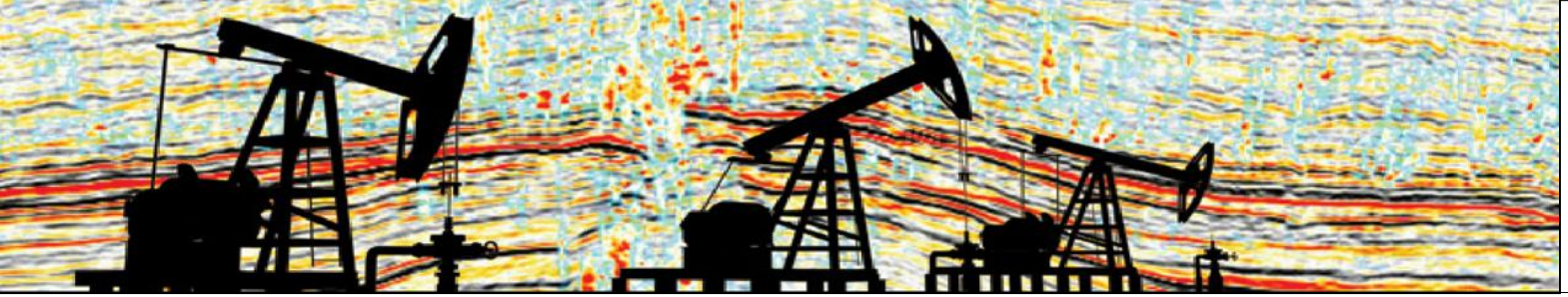
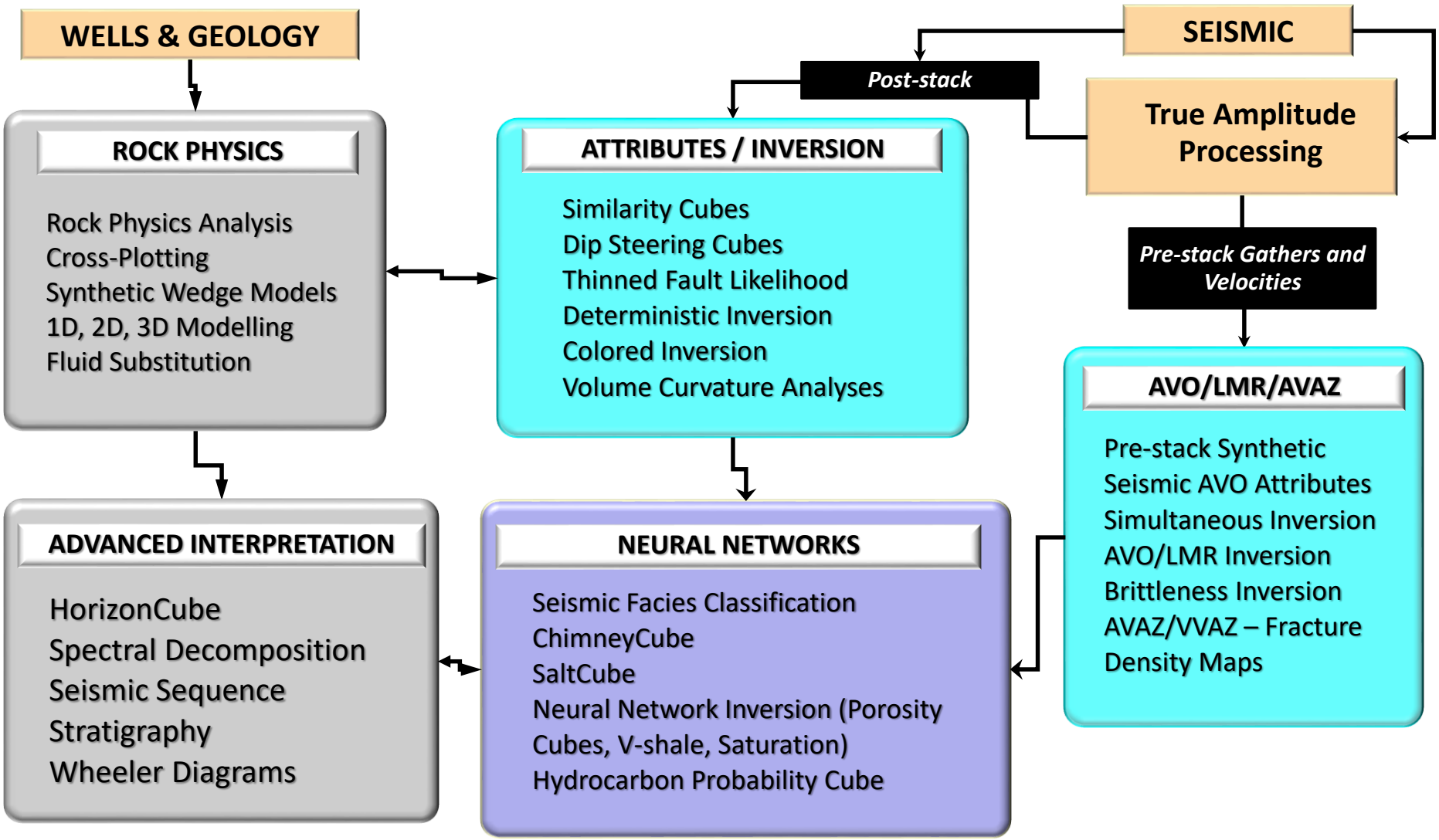


INTEGRATED RESERVOIR CHARACTERIZATION SERVICES

Your Exploration Partner

RESERVOIR CHARACTERIZATION SERVICES



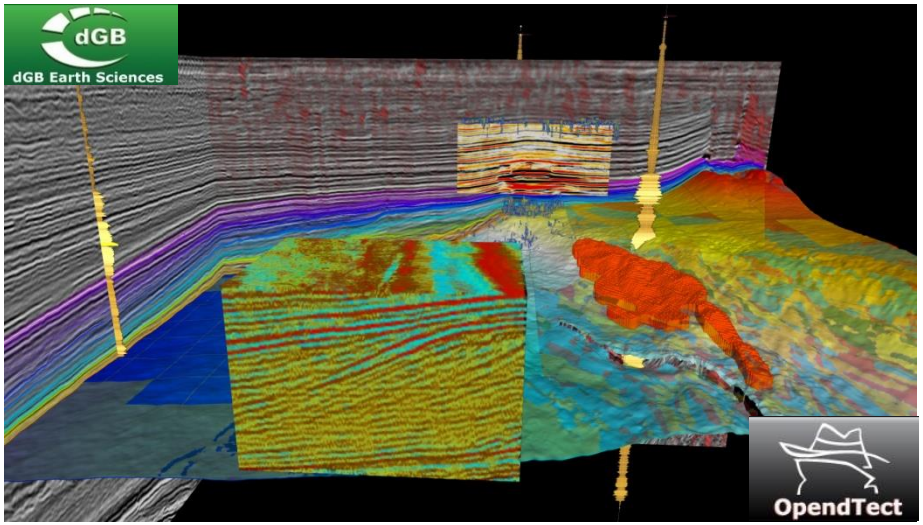
SOFTWARE – A COMPLETE TOOLBOX

Canadian Representative

OpendTect Pro

"The Seismic Interpretation Platform
with the highest return on investment"

