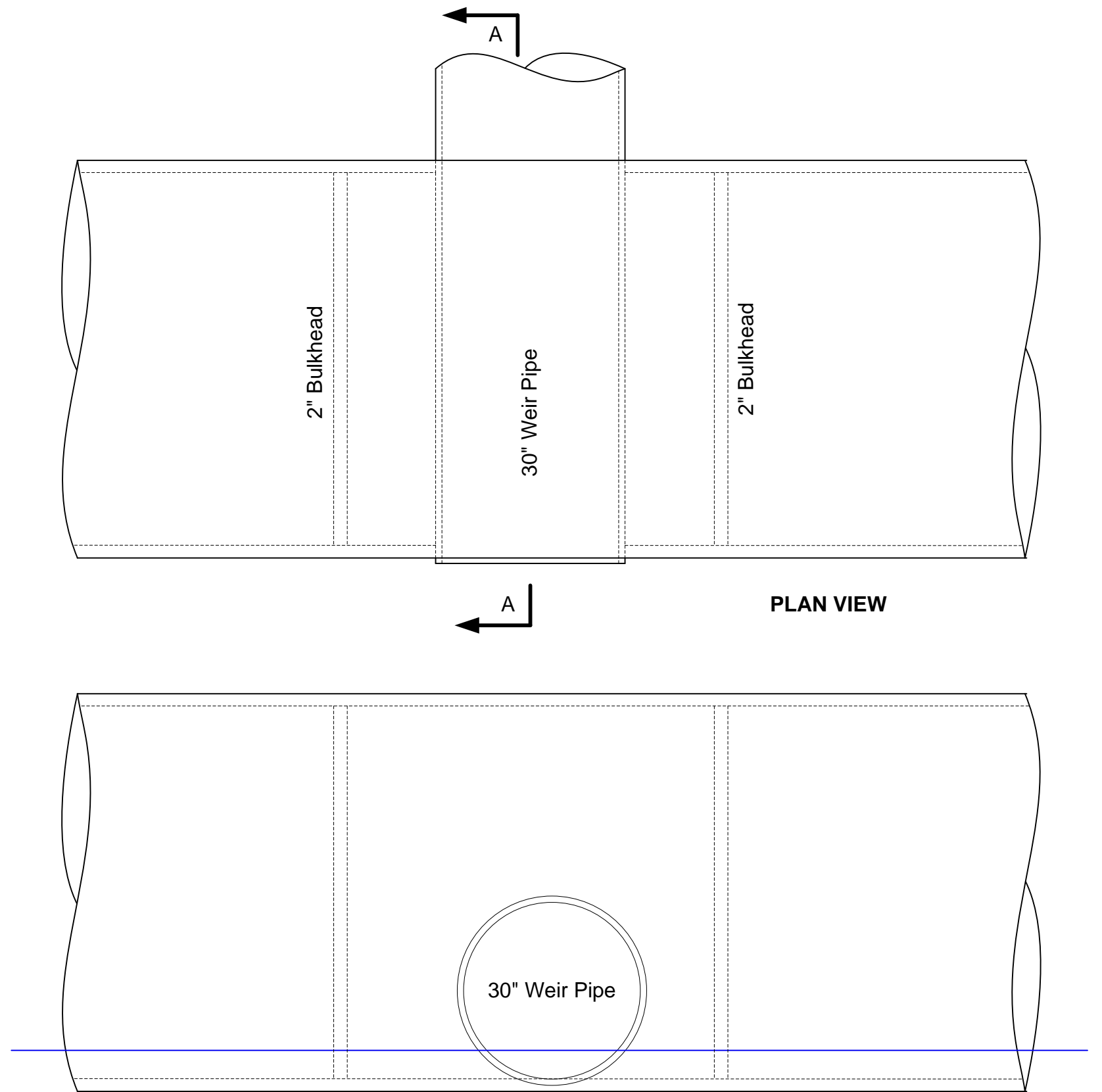


SECTION A-A



PLAN VIEW

FRONT VIEW

STEWART TECHNOLOGY ASSOCIATES, Houston, TX. 713-789-8341. [www.stewart-usa.com](http://www.stewart-usa.com).

