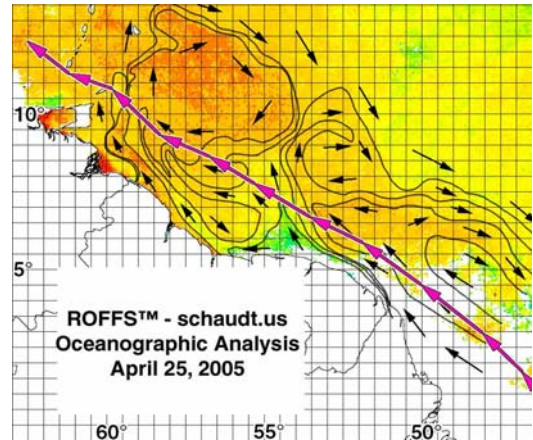


Energy Solutions from ROFFS™ and schaudt•us

Drawing from time-tested synoptic analysis skills and advanced satellite image analysis techniques; numerical weather and current models; and vessel simulators; **ROFFS™** and **schaudt•us** are pleased to offer services for deep water drilling and construction; ocean tows/ transports; and seismic operations.

Having supported offshore operations and engineering design since the early 1980's, **schaudt•us** and **ROFFS™** have proven their ability to help clients operate effectively with eddies and fronts in order to maximize operational efficiency and safety.



CURRENT AND EDDY FORECAST SUPPORT: Accurate analyses and forecasts must start with the best depiction of the recent ocean conditions. **ROFFS™ - schaudt•us** Oceanographic Analyses and Forecasts start with synoptic analyses prepared from real-time infrared, ocean color, chlorophyll, altimeter, radar, current meter, and meteorological data. Geographic coverage, spatial and temporal resolution are varied to meet the needs of the clients in a cost-effective fashion. Presently, daily support is provided for Trinidad. On demand, service can be provided worldwide including the Gulf of Mexico, eastern Canada, offshore Cuba, the Caribbean and offshore South America.

SHIPPING, TOW AND RIG MOVE FORECASTS: By blending Oceanographic Analyses, current models and vessel simulators, our team is able to verify and improve the models, extend the range of coverage and optimize route guidance. Presently, our support of long-distance tows and shorter rig moves allows the client to minimize delays and save time. In one recent tow, the client reported that seven days were saved on a 40-day tow.

RESPONSE AND HORSEPOWER FORECASTS: In tow forecasting, the simulator is used to forecast the speed and response of the vessel during transit. For fixed operations, such as a recent winter drilling campaign off Nova Scotia, the simulator is used to model and forecast the heave, pitch, roll and orientation. Recently, the simulator was generalized to predict the full electrical power demand on cruise ships which requires tracking the weather and currents as well as the variation throughout the day. For dynamic-positioned operations, this same technology can be used with the Oceanographic Analyses to optimize the scheduling of power between stationkeeping and drilling.

ENGINEERING DESIGN AND OPERATIONS: Since the late 1970's, team members have provided metocean, hydrodynamic and oceanographic support for operations and design worldwide.

Supporting drilling; pipeline and construction operations; seismic; shipping; LNG transport; oil spill response; environmental assessment and monitoring; engineering design and operational planning.

schaudt•us

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