Crude diet flexibility is one of the primary means of improving a refinery’s profitability. The ability to process discounted crude—ranging from light shale oil to heavy Canadian crudes—opens up a window of opportunity for refiners, but it also comes with an array of challenges and risks. With so many unknown factors about crude oil makeup and characteristics, uncertainty in processing is higher than ever.

Baker Hughes can help you overcome these concerns with our comprehensive Crude Oil Management™ approach, which includes a suite of tools and technologies that provide the best feedstock preparation and desalting performance possible to maximize your profitability and minimize your risk. Poor desalting efficiency, uncontrollable emulsions, and other desalting challenges are common when processing lower priced opportunity crude oils and will further impact downstream operations. Proactively gaining insight into the processing challenges of crude blends allows you to confidently increase your crude diet flexibility without compromising reliability.

**Comprehensive risk assessment**

We start by conducting a comprehensive risk assessment to understand how a crude blend may impact your refinery operations. This includes understanding upstream recovery operations and how previous chemical treatments might affect downstream processing. We also evaluate how your refinery is receiving the crude—whether by truck, rail, pipeline, or ship—to gain perspective on storage, handling, and blending activities before it reaches the crude unit. Furthermore, by understanding how your refinery equipment and processes are configured, we can identify and address potential processing limitations that may arise from different crude blends.

**Applications**

- Discounted crude processing:
  - Shale or tight oils
  - Heavy, asphalteneic crudes
  - Sour crudes
  - High-acid and high-metal crudes

**Features and benefits**

- **FLO pipeline drag reducers**
  - Maximize efficiency and improve product throughput
- **SULFIX H₂S scavengers**
  - Reduce the level of hydrogen sulfide and ensure safe operations
- **Wax dispersants**
  - Reduce sludge and wax buildup
- **Field ASIT services technologies**
  - Predict the impact of crude oil blend characteristics
- **XERIC heavy oil programs**
  - Resolve difficult emulsions of heavy crudes
- **JETTISON solids release agents**
  - Remove solids with brine during desalting process
- **LIFESPAN exchanger fouling control programs**
  - Control fouling in preheat trains
- **EXCALIBUR contaminant removal technologies**
  - Remove contaminants in the desalter
- **TOPGUARD overhead corrosion control programs**
  - Predict and control the corrosive impact of crude blends and operating conditions
- **SMARTGUARD high-temperature corrosion control programs**
  - Protect equipment from naphthenic acid and sulfur corrosion
Proven experience
Baker Hughes has been in the business for 100 years and maintains a global presence across upstream and downstream operations. Our experts, both in the field and in the lab, are driven to find solutions that enable you to increase your feedstock flexibility. We deliver a proactive service model to build partnerships and own the outcome along with our customers.

Innovative technology
When new crudes come to market, we immediately begin development on new technologies to overcome their processing challenges, quickly delivering solutions that make newly available crudes profitable for you. We have an extensive portfolio of chemical treatments, modeling platforms, and mechanical service programs to ensure reliable and profitable refinery operations.

Combining our years of experience and latest technologies enables us to take a holistic approach to your desalting operations, so you can take full advantage of attractively-priced crudes. Contact your Baker Hughes representative to learn how our Crude Oil Management approach can help you confidently process more opportunity crudes and increase your bottom line.

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