

The Petrosys PRO software suite is the industry-leader in mapping and surface modeling software solutions for petroleum E&P – delivering direct connectivity with the most popular exploration, production and GIS data sources. Petrosys PRO produces high quality maps and surface models, it manages seismic, well, geoscience and other specialised data used in the search for oil and gas.



Connectivity & Exchange



Mapping & Visualisation



Surface Modeling

Produces high quality maps quickly

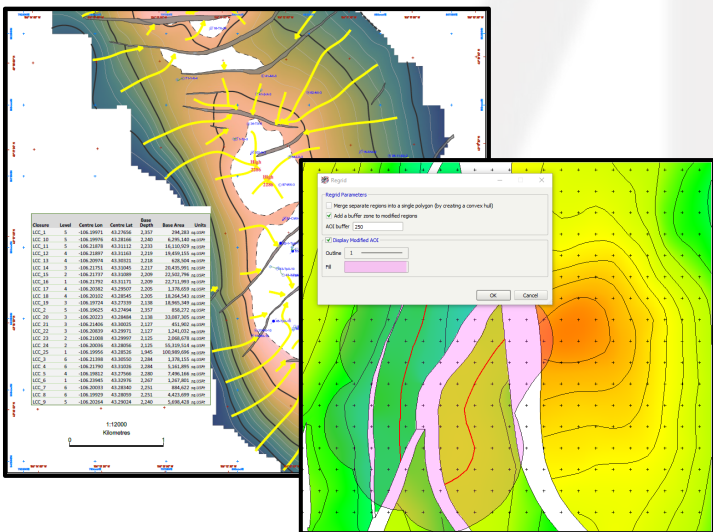
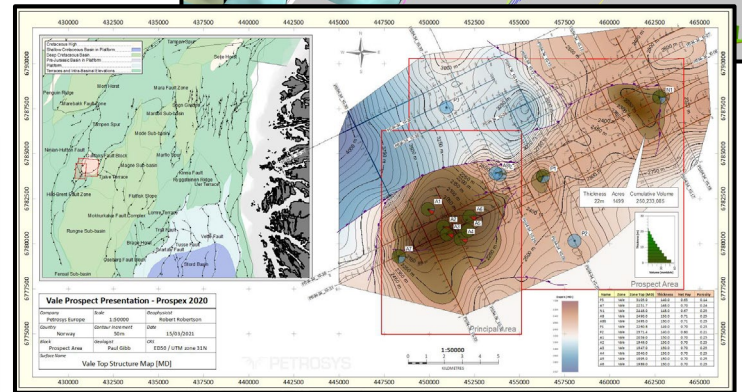
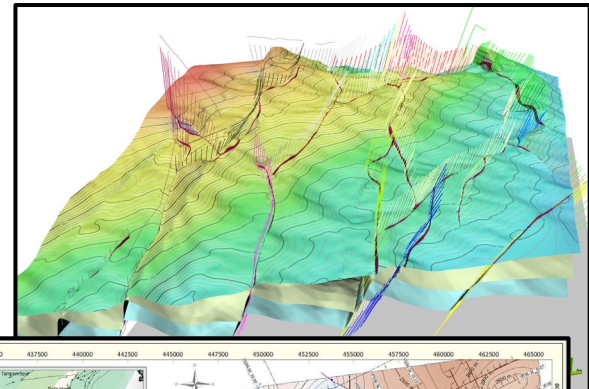
- Map templates allow the geoscientist to reproduce professional cartography quickly

Rapid computation of geologically realistic surface models

- Controllable merging/management of regional grid data
- Time to depth conversion algorithms
- Fault polygons and fault sticks used to constrain grids
- Lowest closing contour identification of structural traps

Manipulates subsurface structural and attribute grids

- Contour editing and surface manipulation tools allow us to apply geological opinions to grid outputs



