<table>
<thead>
<tr>
<th><strong>Challenge</strong></th>
<th><strong>Solution and Results</strong></th>
<th><strong>Benefits</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Remove the significant time lag and inaccuracy of vague refinery shutdown announcements through transparent, fact-based data.</td>
<td>RefineryScanner combines weekly satellite imagery with advanced analytics to indicate refinery shutdowns up to six weeks ahead of the market.</td>
<td>Users can draw more accurate insights on related commodity flows and trade with more confidence.</td>
</tr>
</tbody>
</table>
Challenge

Maintenance of the Saudi Aramco Yanbu Refinery, with its total refining capacity of 240 MBD, was announced to the market in early February, forecasting a one-month shutdown of the site beginning in early March.

The challenge this posed for the oil trading industry was defining the precise turnaround dates and the implications of this outage on the Yanbu refining capacity.

Solution and Results

RefineryScanner identified first signs of an upcoming shutdown at the refinery on 3rd February 2019, five weeks before the announced shutdown date.

Activities Observed

3rd February
Build-up of materials and equipment in designated set-up zones, and set up of portable buildings.

19th February
Movement of cranes and lift vehicles, increase in materials, equipment and number of portable buildings visible near the Crude Distillation Unit (CDU).

14th March
Initiation of shutdown confirmed through observations of an active crane on the CDU, and multiple smaller cranes and lift vehicles detected on secondary units.

5th April
Maintenance activity ending with reduced number of portable buildings, active cranes and material in storage areas visible.

14th March 2019: Activity including cranes, porta-cabins and vehicles observed

14th March 2019: No activity observed

Benefits

- Provided more detailed observations of the specific refining units that underwent maintenance.
- Users were able to better quantify the impact of the shutdown on crude demand and refined product supply.
- Thanks to advanced activity-monitoring algorithms, evidence of shutdown activity was highlighted five weeks before the announced shutdown date.
- Enabled users to trade with more confidence by providing intelligence independent of market rumours.

Solution Description

RefineryScanner combines weekly refreshed satellite imagery with advanced analytics to indicate shutdowns up to six weeks ahead of the market, as well as drawing implications on crude capacity.

Combining this data with global downstream analytics enables users to draw more accurate insights on commodity flows.