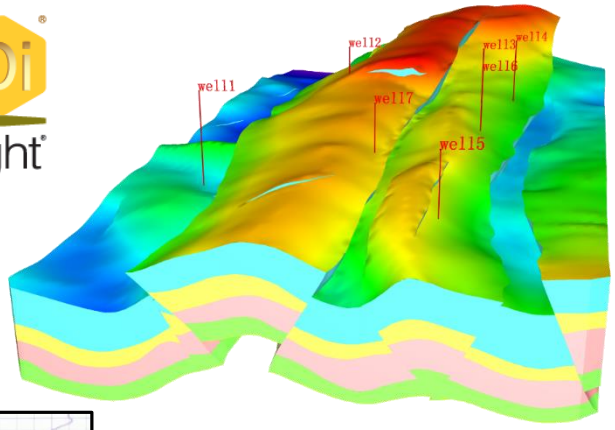
Pro Plus

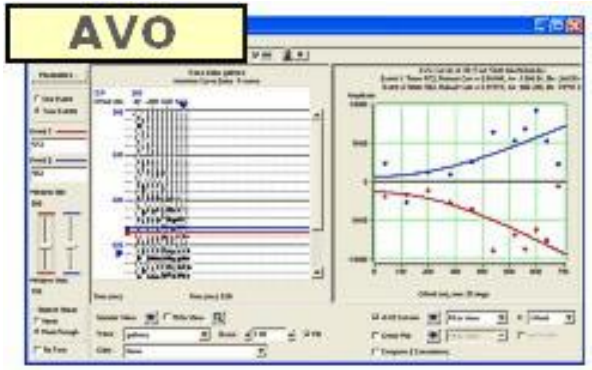


HAMPSON-RUSSELL
A CGGVeritas Company

GridWorld DepthInsight

Canadian Representative





SeisWare
Industrial Strength Interpretation

STRIP.LOG 6
The Lithological Strip Log Drafting Tool

HORIZONTAL.LOG 6
The Horizontal Strip Log Drafting Tool

LIGHTSTREAM RESOURCES

MURPHY OIL CORPORATION

Pacific Rubiales Energy

TOTAL

CEPCOLSA

PETROCHAD (MANGARA) LIMITED

Apex Allied Petroleum Exploration Inc.