Computes accountable volumes

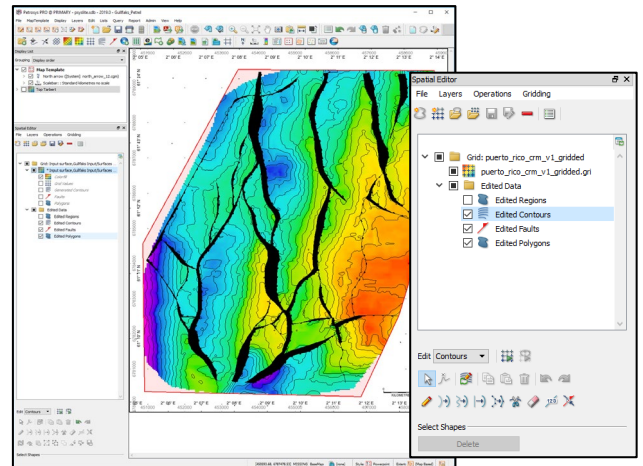
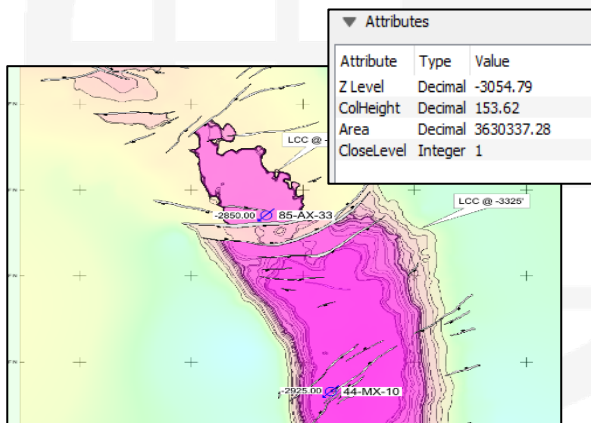
- Established and flexible gross rock volume algorithms
- Reproducible reserves computation workflows

Integrates data across applications

- Direct use of data from multiple G&G and GIS applications
- Can transfer/convert data across multiple G&G and GIS applications.

Subsurface Mapping Editors

The Petrosys subsurface mapping editors are vital tools for many geoscientists globally. Their flexibility and simplicity generates a powerful suite of tools to interpret the subsurface more accurately. This allows users to impose their geological knowledge into subsurface maps whereas other applications may force the user to accept a default generated grid and offer limited control beyond this.



Lowest Closing Contours (LCC)

The Lowest Closing Contour (LCC) option help users quickly and easily identify prospects within their subsurface grids. Changing the input parameters allows the user to identify economic prospects and remove smaller, uneconomic closures.

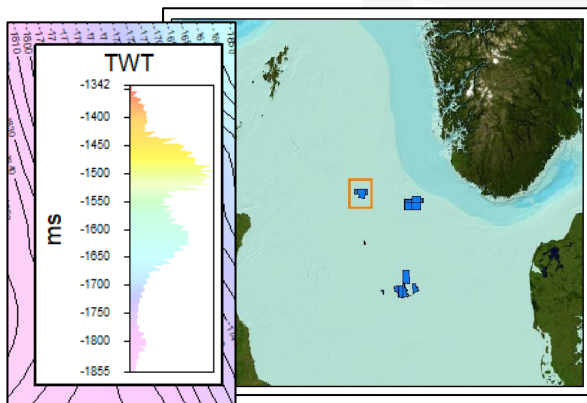
Both leaking and sealing faults can be incorporated to delineate fault bounded structures where the user has the geological knowledge to constrain the model.

Probabilistic Resource Calculator (PRC)

The new PRC tool is a step change for Petrosys PRO volumetric calculations. The PRC tool gives all PRO users access to our tried and tested monte-carlo simulation capability, from the Petrosys Prospects and Leads Database (PLDB).

With access to a variety of computational methods for both conventional and unconventional resources, the PRC reduces risk and uncertainty by opening up the door to probabilistic modelling.

