

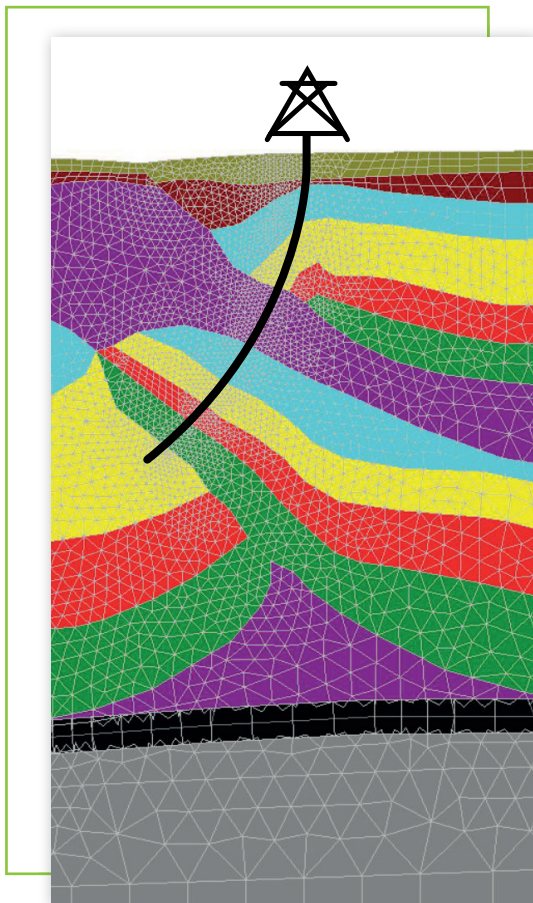
**CURISGEOMECH**



OIL AND GAS GEOMECHANICS



**CURISTEC Geomechanics services are characterized by the application of the latest sciences and technologies to help you reduce well construction problems and increase reservoir harvesting. Our Mechanical Earth Models (MEMs) are designed to meet your specific well or field requirements. We select the most efficient laws to evaluate formation properties, pore pressure and stresses. Our proprietary rock physics models have been developed to improve MEM precision. Each field simulation is optimized to take into account the complexity of each project. Lab testing is design based on the nature of the rock, while test interpretation takes into account the microstructure of the rocks.**



Wellbore instability and mud losses are two of the key causes of excessive NPT. Sand production is a significant driver for lower Return on Investment (ROI).

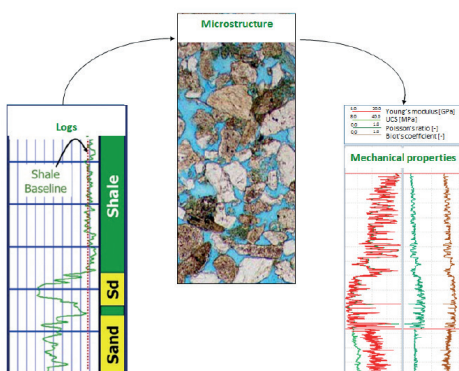
### Geomechanics at wellbore scale

- Formation mechanical properties
- Pore pressures
- In situ stresses
- Mud weight window
- Sand production risk

Optimizing reservoir production requires a holistic analysis including geomechanical effects.

