UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
SOUTHWEST FISHERIES SCIENCE CENTER
8604 LA JOLLA SHORES DRIVE
LA JOLLA, CA 92037

May 5, 2004 F/SWC1:AEH

CRUISE ANNOUNCEMENT

VESSEL: NOAA Vessel *David Starr Jordan*, 0407-JD, DS 04-05 (345).

CRUISE DATES: July 12 - 28, 2004.

PROJECT: CalCOFI Survey, Fisheries Resources Division.

ITINERARY: Depart San Diego, California at 0800 on July 12, 2004 and proceed to first station 93.3/26.7 (position 32° 57.4'N/117° 18.3'W). To complete the proposed cruise track, it will be necessary to maintain maximum speed between stations whenever possible. Once the pattern has been completed, the ship will return to San Diego on July 28, 2004.

OBJECTIVES:

1. To conduct continuous underway sampling of surface waters. Temperature and salinity will be automatically logged by computer with the output from the GPS navigational unit.

2. To record current profiles throughout the duration of the cruise with the Acoustic Doppler Current Profiler in an attempt to estimate net transport in the northern region.

3. To continue an ongoing assessment of pelagic fish stocks between La Jolla and Avila Beach, California.

4. To monitor environmental conditions within the CalCOFI survey area.

5. To make continuous observations of sea birds and marine mammals.

6. To record continuous acoustic targets obtained with the EK-500 scientific sounder.

PROCEDURES:

1. Each standard CalCOFI station will include the following:

   a. A CTD/Rosette consisting of 20 10-liter hydrographic bottles will be lowered to 500 meters (depth permitting) to measure physical parameters and collect water at discrete depths for analysis of: oxygen concentration, salinity, nutrients, chlorophyll and phytoplankton.

   b. A CalBOBL (CalCOFI Bongo) standard oblique plankton tow with 300 meters of wire out, depth permitting, using paired 505 µm mesh nets with 71 cm diameter openings. An Optical Plankton Counter will be mounted in the port side of the frame to record time, depth and size fractions of the sampled plankton, in situ. The technical

requirements for this tow are: Descent rate of 50 meters per minute. All tows with ascending wire angles lower than 38° or higher than 51° in the final 100 meters of wire will be repeated. Additionally, a 45° wire angle should be closely maintained during the ascent and descent of the net frame.

c. A Manta net (neuston) tow, using a 505 µm mesh net on a frame with a mouth area of 0.1333 m^2.

d. Weather observations.

e. A Pairovet (vertical) plankton tow will be taken at all stations inshore of, and including station 70. The Pairovet net will be fished from 70 meters to the surface (depth permitting) using paired 25 cm diameter 150 µm mesh nets. The technical requirements for the Pairovet tows are: Descent rate of 70 meters per minute, ascent rate of 70 meters per minute. All tows with wire angles exceeding 15° during the ascent will be repeated.

f. During transit between stations, a bird observer will be recording location and species of various sea birds and marine mammals

g. At about 1100 hours each day of the cruise a primary productivity CTD cast consisting of six 10-liter hydrographic bottles will be carried out. The cast arrangement will be determined by a Secchi disc observation. The purpose of the cast is to collect water from 6 discrete depths for daily in situ productivity experiments. Measurements of extracted chlorophyll and phaeophytin will be obtained with a fluorometer. Primary production to be measured as C14 uptake in a 6 hour in situ incubation. Nutrients will be measured with an auto-analyzer. All radioisotope work areas will be given a wipe test before the departure of the SIO technical staff.

h. A light meter (Secchi disc) will be used to measure the light intensity in the euphotic zone once a day with the primary productivity cast.

