FIELD REPORT

REVISED

Project Name:	Cape Wind – SSCS Installation
OCC Project No.:	203082
Date:	25 May 2006
Personnel:	John Bazzoni – OCC Bryan Jones - OCC 4-person dive team from Fathom Solutions Boat Captain – Patriot Party Boats
Vessel:	Patriot Too (50' crew boat)
Equipment:	Surface-Supplied Dive Station (including compressor, umbilicals (2), Desco dive helmets (2), and dive control box), hydraulic power unit and hoses, Stanley BR-45 underwater hydraulic breakers (2), spigot holders and rods, VideoRay Pro III Remotely Operated Professional Submersible (ROV) with DVD recording system.
Materials:	Type 12 Seabed Scour Control Mats (4) as manufactured by Seabed Scour Control Systems (SSCS)
Dock:	Town Dock in Falmouth, MA
Departure Time:	0630
Return Time:	1505
Weather:	Mostly sunny, high appx. 60°F, wind appx 5 kts, 1-3' seas, water temp appx 56°F. Underwater visibility approximately 10'
Site Location:	Scientific Measurements Devices Station (MT) in Nantucket Sound Geographic Coordinates (NAD 83) Latitude 41° 28.306' Longitude 70° 18.857'

Observations:

OCC and Fathom Solutions loaded gear onto the *Patriot Too*. The crew left the dock in Falmouth at 0630 and arrived at the work site at 0755. Upon arrival at the work site, the crew proceeded to anchor the vessel in position for the installation using a two point mooring with

the stern tied-off to the Southeast pile and an anchor set off the bow. Fathom Solutions set-up the dive station and hydraulic equipment while OCC set-up the ROV equipment.

At approximately 1000, after donning dive gear, Fathom Solutions divers (2) entered the water and scoped out the work location.

The Fathom divers then proceeded to install the four (4) new mats at the seabed surrounding the Southeast pile. Mats are standard Type 12 SSCS mats with the following modifications:

Mat No. 1

Standard Type 12 mat but with short frond lines of 0.625m plus attachment of tie-wraps at all points on the mat where the frond lines are attached to the perimeter webbing.

Mat No. 2

Standard Type 12 mat but with a higher density of short frondlines of 0.625m and the loop attachment replaced with a 6 tonne b/strain webbing loop plus tie-wraps.

Mat No. 3

Standard Type 12 mat but with all frond lines being made of 2 tonne b/strain webbing instead of the usual 1.4 tonne webbing.

Mat No. 4

Standard Type 12 mat made entirely with the 6 tonne webbing.

The attached layout drawing No. 5465.02 illustrates the positioning of the mats relative to the Southeast pile.

After installation of the mats and deployment of the fronds, the Fathom divers replaced the existing nylon ratchet straps on the Southeast and Southwest piles with new, wider nylon ratchet straps. The straps were placed at the same location as the existing straps. A strap was also placed on the North pile.

Scour of the seabed was evident at each of the three supporting piles. Two existing mats are located at the base of the Southwest pile. Portions of the nylon webbing that comprise the existing mats were exposed above the seabed. The fronds appear to have separated longitudinally into many fronds of smaller width, however the fronds appear to be firmly attached to the mat webbing.

Measurements were taken between strap and the seabed at each pile. A tabulation of the current readings including prior readings is listed below:

	10/13/2003	**6/13/2004**	**6/3/2005**	**5/25/2006**
Southwest Pile	48”	43”	36”	36”
Southeast Pile	48”	72”	61”	55”
North Pile	---	---	---	47”

The ROV was used to document the seabed conditions at the site. Results were recorded onto a mini-DVD camcorder. Due to the good underwater visibility, the ROV was able to clearly record the seabed conditions. During ebb tide, it was difficult to control the ROV due to the swift currents. Once the current became a problem and after installation of the four new mats, the ROV was held and guided by one of the divers while he swam around the site and recorded video. The photographs attached to this report were captured from the underwater video.

After doffing the dive gear and securing the equipment, the *Patriot Too* pulled anchor at approximately 1330 and made her way to port. The *Patriot Too* arrived at the Town dock in Falmouth at approximately 1505 whereby all equipment was promptly off-loaded. The OCC and Fathom Solutions crew then de-mobilized from the dock and headed for home.

