

Pipeline Integrity

Cannon



Services Include

- **Pipeline System Review**
 - Smart-Pig Survey Analysis and Comparison
 - Line History and Trend Analysis
 - Hydraulic Calculations
 - Stress Analysis
- **Pipeline Road Crossings**
- **Individual Component Analysis**
- **Integrity Program Development**

Pipeline System Review

- Pipeline Status Sheets
- Applicable Code Review
- Pipeline Relative Risk Ranking





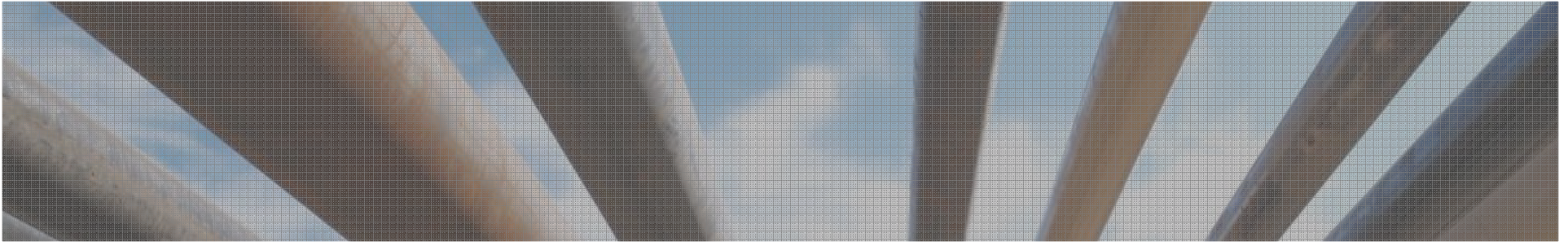
Integrity Program Development

- **Monitoring and Inspection Requirements**
- **Pipeline ‘Change of Operating Condition’ Forms**
- **Pipeline Data Sheets**
- **Construction/Repair Checklists**
- **Regulatory Jurisdiction Determination**



Pipeline Review

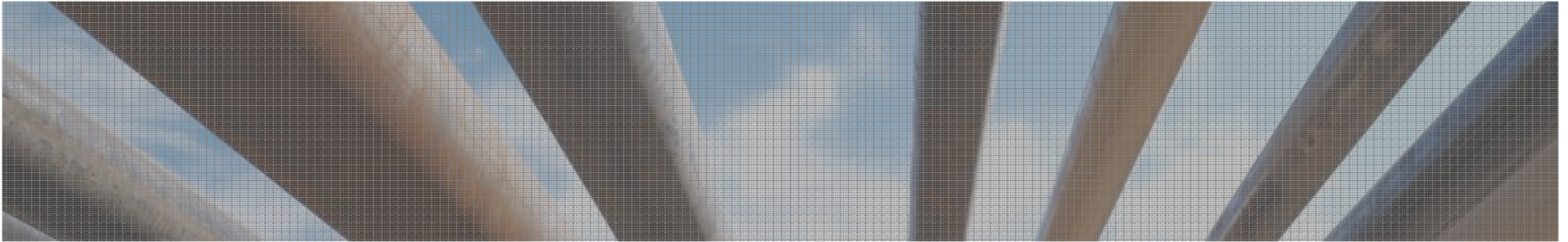
- **Smart Pig/Confirmation Dig Planning and Execution Support using GPS Equipment**
- **Smart-Pig Survey Analysis and Comparison**
- **Pipeline History and Trend Analysis**
 - File review and background research
- **Hydraulic Calculations**
 - Line diameter, pump, and control valve sizing
- **Stress Analysis**
 - Pipe stress analysis with Caesar II software



Pipeline System Review

Pipeline Road Crossings

- **Complete design**
 - **Permitting**
 - Rights of way acquisition
 - Survey and legal descriptions
 - **Plan and Profile Drawings**
 - **Cathodic Protection**
 - Experience in selection and application of state-of-the-art products
 - Experience in road bores, pipe bursting and related technologies
 - **Construction Management**
 - 60+ years of field experience





Individual Component Analysis

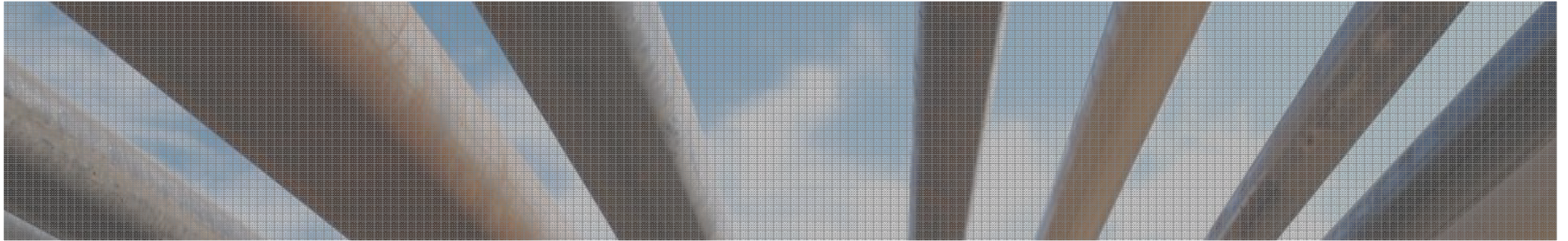
- **Failure Analysis**
- **Pipeline Repair**
 - Design
 - Permitting
 - Construction Management
- **Line Diameter, Pump, and Valve Sizing**





Existing Pipeline Clients

- **Aera Energy**
- **Plains Exploration and Production**
- **ChevronTexaco Pipeline Division**
- **Shell Pipeline**
- **Shell International Exploration and Production**
- **Conoco Phillips**
- **Tosco**
- **Paragon Engineering**



- **John Crews, PE**
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The logo graphic consists of two parallel, dark blue curved lines that sweep from the left side towards the right, framing the text. The top line starts at the top left and curves downwards to the right. The bottom line starts at the bottom left and curves upwards to the right.

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