Integrated Production (Choke) Model
Case – Integrated production (choke) model in an unconventional field

**Business Issue**
- Unconventional wells typically have a more dynamic behavior than conventional wells
- Therefore integrated production models need to have a high “refresh” frequency
- Requires more dynamic opportunity identification

**Solution**
- Capture the constrains of each part of the production system, identify opportunities and build scenarios
- Use Spotfire to dynamically analyze and plan opportunities against cost, bbls and time dimensions
- Proven in International Oil Companies

**Outcome**
- Platform for cross discipline collaboration
- Increase of production target compliance (seen improvements from >8% to <3% discrepancy)
- Drives focus on return on investment (spending money most wisely)
- Stepping stone to live limit diagrams
Integrated Production (Choke) modeling – the process

1. Capture current constraints
2. Capture and qualify Opportunities
3. Build scenario’s
4. Validation and optimization using IAM

Limit Diagram Showing Non-Economic LIP

Facility Limit Diagram

- Capacity
- Economic LIP
- Uneconomic LIP
Integrated Production (Choke) modeling – the modeling
Integrated Production (Choke) modelling – opportunity identification
Integrated Production (Choke) modelling – opportunity planning

Opportunities Planning

Planning - Do nothing scenario

Planning - including selected opportunities

Opportunities list

Opportunities for Business planning

Financial

Objectives: 
- Increase production
- Enhance well performance
- Minimize maintenance costs

Methods: 
- Enhanced oil recovery techniques
- Production optimization
- Well interventions

Results: 
- Improved oil recovery rates
- Reduced operational costs
- Increased production output

Conclusion: 
- The integrated approach to production modeling has shown promising results in enhancing oil recovery and optimizing well performance.