PPL

KNOC 한국석유공사

Worldwide Projects

TEINE ENERGY

Tallahassee RESOURCES, INC

cequence energy ltd

Kallisto Energy Corp

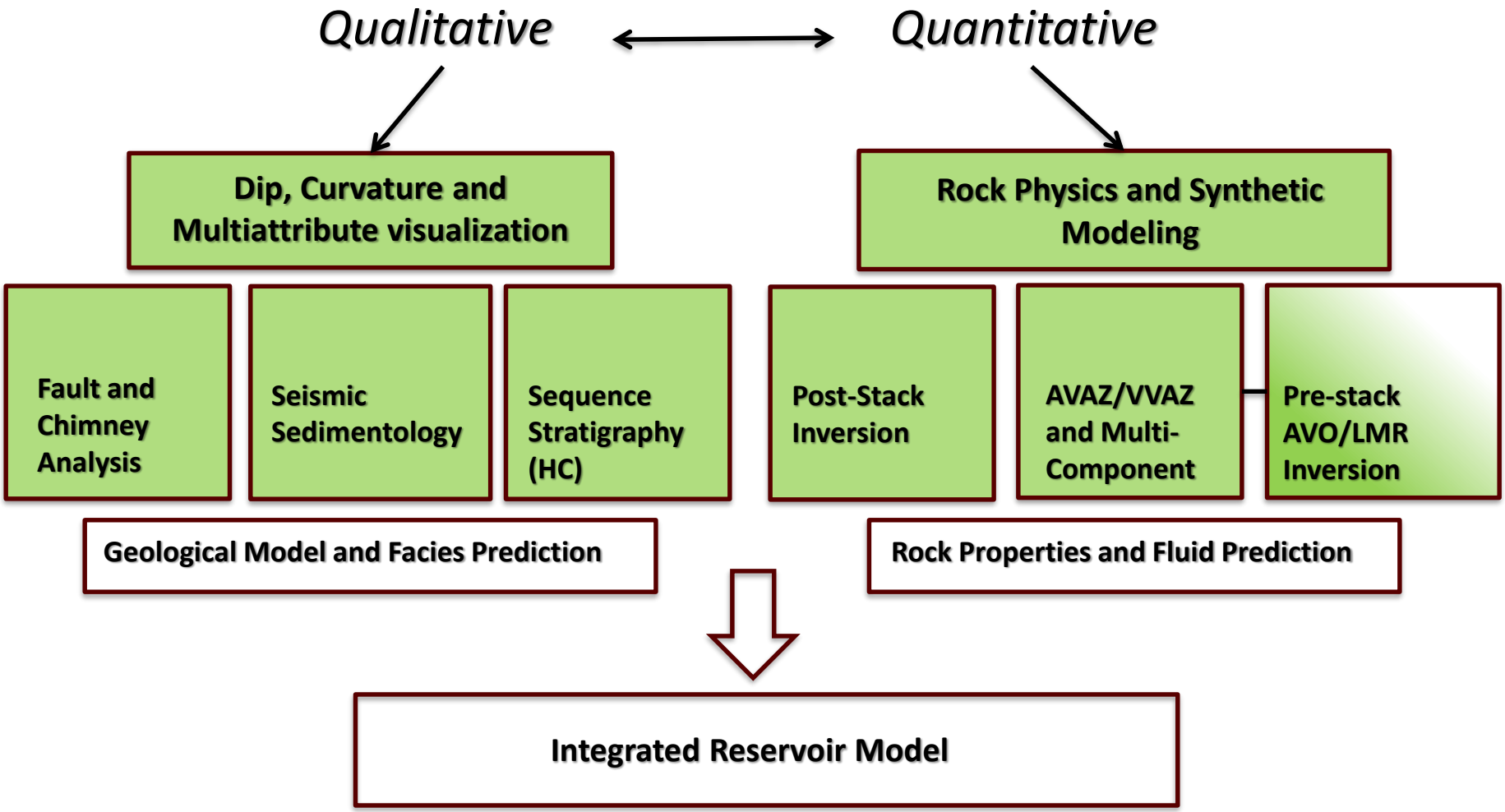
Dodsal

VANOIL

NXT Energy Solutions

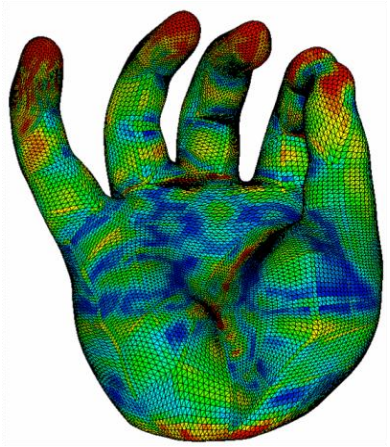
FCR

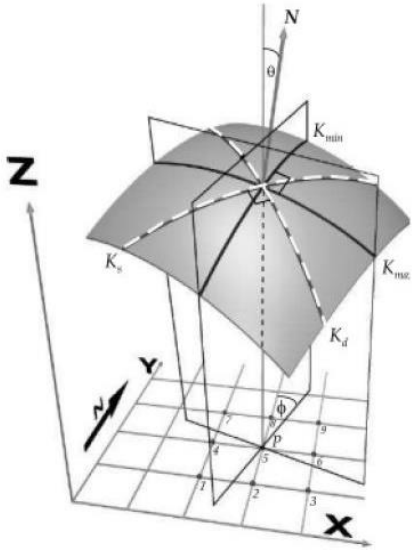
TYPICAL PROJECT LAYOUT

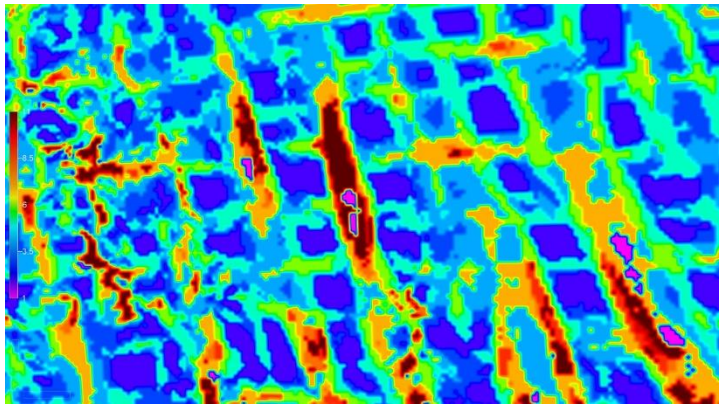


