

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

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**ROFFS™ OCEANOGRAPHIC ANALYSIS FOR THE DEEPWATER HORIZON OIL SPILL AREA**

**UPDATED SATURDAY 15 MAY 2010 (16:00 HRS)**

**REVISED SUNDAY 16 MAY 2010**

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

We received some dramatic and clear synthetic aperture radar (SAR) imagery from the NASA Jet Propulsion Laboratory (thank you Ben Holt) that clearly shows that the oil is being pulled into the Loop Current. The first two images are from today and the third and fourth one is from May 12, 2010. I have annotated the imagery so you can see the oil. On the image from May 12, one can also see the tendrils of oil that have moved west and southwest. These images confirm again our water mass-sequential image analysis technique that we have been using. See the analyses from earlier this week on other evidence of this. Obviously the oil has moved further into the Loop Current system than we had seen the last few days using infrared, ocean color and RGB satellite data.

The question now is how fast and how much of this oil will be entrained into the Loop Current. 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 the northern Gulf of Mexico.

From the infrared imagery it is still a mess of clouds out there. As best as we can determine the northern boundary of the Loop Current has moved north another five miles northward in the last 24 hours and the location of the northern boundary of the Loop Current at 88°00'W is 27°15'N. The western boundary of the eddy on the southeastern side of the Loop Current is 86°10'W & 24°45'N and there is no apparent change in the location of the western boundary and southern boundary of this eddy. We can not determine how much of the western side of the eastern limb of the Loop Current is interacting with the eastern side of the western limb of the Loop Current (read that again twice).

Please give credit to ROFFS™ and

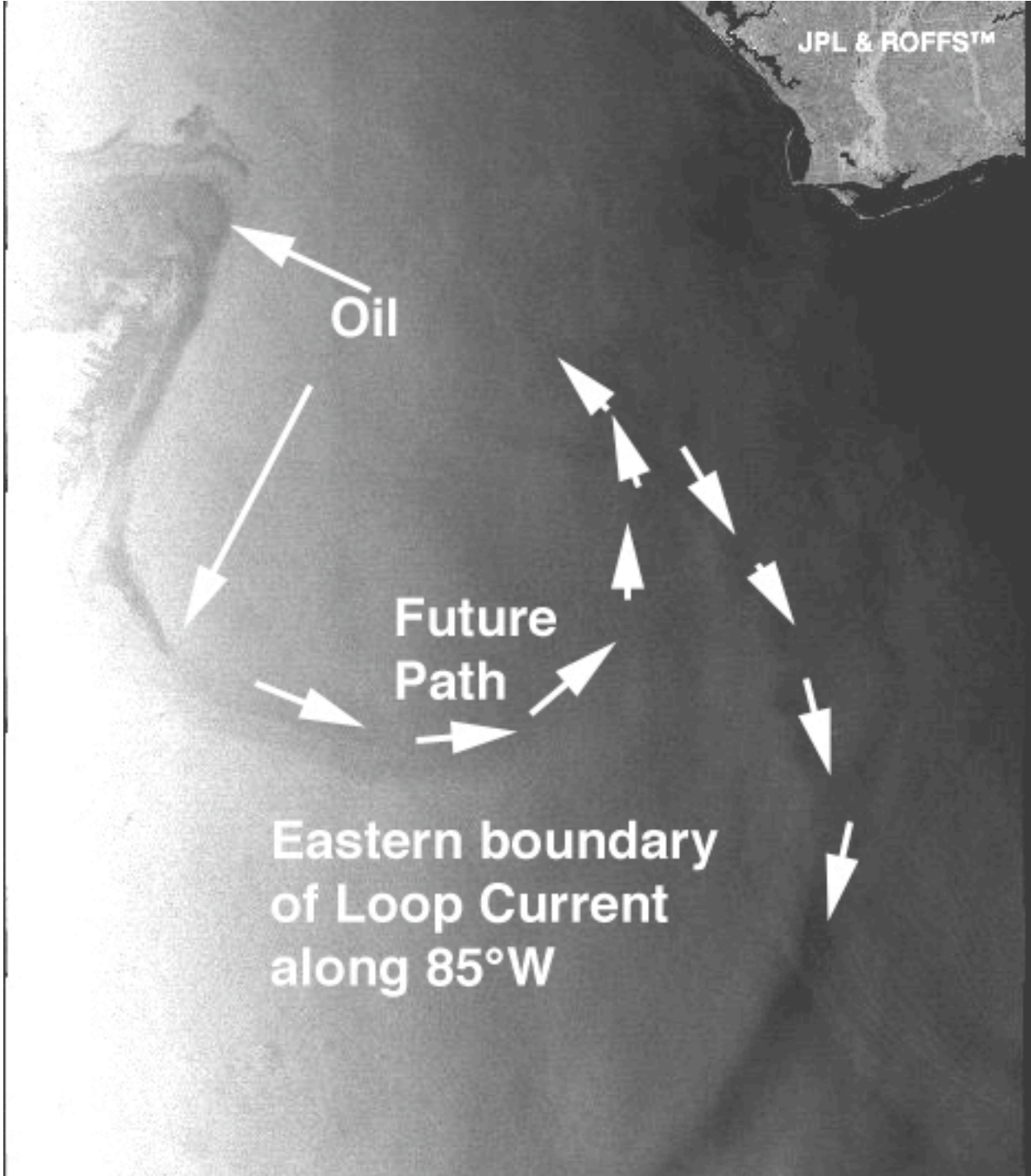
see more of our coverage (<http://www.roffs.com/deepwaterhorizon.html>).