Conclusions:

The measurements indicate a net accretion of twelve inches at the Southwest pile and a net scour of seven inches at the Southeast pile. The findings indicate that, despite the condition of the mats on the Southwest pile, the existing mats appear to be helping to prevent scour at this location.

Recommendations:

Continue monitoring of the seabed and mat conditions. A follow-up investigation should be undertaken in the Spring of 2007.

Report Prepared By:

John V. Bazzoni, Jr.

Digitally signed by John V. Bazzoni, Jr.
DN: CN = John V. Bazzoni, Jr., C = US
Date: 2006.08.22 10:15:05 -04'00'

John V. Bazzoni, Jr.
Construction Engineer

Attachments:

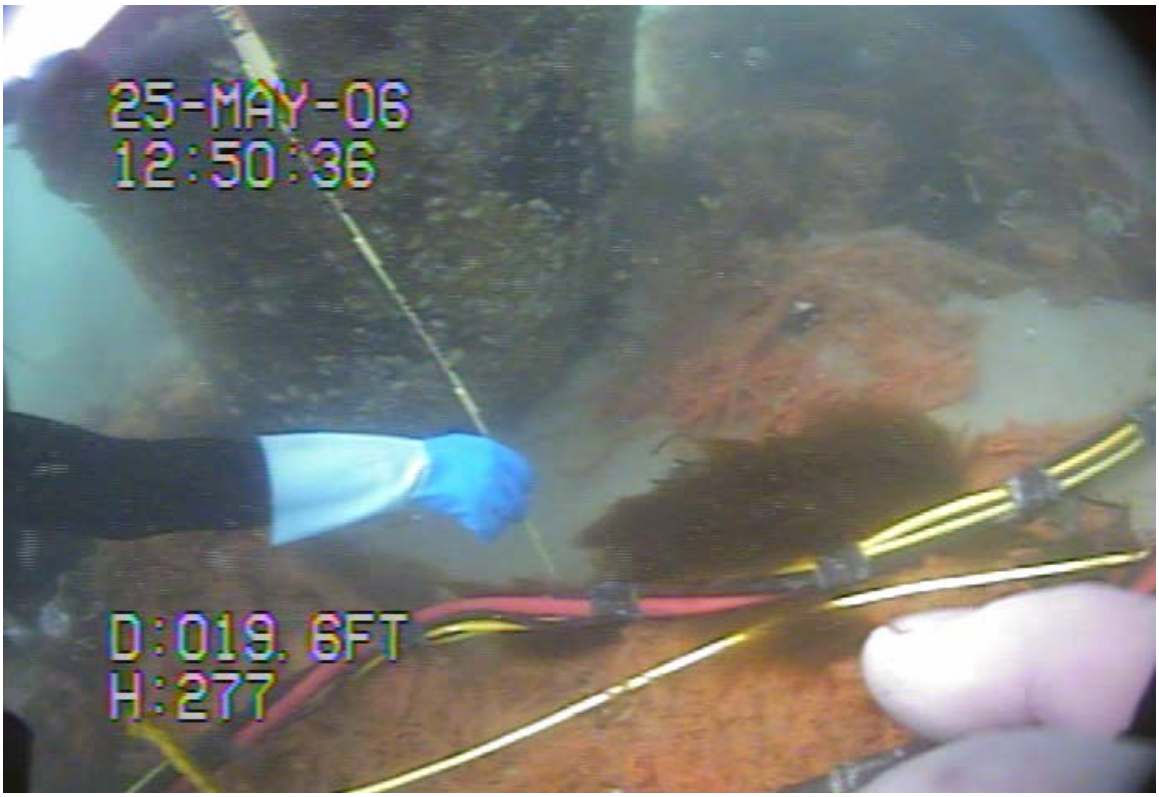
Photographs
SSCS Installation Drawing
Tide Graph for 25 May 2006
Current Graph for 25 May 2006