Project: OFFSHORE OIL SPILL CONTAINMENT, COLLECTION AND SEPARATION SYSTEM

Client: INTERNAL

Checked by: WPS

Approved by & Date:

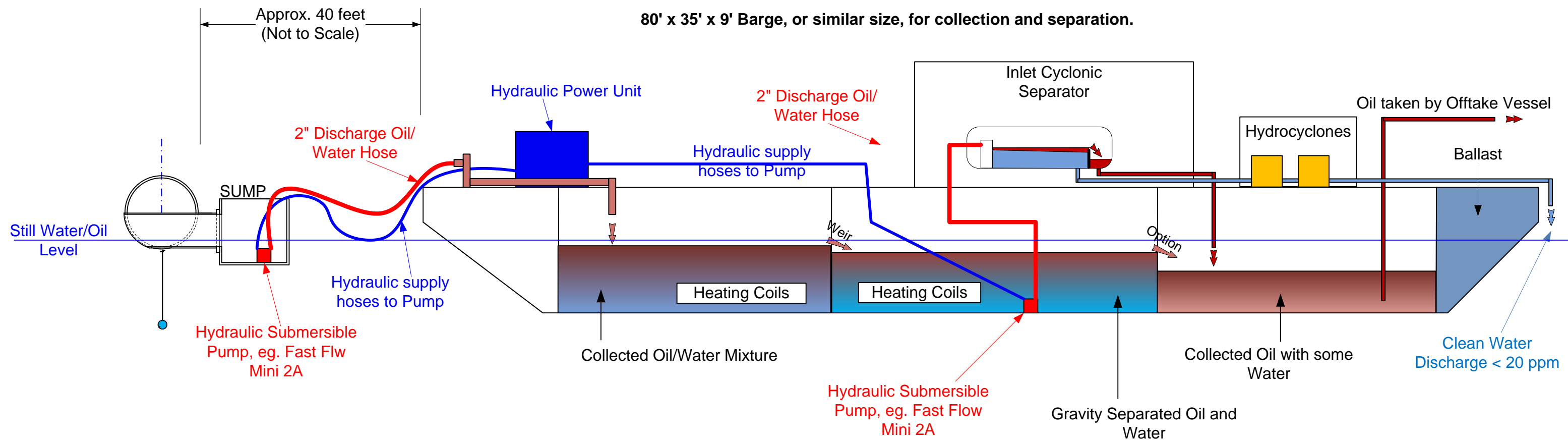
File name:

Date: 05/13/10

Scale:

Title: Prelim. Detail at Weir Pipe  
Drawing number: STA-990-001

Revision: Sheet: 2



STEWART TECHNOLOGY ASSOCIATES, Houston, TX. 713-789-8341. www.stewart-usa.com.

Revisions:

Title: Barge Collection/Separation Schematic

Project: OFFSHORE OIL SPILL CONTAINMENT, COLLECTION AND SEPARATION SYSTEM

Client: INTERNAL

Checked by: WPS

Approved by & Date:

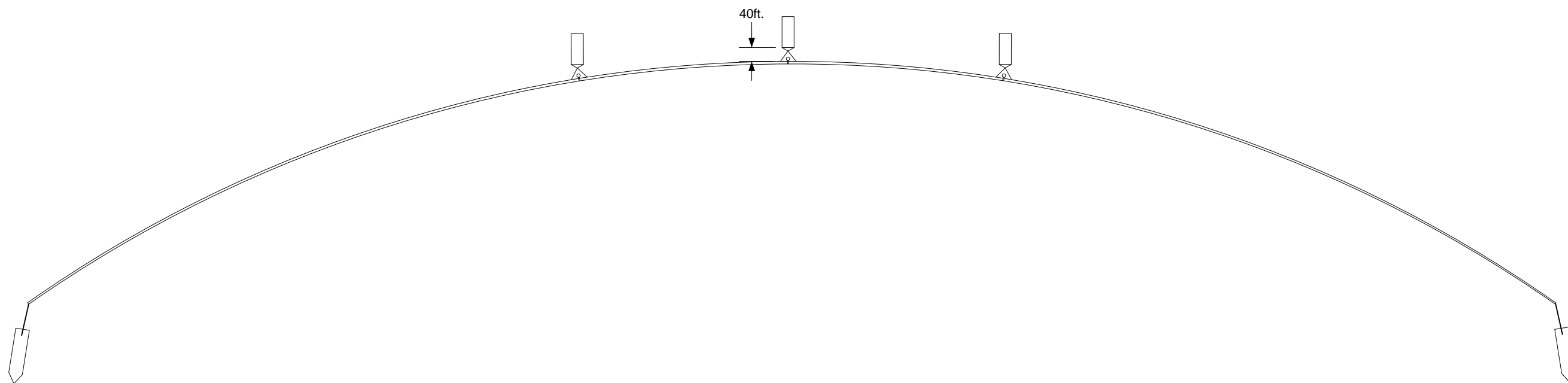
File name:

