



# Quantapoint Case Study

## Chevron Nigeria Limited – Offshore

### *Dimensional Control for Escravos Gas Project Phase 3A (EGP3A)*

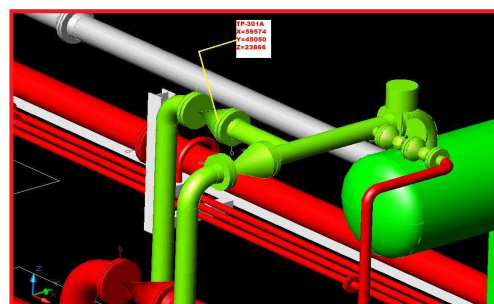
#### **Situation**

Chevron Nigeria Limited (CNL) and the Nigerian National Petroleum Corporation (NNPC) are joint venture partners for the Escravos Gas Project Phase 3A (EGP3A). EGP3A is driven by a Nigerian government mandate that requires all oil producing companies to stop flaring natural gas with the goal of capturing, processing, and optimizing gas resources. The scope involved modification and tie-ins to support two new gas gathering and compression platforms and wellheads.



#### **Challenge**

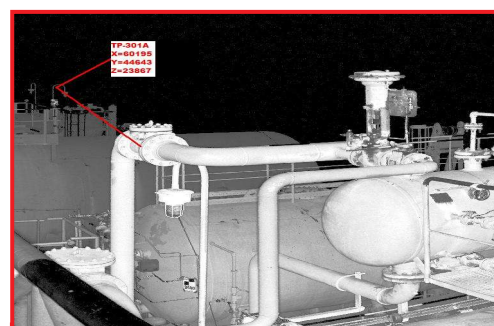
The piping and structural design were completed in Bentley AutoPLANT by an engineering contractor without accurate existing condition documentation. CNL was concerned that this may result in significant construction rework and hot work, which would negatively impact project schedule and expenses.



*Bentley AutoPLANT Model of Tie-Point  
Does Not Include Details (small piping, etc.)*

#### **Solution**

CNL contacted Quantapoint to re-engineer the designs to ensure they were interference free. Quantapoint rapidly collected, registered and verified billions of highly accurate measurements to provide a consistent and up-to-date “digitized platforms” of laser documentation™ that included dimensions, elevations, layout and other information – without manual measurement, purchasing costly hardware or time-consuming remodeling.

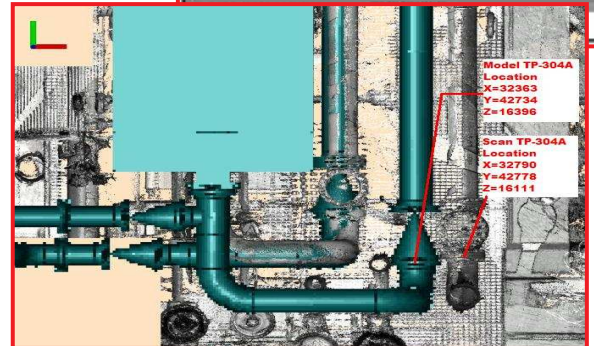


*Quantapoint 2D Laser Scan (Not a Picture)  
Actual Existing Conditions with Details*

## Results

Quantapoint created 3D laser models from the laser documentation to provide an interactive 3D view of the platform using Quantapoint's PRISM 3D software. The original Bentley AutoPLANT design models were imported into PRISM 3D and clashed against the 3D laser models. A number of design errors and clashes were identified on both platforms.

Quantapoint generated and distributed reports that prioritized the design errors and clashes and provided alternative designs or construction isometrics in Bentley AutoPLANT that would avoid any issues. Quantapoint helped the project team achieve their schedule and budget goals. Even greater benefits could have been achieved had Quantapoint digitized the platforms prior to designs being created in 3D CAD and verified the tie points.



*Combined 3D Laser Model and 3D CAD Model  
Identifying and Eliminating Clashes and Errors*