**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 IMAARS 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>).



Oil

Future  
Path

Eastern boundary  
of Loop Current  
along 85°W

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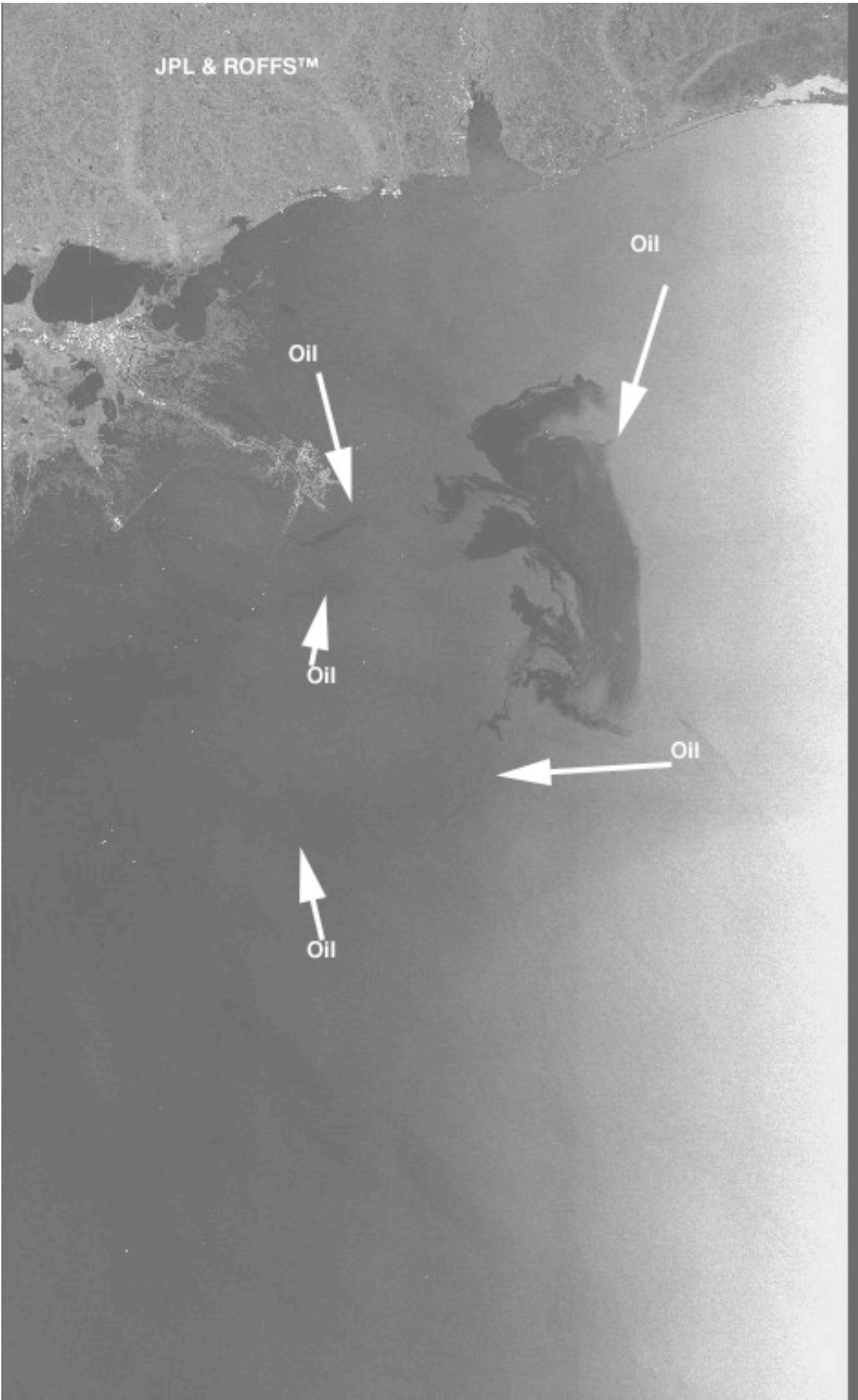
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