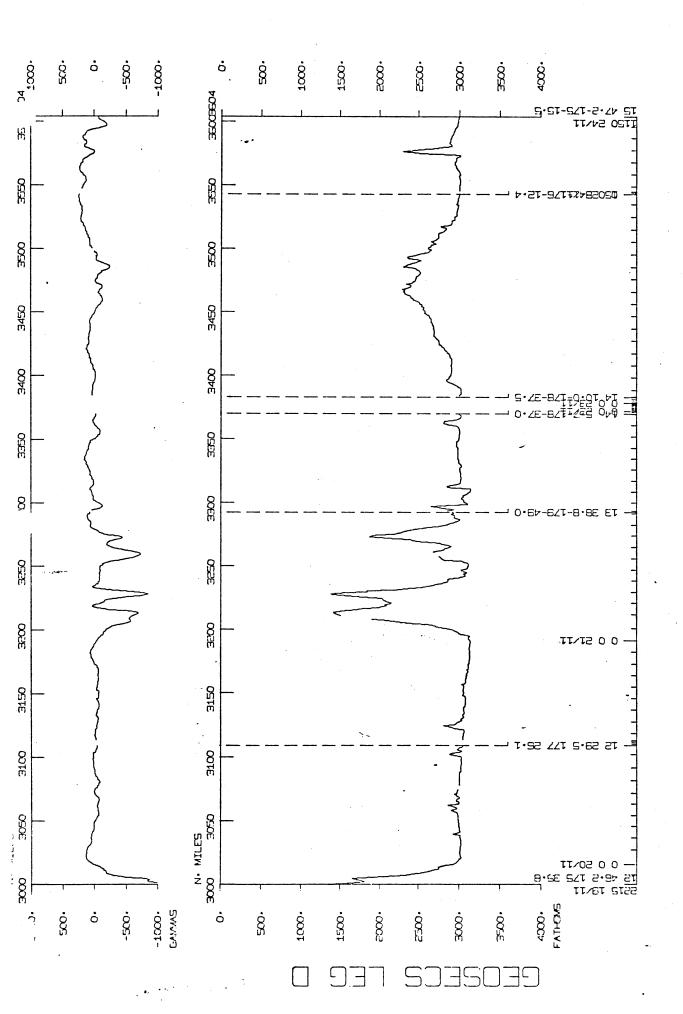
\$<sub>1</sub>

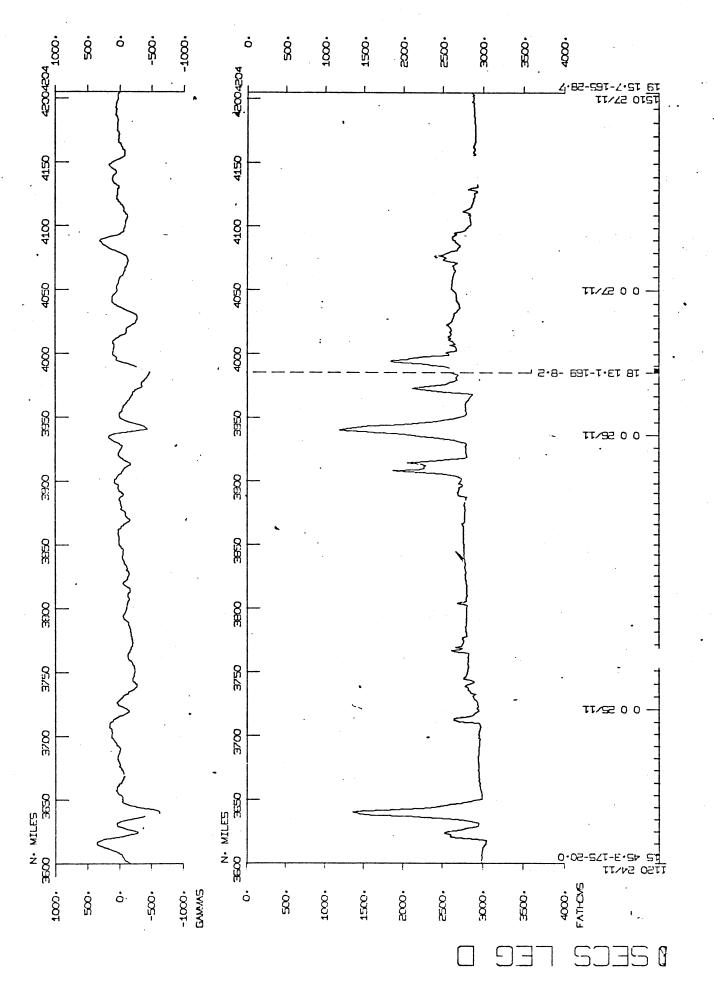


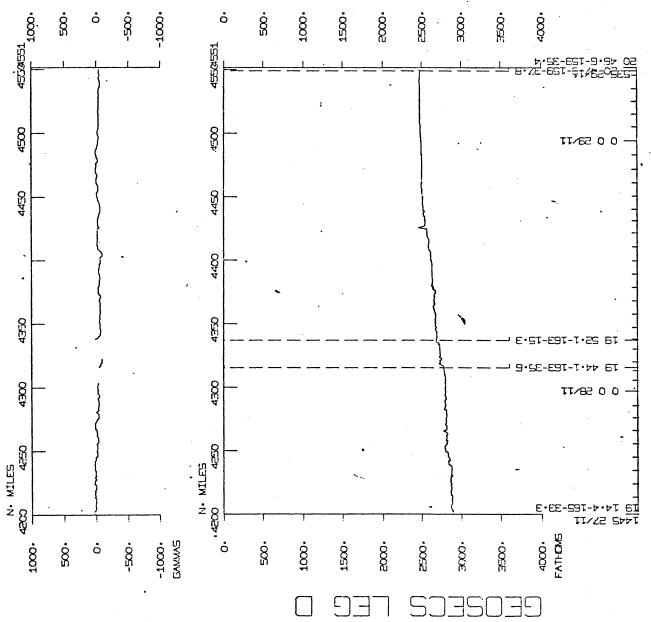












LEG D GEOSECS EXPEDITION

AMPLE INDEX

LISTED 12 FEBRUARY 1974

GECS DMV GECS DMV  $\begin{array}{c} \textbf{GECS} & \textbf{DMV} \\ \textbf{GECS$ GFCS DMV GECS DMV 21 170N 157 531E 35 420N 139 480E 6SX UCP 616 65X 65X GSX GSX GSX OHM GSX GSX GSX USU 0CP 65X 65X 65X 65X (; S X GSX GSX 65 X ۲MJ UHI E HONOLULU, HAWAII B TOKYO, JAPAN **CUMM INGHAM WHITEHUUSE** SUNDOUTST WITHEROW TRIST SPENCER MANTYLA HAMMUND PPICE RENNER ROME RINUER HREEZE RRAUER RUU HUR HE STER GUBAT JAMES CHUNG RUSS NIVC MEAU TΠY ۲ОИ . . 'n. ч. В в. • <u>.</u> . . . \_ . 0 ۰ ۷ ٨. ч. 3 ۸. . ىد **ئ** ٠ ۲ : в. r cu L cu а ч ч ч ч ч ч п п п п п п п п ЪЕ ЪE ЪЕ ы Б ы Э Ъ ЪE ы Б Б Б

