WHAT HAPPENED:

While starting up the control system for the BOP stack during maintenance activities, there was a release of hydraulic fluid from a small bore tubing which had separated from the 3,000 PSI manifold of the system. An estimated 196 litres (51 gallons) of fluid was released from the system into a bunded area.

CONTRIBUTING FACTORS:

The failed section of pipework was sent onshore for failure mode analysis, which revealed the cause to be a fatigue fracture caused by deep bite marks, resulting from excessive tightening of the compression nut. Inspection of the unit identified several fittings that had also been overtightened.
LESSONS LEARNED:

Inspect piping and tubing connections and ensure there are no loose or over tightened connections. Consider marking correctly torqued connections to easily identify which have been torqued. Use gauge/tool provided by manufacturer to avoid damaging small bore tubing.