CRUISE REPORT

R/V SPROUL

MAY 5-9, 1987

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Woods Hole, MA 02543

Vessel: R/V SPROUL

Ports: Ventura, CA to Ventura, CA

Dates: May 5-9, 1987

Objectives: This cruise was conducted as part of the sediment transport project of the California OCS Phase II Monitoring Program. The objectives of the cruise were to:

1. Conduct a side-scan sonar survey at three locations (in the vicintiy of regional stations R8, PJ1, and R9, stations A, B and C respectively, See Fig. 1).

2. Deploy subsurface current moorings at these three sites;

3. Deploy GEOPROBES at stations A and B;

4. Collect box cores for detailed sediment analysis;

5. Conduct a hydrographic and suspended matter survey on three cross-slope transects.

Personnel:

Brad Butman	USGS, Woods Hole, MA
Bill Strahle	" " " "
John Moody	" " " "
Dave Drake	USGS, Menlo Park, CA
George Tate	" " " "
Rick Vale	" " " "
Jim Nicholson	" " " "
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Chris Webb	" " " "
Gary Brewer	Minerals Management Service
Jim Campbell	Battelle, Ventura, CA
Bill Crowley	International Underwater Contractors

Summary and highlights:

All major objectives of the R/V SPROUL cruise were accomplished despite temporary failure of the side-scan and CTD systems. The slip rings on the side-scan sonar winch were found to be shorted just prior to departure. Thus the current moorings and GEOPROBES were deployed during the first part of the cruise without benefit of the side-scan survey. Replacement slip rings were picked up in Port San Luis on May 6 and the winch repaired; the side-scan survey was conducted on May 6 and 7. During the CTD survey at Station 5, the data from the fish suddenly stopped at about 200 m. Several hours of intense trouble-shooting failed to correct the problem. The remainder of the hydrographic survey was conducted using the R/V SPROUL's hydrographic winch

which was too small to safely support the sampling rosette; limited water samples for suspended sediment analysis were obtained using a single bottle clamped to the wire. Because of the down-time associated with the winch and CTD repair, only a central and southern hydrographic transect were completed (see Fig. 1).

The R/V SPROUL was an excellent vessel for this work, although the weather was generally calm. The extremely low freeboard might make the deck unworkable in rough seas. All the equipment on the SPROUL was well-maintained and easy to operate. The captain and crew were very helpful and competent. On future sediment-transport cruises at least 2 days should be allowed for mobilization. The one day allotted was not sufficient to load, secure, and test all the equipment.

The side-scan sonar survey revealed several interesting features. The seafloor around station R8 was generally featureless. Around the site-specific sampling array numerous trawl marks and whale gouges were observed. Numerous large pit, 5-10 m diameter were observed at station R9 as well as trawl marks. The pits may be caused by shallow gas.

Narrative:

May 4	0800-2300	Load RV SPROUL Bad slip rings on sidescan winch
May 5	0045	Depart Ventura
	1300	Arrive Station C
		Setup to Launch mooring at C
	1543	Mooring 326 deployed
	1943	Mooring 325 deployed at site B
	2057	Mooring 324 deployed at site A
	2243	Box Core at station A
May 6	0600	Prepare GEOPROBE Deploy GEOPROBE at station A
	1055	Underway to station B
	1215	Box core at station B
	1400	Deploy GEOPROBE station B Underway to port San Luis
	1600	Arrive San Luis. Receive and install slip rings for side-scan winch
	1700	Depart Port San Luis
	1970	Start sidescan survey at site A
	2342	Complete sidescan at site A
	2350	Start sidescan survey at site B
May 7	0625	End sidescan at site B
	0730	Start sidescan at site C
	1200	Complete sidescan at site C. Limited coverage obtained because of winch level wind failure and deep water
	1343	Box core at site
	1733	Begin CTD transect

	2130	Problem with CTD at station 5. Re-terminate CTD cable Various test casts of CTD system.
May 8	0318	Box core at R7
	0500	Resume CTD. Changed to ship hydro winch.
	1057	Complete central CTD transect stations 1-9.
	1259	Begin southern CTD transect (sta. 10).
	1743	Complete southern CTD transect. Underway to Ventura.
May 9	0700	Arrive Ventura

Tabulated Information:

Days at sea: 5
Hydrographic Stations: 15
Suspended Sediment Samples: 30
Box cores: 4
Sidescan Sonar: 90 km (estimated) EG+G (PMG equip)

Table 1. Moorings deployed on RV SPROUL, May 5-9, 1987. SS means subsurface mooring; G indicates GEOPROBE.

Sta.	Water Depth (m)	Mooring No.	Mooring Type	Inst. Depth (m)	Latitude (N)	Longitude (W)	LORAN C		
A	83	324	SS	63 77	34° 55.6'	120° 45.8'	16500.74	27805.61	41980.21
			G		34° 55.6'	120° 45.7'		27806.0	41979.7
B	148	325	SS	142 128	34° 54.95'	120° 49.78'	16495.83	27792.73	41990.65
			G		34° 54.8'	120° 49.8'	16495.90	27792.88	41989.79
C	415	326	SS	144 395 409	34° 53.7'	120° 59.5'	16483.28	27761.82	42017.49