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

R. YATES

\*\*\*PERSONNEL\*\*\*

i				3			- I - I - I									
			•											•	•	
**	NAVIGATION PL	LUT	S ***													
T I ME	DATE TIME 1 D.M.Y. LUC L	דב רווכ דב	SAMP CODE		SAM	PLE I	DENT	•	01SF CODE	ור. ו ושה	ΔΤ.			1	CRUIS LEG-S	HIP
600 1500	311073 71173		N V H P N V B P	பை	BRID BRID	106E PL 106E PL	L07 0	04-01 04-01	60C	34	4 95N 37RN	140 162	160E 472E	s s	G EC S G EC S	7 M U
1500 400	71173 111173		NVBP NVBP	∝ய	8R I U 8R I U	IDGE PL	PLUT 0	04-02 04-02	6DC 6DC	32	378N 177N	162 170	472E 404E	ŝ	G EC S G EC S	7 M () 7 M ()
4 00 1 200	111173 141173		NVBP NVBP	њш	6 K I D 6 K I D	1066 PL	01	04-03 04-03	6DC 6DC	30 23	177N 328N	170 169	404E 538E	ŝ	GECS GECS	7 MU
1300 1835	141173 161173		NVBP NVBP	கய	BR IDG BR IDG	ユ ユ エ ユ	10	04-04 04-04	000 000	23 18	32.8N 2.73N	169 169	538E 469E	ŝ	GECS GECS	7 MU
1835 2300	161173 251173		N VB P N VB P	њш	BRID BRID	DGE PL DGE PL	L01 0	04-05 04-05	60C 60C	18 17	273N 531N	169 170	469E 62W	s s	G EC S G EC S	7 M (1
2300 2200	251173 251173		NVBP NVBP	£ш	BR I DGI BR I DGI	ਹੋ ਹੋ ਹ ਹ	55	04-06 04-06	GDC	17	531N 488N	170 170	62W 157W	s s	G EC S G EC S	VMU VMU
17***	ATHUGRAMS ☆☆	*.		• *												
T IME GMT	DATE TIME D.M.Y. LOC	T2 LOC	SAMP CODE		SAMI	PLE PLE	IDENT	•	DISF	יר שום	AT.	ΓO	ONG.		CRUIS LEG-S	SE SHIP
	1107		1) P.R.T 1) P.R.T	£ш	60.R 60R	1 2K H Z 1 2 K H Z	а. Т.	01	60C 60C	33	496N 537N	140 152	342E 147E	s s	GECS	W M M
130 2129	31173 51173		0 P.R.T 0 P.R.T	хш	GUR GDR	1 2 K H Z 1 2 K H Z	ч ж 	02 02	60C 60C	33	537N 478N	152 161	147E 509E	ŝ	GECS GECS	7M() VM()
1011 816	71173 91173		DPRT DPRT	сш	GDR GDR	12КНZ Ј2КНZ	ч <del>к</del> 	03	6DC 6DC	32	468N 352N	161 170	523E 395E	ŝ	GECS GECS	2 MC
1 83 581	111173 121173		DPRT DPR1	цц	6.0R 6.0R	1 2 К Н 2 1 2 К Н 2	R - 04 R - 04	24	GNC GNC	30 24	N707	170	386E 71E	ŝ	GECS	VMU VMU
330 2330	141173 151173	•	DPRT DPRT	œш	GUR GDR	12КНZ 12КНZ	4 4 	05 05	60C	25 19	105N 22N	170 169	71E 198E	ŝ	G EC S G EC S	UMU UMU
1520	151173 151173	· ·	0 P R T 0 P R T	њъ	GDR GPR	12KHZ 12KHZ	4 4 1 1	06 06	60C 60C	21 19	401N 25N	169 169	369E 214E	ົດເຈ	GECS	NMC VMC
1000 920	161173 181173	•.	DPRT DPRT	e u	GDR GDR	12KHZ 12KHZ	л <del>А</del>	07 70	60C 60C	19	64N 518N	169 173	226E 304E	ŝ	G EC S G EC S	NWC NMC

UNUERWAY DATA - CURATOR T.E. CHASE 2ND FLOOP 40UARIUM (EXT.1534)