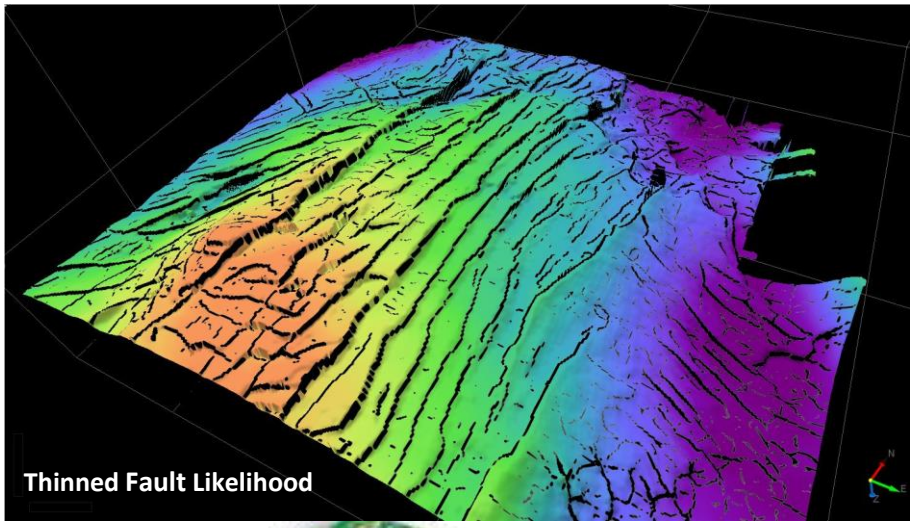
FAULTS/FRACTURE ANALYSES

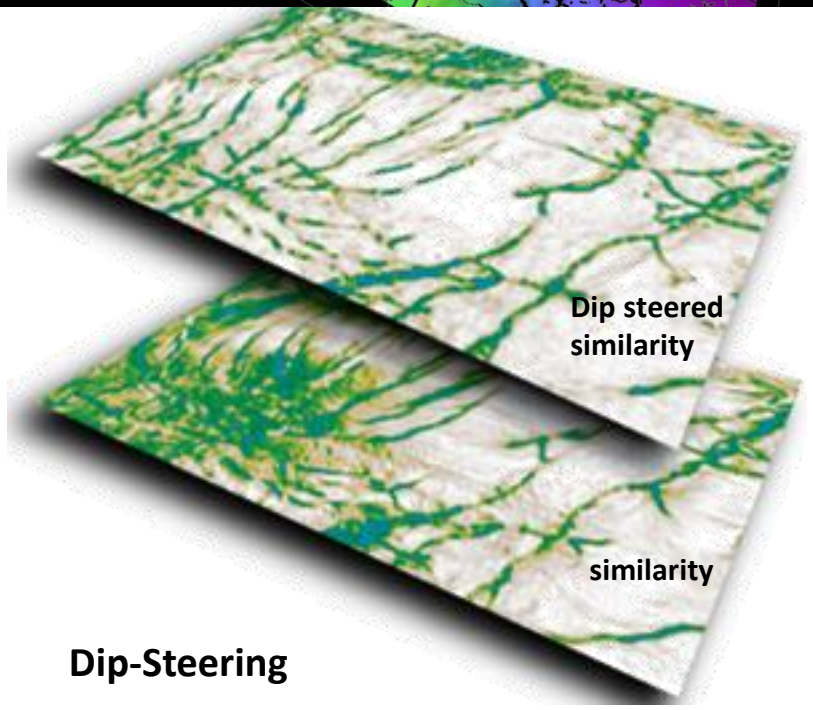
Volume Curvature





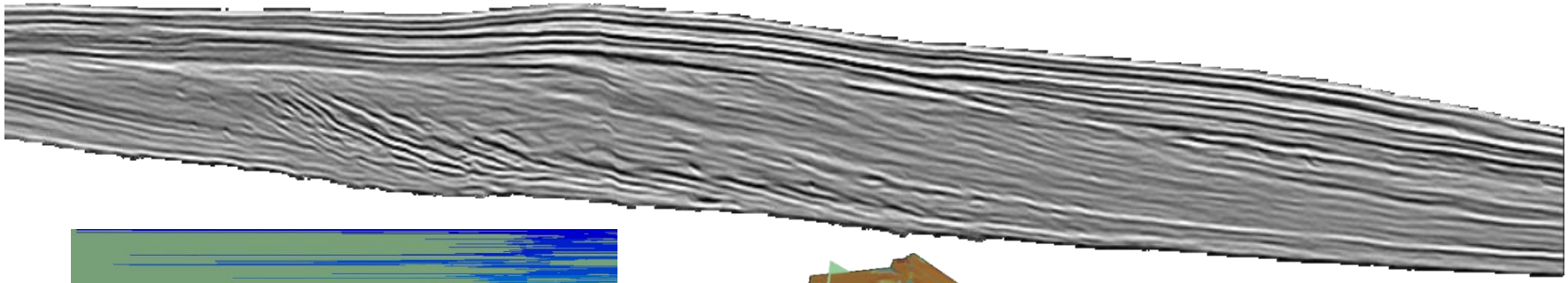


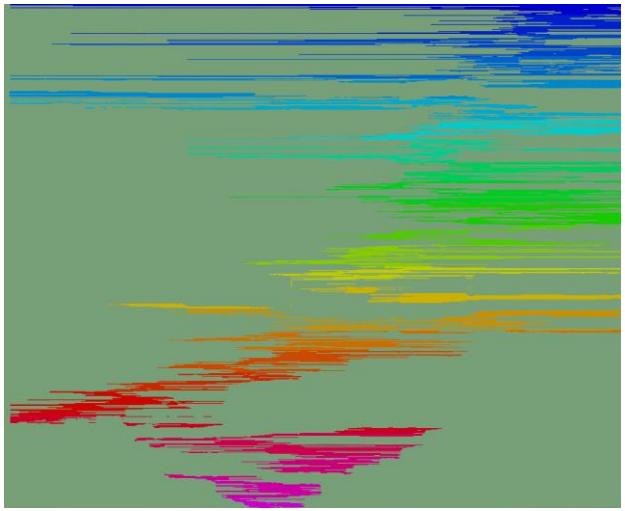


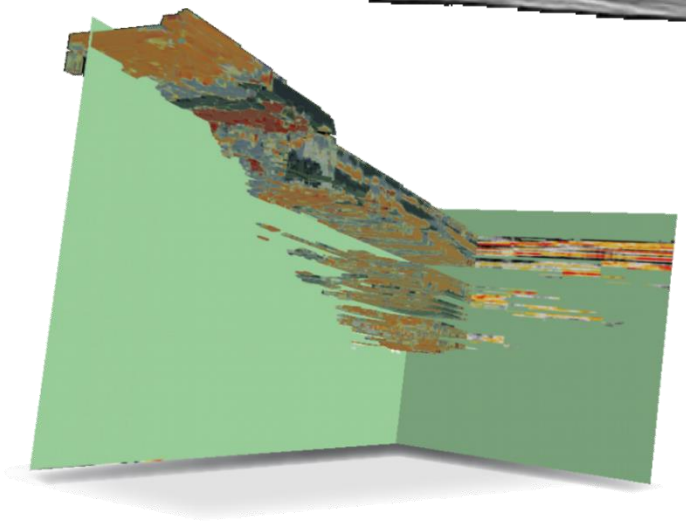


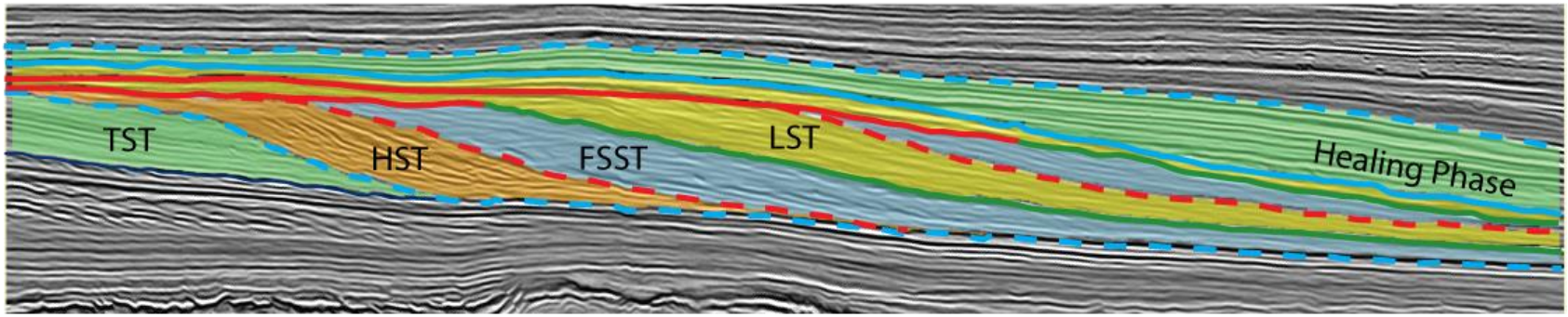
Dip-Steering

SEQUENCE STRATIGRAPHIC INTERPRETATION

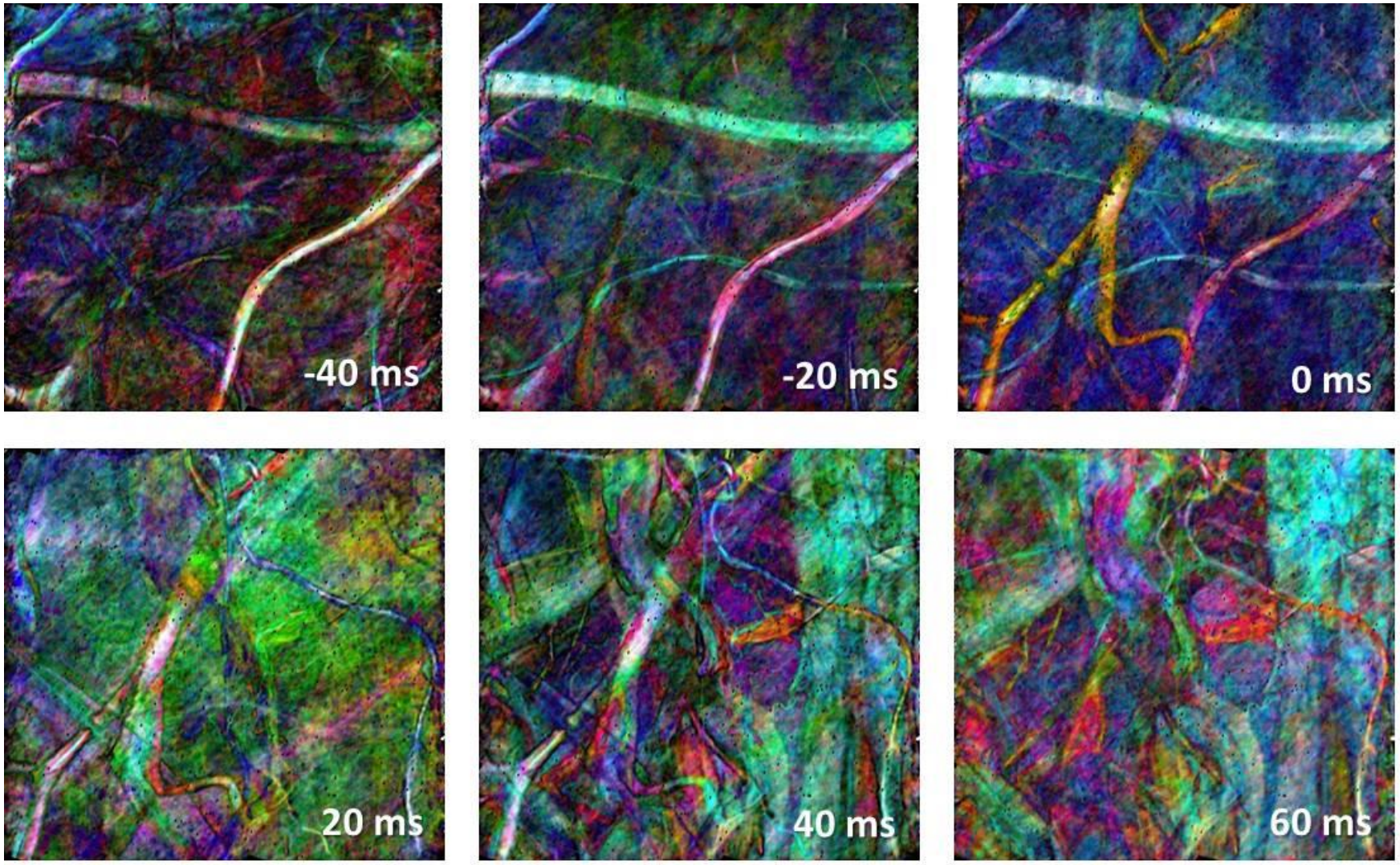






