

ROFFER'S OCEAN FISHING FORECASTING SERVICE, INC.

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

**ROFFS™ OCEANOGRAPHIC ANALYSIS FOR THE DEEPWATER HORIZON OIL SPILL AREA
UPDATED TUESDAY 18 MAY 2010 (16:00 HRS)**

See enclosed PDF analysis as the graphic is enclosed. Higher resolution graphics are available.

We continue to receive dramatic and clear synthetic aperture radar (SAR) imagery from the NASA Jet Propulsion Laboratory (thank you Ben Holt) and from the Envisat satellite (ASAR sensor) that clearly shows that the oil is being pulled around the southern and southeastern side of the large counter-clockwise rotating eddy which was centered near 86°30'W & 27°35'N this afternoon. Today, it appears that currently the majority of this oil, which was followed in our sequential image analysis and also observed in today's SAR imagery is being re-circulated around this counter-clockwise rotating eddy. It does appear as if some of the oil near 85°30'W & 27°37'N may be moving east/southeastward and towards the area inshore of the 100 fathom depths offshore of Tampa, but at this point it remains to be seen how much oil will take this route and ride along the eastern edge of the Loop Current. These SAR images can be viewed on our website at (<http://www.roffs.com/deepwaterhorizon.html>). We have included this afternoon's SAR image in today's analysis. We have annotated today's SAR imagery so that you can see the oil. These images confirm again our water mass – sequential image analysis technique that we have been using since the initial accident back on April 21, 2010. See the analyses from last week on our website for other evidence of this. Obviously the oil has continued to move closer and closer to the Loop Current system than we had seen since last week using infrared, ocean color and visible (RGB and SAR) satellite data. This is mainly interaction of the large counter-clockwise eddy centered near 86°30'W & 27°35'N with the eastern edge of the Loop Current.

The question continues to be how fast and how much of this oil will be pulled towards the ride along the northeaster and eastern edge of the Loop Current. It remains to be seen how much of the oil visible in today's RGB imagery from 87°00'W & 27°25'N to 86°30'W & 27°10'N to 85°30'W & 27°37'N will be circulated north/northwestward back around and towards the core of the large counter-clockwise rotating eddy and how much will be pulled southeastward along the eastern side of the Loop Current. Today it does appear as if more oil is being pulled towards the eddy that is being pulled towards the east/northeastern edge of the Loop Current. This eddy has pushed the eastern edge of the Loop Current between 26°00'N to 27°30'N eastward an additional 5 miles overnight and this feature has moved 30 miles eastward towards Tampa since Friday. The eastern edge of the Loop Current near 84°30'W & 27°00'N is now less than 100 miles offshore of Tampa and this feature now occurs inshore of the 100 fathom depths. The other critical questions are what is below the slick and what is in the water masses we have been tracking since the original spill? What will we do to stop the impacts of this oil and the other oil moving along throughout the northern Gulf of Mexico?

Southward, the southwestern side of the elongating (now egg shaped) eddy centered near 85°00'W & 25°00'N continues to move southwestward. The southwestern boundary of this feature was observed near 86°15'W & 24°30'N today and this feature appears to have been pulled approximately 5-7 miles southwestward overnight and 25-27 miles southwestward since this past Friday. We continue to observe the western side of the eastern limb of the Loop Current approaching the eastern side of the western limb of the Loop Current, which is usually indicative of the formation of a large clockwise rotating Loop Current eddy. It remains to be seen if this motion will continue and if it will cause such an eddy to form.

If you decide to use this analysis or the images contained within, please give credit to ROFFS™ and see more of our daily coverage here: (<http://www.roffs.com/deepwaterhorizon.html>).