Geology	Oil	Associated Gas	Probability factors		Correlation	Results - Oil	Results - Associated Gas		Distribution Type
Variable	Minimum (P99)	Low Side (P90)	Median (P50)	Mean		Constant/Mode	High Side (P10)	Maximum (P1)	
Porosity (fraction)	0.094	0.110	0.133	0.134		0.160	0.186	Lognorm	
Degree of Fill (fraction)						1.000		Constar	
TGCF (fraction)						1.000		Constar	
Pool Area (km2)	57.880	79.284	102.877	103.148		102.000	127.419	153.006	Stretche
Net Pay (m)	29.548	43.000	59.500	59.500		76.000	89.452	Normal	
Ave Net Pay ^{EX} (m)	0	0	0	0		0	0		
100% NRV ^{EX} (km2.m)	0	0	0	0		0	0		



Map Templates

Map Templates have revolutionized how PRO users make subsurface maps. Such has been the success that we have listened to the early adopters and implemented some additional improvements in map making efficiency. These are: High quality dynamic location maps which can now be based on any customized base map; universal colour bars will be available as part of a style template; title blocks can be created from Excel files, legend styles can be included with the style template.

Quickly Convert Legacy Data To Digital Formats

The Challenge

A new entrant to a mature basin needed to gather surface and fault data from many images and scanned maps. Traditional digitising was slow, boring and unpopular with the team, but attempts to outsource it had resulted in error prone data being returned. Useful knowledge was being excluded because it was too difficult to capture.

The Solution

Petrosys has tools to georeference images; convert rasters to grids; automatically trace lines; edit grid and vector data. Geoscientists can quickly convert images without getting repetitive strain and own their data making any necessary edits to produce high quality results that match their expectation and knowledge.

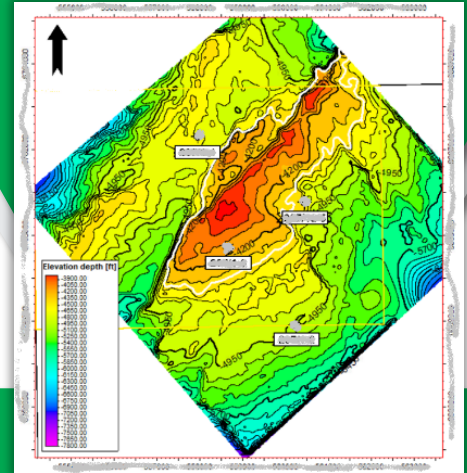
The Result

With a fast and accurate process, much more relevant data is available for assessment. The outputs are properly positioned in all dimensions and are easily shared with geoscience and GIS software, adding context and value to recent interpretation.

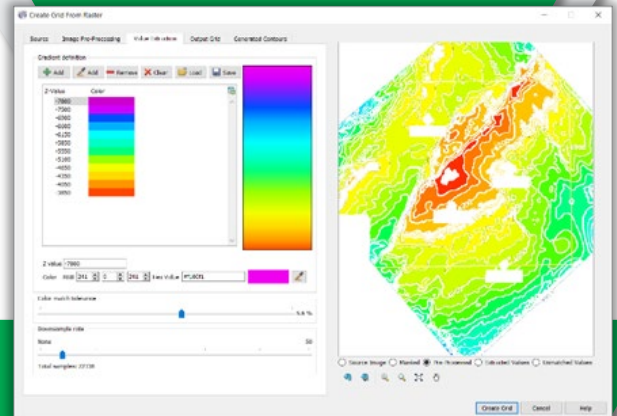
"We used to make do with using images as background pictures but being able to properly incorporate surfaces or contours with z-values has changed the way we work."

