



## **Specialized Services for Energy**

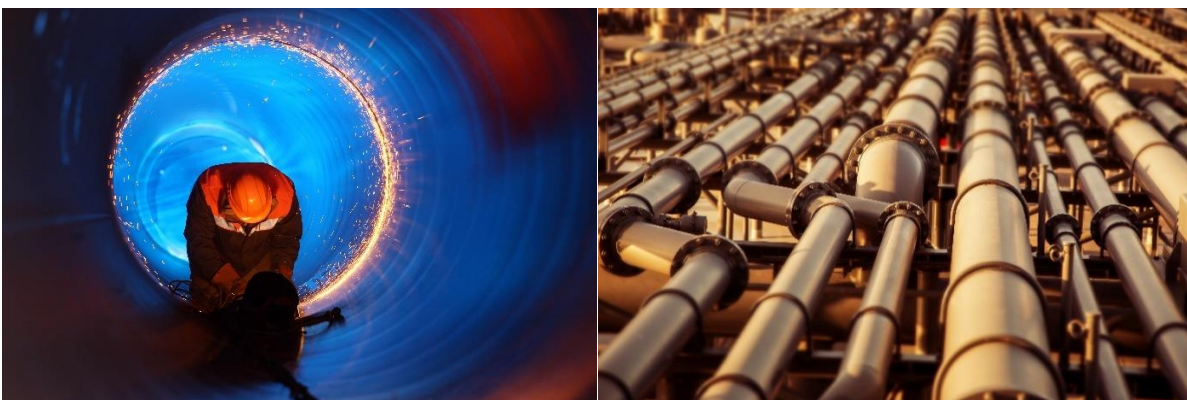
Blu 5 Engineering Ltd. is a privately-owned independent Canadian consulting company whose mission is to provide specialized, value-added integrity engineering solutions to North American companies. We help our clients to succeed in a highly-competitive world market. We serve the energy, petrochemicals, utilities, resources, and transportation sectors. We provide services in five broad practice areas as follows:

- 1. Asset integrity management (pipelines and facilities)**
- 2. Operational excellence and quality management**
- 3. Materials, welding, and inspection engineering**
- 4. Regulatory Compliance**
- 5. Environmental Stewardship**

Our client-focused values drive us to provide:

- 1. The right people**
- 2. The right plan**
- 3. The right timing**
- 4. The right value and**
- 5. The right solution for every project that we undertake.**

The privilege of serving your needs to be your trusted integrity engineering partner. With over 300 years of collective experience, we welcome your challenges.



**Smart Asset Management**

- Pre-acquisition due diligence evaluations
- Integrated GIS Application and Mapping Information Systems
- Suspension, Decommissioning, Reactivation
- Engineering Assessments and Fitness for Service
- Upstream / Midstream / Downstream asset data collection and management
- Application of Innovative, low-cost inspection technologies
- DAR (Decommission Abandonment and Remediation) Planning
- Production OPEX vs. DAR economic cost analysis
- Operational optimization

**Digital Oil Field**

- Asset inventory data collection, tracking and management
- Digitization of data systems with integrated GIS mapping
- Database development and data management infrastructure
- Minimize Risk using Process Safety Management Techniques
- Maintenance and reliability optimization
- Risk-based Inspection management
- More rigorous data management processes to reduce the risk of data loss or corruption

**Trending**

- ILI validation and quality verification
- NDE verification
- ILI tool run comparison and analysis
- Align ILI and NDE data
- Unity plot reconciles ILI data with NDE to assess tool performance.
- Further integration of other pipeline data
- Statistical analysis for enhanced predictive modelling
- Maximize value from existing data while lowering risk, optimizing operational efficiency

**Fugitive Emissions and Environmental Stewardship**

- Fugitive Emissions Management Planning (FEMP) to assure regulatory compliance (CAN SOR/2018-66, AER Directive 60/ Manual 16, SMER 10, BCOGC Flaring and Venting Reduction Guideline Version 5.1)
- Environmental compliance review
- Methane Reduction Retrofit Compliance Plan (MRRCP)
- Emission monitoring
- Leak Detection and Repair (LDAR) strategic planning and implementation
- Enhanced revenue through Fugitive Emissions field applications, solutions, and optimization

**MOC & EPCM (under \$10M)**

- Engineering Design, Procurement & Construction Management of pipelines and facilities
- Pipeline and facilities upgrades and modifications (MOC process)
- Project management, site supervision and daily cost tracking
- Small capital projects, pipeline and facilities (<\$10M)