Needs more info

Received 9 MAR 81

#80023

CRUISE REPORT

VESSELS: R/V Lulu
DSRV Alvin 106

CRUISE NUMBER:

AREA: Lydonia Canyon, Georges Bank and Upper Continental Slope

DATE: 27 August - 5 September 1980

FUNDING AGENCY: Bureau of Land Management - North Atlantic Project

CONTRACT NUMBER:

PERSONNEL:

U.S. Geological Survey

Slater, Richard	Chief Scientist - Geologist
Bothner, Michael	Geochemist
Buttman, Brad	Physical Oceanographer
Eliason, Andy	Electronic Technician
Musialowski, Frank	Scientific Assistant
Rendigs, Rich	Scientific Assistant

Lamont Observatory

Gibson, Pat	Biologist
Hecker, Barbara	Biologist

ALVIN Pilots

Brown, Bob
Ellis, George

LULU Captain

Harrington, Phillips

PURPOSE OF CRUISE: To investigate the biology, and the current and sediment dynamics of Lydonia submarine canyon with the use of the ~~dey~~ deep-diving submersible ALVIN

NAVIGATION TECHNIQUES: Navigation of the LULU was with continuous LORAN-C autotracking (Northstar 6,000 LORAN C). ALVIN's position relative to LULU was determined by knowing the submersible's depth and the subs range and bearing from LULU.

SCIENTIFIC EQUIPMENT:

3.5 kH_2 profiler

Submersible ALVIN with two hydraulic arms, various collecting devices and collecting basket.

Externally mounted video camera and two externally mounted BENTHOS 35mm cameras with synchronized strobes.

Neil Brown Instrument Systems CTD with light transmission and small hydrowinch

Expendable bathythermographs

From Mike Bothner

37 grabs
13 Cores
13 Interface Sediment Sampler Samples
63

DSRV ALVIN SCIENTIFIC OBSERVERS

(2 Observers/Dive)

	Dives	Time (Underwater)
Bothner	3	18 hrs 7 min
Butman	4	22 hrs 24 min
Gibson	3	21 hrs 12 min
Hecker	4	23 hrs 29 min
Slater	4	24 hrs 2 min
Total Dives	9	55 hrs 20 min - Total Time Underwater

R/V LULU LOG

27 August 80	
0400	Depart Woods Hole
0400-2400	Transit (Woods Hole to Lydonia Canyon)
28 August 1980	(Wind SW-12 knots, Sea 3-4', Air Temp 74°, Water Temp 74°)
0000-0900	Transit (Woods Hole to Lydonia Canyon)
0945-1722	ALVIN Dive #1037
1900-2400	3.5 kH2 profiling
29 August 1980	(Wind NE-15 knots, Sea 3-4', Air Temp 77°, Water Temp °)
0000-0800	3.5 kHz profiling
0843-1614	ALVIN Dive #1038
1800-2400	3.5 kHz profiling
30 August 1980	(Wind NE-5 knots to SW-10 knots, Air Temp 82°, Water Temp °)
0000-0600	3.5kHz profiling
0823-1230	ALVIN Dive #1039
1335-1750	ALVIN Dive #1040
1800-2130	CDT profiling
2200-2400	3.5 kHz profiling
31 August 1980	(Wind SSW-15 knots, Sea 4-5', Air Temp 79°, Water Temp °)
0000-0600	3.5 kHz profiling
0841-1650	ALVIN Dive #1041
1800-2400	CDT and 3.5 kHz profiling

1 September 1980	(Wind SW-13 knots, Seas 4-5', Air Temp 81°, Water Temp 76°)
0000-0600	3.5 hKz profiling
0830-1830	ALVIN Dive #1042
1900-2400	CDT and 3.5 kHz profiling
2 September 1980	(Wind SW-12 knots, Seas 5-6', Air Temp 87°, Water Temp °)
0000-0600	3.5 kHz profiling
0839-1620	ALVIN Dive #1043
1800-2400	3.5 kHz profiling
3 September 1980	(Wind SW-15 knots to NW-2-3, Seas 6-7', Air Temp 79°, Water Temp °)
0000-0600	3.5 kHz profiling
0906-1600	ALVIN Dive #1044
1800-2400	3.5 kHz profiling
4 September 1980	(Wind NNE-12 knots, Seas 3', Air Temp 76°, Water Temp °)
0000-0600	3.5 kHz profiling
0822-1241	ALVIN Dive #1045
1306-2400	Transit (Lydonia Canyon to Woods Hole)
5 September 1980	
0000-1300	Transit (Lydonia Canyon to Woods Hole)
1300	Arrive Woods Hole

ALVIN DIVE DATA

Dive #	Date	Time			Position		Max Depth	Pilot Observs	Samples	Film (Rolls)	Remarks
		Down	Up	Total	Start	Finish					
1037	28 Aug 80	0945	1705	7 hrs 7 min	40°31.91 67°24.23	40°27.65 67°40.50	549m	Ellis Butman Hecker		2 Color(Benthos) 8 Color(Hand Held)	West Wall Lydonia
1038	29 Aug 80	0853	1555	6 hrs 2 min	40°30.45 67°42.62	40°31.73 ~~47~~°43.69 6	316m	Brown Slater Gibson		1 Color(Benthos) 1 B & W(Benthos) 2 Color(Hand Held)	Head of Lydonia
1039	30 Aug 80	0834	1222	3 hrs 48 min	40°28.75 67°42.00	40°29.48 67°42.10	431 m	Ellis Bothner Hecker		1 Color(Benthos) 1 B & W(Benthos) 3 Color(Hand Held)	
1040	30 Aug 80	1346	1738	3 hrs 52 min	40°28.30 67°41.40	40°29.00 67°41.04	440m	Ellis Slater Butman		1 Color(Benthos) 1 B & W(Benthos) 2 Color(Hand Held)	
1041	31 Aug 80	0850	1635	7 hrs 45 min	40°24.28 67°39.95	40°26.05 67°39.95	633m	Brown Bothner Gibson		1 Color(Benthos) 1 B & W(Benthos) 8 Color(Hand Held)	East Wall of Lydonia
1042	1 Sept 80	1011	1820	8 hrs 34 min	40°16.23 67°38.51	40°17.45 67°40.03	1662 m	Ellis Slater Hecker		1 Color(Benthos) 1 B & W(Benthos) 4 Color(Hand Held)	
1043	2 Sept 80	0844	1609	7 hrs 25 min	40°20.04 67°40.99		1117 m	Brown Butman Gibson		1 Color(Benthos) 1 B & W(Benthos) 8 Color(Hand Held)	
1044	3 Sept 80	0916	1550	6 hrs 34 min			1130 m	Ellis Slater Bothner		1 Color(Benthos) 1 B & W(Benthos) 4 Color(Hand Held)	
1045	4 Sept 80	0828	1228	4 hrs 0 min			400m	Brown Butman Hecker		1 Color(Benthos) 1 B & W(Benthos) 5 Color(Hand Held)	