Date: 05/13/10

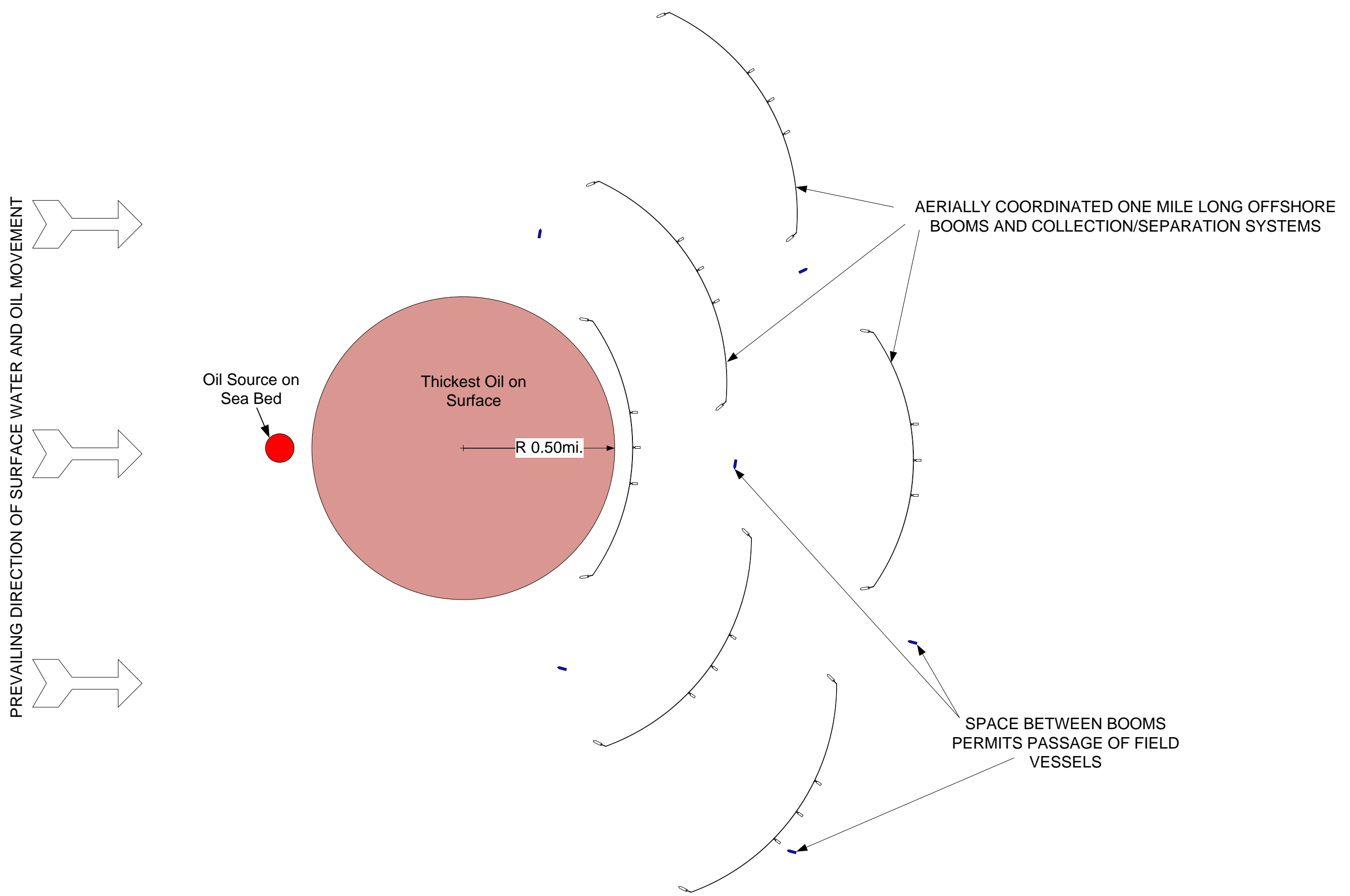
Scale:

Drawing number: STA-990-001

Revision: Sheet: 3



**One Mile Long Boom with Three Weirs, Sumps, Barges and Separation Systems**



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Revisions:

Title: OFFSHORE DEPLOYMENT CONCEPT

Project: OFFSHORE OIL SPILL CONTAINMENT, COLLECTION AND SEPARATION SYSTEM

Client: INTERNAL

Checked by: WPS

Approved by & Date:

File name:

Date: 05/13/10

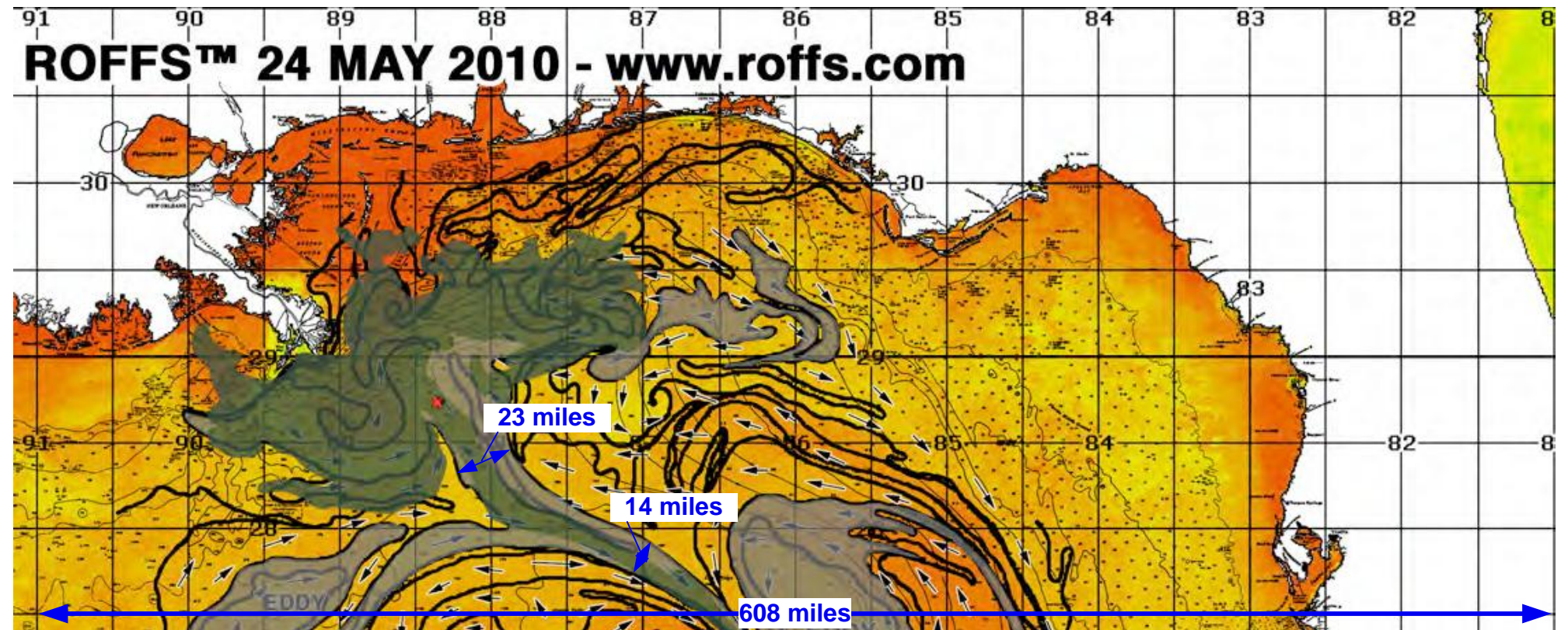
Scale:

Drawing number: STA-990-001

Revision:

Sheet: 5

**Logical Positions for Offshore Collection Boom Systems are shown based on ROFFER'S Oils Spill and Current Data. Tables created by STA.**



Oil Collection Rate Calculations	
Rate of travel	1 knot
Rate of travel	6080 ft/hr
Time period	24 hours
Boom Effective length	0.75 miles
Boom Effective length	3960 feet
Thickness	0.0005 inches
Thickness	0.0127 mm
Volume/hr	1003 ft <sup>3</sup> /hr
Volume/hr	28 m <sup>3</sup> /hr
Volume/hr	7505 gallons/hr
Volume/hr	179 bbl/hr
Volume in time period	180126 gallons/day
Volume in time period	4289 bbl/day

Weir Flow Calculations	
Percentage oil over weir	3.00%
Oil Thickness at weir	0.25 inches
Liquid Height at weir	8.33 inches
Water Thickness at weir	8.08 inches
Width of weir	0.93 feet
No. Weirs	3
Oil Flow Rate	1003 ft <sup>3</sup> /hr
Total Liquid Flow Rate	33440 ft <sup>3</sup> /hr
Area of Oil over weirs	0.058 ft <sup>2</sup>
Velocity over weirs	4.815 ft/sec
Weir Flow Eqn.	9.3 ft <sup>3</sup> /sec
Weir Flow Eqn.	33440 ft <sup>3</sup> /hr

OIL Green Volume		OIL SPILL Grey Volume				
E-W	180 miles	E-W	300 miles			
N-S	45 miles	N-S	30 miles			
Area	8100 sq.miles	Area	9000 sq.miles	Average Daily Flow Rate		
Average Thickness	0.0005 inches	Thickness	0.00004 inches			
Average Thickness	0.0127 mm	Thickness	0.001016 mm			
Volume	9,126,000 ft <sup>3</sup>	Volume	811,200 ft <sup>3</sup>			
Volume	258,420 m <sup>3</sup>	Volume	22,971 m <sup>3</sup>			
Volume	68,262,480 US gallons	Volume	6,067,776 US gallons	Cumulative		
Volume	1,625,413 bbl	Volume	144,481 bbl	74,330,256	US gallons	74,000,000
No. Days	33 days	No. Days	33 days	1,769,894	bbl	1,770,000
Rate	49,255 bbl/day	Rate	4,378 bbl/day	No. Days	33	days
					bbl/day	54,000

**ROFFER'S OCEAN FISHING FORECASTING SERVICE, INC.**

[WWW.ROFFS.COM](http://WWW.ROFFS.COM) - (321) 723-5759 // EMAIL: FISH7@ROFFS.COM

**ROFFS™ OCEANOGRAPHIC ANALYSIS FOR THE DEEPWATER HORIZON OIL SPILL AREA  
UPDATED 24 MAY 2010 (15:00 HRS)**

Today's RGB data shows that the surface oil (olive green) has reached the counter-clockwise eddy (centered roughly near 85°45'W & 27°30'N) west of Tampa, Florida and the tip of the oil was observed near 85°50'W & 27°07'N). We have received visual confirmation of this oil from on-site sampling by Dr. Jim Franks Southern Mississippi University who described a sheen and visible oil globules, 1/8 inch to 5 inches in diameter at 86°57'W & 27°45'N and 86°54'W & 27°46'N. Based on the motion of the water west of Tampa it appears that this surface oil is anticipated to travel the same path as the subsurface oil-water-dispersant mixture that we have depicted in a gray color. The southernmost point of this subsurface mystery oil that has been moving along the eastern boundary of the Loop Current was seen today near 84°25'W & 26°20'N. This water is expected to move along the boundary of the Loop Current the next few days away from Florida.