



## Hydrocarbons Discovery and Evaluation

Buisier Engineering offers prospect generation and maturation services including seismic interpretation for 2 and 3-dimensional seismic reservoir studies to estimate the initial hydrocarbon in place. Prospect generation progression consists of the following steps.

- Geological setting delineation including basin tectonics and structural style, lithostratigraphic section and standard nomenclature, regional hydro carbon sourcing, typical traps top seals and lateral seals.
- Project Area Research activities such as a local base map (fields, wells, cultural data), producing intervals and cumulative production, type logs and stratigraphic column, seismic data acquisition parameters and processing flow.
- Digital data extraction and loading consists of cultural data, well curve data, seismic data, digital fault cuts and formation picks.
- Conducting petrophysical analysis including standardizing and normalizing log data, building a local petrophysical model, determining reservoir characteristics (RW, OWC, Porosities, Lithologies), create, inventory, and analyze well files (cores, dipmeters, mudlogs, etc.).
- Outline sequence stratigraphic framework such as determining the major sequence boundaries, depositional environment modeling, and identifying major faults and unconformities
- Synthetic seismograms integration including seismic data frequency analysis, creating synthetics integrating vsps, sonic and densities.
- Geological structural investigation including pairing synthetics to seismic data, identify seismic reflectors that correspond to regional sequence boundaries, generate interpretation of regional markers, major faults and unconformities, and identify areas of structural interest.
- Study producing analogs including delineate reservoir geometry near producing wells, identify trapping mechanisms and detailed seismic attribute analysis on productive intervals.
- Identification of prospects by detailed mapping of exploration area, seismic attribute analysis focusing on productive analogs and map geometry as well as extent of prospective traps.
- Extended seismic evaluation by reprocessing seismic based on interpretation invert seismic data to aid in prospect evaluation and computing continuity coherence cube for reservoir compartmentalization analysis.
- Depth conversion including detailed velocity analysis of seismic data, creating velocity volumes, converting interpretations to depth, plotting final contour maps- structure, isopachs, velocities, errors, and output digital files of final interpretation surfaces for geological modeling
- Preparation of the final report which will include recommended drilling locations, evaluation and quantified depth and thickness of target reservoir, target geometry and trapping style description and discussed risk factors related to quality of input data.