

Weather, Staff and Equipment – a Trifecta of Success for Closure Work on Remote Winter Access Sites

Jeff Biegel, 360 Energy Liability Management
Rob Thompson, Orphan Well Association

Steen River, Alberta is located 140 kilometres (km) north of High Level and approximately 50 km south of the Northwest Territories. This is the area of the remote winter closure program that SHARP Environmental, a division of 360 Energy Liability (360) worked on in 2021/22 for the Alberta Orphan Well Association (AB OWA). The AB OWA has a mandate to decommission Alberta's orphan oil and gas infrastructure, and restore the land similar to its original state, all in a safe, principled, and cost-efficient manner. They are industry funded through the Orphan Fund Levy and are an independent, not-for-profit organization that operates under the delegated authority of the Alberta Energy Regulator.

In 2021, 360 was assigned responsibilities as a Prime contractor for AB OWA to work on a closure program on Strategic Oil and Gas orphan sites in Steen River area. The project was divided into two main areas, east and west, with different Prime contractors designated by area.

In July 2021, the program commenced with planning, permitting and Phase 1 Environmental Site Assessments (ESAs) before transitioning in January 2022 to the field execution stage and construction of a camp, ice roads and an ice bridge over the Hay River. This presentation will share program challenges, how the team worked to overcome them and feature some of the program successes.

Over the 2.5-month period of the execution phase of the program; 360 km of ice road was constructed, and a 130-metre-long ice bridge was built, a 150-person camp installed, 169 sites were assessed, abandoned or decommissioned, 60 Phase 2 ESAs were completed with 988 boreholes drilled and 4,105 soil samples analyzed in a 48-hour turnaround time, 3963 tonnes of contaminated soil were hauled to landfill and multiple site reclamation activities were scoped and/or completed prior to bridge and roads being rolled back/decommissioned.

Challenges included balancing available equipment and operators, Covid-19 procedures and operational impacts, harsh conditions and short weather window, warm conditions and night crews, multiple Prime contractors managing multiple sub-contractors in simultaneous operations. Project successes to be highlighted include clear, regular, and concise communication between the AB OWA, Primes and their subcontractors, regular re-prioritization of field activities safety, quick laboratory turnaround on Phase 2 ESA sample results facilitating short remediation timelines and the execution of a significant volume of closure work in a short winter working window (100-120 days) which was critical to program economic success.

Upfront planning and continuous communication between the program teams was critical to the successful execution of this project. Aligning with this, we will share our learnings as we continue to work together for the safe clean up of industry liabilities in western Canada.

Jeff Biegel

Jeff Biegel, P.Ag. is a Senior Advisor with 360 Energy Liability Management. He has extensive experience in oil and gas site reclamation and remediation closure phases. Over his 34 years of experience, he has been involved on both the government regulatory side of Alberta environmental legislation, and industry side bringing oilfield disturbances from pre-disturbance full circle to closure and issuance of reclamation certification. Graduating from the University of Alberta with a B.Sc. in Agriculture in 1988 Jeff started his career with the Government of Alberta. He took a role with the Department of Forestry, Lands and Wildlife and then with Alberta Environment as a Land Resource Agrologist and Reclamation Inspector. In January of 1994 SHARP Environmental (SHARP) was established by brothers Brent and Jeff Biegel and he started his over 25-year career in environmental consulting. In October of 2000 Jeff became sole owner of SHARP and in April 2022 SHARP was sold to 360 Energy Liability Management, a Calgary based company providing integrated closure services in western Canada.

Rob Thompson

Rob Thompson, P.Eng., P.Biol. is Manager Environment with the Orphan Well Association. Rob has over 25 years of experience with remediation and reclamation of oil and gas sites. He combines a consulting background with Industry experience and a history of consensus building for industry advocacy with the regulator. Rob was a member of the original industry-regulator working group that developed and rolled out the Area Based Closure program and laid the groundwork for Directive 88. Graduating from Queen's University with a degree in Engineering Chemistry and a minor in Biology, Rob moved out to Calgary in 1995. He spent 15 years as a consultant assessing and remediating hydrocarbon impacts, and building expertise in the in-situ remediation of hydrocarbons. More recently Rob worked for 10 years as an Environmental Coordinator in Industry before joining the Orphan Well Association (OWA) in January 2021.