1. View of the MT from the deck of *Patriot Too*

2. Newly installed mats at base of Southeast pile

3. Installing ratchet strap on Southeast pile

4. Bottom conditions at base of North pile



5. Existing mats at base of Southwest pile

6. Newly installed mats at base of Southeast pile

7. Newly installed mats at base of Southeast pile, Southeast pile in background

8. Existing mats at base of Southwest pile

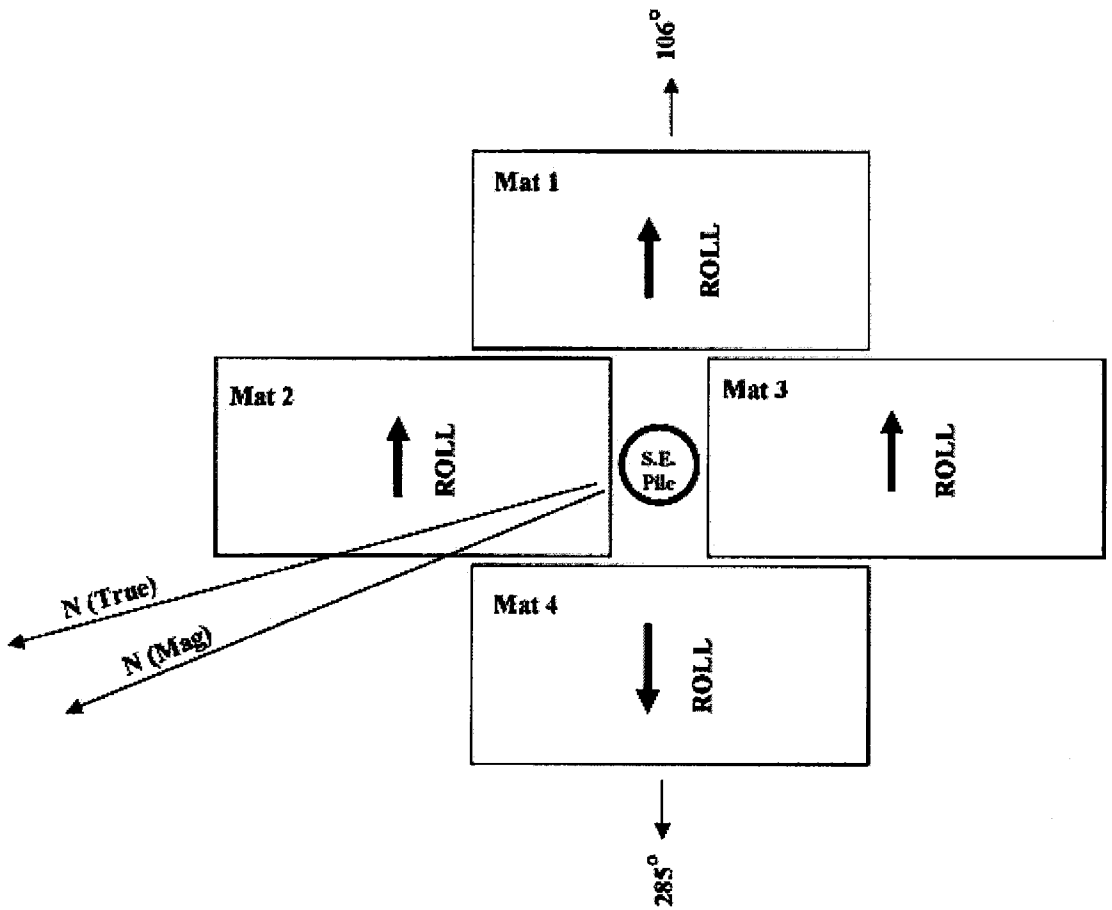
9. Existing mats at base of Southwest pile, Southwest pile in background

10. Existing mats at base of Southwest pile, Southwest pile in background

12. Mat on bottom ready for installation and scour at base of Southeast pile

13. Mat on bottom ready for installation and scour at base of Southeast pile

14. Scour at base of North pile



Prepared by:	Brian D Smith
Approved by:	Brian D Smith

Primary Directions of Tidal Flow:
EBB 285° & FLOOD 106°
The Type 12 Mats must be aligned so as to face these Directions.

NOTES

1. Scour Control Mats for SCOUR PROTECTION as indicated on this DRAWING to be by Seabed Scour Control Systems Ltd through Ocean and Coastal Consultants, CT 06611.

2. Type 12 MATS to be positioned by competent DIVERS, two divers are required for installation. Mats to be aligned 106° and 285 ° from TRUE NORTH.

