

PRESERVING WATER

NEXT GENERATION INSPECTION

THE CHALLENGE

Major pipeline operators use hydrostatic testing technology to detect complex cracking issues along pipeline assets. This method uses large volumes of water under pressure to determine the integrity of pipeline joints and fittings by highlighting leaks. As the water is contaminated, it must be cleaned, treated, and disposed of. This costly inspection technique can fatigue non-threatening features, exposing them to failure.

SASB & GRI METRICS ALIGNMENT

PROFIT

- ✓ REDUCED DETECTION COSTS
- ✓ MORE ACCURATE INSPECTION
- ✓ LESS RESOURCE INTENSIVE IN TERMS OF STAFF

PLANET

- ✓ REDUCED EMISSIONS FROM FUGITIVE LEAKS
- ✓ REDUCED WATER IMPACT
- ✓ ECOLOGICAL PROTECTION FROM LEAKS

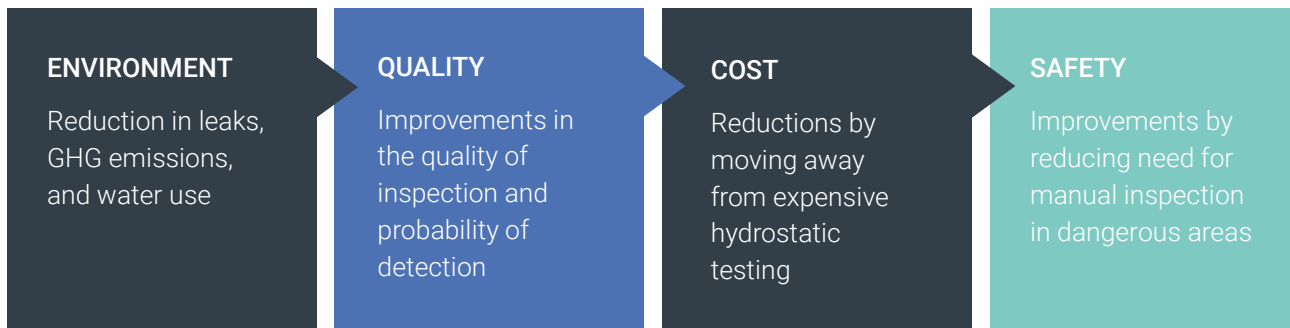
PEOPLE

- ✓ SYSTEMATIC APPROACH TO RISK MANAGEMENT
- ✓ LOCAL COMMUNITY IMPACTS OF LEAKS
- ✓ TOTAL RECORDABLE INJURY RATE

THE SOLUTION

A North American pipeline operator, looking for a more efficient and cost-effective solution, partnered with Previa to develop a next generation solution. Through this partnership, Previa developed its Proton inspection technology, a high-resolution crack inspection tool with the ability to detect and size features more accurately. This enhanced insight into the condition of its pipeline assets, without the high cost, risk, and environmental implications of a hydrostatic inspection, ultimately, provided a better fitness-for-purpose pipeline network

assessment. With our enhanced system's capabilities and improved inspection quality, we now ensure a 99% detection probability for severe flaws without pipeline compromise.



THE RESULTS

The development of this technology also provides significant environmental and social benefits to the operator. Firstly, by considerably reducing water consumption and contamination in areas where water-stress continues to increase as climate change intensifies. By 2071, it is expected that nearly half of the 204 freshwater basins in the United States may not be able to meet the monthly water demand¹, increasing the need for major water users to adopt the Alliance for Water Stewardship Standard. By shifting from hydrostatic testing to Previa's Proton testing technology, clients can better align to both the Alliance and other water reduction targets and pledges. Secondly, by improving inspection accuracy, the operator pro-actively avoids any serious cracks and leaks before they happen. Oil leaks can have devastating impacts on surrounding ecosystems while natural gas leaks lead to methane emissions, a greenhouse gas 25 times¹ more potent than carbon. Our Proton inspection technology is well adapted to help our clients achieve their ESG & net zero targets.

¹ Source: Harvard Future Widespread Water Shortage Likely in the U.S.

² US Environmental Protection Agency

- Validated in 2019
- 99% probability of detecting severe flaws
- 239 Terabytes of inspection data
- 526 Km of pipeline inspected in 2020

UN SUSTAINABILITY DEVELOPMENT GOALS (SDGS)



The SDGs provide an urgent call for action by all countries - developed and developing - in a global partnership. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests. The goals listed here indicate the SDGs addressed in this case study.