TF, Geoscience Data Coordinator

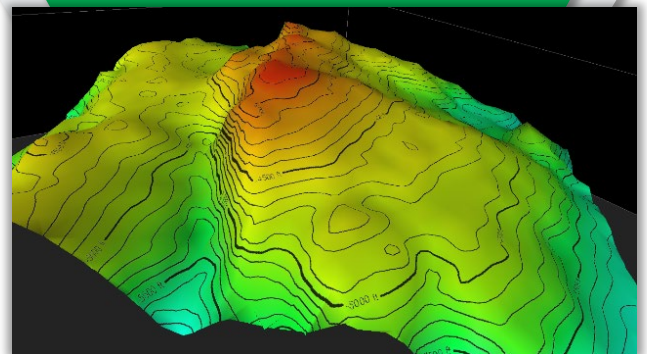
Traditional digitising - 3 hours



Converted and QC'd geoscience data in 25 minutes



Write data directly back to interpretation systems for further modelling



Regional Mapping of Key Horizons

The Challenge

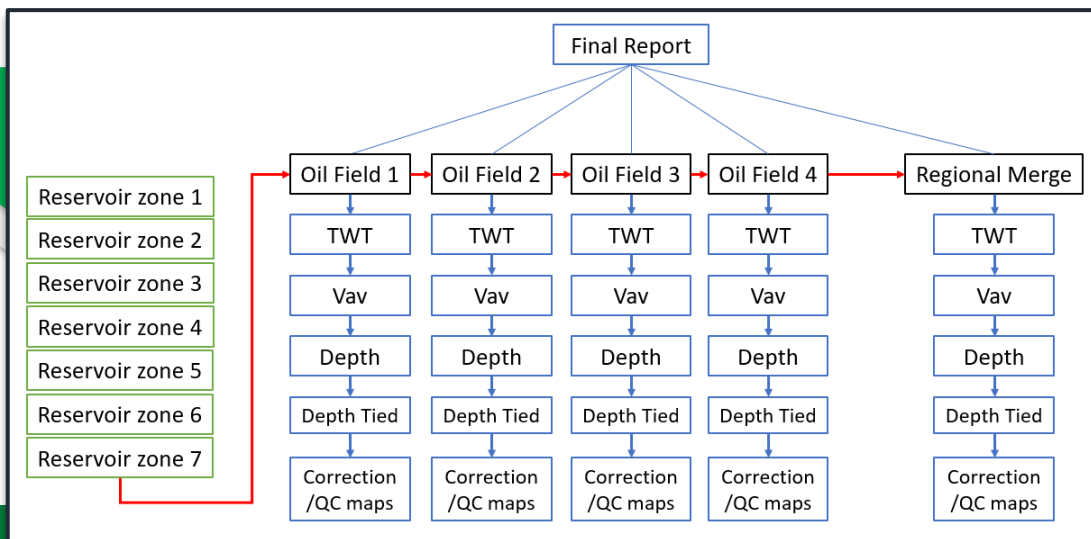
A regional exploration team at a large NOC needed to map key reservoir horizons across four producing oil fields. While geographically adjacent to each other, they were for a period of more than 30 years developed separately, with no exchange of knowledge between separate Asset Teams.

The Solution

A small team of Petrosys consultants were deployed on rotation to install Petrosys PRO software, to establish the data exchange links to third party applications, and to develop the workflows to build the regional maps for seven key horizons.

The Result

Drawing on the final TWT interpretation and the Velocity data from each of the four Assets, intuitive and interactive workflows were built to generate each Assets well-tied depth horizons and regionally merged and well-tied depth horizons.



In addition to creating regional maps for seven merged and well-tied depth horizons the project delivered:

- a documented workflow ensuring the repeatability as new interpretation became available
- the optional delivery of the product depth grids back into the preferred interpretation solution
- knowledge transfer in both domain expertise and future workflow configuration

The value of the Petrosys Consultant on this project was:

- domain expertise delivering results quickly by addressing the identified technical challenges
- complete catalogue of maps for the seven key events, with the capability to reproduce and update them at any time
- staff able to focus on their areas of expertise, but also to adopt and incorporate new best practices for when required again