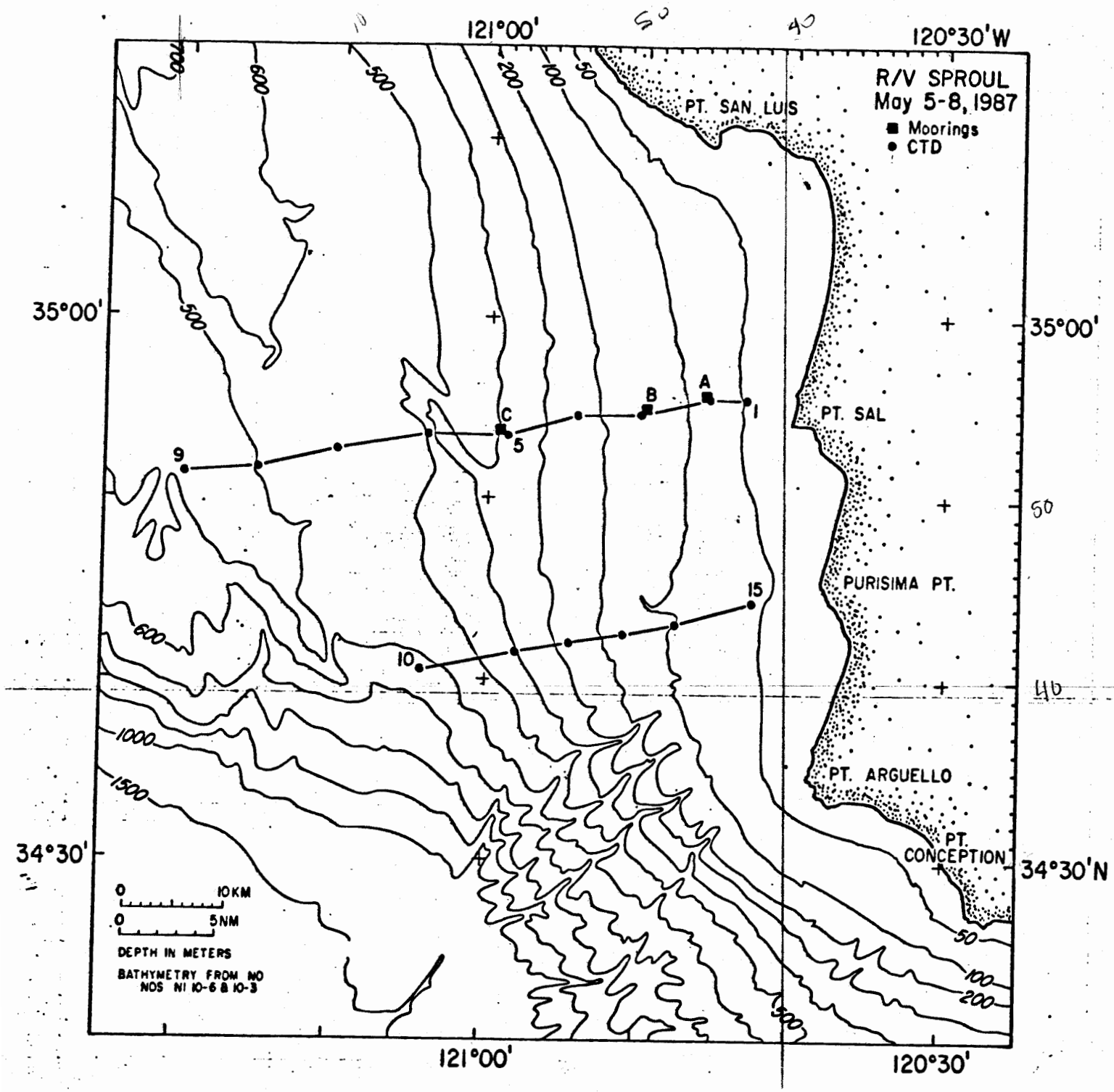
Table 2. Hydrographic stations occuppied on RV SPROUL May 5-9, 1987

Station	Section	Date YR	MO	DY	Time (PDT)	Depth (m)	Latitude (N)	Longitude (W)
1	1	87	05	07	1733	53	34° 55.4'	120° 43.6'
2	1				1829	83	34° 55.5'	120° 45.9'
3	1				1933	148	34° 54.6'	120° 50.0'
4	1				2020	243	34° 54.4'	120° 54.3'
5	1	87	05	08	1035	388	34° 53.4'	120° 59.0'
6	1				0920	513	34° 53.6'	121° 04.3'
7	1				0451	555	34° 52.7'	121° 10.3'
8	1				0605	445	34° 51.6'	121° 15.7'
9	1				0715	448	34° 51.2'	121° 20.4'
10	2	87	05	08	1254	610	34° 40.5'	121° 04.6'
11	2				1415	310	34° 41.4'	120° 58.1'
12	2				1501	278	34° 42.0'	120° 54.7'
13	2				1555	156	34° 42.5'	120° 51.0'
14	2				1640	93	34° 43.0'	120° 47.5'
15	2				1730	58	34° 44.1'	120° 42.3'

Time is Pacific Daylight Time
Latitude/Longitude from Northstar 7000 algorithm

Table 3. Box cores collected on R/V SPROUL, May 5-9, 1987.

Sample	Date YRMODY	Water Depth (m)	Latitude (° N)	Longitude (° W)	LORAN C			Sta.
1	870505	85	34° 55.4'	120° 45.8'	16500.7	27805.5	41979.1	R8
2	870506	143	34° 54.7'	120° 49.8'	16495.9	27792.8	41989.3	PJ1
3	870507	393	34° 53.9'	120° 59.1'		27762.8	42017.0	R9
4	870508	560	34° 52.6'	121° 10.4'		27727.5	42047.8	R7



Cruise track for RV SPROUL cruise, May 5-8, 1987. Moorings were deployed at stations A, B, and C. CTD casts conducted at stations 1-15. Box cores were obtained near the 3 mooring stations and near CTD station 7.