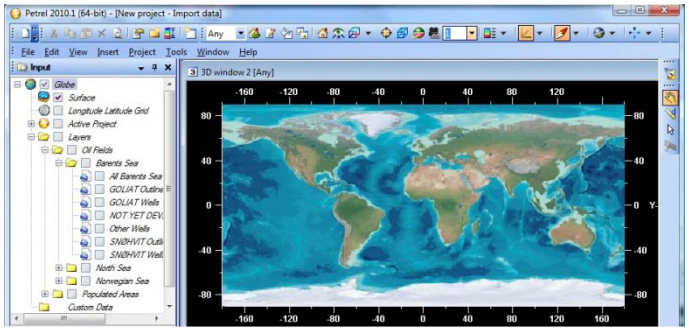
TheGlobe for Petrel

Petrel currently limits projects and data to a singular Cartographic Projection. Map projections are not well suited to represent data that are collected with different references or cover large geographic areas. We therefore complement Petrel with an alternative world:

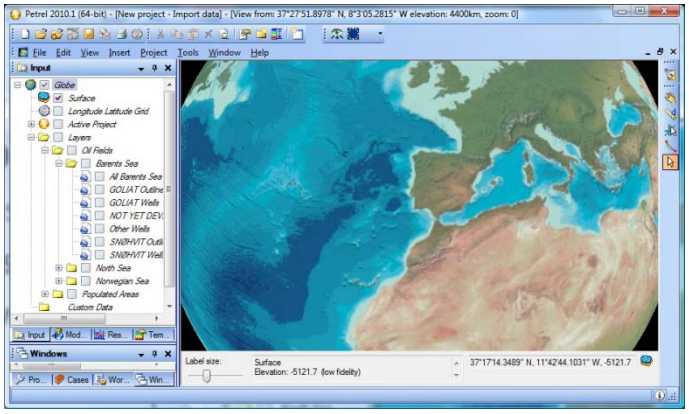
- a Globe object
- a Global viewer
- a set of geodetic tools
- some project management features
- an API that extends Ocean for TheGlobe

TheGlobe Object is inserted into the Petrel input tree. It is defined in the horizontal geographic Coordinate Reference System WGS84 and the vertical EGM96. Data objects can be attached to the Globe if they are defined in or are bound to a cartographic transformation to WGS84.



Classic 3D window, flat world

TheGlobe Viewer is a new spatial viewer that differs from the traditional 3D viewer in that the render coordinates are ellipsoidal and not projected. Objects attached to TheGlobe are used for interactions and visualization. The viewer's scene graph uses a spatial hierarchy and the renderers implement three levels of detail.



New Globe window, ellipsoidal world

Geodetic tools with dual domain worlds we are able to introduce a new class of tools for exploring the world of geodesy, and aid in the process of analyzing the effects and limitations of forcing all data into a singular map projection.

API TheGlobe has an extension API that interoperates with, and honours the style and conventions of Ocean for Petrel. Ocean programmers can implement ellipsoidal renderers using Inventor and have their data objects participate in TheGlobe world.

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Some Highlights

Who needs it?

- Managers of large scale projects
- Technicians of spatial activities
- Users annotating and presenting

A global world

- Add data in geographic coordinates
- Work in a global context

Tables

- Efficient handling of large number of places
- A geographic spreadsheet, search and filter
- Import place-marks from
    - o <tab> separated text files
    - o .kml files
- Hierarchical styles for text and symbols
- URL column for linking external resources

Geo-referenced documents

- Import any document and anchor it spatially
- Anchor project (.pet) files within container projects
- Open the document from the context menu

Geomatics

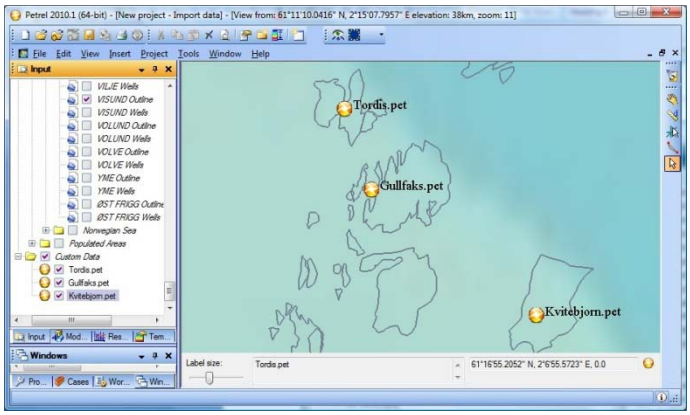
- Ellipsoid geodesics (distance in lat/long space)
- Distance in true 3D using ECEF
- World picking in projected, geographic and geocentric coordinates
- Re-projection distortion estimation

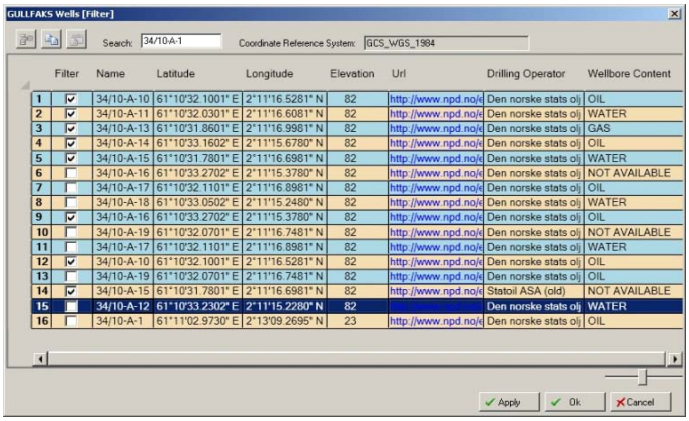
Viewing and picking

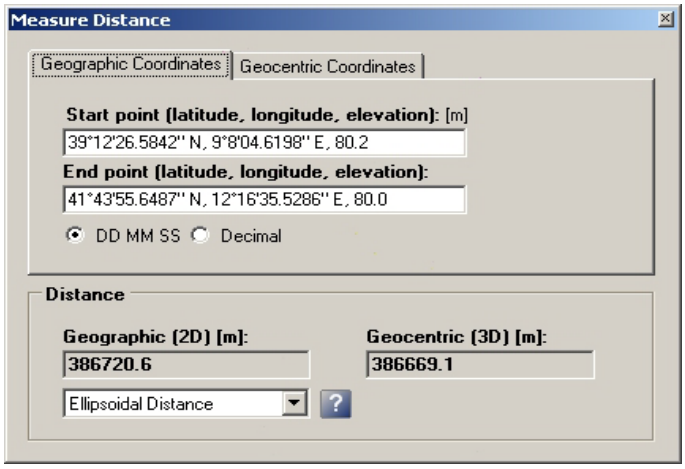
- Petrel data in TheGlobe window (seismic 2D & 3D well head & borehole)
- Globe data in the 2D, 3D & Map windows
- Multi-resolution rendering
- Smooth interactions independent of scale
- Zoom to object and fly to places

Ocean Petrel

- Integrated and compliant, same look and feel
- Participates in project life cycle and events
- Stores its data within the Petrel project
- Extends the Ocean API







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