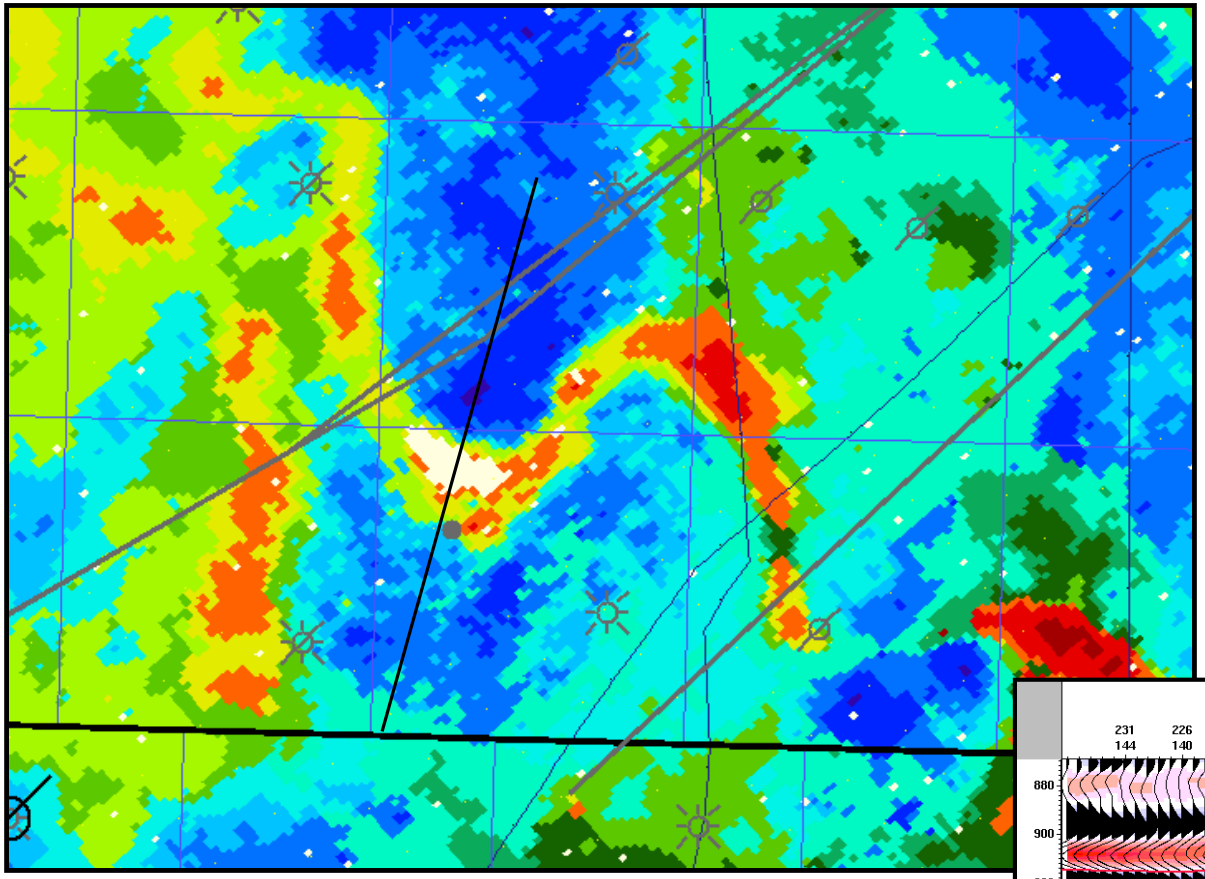


SPECTRAL DECOMPOSITION



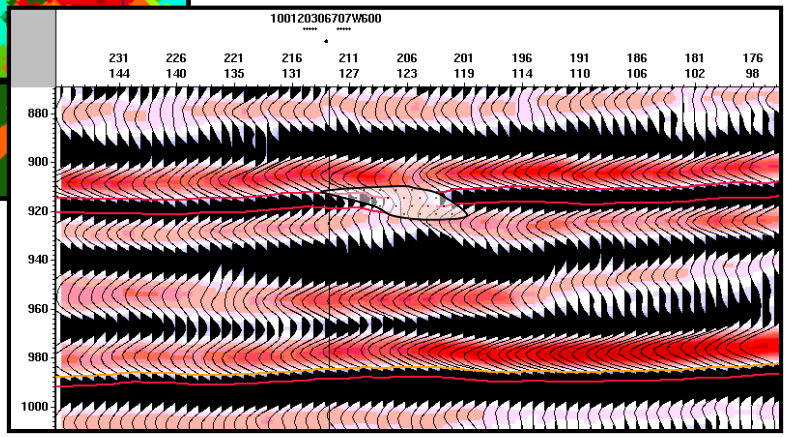
Example of fluvial deposition, Cabonera Fm, Llanos Basin, Colombia presented at AAPG ICE 2013, Cartagena

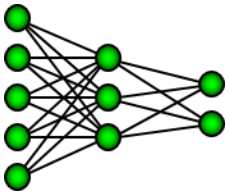
SEISMIC FACIES ANALYSIS



Seismic geomorphology and sequence stratigraphy could lead to opportunities.