### Geomechanics at field scale

- Compaction
- Subsidence
- Fault reactivation
- EOR

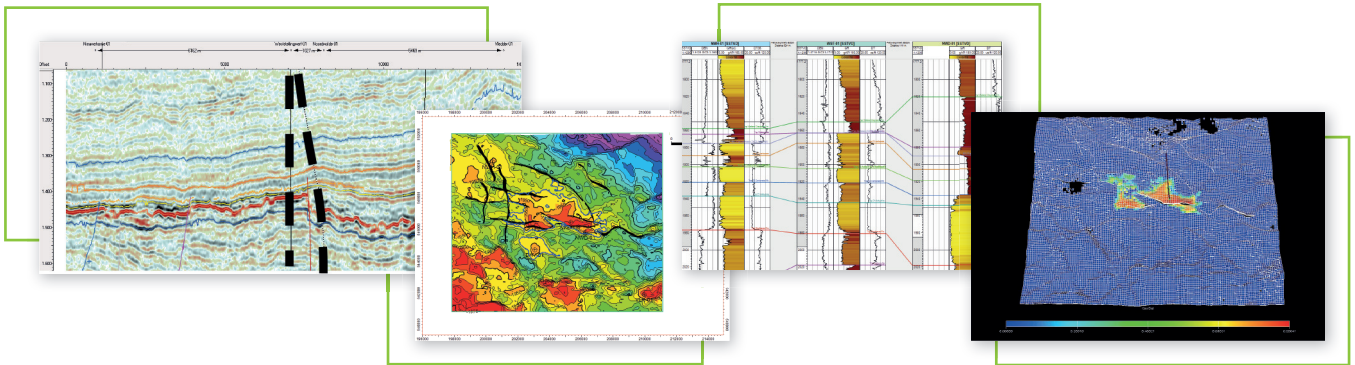


### No two projects are alike

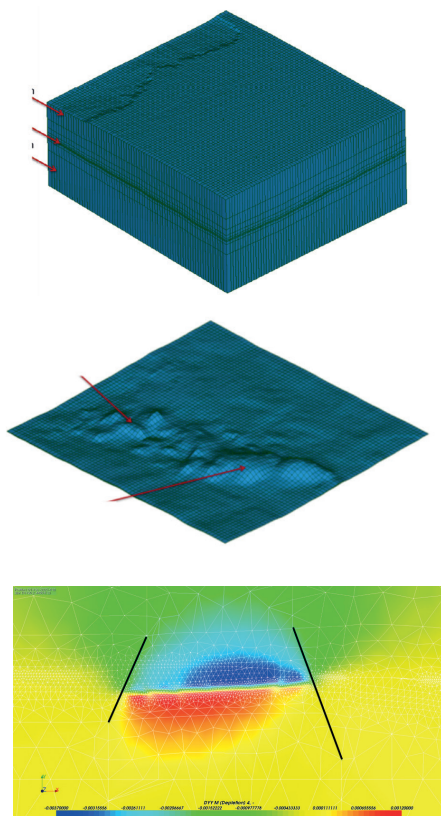
- Technologies are selected based on project specifications
- Theoretical / experimental models are favored compared to empirical models

# GEOMECHANICS AT FIELD SCALE

**Producing a reservoir should be optimized to increase the recuperation ratio and decrease unplanned expenditures.**



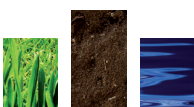
**Optimizing reservoir production requires a holistic analysis based on geology, geophysics, petrophysics, reservoir engineering and geomechanics.**



**CURISTEC performs 2D and 3D field geomechanical modeling**

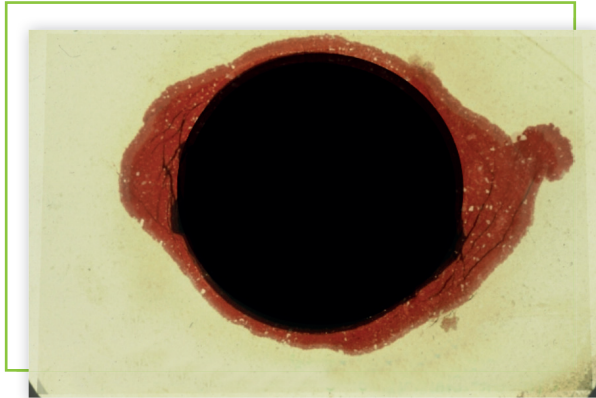
**CURISTEC** engineers help understand the behavior of your reservoirs to optimize production and minimize negative effects such as

- Compaction
- Subsidence
- Cap rock loss of integrity
- Well induced failure
- Poor EOR efficiency
- Etc.



# GEOMECHANICS AT WELLBORE SCALE

The accuracy of **CURISTEC** models comes from our ability to improve the quality of input data and to recognize the complexity of geology.

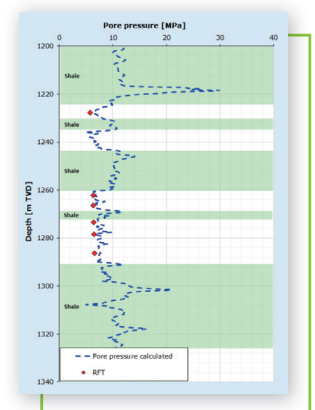
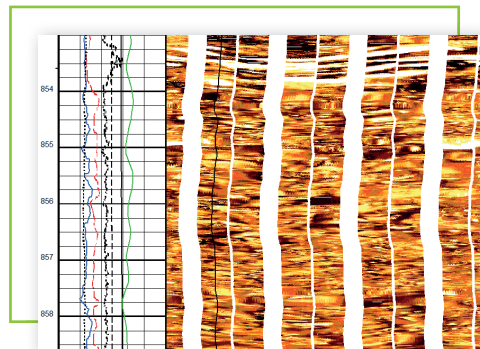
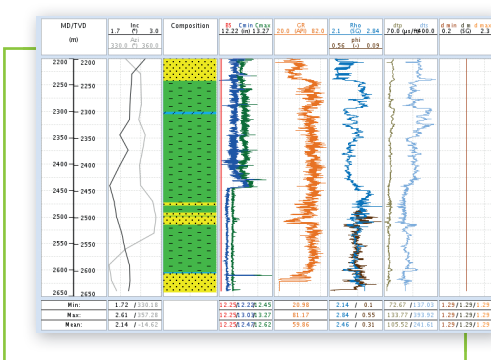
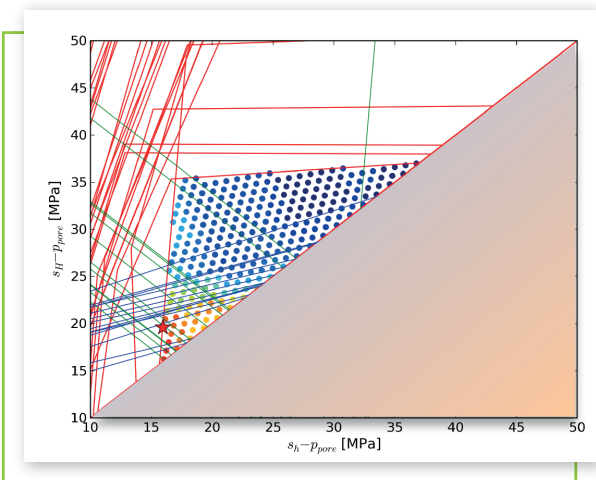


