



## HUSKY POLYMER MODIFIED ASPHALT [PMA] EXPANSION

Installation of Belled and Straight Shaft Drilled Piles

CANADA



### Owner

Husky Oil Operations Limited

### Engineer

Stantec Consulting

### General contractor

Soletanche Bachy Canada

### Period of works

April 2018-June 2018

### Main figures

#### Underream (bell piles)

Construction of 313 CIP straight shaft concrete piles, incorporating steel.



### Project description

Husky Oil Operations Limited (owner) contracted SB Canada to construct pile foundations required to support PMA tanks, pipe racks, exchangers, and building structures as part of the expansion of the Husky Lloydminster Asphalt Refinery. The Refinery maintained full production while the expansion project was underway which required a careful coordination of the works with plant operations.

### Ground conditions

Ground conditions on site were clay fill to approximately 2 meters followed by very stiff, silty clay till.

### Solution

Hydro-vacuuming was completed at all pile locations by Husky representatives to identify existing buried underground utilities. To mitigate damage to existing asphalt, a rubber tired, truck mounted Watson 2100TM drill rig was used to construct piles where there was adequate access. Where access was restricted by existing structures and pipe racks, a low clearance Tes Car drill rig was utilized. A Tadano picker crane was used to hoist steel pipe inserts into place and to assist with maintaining pipe verticality while concrete was placed into the pipe and the surrounding pile borehole. Pile reinforcing design was unique and involved pre-fabricated pipe and reinforcing steel assemblies.