Seismic Facies analysis of Lower Notikewin channel shows a point bar aligning with a shear zone.

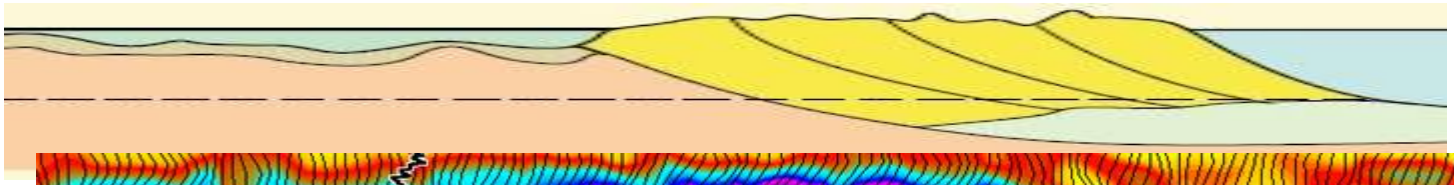




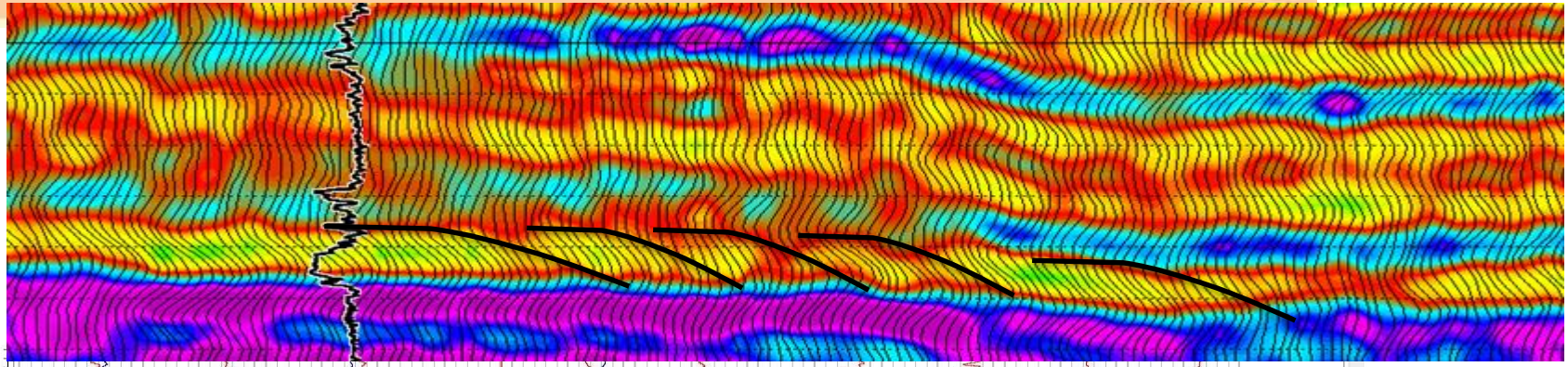
FAULTS
SEQ STRAT
FACIES
INVERSION
AVO/LMR
AVAZ

