Received 11/2/81
Coded 11/3/81

GENERAL INFORMATION

#81011

R/V GYRE 81-G-7-2 (LEG II)

AREA OF OPERATION: Mississippi Fan

DATES OF OPERATION: 5/9/81 to 5/15/81

PERSONNEL:

Co-Chief Scientist:	Arnold Bouma - U.S.G.S. - Corpus Christi
Co-Chief Scientist:	Charles Stelting - U.S.G.S. - Corpus Christi
	Ann Martin " " "
	Cyndi Rice " " "
	George Harrison " " "
	Ron Circe " " "
	John Benton " " "
	John West " " "
	Barry Irwin - U.S.G.S. - Woods Hole, MA
	Larry Poppe " " "
	Ray Hall " " "
	Beecher Wooding " " "
	Stan Locker - University of Texas, Austin
	Billy Green - TAMU

PURPOSE: Collection of high-resolution seismics and cores for geologic interpretation of sedimentologic processes in the fan environment.

MAJOR EQUIPMENT: Airguns (5 and 40 in^3), 3.5 kHz, 12 kHz, minisparker, piston core, box core.

NAVIGATION: Integrated system

ACQUIRED: 1070 km high-resolution seismics/bathymetry, 4 piston cores 4 box cores, 1 grab sample.

83

CRUISE IDENTIFIER (as in data record)	FORMAT ACRONYM	DATA CENTER FILE NUMBER	TYPE "1"	TYPE "2"	NUMBER OF PARAMETERS	BATHYMETRY	MAGNETICS	GRAVITY	H.R. SEIS	D.P. SEIS	FILE CREATION DATE (YYMMDD)	CONTRIBUTING INSTITUTION	SEQ. NO.
81-6-7-2	MGD77	83	0	2	9	5	1	1	5	1	810708	U.S. Geological Survey	01

COUNTRY	PLATFORM NAME	PLATFORM TYPE CODE	PLATFORM TYPE plain language	CHIEF SCIENTIST(S)	SEQ. NO.
United States	R/V GYRE	1	Ship	Arnold Bouma, Charles Stelting	02

PROJECT, CRUISE & LEG	FUNDING	SEQ. NO.
Mississippi Fan		03

DATE (YYMMDD)	DEPARTURE PORT (CITY, COUNTRY)	DATE (YYMMDD)	ARRIVAL PORT (CITY, COUNTRY)	SEQ. NO.
810509	Venice, Louisiana	810515	Gulfport, Mississippi	04

NAVIGATION INSTRUMENTATION	POSITION DETERMINATION METHOD	SEQ. NO.
INTEGRATED SYSTEM/LORAN-C/SAT/GYRO	SATELLITE	05

BATHYMETRY INSTRUMENTATION	ADDITIONAL FORMS OF BATHYMETRY DATA	SEQ. NO.
12 kHz 0.50 sec sweep	ANALOG	06

MAGNETICS INSTRUMENTATION	ADDITIONAL FORMS OF MAGNETICS DATA	SEQ. NO.
		07

GRAVITY INSTRUMENTATION	ADDITIONAL FORMS OF GRAVITY DATA	SEQ. NO.
		08

SEISMIC INSTRUMENTATION	FORMATS OF SEISMIC DATA	SEQ. NO.
Minisparker, 3.5kHz, 5¢40cu.in. Air Guns		09

FORMAT TYPE	DATA FORMAT DESCRIPTION (IN FORTRAN)	SEQ. NO.
A	(I1,A8,F5.2,4I2,F5.3,F8.5,F9.5,I1,F6.4,F6.1,I2,I1,3F6.1,I1,F5.1,F6.0,F7.1,	10
	1,F5.1,A8,4I1)	11

NOAA FORM 24-23
(1-76)

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
ENVIRONMENTAL DATA SERVICE
NATIONAL OCEANOGRAPHIC DATA CENTER

A00 DATA CENTER

OCEANOGRAPHY – GENERAL CRUISE INVENTORY
(ROSCOP – II)

A40 REFERENCE NUMBER
83

A01 EXPEDITION/PROJECT

A11 CRUISE NUMBER OR NAME
81-G-7-2

A02 SHIP OR PLATFORM
R/V GYRE

A12 PLATFORM TYPE
01

	YES	NO	PART
A91 Declared national program?		X	
A81 Exchange restricted?		X	
A92 Co-operative program?		X	
A82 Co-ordinated internationally?		X	

A72 NAME

A62 BY WHOM?

