

# REFINERY OPTIMIZATION



## ENERGY SECTOR CASE STUDY

Building on strong past engagements, a large oil refinery in the northeastern United States specializing in production of jet fuel engaged Trindent to reduce high oil blending costs and increase rail rack utilization.

### 9%

**REDUCTION IN HEAVY  
OIL PRODUCTION**

### \$6,100,000

**ANNUALIZED  
SAVINGS**

### 49%

**IMPROVEMENT  
IN RAIL CYCLE  
TIME**

#### HOW WE MADE IT HAPPEN

##### Heavy oil blending optimization

- Changed fluid catalytic cracking 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 \$2,800,000
- Installed switch scheduling dashboard to increase utilization of terminal rail car racks

*"Through a targeted and systematic approach, the Trindent team completed an insightful analysis of our process inefficiencies and identified and defined key issues. The Trindent team also developed and installed pragmatic and holistic solutions that addressed the root causes of our problems. Trindent has worked closely with our staff involved to ensure that the changes were sustained and met their objectives."*

*–Commercial Operations Leader*