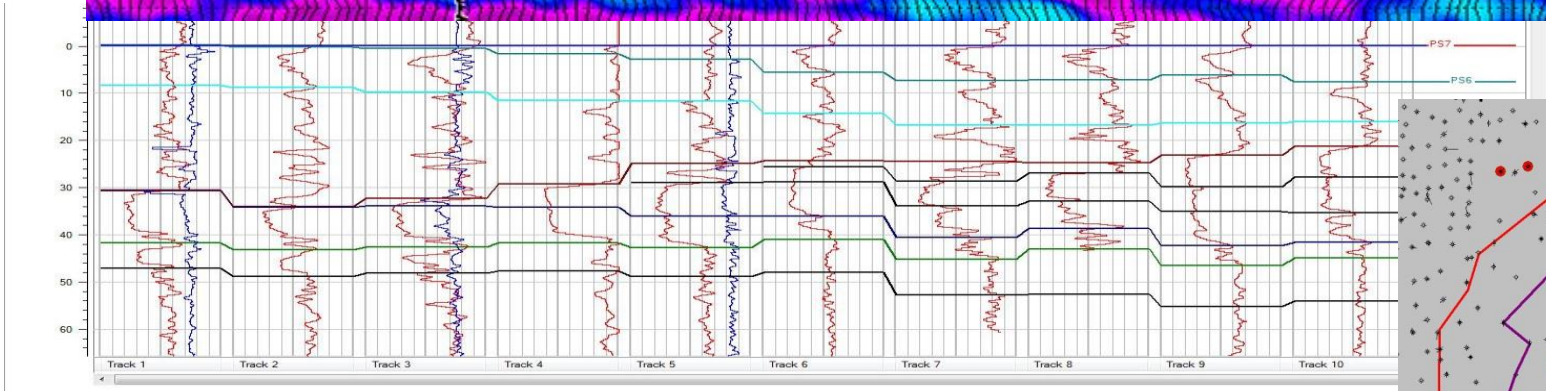
CASE STUDY – POST STACK INVERSION

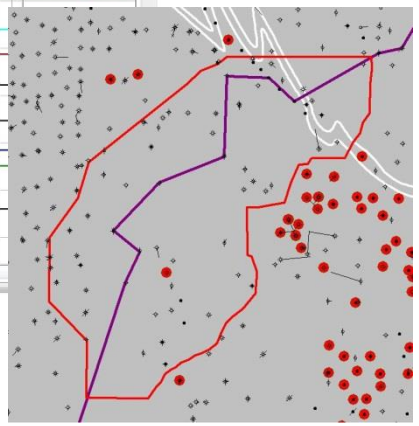
Present day example – Galveston, Texas



SW **NE**

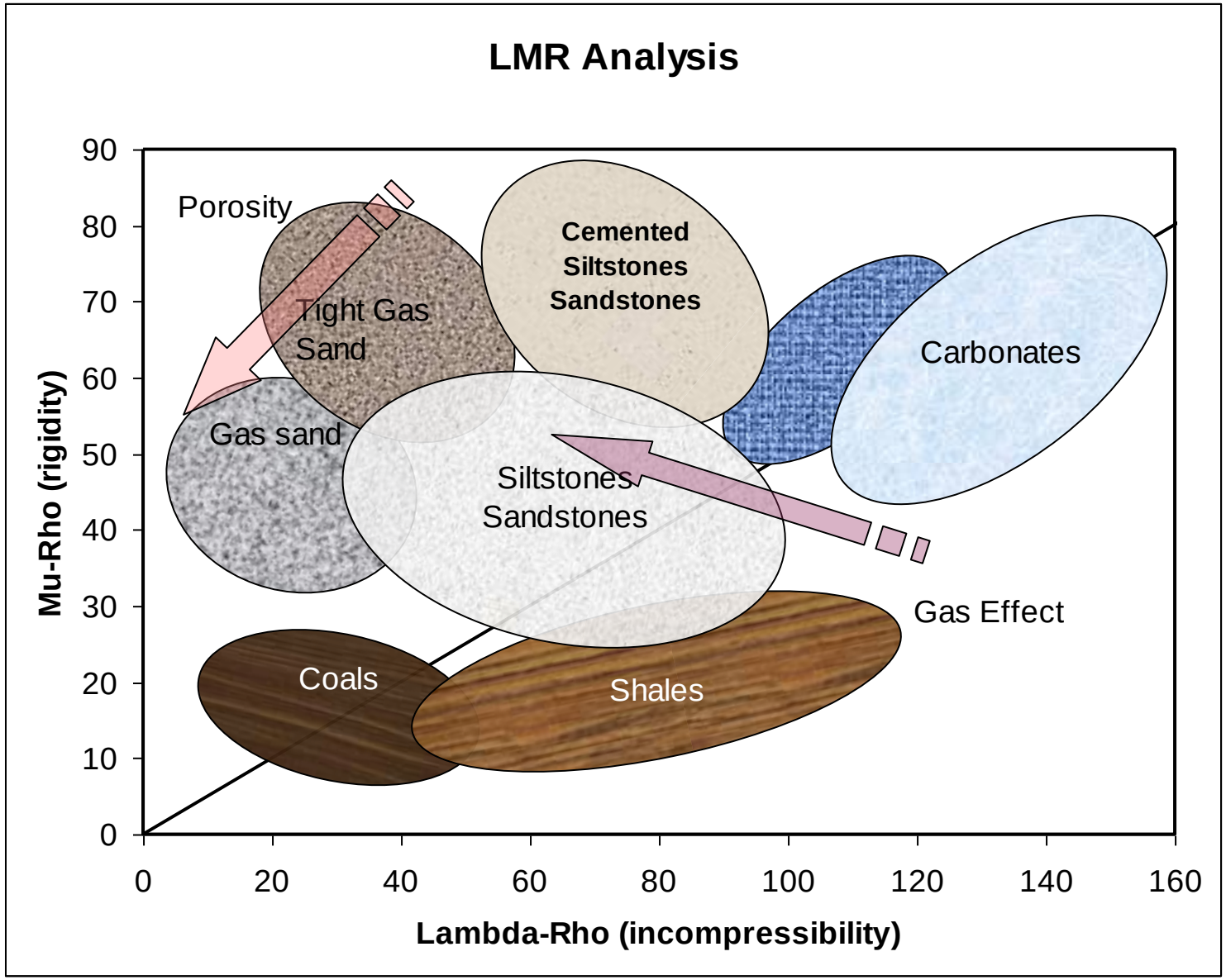






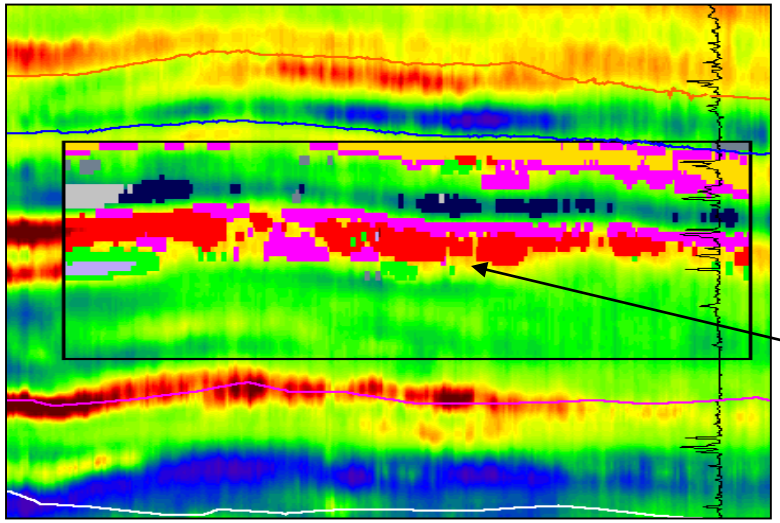
SW-NE cross-section flattened on top of PS4 (Kakwa sand member, Cardium Fm, Canada)

