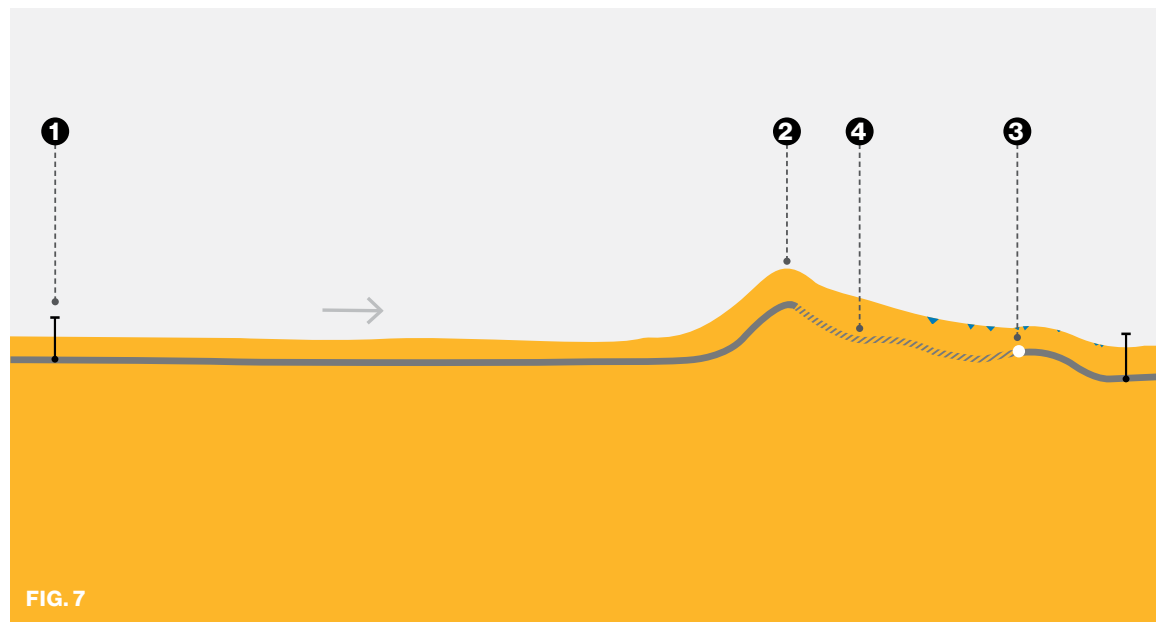


## Line 9

### Example of Intelligent Valve Principles (Cardinal Station to 3543.1)



From Cardinal Station ❶ downstream by approximately 40 kilometres, pipeline elevation slopes generally downward to the east. This long section contains no water crossings, and has elevation features that

naturally protect the HCAs in this segment. A large hill ❷, acts as a natural isolation point for terrain to the east. In the event of a rupture ❸ only the cross-hatched area of the pipe ❹ would be released, about 950 m<sup>3</sup>.

The rest of the product west of the hill would remain in the pipeline due to the isolation from the hill, even though the closest upstream valve is over 40 km away.