T = NATE TIME T	TZ SAMP LNC CODE	1	SAMPI	і ші ці	IDENT.		015P CODE		•		DNG.		CRUIS LEG-S	SE SHIP
801 191173 950 201173	DPRT DPRT	с <del>ш</del>	GDR 60R	12КН2 12КН2	R - 08 R- 08	•	6DC 6DC	12 12	562N 295N	173 177	227E 261E	ŝ	GECS	VM()
1525 201173 2055 211173	0 P R T 0 P R T	њш	GUR GUR	12KHZ 12KHZ	R-09 R-09		6DC 6DC	12 14	2.96N 55N	177 178	216E 373W	ss	GECS GECS	DMU VMU
720 231173 2355 231173	<u> </u>	е п	GD R GDR	1 2К Н 2 1 2 К Н 2	R-10 R-10		6DC 6DC	14 15	111N 251N	178 176	376W 124W	ss	G EC S G EC S	VMU VMU
530 241173 115 261173	DPRT	ъ	GDR GUR	12КН2 12КН2	R-11 R-11		6DC 6DC	15 18	237N 10N	176 169	114W 438W	ss	GECS GECS	DMU
123 261173 500 261173	DPRT DPRT	£ш	60 R 60 R	12КНZ 12КНZ	R-12 R-12		6DC 6DC	18 18	14N 131N	169 169	42 4W 82W	ŝ	G EC S G EC S	7 MU
1745 261173 435 271173	0 P.R.T 10 P.R.T	щ	GDR GDR	12KHZ 12KHZ	R-13 R-13		60C 60C	18 18	164N 456N	169 167	80W 204W	ss	GECS GECS	7 MU
900 281173 530 291173	UPRT DPRT	9 ш	GD R G DR	1 2KHZ 1 2 KHZ	R-14 R-14		60C 60C	19 20	525N 470N	163 159	148W 362W	ss	GECS GECS	DMU DMV
*** M. A. GNETOMETER *	* * *						•			• .				÷
TIME DATE TIME TI GMT D.M.Y. LOC LC	TZ SAMP LOC CODE		SAMI	I J J J	DENT.		UISP CODE		LAT.	L C	ONG.		CRUIS LEG-S	SE SHIP
		1 1 1	1		8	1 6 1 1 1	1	i		1	1		1	1
730 311073 2335 81173	M GR M GR	αjuu	MAGN MAGN	MAGNET ICS MAGNETICS	R-01 R-01		60C 60C	34 30	456N 573N	140 168	342E 596E	ŝ	GECS GECS	7 MU VMU
0 91173 1512 241173	MGR MGR	6 ш	MA GNE MAGNE1	ETICS ETICS	R-02 R-02		6DC 6DC	30 15	560N 598N	169 174	44E 452W	ss	GECS GECS	DMV DMV
1527 241173 535 291173	M GR M GR	ыE	MAGNE MA GNE	ETICS ETICS	R-03 R-03	•	6DC	16 20	8N 466N	174 159	4 30W 35 4W	ss	G EC S G EC S	7 MU
*** GFÅCHEMIC∧L ST	ATION	LAR	ц	VOE UME	* * *						•		•	
TIME DATE TIME TA GMT D.M.Y. LUC LC	TZ SAMP LOC CUDE		SAM	AMPLE I	I D ENT.		DI SP CODE		LAT.		LONG.		CRUIS LEG-S	SE SHIP
2309 51173 1010 71173	CLV GCLV	ي ≎	GE USEC GEOSEC	EC 22 EC 22	2.2	•	606 606	32	385N 468N	162 161	4E 521E	ທ່ທີ	6 EC S 6 EC S	7 8 1 8 1 8 1 8 1 8 1 8 1 8 1 8 1 8 1 8
813 91173 130 111173	000LV	ъ	GEUSE GEUSE	EC 22 EC 22	6 6	•	606 606	30	35 IN 406N	170 170	394E 385E	ss	G EC S G EC S	VMU VMU
527 121173 323 141173	001V 001V	<del>В</del> ш	GEUS GEUS	SEC 22 SEC 22	~~		909 000	24 25	588N 114N	170 170	69E 71E	ss	G EC S G EC S	7 M U 0 M U
• .	•		•					•						