AVO/LMR ROCK PHYSICS

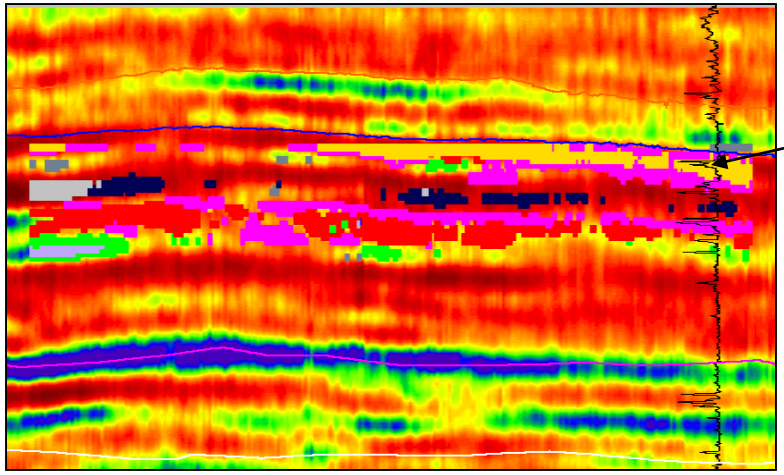


AVO/LMR – PRE-STACK LITHOLOGY AND FLUID DETECTION

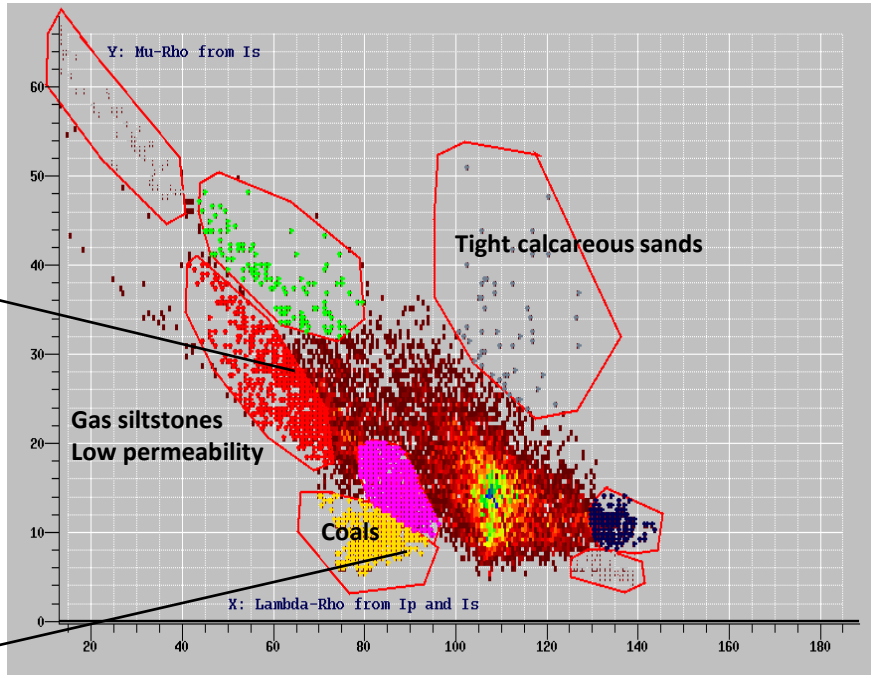
Lambda-Rho (incompressibility)



Mu-Rho (Rigidity)



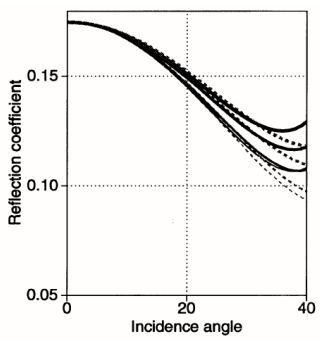
Pre-drill analysis for well 12-10. Falher F and G sandstones with AVO effect

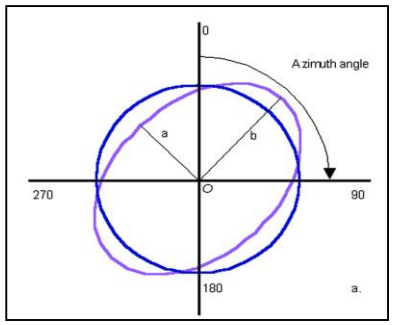


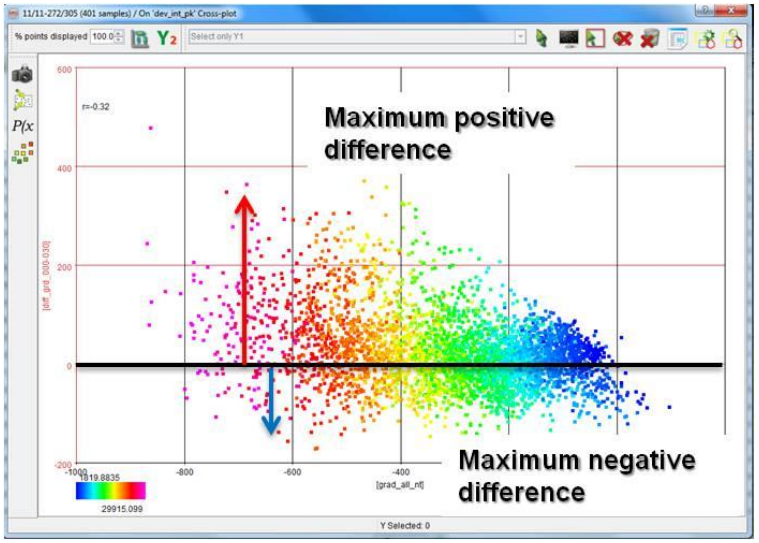
Lambda-Rho vs Mu-Rho x-plot do have physical meaning related to the rocks and can be derived seismically as well.

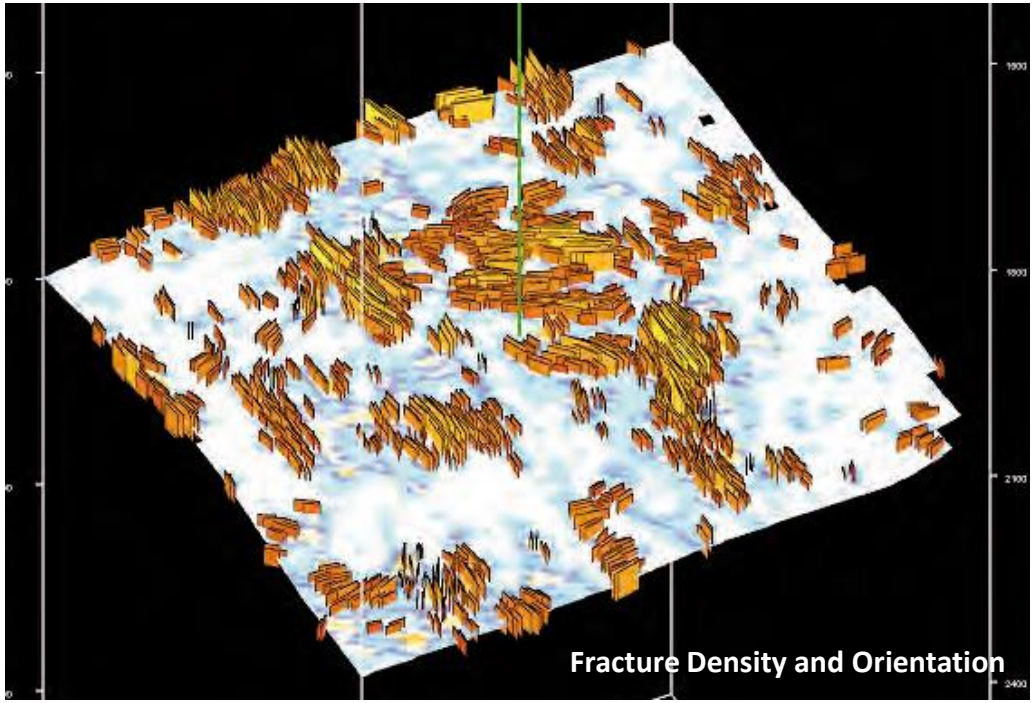
AVO/LMR – More definitive tool can be transformed more accurately to lithology and fluids

AVAZ - FRACTURE DENSITY AND ORIENTATION









Fracture Density and Orientation derived from AVAZ Gradient residuals can be shown by glyphs. Input from VVAZ can also be combined with the results.

YOUR EXPLORATION PARTNERS

PETROEXPLORERS

Thank You!