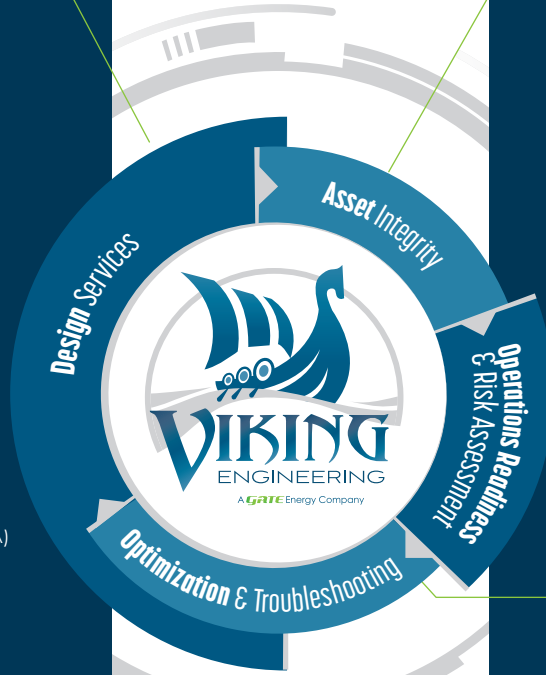


Critical Engineering & Materials Testing Lab



Design Services

▶ Critical Well Engineering

Integrated Fracturing & Stimulation
Tubular Casing & Design: WELLCAT/StressCheck/TDAS
Annulus Operating Envelope (AOE)
HPHT Well Design & Completions Engineering
Well Certification

▶ Flow Assurance

Thermal-Hydraulic Analysis/Network Modeling
Corrosion & Chemical Thermodynamic Modeling
Multiphase Transient & Steady State Simulator, PrhoTM, OLGA® Modeling
Sand Transport & Erosion Assessment
Wax, Asphaltene, Scale & Hydrate Risk Assessment

▶ Production Chemistry & Chemical Management

Chemical Selection & Vendor Evaluation
Injection System Optimization
Scale & Corrosion Modeling
H₂S Partitioning Studies
Reservoir Souring Risk Assessment

▶ Water Injection

Material Selection & Corrosion Modeling
Thermal & Fracture Modeling
System Design & Selection

▶ Decommissioning

Well Plug & Abandonment (P&A)
Topsides & Substructure

▶ Technology & Training

Casing & Tubular Design, Sand Control, Drilling Best Practices, ESP Training, Erosion & Corrosion Software
Online Courses

Asset Integrity

▶ Failure Analysis

Root Cause Analysis, Field Investigation
Forensic Engineering
Legal Support-Expert Witness
Finite Element Analysis

▶ Quality Assurance

QA/TPI Surveillance
Rig Inspections
Mill Auditing & Qualifications

▶ Materials & Corrosion

Risk Based Inspection (RBI) & Assessment
Integrity Management Plan Development
Material Selection
Sour Service Evaluation & Testing

▶ Engineering Lab Services

Modeling & Technology
Materials, Corrosion & Engineering Mechanics
Metallurgical Laboratory
Welding Engineering

Operations Readiness & Risk Assessment

▶ Procedure Development

Initial Startup Planning & Procedures
Standard Operating Procedures (SOPs)

▶ Process Hazard Analysis (PHA)

Stream-based HAZOP
Layer of Protection Analysis (LOPA)
Systems Theoretic Process Analysis (STPA)

Optimization & Troubleshooting

▶ Production Optimization

Nodal Analysis & Modeling
Life Extension & Fitness for Service

▶ Operational Flow Assurance

Sand Control Design & Mitigation
Blockage Remediation
Well Testing - PTA RTA

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In-House Staffing Support 24/7 | Management Consulting
Feasibility Studies | PE Portfolio Reviews

Onshore | Offshore
Upstream, Midstream & Downstream Services



MAIN OFFICE

13501 Katy Fwy, Suite 3300
Houston, TX 77079

281.870.8455

ENGINEERING LAB

4930 Dacoma St, Suite K
Houston, TX 77092

281.870.4016

NEW ORLEANS OFFICE

830 Union St, Suite 400
New Orleans, LA 70112

504.507.1157

MEXICO CITY OFFICE

Curie # 11
Colonia Nueva Anzures
Alcaldia Miguel Hidalgo
Ciudad de Mexico
Código Postal 11590

+1.281.870.8455

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