

CASE STUDY

Safety Shutdown System

OUR CLIENT:	Shell Todd Oil Services – Kapuni Production Station
INDUSTRY:	Oil and Gas
VALUE:	NZ\$250K
OVERVIEW:	<p>Kapuni Production Station was first commissioned in the 1960s. Since then several of the control systems have been upgraded to current standards. The safety shutdown system has always remained relay logic based.</p> <p>A Safety Integrity Level (SIL) study was undertaken for the site safety shutdown system. As a result of the study several loops within the relay Logic were identified as SIL2. The relay logic based safety shutdown system was unable to achieve SIL2. An action from study was to install a Hima Himax Safety PLC, a SIL3 rated system.</p> <p>The Kapuni wellsites already utilize Hima HIMatrix F60 SIL3 rated PLCs, so utilizing the Hima Himax system allows for future expansion and further de-commissioning of other relay logic on site.</p> <p>A deviation was logged against the failure to meet SIL2 in the relay logic, allowing the system to continue running until the remedial work to install the Hima Himax system was complete.</p>
ENGINEERING:	<p>ECL TÜV certified Engineers delivered a turnkey shutdown system which included; panel build (sub-contracted), software configuration, pre-commissioning, commissioning and start-up support.</p> <p>The commissioning included the de-commissioning of the existing relay logic safety shut down system and was staged to fit in with planned site shutdowns to maximize site availability.</p>

OUTCOME:

- The Hima Himax Safety PLC met the requirements for achieving SIL2, allowing the deviation against the relay logic to be closed off.
- The project was completed on time, within budget with no lost time incidents.



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