3. Nominal CLEAR DISTANCE between the South East Pile and the inner edge of a T12 Mat to be Approx: 350mm to 500mm.

4. INSTALLATION Sequence Mat 2,3,1,4. During Installation the SAFE NETS MUST NOT BE REMOVED UNTIL ALL ADJACENT MATS HAVE BEEN FULLY INSTALLED.

NOTES
NOT TO SCALE

CLIENT
CAPE WIND

FILE
CAPE COD WINDFARM PROJECT

Seabed Scour Control Systems Limited
Harfreys Road, Harfreys Industrial Estate,
Great Yarmouth, Norfolk NR31 0LS. U. K.
Tel: + 44 (0)1493 443380 * * Fax: + 44 (0)1493 443390

DRG No 5465.02 | Date: 18th July 2005 | REV I

Tides:Hyannis Port

based on Boston, Massachusetts (NOAA)
41° 38 N 70° 18 W

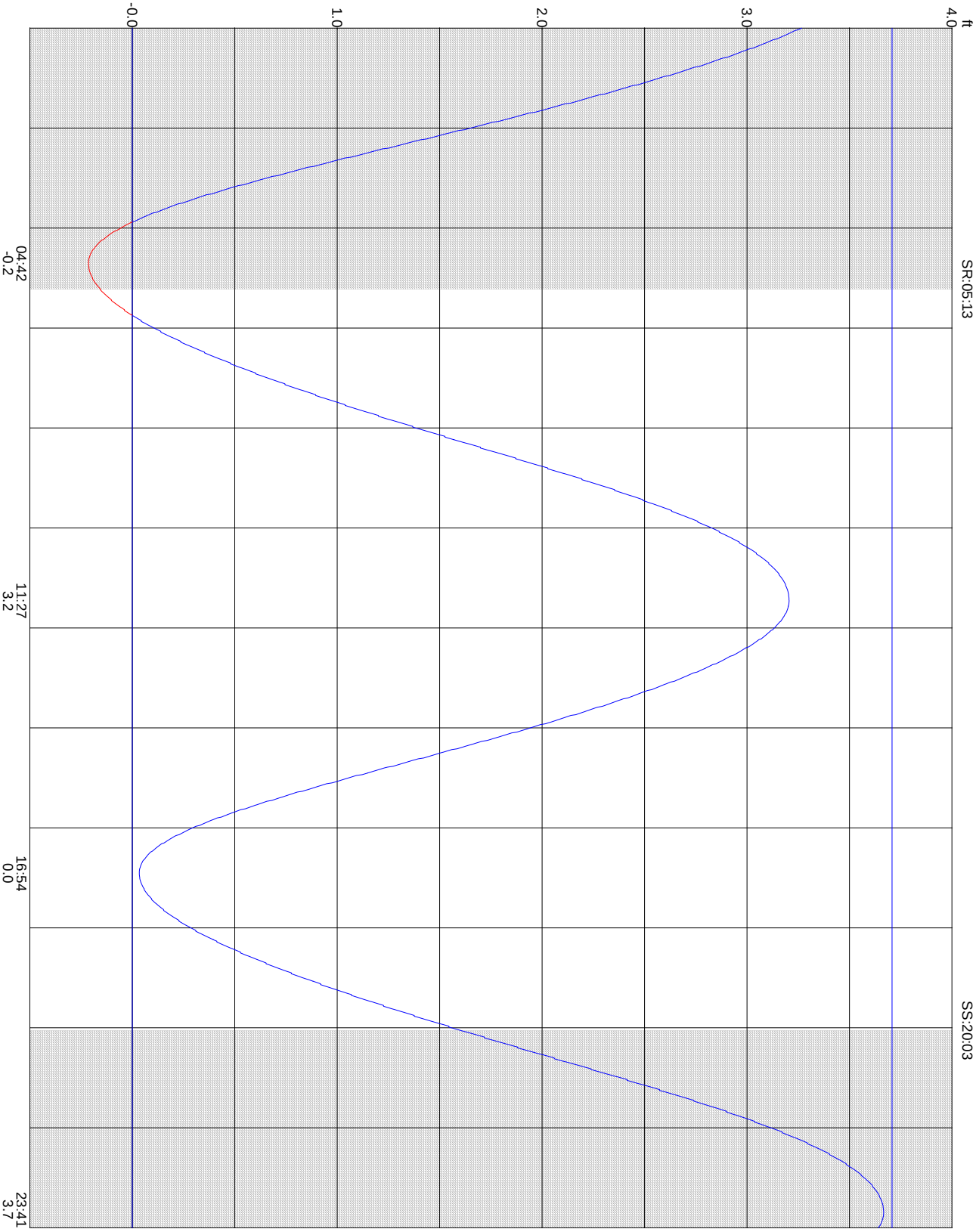
Thursday, May 25, 2006

Average Tides	
Mean Range:	3.1 ft
MHWS	3.7 ft
Mean Tide:	1.6 ft

Daily Highs & Lows			
04:42	-0.2	ft	Low
11:27	3.2	ft	High
16:54	0.0	ft	Low
23:41	3.7	ft	High

Moonrise:03:50
Moonset:18:43

(EDT)	Tide
00:00	3.3 ft
00:30	3.0 ft
01:00	2.6 ft
01:30	2.1 ft
02:00	1.6 ft
02:30	1.1 ft
03:00	0.7 ft
03:30	0.2 ft
04:00	-0.1 ft
04:30	-0.2 ft
05:00	-0.2 ft
05:30	-0.1 ft
06:00	0.1 ft
06:30	0.4 ft
07:00	0.7 ft
07:30	1.0 ft
08:00	1.4 ft
08:30	1.8 ft
09:00	2.2 ft
09:30	2.5 ft
10:00	2.8 ft
10:30	3.0 ft
11:00	3.2 ft
11:30	3.2 ft
12:00	3.1 ft
12:30	2.9 ft
13:00	2.7 ft
13:30	2.3 ft
14:00	1.9 ft
14:30	1.5 ft
15:00	1.1 ft
15:30	0.6 ft
16:00	0.3 ft
16:30	0.1 ft
17:00	0.0 ft