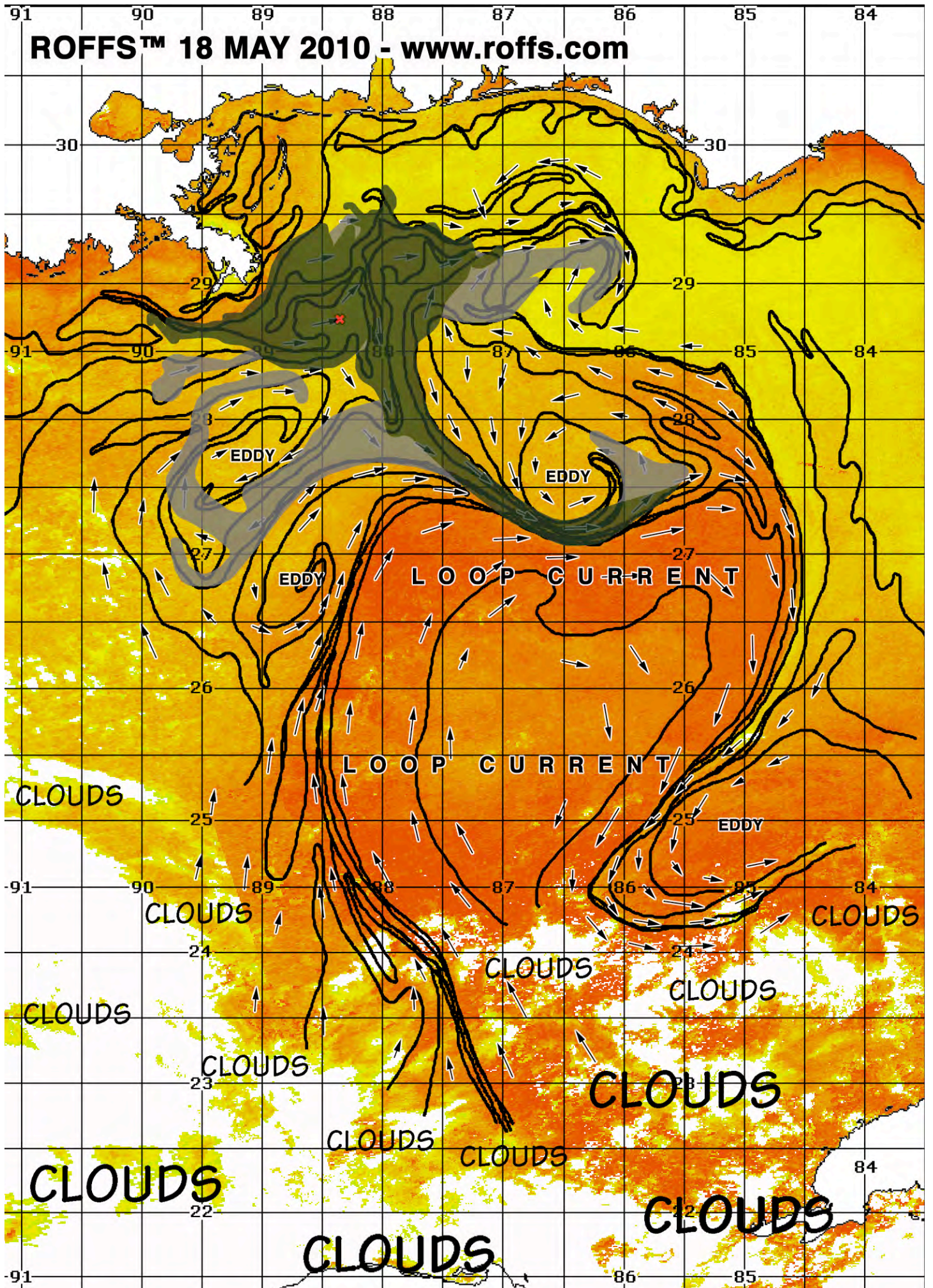
EDITORS NOTE:

While we have been conducting these analyses as a civic duty and as an exercise in technology transfer, we would like to be contracted to do this to support cleanup, restoration, and litigation efforts. If you plan to use these reports including the graphics you must give ROFFS™ full credit for this work. ROFFS™ would be appreciative if you would copy this analysis to others who may be interested in our efforts. At ROFFS™ we have been mapping the distribution and movements of the oil from the Deepwater Horizon spill from satellites since the explosion. Basically we are using a host of U.S. (NOAA and NASA) and European (ESA) satellites with a variety of spectral (infrared, near infra-red, visible, RGB and synthetic aperture radar) and spatial resolutions (300 meter to 1 KM) to see the oil. The MODIS satellite data are being received from the University of South Florida IMaRS and the synthetic radar (SAR) imagery is being received from the CSTARS at the University of Miami and also from the NASA's Jet Propulsion Laboratory. We manipulate and integrate these data at ROFFS™ and the analyses are ROFFS™ expert interpretations of the satellite imagery along with other data such as winds, sea surface temperature, currents, and in-situ reports. We routinely discuss our results with several academic and non-academic oceanographers.

We use a plethora of techniques to remove or reduce the effect of clouds and satellite angle, as well as, to manipulate the satellite data to understand the ocean circulation patterns associated with the oil's motion. We focus our efforts on the offshore segment of the oil. Sequential image analysis allows us to visualize the motion. The red "X" indicates the site of the Deepwater Horizon spill area.

