Operation & Monitoring of Trans-Alaska Pipeline

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Operation

- Operating Gradients
- Minimum Required Pressure Criteria (MOP)
FIGURE 1
2.10 MMBPD Hydraulic Gradient

[Graph showing elevation and hydraulic gradients with markers for pipeline mileposts and different pipe profiles.]
FIGURE 2
1.10 MMBPD Hydraulic Gradient

[Diagram showing elevation and hydraulic head along pipeline mileposts with markers for ATICUN PASS, MP 236, PS 4, PS 8, PS 9, ISABEL PASS, PS 10, PS 11, THOMPSON PASS, and VALDEZ. Each pipeline milepost is represented by a point on the graph, with corresponding labels and a legend indicating different markers: Ground Profile, MAOH, and Gradient @ 1.10 MMBPD.]
FIGURE 5
Functional Maximum Operating Pressure (MOP)
Monitoring

- Settlement
- Corrosion
- Data Analysis
Monitoring

- Settlement
  - Curvature Pig
Monitoring

- **Settlement**
  - Curvature Pig
  - Deformation Pig
Monitoring

- Settlement
  - Curvature Pig
  - Deformation Pig
  - Thermistors
  - Monitoring Rods
Monitoring

- Corrosion
  - Ultrasonic Pig
    - Prioritize Digs & Visual Inspection
Monitoring

- Corrosion
  - Ultrasonic Pig
    - Prioritize Digs & Visual Inspection
  - Cathodic Protection (CP) Readings
  - Corrosion Coupons
Monitoring

Data Evaluation

- Pressure De-rates (Rstreng)
  - Rstreng Analysis of Visual Inspection
- Sleeve to Maintain MOP
- Buckling Analysis
  - Curvature / Corrosion - SAFE Program
Summary

- State of the Art monitoring tools combined with data evaluation by experienced personnel ensure that the MOP requirements are maintained for all operating scenarios of the Trans-Alaska Pipeline