**CURISTEC** has a wide experience in the evaluation of stability issues during drilling and production.

Ours engineers have worked in complex environments such as

- Deep water
- Sub salt
- Tight formation
- Shale gas
- Unconsolidated formation
- Fractured reservoirs
- Etc.

All projects are looked at as a new challenge and use is made of the most advanced technologies.

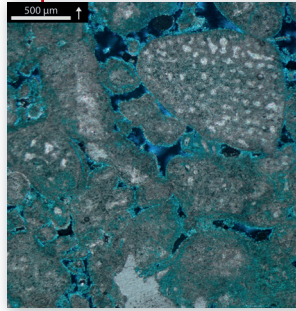




**CURISLAB**

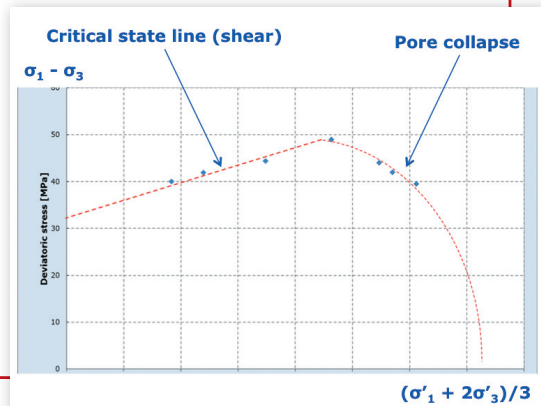
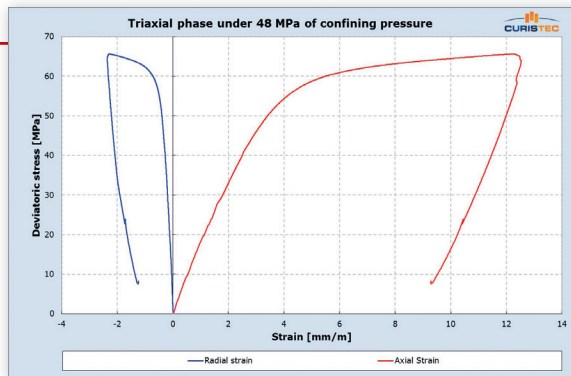
## **CURISTEC** extensive laboratory testing experience enhances our solution development

- Adaptation of the testing procedure to the type of rock
- Use of rock physics modeling to analyze test results
- Curve fitting to evaluate the constants of constitutive laws



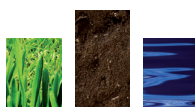
## **Formation & Rock Testing**

- Density, Porosity
- Mechanical properties
- Permeability plugging
- Solubility
- Sonic waves
- Thin section



## **Quality & performance with CURISDATA**

- Complete laboratory quality management system
- API/ISO quality process adherence
- Optimized laboratory software for data and report exchanges



**CURISTEC is a privately-owned industry recognized technology company**, specializing in oil & gas geomechanics, wellbore integrity, cement integrity, materials testing, engineering software and consulting services.

With engineers in France, Vietnam, Americas, and Abu Dhabi (CurisCotta), CURISTEC is globally positioned to deliver solutions based on an integration of science, engineering and field experience for your projects. **The quality of the service is the same independently from where it is provided.**

CURISTEC's dedicated materials testing laboratory in France and Abu Dhabi (2016), can easily and quickly test **the properties of your formations and cements.**

CURISTEC creates leading edge user friendly **software applications based on the latest sciences and technologies** with CurisIT developers located in Spain and China.

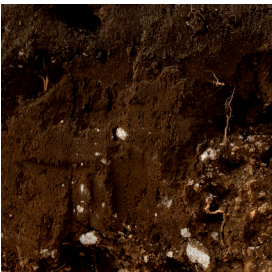


**CURISTEC** delivers complete services in geomechanics



### **Geomechanics at wellbore scale**

- Development of Mechanical Earth Models
- Evaluation of formation properties
- Estimation of stresses
- Preventing wellbore stability problems
- Minimizing sand production risks



### **Geomechanics at field scale**

- Development of 1D, 2D, 3D geomechanical models
- Evaluation of reservoir compaction and surface subsidence
- Estimation of the risk of fault reactivation
- Analysis of the integrity of caprocks



### **Rock testing**

- A complete portfolio of tests
- Fit-for-purpose testing campaigns
- Rock physics models to analyze test results
- Advanced constitutive law design



#### **France / Headquarters**

3 rue Claude Chappe  
69370 Saint-Didier-Au-Mont-d'Or  
(Lyon) France  
+33 4 74 26 93 55  
contact@curistec.com