ScanTech Offshore was selected by a major IOC to provide a solution for a large-scale gas field project required over a minimum three-year period, to facilitate the design and installation of the rig solution, and remain onsite throughout the duration.

ScanTech Offshore provides a well test solution in Azerbaijan

The challenge

- Preliminary calculations for Gasrates of 100 and 120 MMscf/d indicate 10-15 MMBTU/hr required heat capacity.

- The large-scale gas field project featured several wells, each complete with varying water depths and wellhead temperatures. Limited deck space, high ambient temperatures, and the need to minimise drill and portable water usage all had to be overcome.

- Ahead of the project, preliminary calculations would need to be conducted to assess what steam and heat capacity solutions were required.

- Our in-house well test engineer was required on site until the project had been delivered to oversee project works and to design and build the required elements.

- Ensuring all units’ technical specification was suitable for up to +55° ambient temperatures.
The solution
ScanTech Offshore provided three, 6.0 MMBTU/hr Zone II Steam Boilers to provide the required steam duty, along with three 1600CFM Zone II Air Compressor units to deliver the required air flow for a condensate rate of 7,000 BPD, all these units to fit within the rig’s confined 6-metre by 10-metre upper deck area.

• ScanTech also provided integrated, patented HeaterSentry units installed on Heat Exchanger skids into the well test steam exchanger process. This modification was carried out in Paris, for an industry-leading oilfield services company.

• In line with the project’s requirements, the units were redesigned to comply with the 55 degrees centigrade operating temperatures, automatically fueled and with reduced drill water usage for generating steam.

• Ahead of the project’s start, a dedicated project engineer / manager was assigned to carry out front end engineering design to the customer’s specified requirements and performed structural calculations to ensure the proposed deck area could withstand loading. Including design air and steam runs to and from the well test area and booms, as well as separate water feed tank and control room.

• Required design and build elements included a base plate, stairways and work platforms for the upper section of support package, and a separate water feed tank and control room.

• An integrated fire detection system was incorporated into the rig system to meet ABS permanent well test equipment specifications.

• Removed units from hire fleet to upgrade to required specifications, EXD electrics, EXD cooling fans, new exhaust systems, and sea water cooling system.

• Conducted System Integration Test on location, with factory acceptance testing carried out at ScanTech Offshore’s UK facility in Great Yarmouth.

Results and benefits
• The solution was successfully installed in the allotted time frame, completing the three-year project contract with only minor issues.

• The major IOC experienced no rig up / rig down time as equipment was permanently on the rig. A dedicated ScanTech crew and dedicated equipment purposely designed and built for the project ensured its success.