17:30	0.1 ft
18:00	0.3 ft
18:30	0.5 ft
19:00	0.8 ft
19:30	1.2 ft
20:00	1.6 ft
20:30	2.0 ft
21:00	2.4 ft
21:30	2.8 ft
22:00	3.1 ft
22:30	3.4 ft
23:00	3.6 ft
23:30	3.7 ft
00:00	3.6 ft



Currents:Broken Ground-Horseshoe Shoal, between

based on Pollock Rip Channel (Butler Hole), Massachusetts (NOAA)
41° 33 N 70° 17 10 W

Thursday, May 25, 2006

Slack	Max Flood & Ebb			
	00:16	0.9 kt	276°	ebb
03:48	07:28	1.1 kt	107°	fld
09:52	12:46	0.9 kt	276°	ebb
16:16	19:51	1.0 kt	107°	fld
22:09				

Moonrise:03:50
Moonset:18:43

(EDT)	Current
00:00	0.9 kt ebb
00:30	0.9 kt ebb
01:00	0.9 kt ebb
01:30	0.8 kt ebb
02:00	0.7 kt ebb
02:30	0.5 kt ebb
03:00	0.3 kt ebb
03:30	0.1 kt slk
04:00	0.1 kt slk
04:30	0.3 kt fld
05:00	0.6 kt fld
05:30	0.7 kt fld
06:00	0.9 kt fld
06:30	1.0 kt fld
07:00	1.1 kt fld
07:30	1.1 kt fld
08:00	1.0 kt fld
08:30	0.9 kt fld
09:00	0.6 kt fld
09:30	0.3 kt fld
10:00	0.1 kt slk
10:30	0.3 kt ebb
11:00	0.6 kt ebb
11:30	0.7 kt ebb
12:00	0.8 kt ebb
12:30	0.9 kt ebb
13:00	0.9 kt ebb
13:30	0.9 kt ebb
14:00	0.8 kt ebb
14:30	0.7 kt ebb
15:00	0.5 kt ebb
15:30	0.3 kt ebb
16:00	0.1 kt slk
16:30	0.1 kt slk
17:00	0.3 kt fld
17:30	0.5 kt fld
18:00	0.7 kt fld
18:30	0.9 kt fld
19:00	1.0 kt fld
19:30	1.0 kt fld
20:00	1.0 kt fld
20:30	0.9 kt fld
21:00	0.8 kt fld
21:30	0.5 kt fld
22:00	0.1 kt fld
22:30	0.2 kt ebb
23:00	0.5 kt ebb
23:30	0.7 kt ebb
00:00	0.8 kt ebb