

## ENERGY SECTOR REFINERY OPTIMIZATION



The client is an 180,000 bbl/day refinery and pipeline that produces petroleum products. A subsidiary of a major airline, the refinery was purchased to reduce jet fuel costs. For Trident's second engagement, the four-month project focused on reducing heavy oil blending costs and increasing rail rack utilization.

**\$6.1MM**  
**ANNUALIZED SAVINGS**

### HOW WE MADE IT HAPPEN:

#### Heavy Oil Blending Optimization

- Changed FCC unit operations and targets to leverage different unit incentive rates
- Reduced the amount of heavy cycle oil production and increased intermediate cycle oil draw by 400 bpd
- Increased accuracy of final blend prediction by increasing accuracy of lab procedures and increased sampling of cutter stock tanks
- Developed optimization model for trading group to maximize per barrel margin
- Increased volume of clarified slurry oil blending into 6 Fuel Oil as additional settling time for metals was realized in downstream tankage
- Created a dashboard to value heavy oil streams at third party storage locations

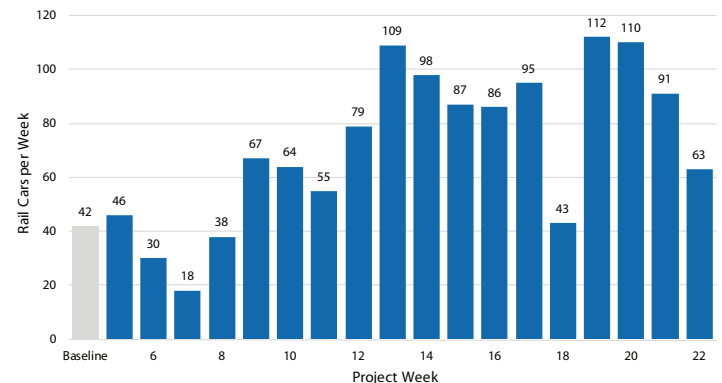
#### Rail Car Utilization

- Standardized operating procedures for the loading and unloading of rail cars, reducing average rail car cycle times by 5.25 hours and achieved an annual demurrage savings of \$2.8MM
- Installed switch scheduling dashboard to increase utilization of terminal rail car racks

### RESULTS:

The refinery experienced a 9% reduction in heavy cycle oil production to the benefit of an increased intermediate cycle oil production with a higher margin, including a 49% improvement in cycle time at its terminal rail rack. The project exceeded its \$6.1MM savings target and achieved 1000% ROI.

#### 71% Rail Car Utilization Increase



We are here to Make It Happen™.

Contact us for a complimentary assessment to help solve your complex business issues at [info@trident.com](mailto:info@trident.com).