

# CEMENT ASSISTED MULTI LATERAL (CAML) JUNCTION

## OVERVIEW

The CAML™ junction is a new, low-cost cement assisted multilateral junction designed to optimize production from reserves that require tight well spacing to exploit, but cannot be economically produced using single lateral wells. The improved economics of the CAML junction results in lower capital and operating costs for operators leading to significant reductions in finding and development (F&D) costs and an overall higher rate of return on investment (ROI).

The CAML junction provides a full drift pressure and debris seal which can be repeated approximately every casing joint. The full drift enables intervention work such as coiled tubing cleanouts and pump placement, as well as shut-off and workover operations. The debris seal allows the CAML junction to be used in unconsolidated formations that produce sand.

The CAML junction does not strictly fall into the industry recognized Technology Advancement of Multilaterals (TAML) classification levels. CAML is a mechanical junction that can be described as a hybrid TAML Level 5 that does not use a Level 6 metal-to-metal seal or cased hole packing and slip-type elements of a Level 5. Unlike other multilateral systems, the physical hardware costs are a fraction of the overall expenditure, with the majority related to drilling time; therefore, additional legs are not cost-burdened.

## APPLICATIONS

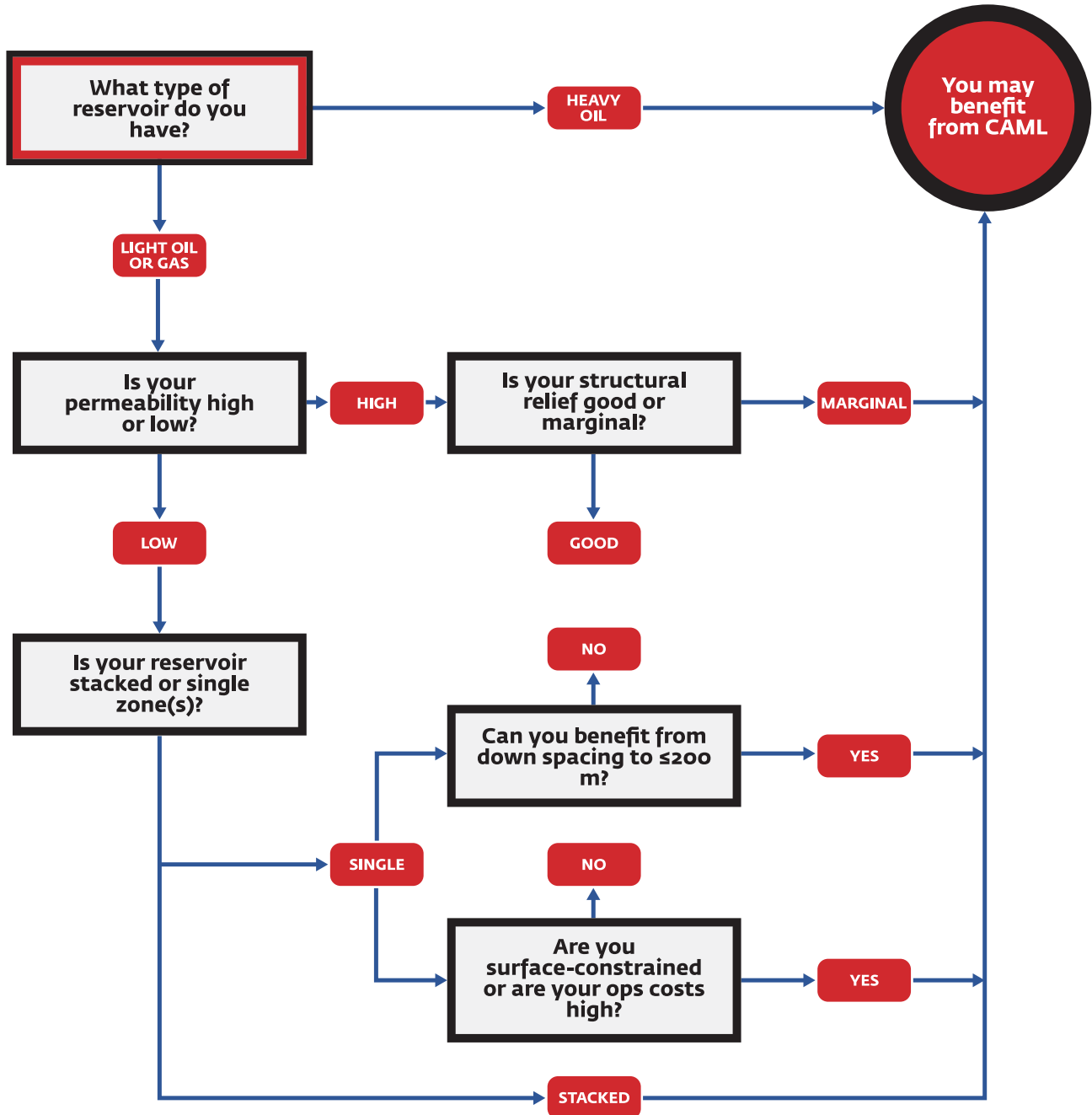
- Cost-restrained reserves
- Reserves that require tight well spacing
- Mature fields
- Marginal fields
- Heavy oil
- Unconsolidated formations

## FEATURES AND BENEFITS

- Between 2:1 and 4:1 cost benefit (depending on the number of legs) on completion, maintenance and operational expenditure (OPEX) costs
- Maintains full drift accessibility of the intermediate and liner casings
- Provides a debris barrier to hold back unconsolidated formation sand during production
- Provides pressure integrity capable of holding maximum differential pressure of the reservoir during production, injection, and workover operations
- Capable of withstanding thermal steam injection temperatures
- Applicable to all standard casing sizes and weights

## DECISION TREE

FCRL has developed the following selection guide, or decision tree, to determine if the CAML junction is the appropriate solution for your well.



For more information contact us at: [info@fcrl.ca](mailto:info@fcrl.ca)