JULY 2000
Site Survey Package 4C to ODP Site Survey Panel

Site Surveys for ODP Leg 201
from the NEMO-3 Cruise
in support of Proposal 465-ADD1:
Southeast Pacific Paleoceanographic Transects
Volume 2
Seismic Reflection and Chirp Subbottom Profiles
Part C. COC-4 and TEH-1 surveys

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BSU CGISS Technical Report 2000-06
1 July 2000
COC-4 Survey:
Intersection of Cocos Ridge
and Costa Rica Margin

Seismic Reflection
(2x150 c.i. GI gun source,
bandpass filter)

2-7 kHz “Chirp”
Subbottom profiler
(Knudsen 320/B)
Data File SBfixavg.2000jun06.0000-0600
COC-4 - Line 1
Bandpass
Cocos Ridge Survey 4
JD158

3 km
Two-way Travel Time (ms)
NW → Line 4 → SE

COC-4 - Line 4
Bandpass
Cocos Ridge Survey 4
JD158

3 km
COC-4 - Line 5  
Bandpass  
Cocos Ridge Survey 4  
JD158  

3 km  

Cores 41MC, 43JC  
X COC-4 line 7  

X COC-4 line 2  

X COC-4 line 3  

COC-4 Drillsite  
Start Line 5  
Turn  
COC Survey  

Two-way Travel Time (ms)  

SW  

NE  

Line 5  

Turn Start Line 5
Line 7  COC-4 Drillsite

Cores 41MC, 43JC
X COC-4 line 5
X COC-4 line 2

COC-4 - Line 7
Bandpass
Cocos Ridge Survey 4
JD158

3 km
Data File SBfixavg.2000jun06.1800-2400
COC-4 - Line 8
Bandpass
Cocos Ridge Survey 4
JD158

change of the speed at 21.04 from 8 to 10 knots

3 km
Two-way Travel Time (ms)
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Two-way Travel Time (ms)

NEMO-3 Chirp
JD 158
Cocos Ridge-4 Survey

2 km
Two-way Travel Time (ms)

NEMO-3 Chirp
JD 158
Cocos Ridge-4 Survey

2 km
NEMO-3 Chirp
JD 158
Cocos Ridge-4
Survey

Two-way Travel Time (ms)

Time (ms)

2 km
Change speed to 8 knots at 6:48
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Two-way Travel Time (ms)

NEMO-3 Chirp
JD 158
Cocos Ridge-4 Survey

2 km
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423

Two-way Travel Time (ms)

NEMO-3 Chirp
JD 158
Cocos Ridge-4
Survey

2 km
Two-way Travel Time (ms)
Two-way Travel Time (ms)

NE SW

Line 5

NEMO-3 Chirp
JD 158
Cocos Ridge-4 Survey

2 km
Two-way Travel Time (ms)

NEMO-3 Chirp
JD 158
Cocos Ridge-4 Survey

2 km
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#### 427

**Two-way Travel Time (ms)**

<table>
<thead>
<tr>
<th>JD158</th>
<th>NEMO-3 Chirp JD 158 Cocos Ridge-4 Survey</th>
<th>2 km</th>
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</table>

#### MIN SW

| 39 | 34 | 38 | 42 | 47 | 51 | 55 | 59 |

#### NE

| 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 |

---

**Turn Start Line 6**

**Line 6**

---

**DELY**
Two-way Travel Time (ms)

NEMO-3 Chirp JD 158 Cocos Ridge-4 Survey

COC-4 drill site X Line 5 COC4, Core here MC41, NB42, JC43

2 km
Data File SBfixavg.2000jun06.1800-2400
Two-way Travel Time (ms)

- Speed 5 knots

Line 8

Deploy Sonobouy

Finish Sonobouy

1 km

JD158

NEMO-3 Chirp
JD 158
Cocos Ridge-4 Survey

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Change speed to 10 knots at 21:42

NEMO-3 Chirp
JD 158
Cocos Ridge-4 Survey

2 km
TEH-1 Survey A:
Tehuantepec Margin
Data File SBfixavg.2000may18.0000-0600
Data File SBfixavg.2000may18.0600-1200

95° 40'W 95° 30'W 95° 20'W 95° 10'W 95° 00'W

15° 40'N 15° 30'N
NW Core MV-003 PC X TEH-1A Line 6 X TEH-1B Line 4 X TEH-1B Line 11