EQUIPMENT: 1. Supplied by scientific party:

- -80°C Freezer (SWFSC)
- 37% Formalin (SWFSC)
- Ethanol (SWFSC)
- Tris buffer (SWFSC)
- Sodium borate (SWFSC)
- 30 cc and 50 cc syringes (SWFSC)
- Canulas (SWFSC)
- Pint, quart and gallon jars (SWFSC)
- Scintillation vials (SWFSC)
- Inside and outside labels (SWFSC)
- CalCOFI net tow data sheets (SWFSC)
- 71 cm CalCOFI Bongo frames (SWFSC)
- 71 cm CalCOFI 505 µm mesh nets (SWFSC)
- CalCOFI 150 µm Calvet nets and codends (SWFSC)
- CalCOFI Pairovet frames (SWFSC)
- 333 µm mesh codends (SWFSC)
- Inclinometer for bongo tows (SWFSC)
- Digital flowmeters (SWFSC)
- Optical Plankton Counter(SIO)

- 75 lb Bongo weight (SWFSC)
- 100 lb hydro weights (SWFSC)
- CalCOFI Manta net frames (SWFSC)
- 60 cm CalCOFI 505 µm mesh Manta nets (SWFSC)
- Standard CalCOFI tool boxes (SWFSC)
- Bucket thermometers and holders (SWFSC)
- Hand held inclinometer (SWFSC)
- Oxygen titration rig with reagents (SIO)
- Oxygen flasks (SIO)
- Guideline Portasal (SIO)
- Salinity bottles (SIO)
- Fluorometer(SIO)
- 90% Acetone(SIO)
- Standard sea water (SIO)
- Data sheets for scheduled hydrographic work (SIO)
- Weather observation sheets (SIO)
- CTD and rosette (SIO)
- 10 liter hydrographic bottles (SIO)
- Isotope van secured on main deck(SIO)
- Trace metal van secured on main deck(SIO)
- Small deck winch for Trace Metal go-flow casts(SIO) mounted on main deck

2. Supplied by *David Starr Jordan*:
   - Starboard hydro winch with ¼" cable for standard Bongo, Pairovet and Manta tows
   - Port winch with .322" conductive cable
   - Center combo winch with .322" conductive cable
   - J-frame w/block to accommodate .322" cable
   - A-frame w/block to accomodate .322" cable
   - Constant temperature room set at 22°C ±1°C (71.5°F ±2°F)
   - Winch monitoring system
   - Seabird thermosalinometer
   - EK-500 Scientific sounder
   - Knudsen 12 kHz depth recorder
   - Acoustic Doppler Current Profiler w/writeable CD drive

MISCELLANEOUS:

1. The disposal of fish caught will be in accordance with NOAA Administrative order 202-735B dated January 25, 1989.

2. At the completion of the cruise an inspection will be made of scientific working and berthing spaces by the Commanding Officer or his designated representative. The Scientific party is responsible for the condition and cleanliness of spaces assigned to the scientific party.

3. The Cruise Leader will hold a pre-cruise meeting aboard the vessel before departure.

4. The Cruise Leader will hold a post-cruise meeting upon termination of the cruise.

5. NOAA Fleet Medical Policy requires that all scientific personnel embarking on NOAA vessels complete an SF-93 form, Report of Medical History.

6. All dates and times recorded will be in Pacific Standard Time. It is requested that the ship retard their clocks to PST at the start of the cruise, 0800 on July 12.

7. It is requested that the constant temperature room be set at the required temperature of 22°C ±1°C (71.5°F ±2°F) prior to the installation of the Portasal unit.

8. A personnel transfer may be requested at Dana Point, Ca. This will be determined at a later date.

PERSONNEL:

Amy Hays, Cruise Leader	SWFSC
Susan Manion	SWFSC
TBD	SWFSC
Jim Wilkinson	SIO
Dave Wolgast	SIO
Jennifer Sheldon	SIO
Fernando Ramirez	SIO
TBD(OPC Checkley tech)	SIO
Doug Masten	SIO/ODF
TBD(Bird Observer)	PRBO
Andrew King	SIO
TBD	
TBD	
TBD	
TBD	

