

# Water Transmission Pipeline Condition Assessment

## case study: Barker Water Pipeline

**Boulder, CO, USA**

The Drakenstein Pipeline is a 10.2 km long, 1500mm diameter steel pipeline lined with 2500 of cement mortar. During commissioning of the line in 2008 surges were experienced which resulted in damage to the mortar lining. Repairs had been made but the client remained concerned over possible internal corrosion of the steel itself.

Downley's team was invited to join the Client's Panel of Experts reviewing the condition of the pipeline and in particular of the mortar lining. We undertook an internal visual and acoustic inspection of 750 metres of the line where damage had occurred. This showed that the lining was in generally good condition but that previous repairs were of poor quality and could lead to future corrosion.

We recommended removal and reapplication of lining repairs as well as further repairs to the lining. We also recommended periodic inspections using impact-echo equipment during planned shutdowns of the line in order to verify the condition of the lining over time. The recommendations were accepted and implemented by the Client and there have been no operational problems with the line since our contract was completed.

### client

TCTA, South Africa  
Jason Consultants Ltd, UK

### date

2010

### value

\$70,000 (consultancy contract)

### services

Internal visual and acoustic inspection  
Condition Assessment of pipe and lining  
Recommendations on lining repair  
Development of an ongoing inspection and monitoring programme