A03 COUNTRY: U.S.

A04 ORGANIZATION: U.S. GEOLOGICAL SURVEY

A05 CHIEF SCIENTIST(S): ARNOLD H. BOUMA, CHARLES E. STELTING

A06 NAME AND ADDRESSES OF ORGANIZATIONS AND PERSONS WHOM TO QUERY

A1 Arnold H. Bouma
~~Charles E. Stelting~~
B1 P.O. Box 6732
C1 Corpus Christi, TX 78411
D1
E1

FINAL DISPOSITION OF DATA

A2
B2
C2
D2
E2

DATE	DAY	MONTH	YEAR
A07 FROM	09	05	81
A17 TO	15	05	81

A08 GENERAL OCEAN AREAS
26 Gulf of Mexico

A09 TYPE(S) OF MARINE ZONE(S)
06, 07

GEOGRAPHIC AREA
If all data were collected at a fixed station, fill in the co-ordinates

A10 LATITUDE N/S

A20 LONGITUDE E/W

A15 FEDERAL SUPPORT

A25 REMARKS

Data Acquired:
1. 3.5 KHZ - 1070 KM
2. 12 KHZ - 1070 KM
3. Minisparker - 170 KM
4. Air Guns (40 IN.^{3}, 5 IN.^{3}) - 875 KM
5. Box Cores (4)
6. Piston Cores (4)

DISCIPLINE AND TYPE OF MEASUREMENTS	Index 10° x 10° Qc	L	G	G	INDEX 1° x 1°
A G0$ B	7	2	0	8	78:88:89
A G23 B	7	2	0	8	57;58;66;67;68; 69;77;78;79;88
A G25 B	7	2	0	8	Same as G23
A B					
A B					
A B					
A B					

DISCIPLINE AND TYPE OF MEASUREMENTS	Index 10° x 10° Qc	L	G		INDEX 1° x 1°
A B					
A B					
A B					
A B					
A B					

G – GEOLOGY GEOPHYSICS

GL MEASUREMENTS MADE AT A SPECIFIC LOCATION	NUMBER	i	l	FORMAT
G01 Dredge				
G02 Grab				
G03 Core rock *(no. of cores)*				
G04 Core–soft bottom *(no. of cores)*	8			
G05 Sampling by divers				
G06 Sampling by submersible				
G07 Drilling				
G08 Bottom photography				
G09 Sea floor temperature *(≤ 1 m from bottom)*				
G10 Accoustical properties of the sea floor				
G11 Engineering properties of the sea floor				
G12 Magnetic properties of the sea floor				
G13 Gravimetric properties of the sea floor				
G14 Radioactivity measurements				
G70 Other measurements				

GU MEASUREMENTS UNDERWAY				
G21 Motion picture of sea floor *(No. of nautical miles)*				
G22 Bathymetry-wide beam *(no. of nautical miles)*				
G23 Bathymetry-narrow beam *(no. of nautical miles)*	580			
G24 Side scan sonor *(no. of nautical miles)*				
G25 Seismic reflection *(no. of nautical miles)*	580			
G26 Seismic refraction *(no. of nautical miles)*				
G27 Gravimetry				
G28 Magnetism				
G29 Other measurements				

G – GEOLOGY GEOPHYSICS *(Continued)*

GS TYPES OF STUDIES	NUMBER	i	l	FOR
G31 Physical analysis of sediments	4			
G32 Chemical analysis of sediments	8			
G33 Paleothermy				
G34 Paleomagnetism and rock magnetism				
G35 Paleontology	4			
G36 Geothermy				
G37 Geochronology				
G38 Mineral and fossil resources				
G39 Litteral zone studies				
G90 Other measurements				