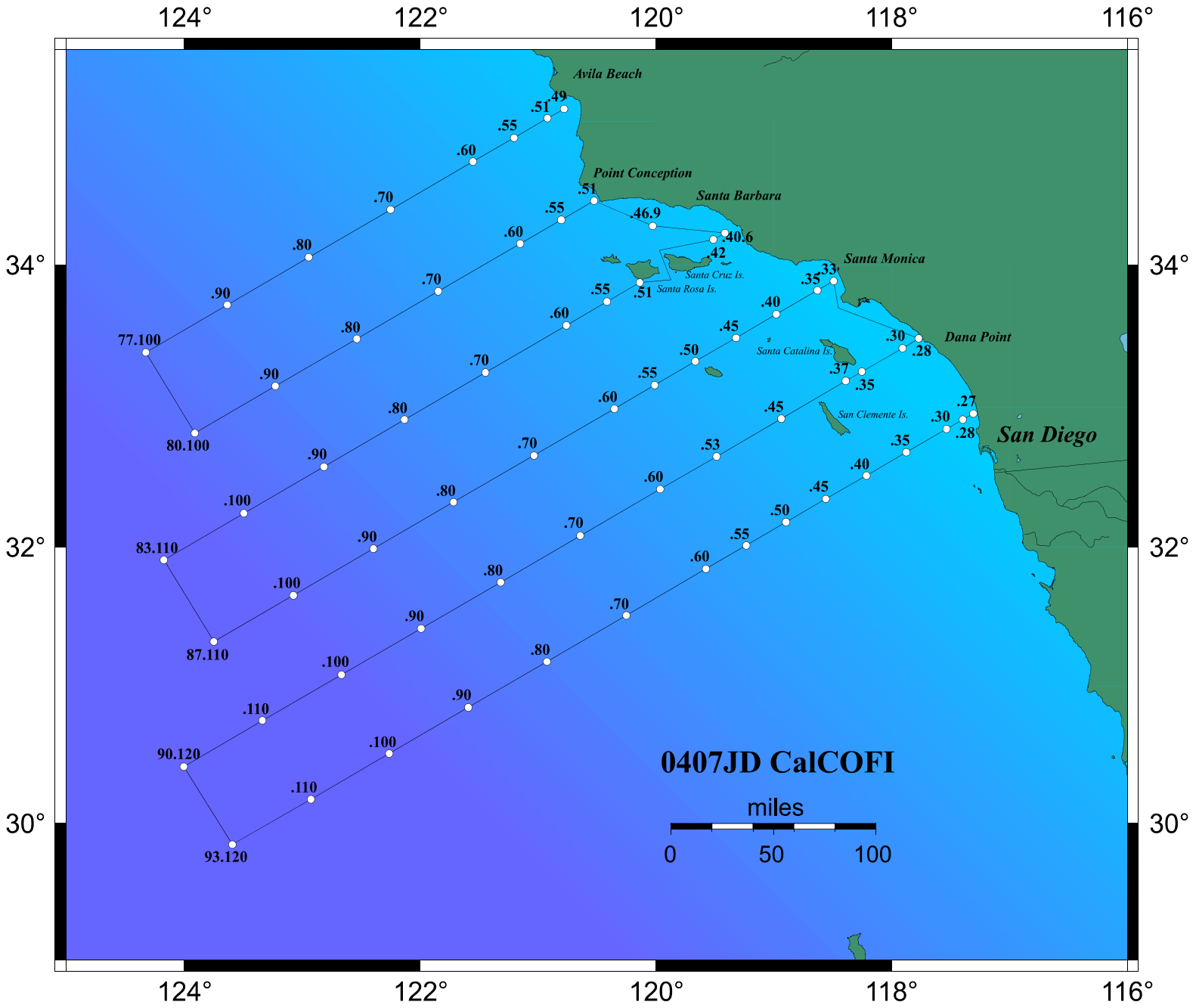
SWFSC personnel authorized per diem at the rate of $3.00 per day to be paid via the Imprest Fund at the termination of the cruise.

WATCH HOURS: 0000-1159 Charge to account 8L4S0D05
1200-2359

OVERTIME: 196 hours (Authorized total per NMFS personnel)
NIGHT DIFF: 204 hours (Authorized total per NMFS personnel)

Date:_____ Prepared by:_____
A.E. Hays

Approved by:_____
Richard A. Neal Ph.D
Acting Science & Research Director
Southwest Region


124°
122°
120°
118°
116°
34°
32°
30°
Avila Beach
Point Conception
Santa Barbara
Santa Monica
Dana Point
San Diego
Santa Cruz Is.
Santa Rosa Is.
Santa Catalina Is.
San Clemente Is.
77.100
80.100
83.110
87.110
90.120
93.120
0407JD CalCOFI
miles
0
50
100