

OILMAP DEEP provides rapid predictions of the movement of spilled oil from sub-sea releases. Both the joint-industry CDOG model and OILMAP's native plume model are supported.

APPLICATIONS

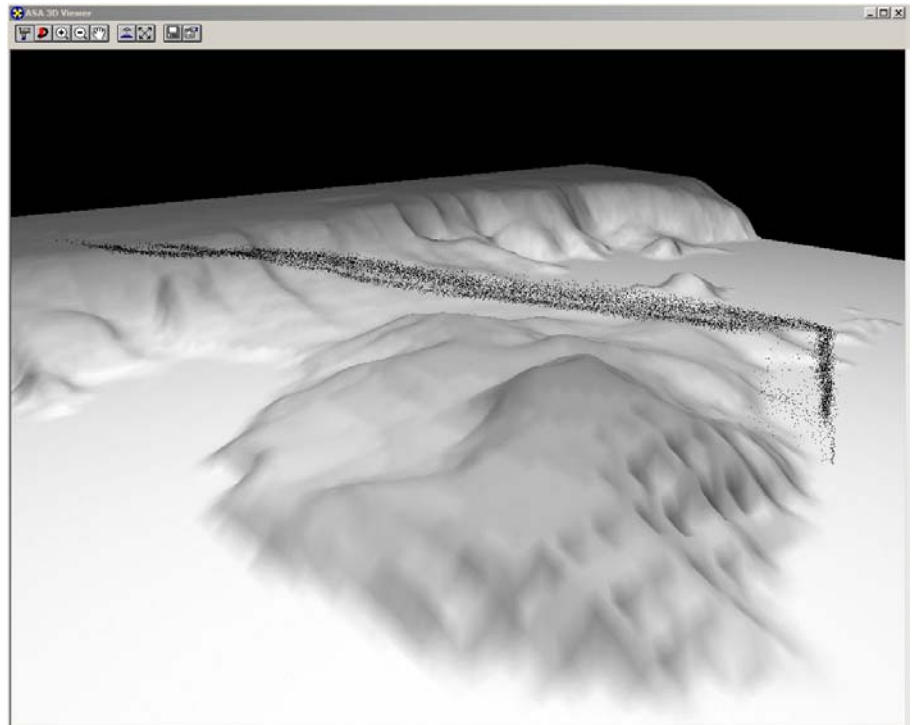
- Well blowout response planning.
- Well blowout response decision support.
- Spill drill exercises.
- Contingency planning studies.

OILMAP DEEP HIGHLIGHTS

- ▶ World-wide capability.
- ▶ Deep water plumes modeled.
- ▶ CDOG or OILMAP plume formulation.
- ▶ Weathering and surface/subsurface transport of spilled oil.
- ▶ Stochastic analysis of surface transport, weathering.

FEATURES

- Includes subsea plume and surface transport for shallow and deep releases.
- Implements both the Clarkson CDOG Version 2.02 and ASA's simple plume calculations.
- Incorporates 2d and 3d hydrodynamic model flow fields.
- Output includes plan and section views of plume, in-water, and on-surface model predictions.
- Develop blowout relief well drilling contingency planning.
- 3d flow fields available for Gulf of Mexico and West Africa drilling/production areas.
- Contains ASA's own GIS or can be used in other GIS software such as ArcView®.

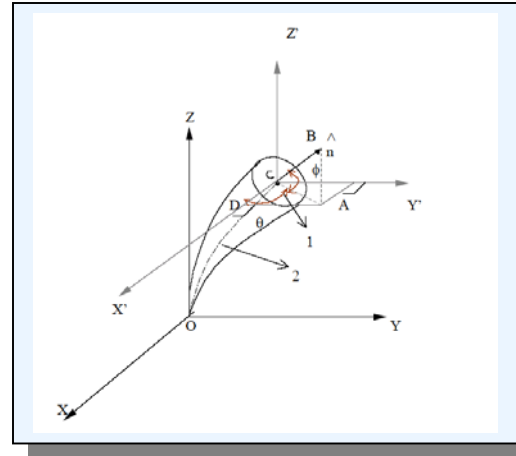


Bottom release visualization.



CDOG VERSION 2.02 MODEL IMPLEMENTATION

- Developed under MMS / Joint Industry program.
- Includes hydrate formation kinetics with mass and heat transfer.
- Includes algorithms for oil particle size estimation.
- CDOG model runs independent from OILMAP, OILMAP visualizes CDOG model outputs.



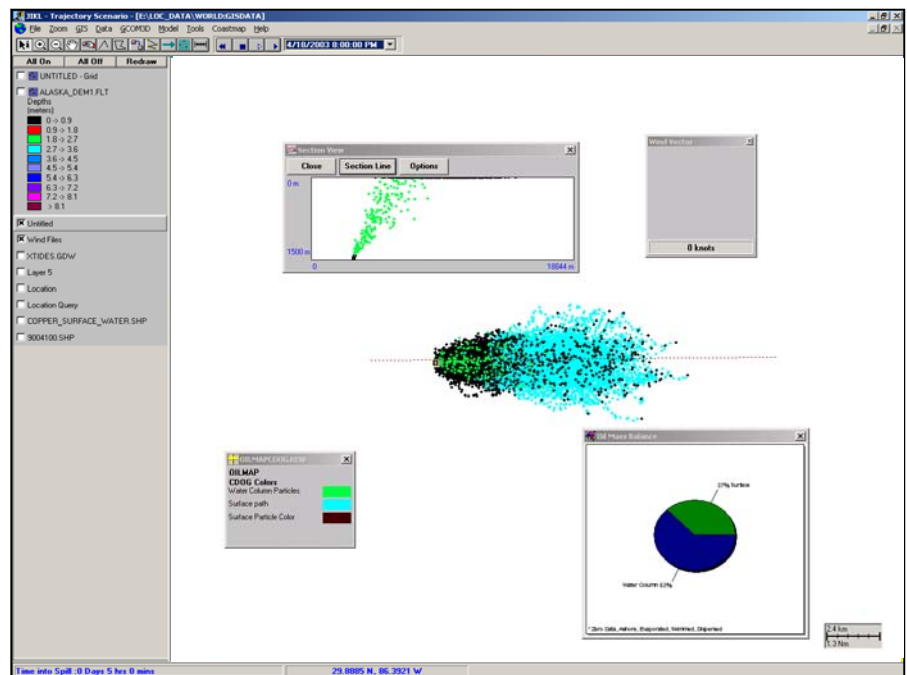
Plume geometry, CDOG.

OILMAP'S PLUME IMPLEMENTATION

- Simplified plume calculation, including water-limited hydrate formation.
- Comparisons in two Deep Spill workshops showed similar surfacing times and distances to CDOG and Sintef model predictions.
- Produces rapid model results.
- Direct integration with complex environmental data.

COMBINED ANALYSIS

- A combined analysis using both CDOG's and OILMAP's plume models has shown to be an effective modeling approach.
- OILMAP's surface weathering processes predict evaporation, entrainment, emulsification, and shoreline interaction.
- OILMAP's stochastic analysis can be used to show stochastic predictions of surface transport subsequent to blowout surfacing.



Planar, section view, and mass balance example.