•

•.•

				•		•																			
1	7W0 7W0	V M O V M O	7 MU	VMU VMU	VMQ VMQ	VWC VWC	<b>V</b> MC :	1 5 1	SE SHIP	VM()	2 M C	DMV	NWC	N₩0	VMC	280 280	NWC	VMC	> WC	NW(I	> wo	DMV	NW0	> w C	DMV
1 1 1 1	GECS	GECS GECS	G EC S G EC S	G EC S G EC S	GECS GECS	GECS GECS	G EC S G EC S	8 8 8 8	CRUIS LEG-S	$\frac{1}{2}$	<u>ה ה</u>	E C	00	s s	ECS	0 U	EC S	GECS	E C S	GECS		ECS	E C	GECS	E C
1 1	ss	ss	S S	s s	s s	SS	ŝ	35)	- 1	Ś	າ ເປ	s S	S o	s s											
1 1 1	213E 226E	303E 221E	262E 222E	369W 372W	280W 118W	83W 71W	153W 148W	T. 11	.0NG.	~ `	ひ ひ 4 H 4 4 5 F	30		507E	479E	342E	366E	381E	21E	64E	369E 107E	232E	425E	272E 515F	362E
1	169 169	173 173	177 177	178 178	173 176	169 169	163 163	(EX		139	143	152	155	162	Ŷ	164	0. ~	170	- ~	~	169	170	172	175	178
1	5N 64N	520N 563N	2 95N 2 98N	56N 114N	362N 235N	130N 167N	521N 525N	INGER	L A T .	52 IN	550N	514N	080 1000	98.0N	394N	200N	365N	410N	45N	127N	401N	406N	145N	577N	588N
1	19 19	12	12 12	14 14	16 15	18 18	19 19			34	5.00	3.6	533	2 2 6	32	25	0 C C C	30	25 25	25	210	17	14	12	12
     	606 606	606 606	606 606	606 606	606 606	909 909	909 606	-	D1SP CODE	0CP	00P	UCP	DC P.	0C b	DC P	00 P	100	DCP	DC P	0C P	000	DCP	UC P	0CP	DCP
	•							GROUP, E																	•
								1	•  - 	ن م	r ac	ŝ	<b>ب</b> ل	<u> </u>	e e	<b>~</b> ~	n –	~ ~ ~	0 C	4	+ -	• •	<b>6</b>		) <del></del>
	228 228	229 229	230 230	231 231	232 232	233 233	234	TORIAL	E IDENT	L F S	ы С С	$\sim$	$\sim$	PLES=5 PLES=0	10	S u	$\sim \sim$	101	$\cap$	· : ^ -	$\cap u$	E S	E S	PLES=3 PLES=3	LES
	GEOSEC GEOSEC	GE OS EC GE OS EC	GEOSEC GEOSEC	GE US E C GE US E C	GENSEC GENSEC	GEDSEC	GEOSEC GEOSEC	- CURA	SAMPL.	NU.SAM	2 2		•	NU SAMPLE		NO. SAMPLE	NU.SAMPLI	NU. SAMPLES	• •	NU.SAMPLE	NU. SAMPLI	• •	. SAM	NCI. SAMI	SAM
ļ	பை	ßш	ъ	еш	ъш	εш	ъщ	SHd							_					. —			_		
	6C S V 6C S V	GCLV GCLV	6CTU 6CTU	GCLV GCLV	6CTD 6CTD	6C S V 6C S V	6CTU 6CTU	GRA 	SAMP	RTX	H X H X	BTX	BTX	B I X B I X	ВТХ	HTX BTX	HTX HTX	HTX HTX	A T A	нтх	BTX VTX	BTX	ВТХ	BTX BTX	BTX
		;		• . • .				HERMO				•	•												•
								тнүтн 	LUC		,														•
	151173 161173	181173 191173	201173	211173	241173 241173	261173	281173	BA1	0АТЕ •М•У•	201	11/	117	117	61173	117	117	117	117	11	117	117	117	117	117	11
	1537 1 1000 1	917 1 750 1	945 20 1530 20	2102 2 724 2	2350 2	450 2 1752 2	437 2		T IME GMT D					00			00								

111

			•					•
SE SHIP	νMQ	<b>VMO</b>	۵MQ	νMO	νMQ	νMC	2 M C	٧MQ
CRUISE LEG-SHIP	GECS	GECS	GECS	GECS	G EC S	GECS	G EC S	GECS
	S	S	S	S	S	S	S	S
-0NG-	38 O W	343W	124W S GECS	263W	563W	66W	543W	351W
	178	178	176	173	169	168	163	160
۲. ۲.	05N	111N	250N	369N	56 7N	344N	402N	360N
1	14	14	15	16	17	18	19	20
UTSP CODE			UC P					
SAMPLE IDENT.	NU • SAMPLES=0	ND. SAMPLES=4	N() • SAMPLES= 3	NO. SAMPLES=4	NU . SAMP LE S= 3	NO. SAMPLES-4	NU.SAMPLES-3	ND. SAMPLES-3
SAMP CODE	НТХ	BTX	нтх	втх	нтх	BTX	BTX	BTX
D.M.Y. LOC LOC	221173	231173	241173	251173	261173	271173	281173	291173
	. o	0	0	0	0	0	0	0

66

END SAMPLE INDEX