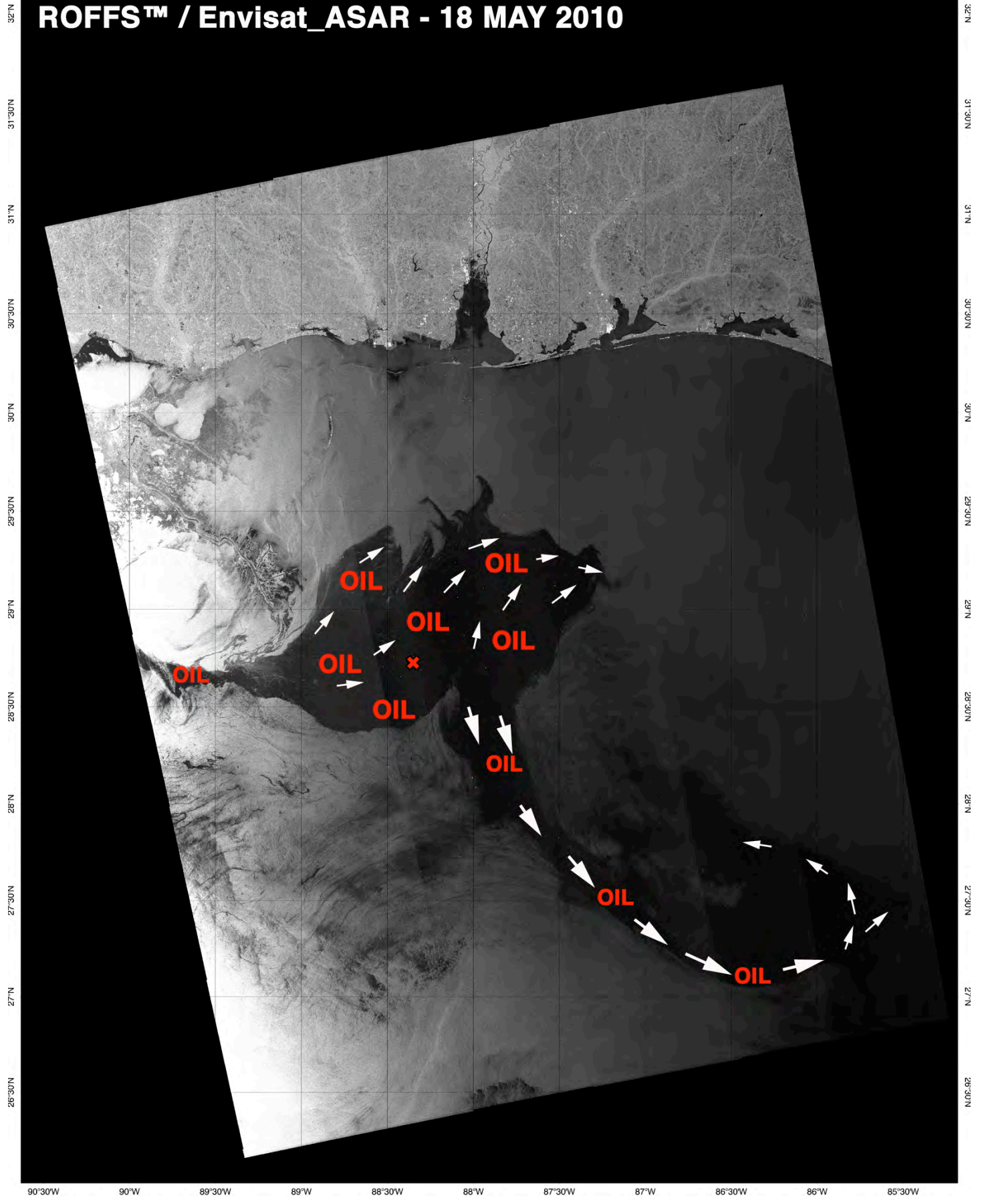
We have been deriving these analyses on a daily basis and posting them to our website (<http://www.roffs.com/deepwaterhorizon.html>). We have many years of conducting similar analyses. For example we mapped the plume coming from the New Orleans area after Hurricanes Katrina and Rita (<http://www.roffs.com/katrina.htm>).

ROFFS™ 18 MAY 2010 - www.roffs.com



90°30'W 90°W 89°30'W 89°W 88°30'W 88°W 87°30'W 87°W 86°30'W 86°W 85°30'W

ROFFS™ / Envisat_ASAR - 18 MAY 2010



90°30'W 90°W 89°30'W 89°W 88°30'W 88°W 87°30'W 87°W 86°30'W 86°W 85°30'W

32°N
31°30'N
31°N
30°30'N
30°N
29°30'N
29°N
28°30'N
28°N
27°30'N
27°N
26°30'N