TEH-1A-Line 3b-4a Bandpass Tehuantepec Survey JD139

3 km

Two-way Travel Time (ms)
Line 4

Two-way Travel Time (ms)

**TEH-1A-Line 4b**
Bandpass
Tehuantepec Survey
JD139

3 km
TEH-1A-Line 4C
Bandpass
Tehuantepec Survey
JD 139

Two-way Travel Time (ms)
TEH-1A-Line 5a
Bandpass
Tehuantepec Survey
JD 139

3 km

Two-way Travel Time (ms)
Line 6
X TEH-1A line 5

ME-003 PC
X TEH-1A Line 3

3 km

TEH-1A-Line 6
Bandpass
Tehuantepec Survey
JD 139

Warning: Heading on this line is not constant
Data File SBfixavg.2000may18.0000-0600

96° 40'W 96° 30'W 96° 20'W 96° 10'W 96° 00'W 95° 50'W 95° 40'W

15° 50'N 15° 40'N 15° 30'N 15° 20'N

TEH-1 Line 1
Two-way Travel Time (ms)
Data File SBfixavg.2000may18.1200-1800
Two-way Travel Time (ms)

- NEMO-3 Chirp
- JD 139
- Tehuantepec 1 Survey
Warning: Heading on this line is not constant.
NEMO-3 Site Surveys CGISS Technical Report 2000-06
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Two-way Travel Time (ms)

NDM

NEMO-3 Chirp JD 140
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Two-way Travel Time (ms)

JD 140

NEMO-3 Chirp

JD 140
Two-way Travel Time (ms)

NEMO-3 Chirp
JD 140
Two-way Travel Time (ms)

NEMO-3 Chirp JD 140
Data File SBfixavg.2000may19.1800-2400
Two-way Travel Time (ms)

NEMO-3 Chirp
JD 140
Two-way Travel Time (ms)

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NEMO-3 Chirp
JD 140
TEH-1 Survey B:
Tehuanetepec Margin
Proposed Drillsite
TEH-1A

Two-way Travel Time (ms)

TEH-1B survey-Line 1
Bandpass
Tehuantepec Survey
JD141

speed 8 knots
TEH-1B survey-Line 2
Bandpass
Tehuantepec Survey
JD141
Two-way Travel Time (ms)
TEH-1B survey-Line 4b
Bandpass
Tehuantepec Survey
JD141

3 km
TEH-1B survey-Line 5
Bandpass
Tehuantepec Survey
JD141

Two-way Travel Time (ms)
Two-way Travel Time (ms)

TEH-1B survey-Line 6
Bandpass
Tehuantepec Survey
JD141

3 km
Data File SBfixavg.2000may20.1200-1800

Line 8 continued
Line 9
Line 10
Line 11
TEH1b Line 8 continued
Line 13
Line 9

Two-way Travel Time (ms)
TEH-1B survey-Line 10
Bandpass
Tehuantepec Survey
JD141

Two-way Travel Time (ms)
TEH-1B survey-Line 11
Bandpass
Tehuantepec Survey
JD141

3 km

Two-way Travel Time (ms)
TEH-1B survey-Line 13
Bandpass
Tehuantepec Survey
JD141
3 km
Two-way Travel Time (ms)
Data File SBfixavg.2000may20.1800-2400
TEH-1B survey-Line 14
Bandpass
Tehuantepec Survey
JD141

change of speed at 19.13
from 8 to 10 knots

3 km
TEH-1B survey-Line 15
Bandpass
Tehuantepec Survey
JD141

Two-way Travel Time (ms)

change of speed from 10 to 12 knots

change of speed at 20.44 from 12 to 8 knots

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511
Two-way Travel Time (ms)
Two-way Travel Time (ms)

NEMO-3 Chirp JD 141
Two-way Travel Time (ms)

NEMO-3 Chirp JD 141
Two-way Travel Time (ms)

NEMO-3 Chirp
JD 141

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Time (ns)

NEMO-3 Chirp
JD 141
Data File SBfixavg.2000may20.1800-2400
### NEMO-3 Chirp JD 140

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**JD141**

- NEMO-3 Chirp
- JD 140
NEMO-3 Chirp
JD 140