D – DYNAMICS

D01 Current meters *(no. of stat.)*				
D02 Current meters *(Average duration of measurement days)*				
D03 Currents measured from ship drift				
D04 GEK				
D05 Drifters *(number)*				
D06 Swallow floats *(number)*				
D07 Drift cards *(no. released)*				
D08 Bottom drifters *(no. released)*				
D09 Tidal observation *(duration)*				
D10 Sea and swell *(no. of observations)*				
D90 Other measurements				

M – METEOROLOGY

M01 Upper air observations				
M02 Incident radiation				
M03 Air–sea interface studies				
M04 Ice observations				
M05 Occasional standard measurements				
M06 Systematic standard measurements				
M90 Other measurements				

TAMU--11/77

CRUISE REPORT

Ship Name: R/V Gyre	Operating Inst.: Texas A&M	Days at sea:	Days in Port:
Cruise No.: 81-G-7-2	Dates: 5/9/81 to 5/15/81	Ship Costs Allocation Data	

Area of Operations:	Port Calls: Place	Port Calls: Dates	Days Charged	Agency Charged	Grant/Contract No.
Mississippi Fan					

Projects Carried Out During Cruise

Project Title and Principal Investigator	Sponsoring Agency	Grant/Contract No.	Participating Personnel (As coded on reverse side)
Primary Projects: Mississippi Fan; Arnold Bouma			
Investigation of deep-sea fan environment			
Ancillary Projects			

Brief Narrative Description of Cruise and Scientific Results:

Using several seismic devices (Airguns, 3.5 kHz, 12 kHz, and minisparker), 1070 km of high resolution seismics and bathymetry were collected over the Mississippi fan. In addition, four piston cores, 4 box cores and a grab sample were collected. Navigation was from the integrated system aboard the R/V Gyre

Arnold Bouma (RM)
Chief Scientist

Date

Institution Official

Date

Type of Observations	No. of Stas. or Observs.	Type of Observations	No. of Stas. or Observs.
Rock Dredge		Underway sfc. temperature	
Grab sampler	1	Underway sfc. salinity	
Piston Corer	4	Standard hydro station	
Gravity Corer		STD/CTD	
Box Corer	4	XBT	
Bottom Photography		Optical Measurements	
Seabed engineering studies		Acoustics measurements	
Magnetics		Bottom Trawls	
Gravity		Zooplankton tows	
Bathymetry	1070 km	Phytoplankton tows	
Subbottom profiling	1070 km	Neuston tows	
Side-scan sonar		Dip-net collections	
Current meter		Midwater trawls	
Drift cards or bottles		Chlorophyll measurements	
Drogues		Primary product. measuremts.	
Swallow floats		Secchi discs	
Dye dispersal measurements		Transmissometer meas.	
Tide gauge measurements		Interstitial water meas.	
Bottom pressure gauges		Suspended matter meas.	
Sea/Swell observations		Scientific diving	
Meteorological observations		Research submersible opers.	

(mark "c" if observations were taken continuously)

Analyses		Analyses	
Salinity		Trace elements	
Oxygen		Radioactivity	
Phosphorous		Dissolved gases	
Nitrogen		Hydrocarbons	
Silicon		Suspended matter	
pH		Particulate carbon	
Alkalinity		Dissolved org. carbon	
Interstitial analyses			

Other observations or analyses:

SCIENTIFIC PERSONNEL ABOARD

Name:	Title:	Affiliation:
1. Arnold Bouma	Geologist	
2. Charles Stelting	PST	
3. Anne Martin	Chemist	"
4. Cyndi Rice	Oceanographer	"
5. George Harrison	"	"
6. Ron Circe	PST	"
7. John Benton	PSA	"
8. John West	ET	
9. Barry Irwin	Geologist	USGS Woods Hole
10. Larry Poppe	Geologist	"
11. Ray Hall	Geologist	"
12. Beecher Wooding	PST	"
13. Stan Locker	Student	Univ. of Texas
14. Billy Green		TAMU
15.		
16.		
17.		
18.		