

## **DEBOTTLENECK PROJECTS** Various Clients | Alberta

- Project Engineering
- Electrical Engineering
- Process Engineering
- Structural Engineering
- Instrumentation & controls engineering
- Design & drafting
- Document control
- Procurement

Federation Engineering's debottlenecking services offer a comprehensive solution to increase the client's facility's production capacity. Federation understands that every facility is different and requires a personalized approach. That's why debottlenecking projects are always tailored through collaboration to meet the client's needs for scheduling, execution, and deliverables. Federation's experienced engineers start by gaining an intimate knowledge of the client's facility, and future operational goals. As a result, bottlenecks are identified within specific process units, and a tailored, cost-effective solution is developed to meet the client's needs and deadlines.

As an example of how Federation's experts contribute, our process engineering teams are familiar with the risk of fouling inside equipment and pipes when evaluating produced water and de-oiling units. To mitigate this risk, Federation conducts fit-for-purpose pressure surveys and calibrates process models to the equipment's actual operating conditions, both thermodynamically and hydraulically.

