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Challenge in operation of Bontang LNG plant due to lean gas entrance

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Bontang Liquefied Natural Gas (LNG) Plant is one of the largest LNG facilities having a capability to produce up to 22.5 Million Tons Per Annum (MTPA) LNG and 1 MTPA Liquefied Petroleum Gas (LPG). It has been operated for more than 40 years in the most excellent practice. Starting 29 May 2017, Bontang LNG Plant receives new feed gas supply which contains lean composition (97% methane content) and causes the overall feed gas composition to Bontang LNG Plant become leaner than the original design (methane content approximately 83%). The entry of leaner feed gas to Bontang LNG plant presented operational issues both commercially and technically such as lower LNG quality (HHV), heavy hydrocarbon carry over, lower fractionation turndown ratio, and potential un-absorb gas. This

paper explains 3 key plant operational strategies that have been selected in Bontang LNG Plant to accommodate leaner feed gas supply,

1. Upstream feed gas delivery strategy;
2. Plant modification and operating procedure improvements
3. Dual LNG HHV production: LNG Plant can produce both lean and rich LNG products simultaneously. Implementation of these strategies have been successfully performed and provide plant operating flexibility for new gas producers and maintain Indonesia's position in the very competitive LNG business.

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