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GAS RESERVOIR MANAGEMENT BENEFITS JAKARTA POWER SUPPLY

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ABSTRACT

Indonesia's rapid development is most evident in the capital city of Jakarta with its growing demand for electricity. Atlantic Richfield Indonesia is helping to support this demand by supplying gas to PLN's Muara Karang and Tanjung Priok generating plants. Most of the early production is from the KLX and KLY Parigi gas reservoirs. These two reservoirs will supply about 50% of the total gas in the project, while 30% is contained in the LL, Y and APN gas reservoirs, and the remaining 20% is associated gas from the Main, Massive and Talang Akar Formations.

Atlantic Richfield Indonesia has embarked on a reservoir management program to ensure efficient economic production from the KLX and KLY gas reservoirs and from the associated gas in the Main, Massive and Talang Akar Formations. This Poster concentrates on the management of the KLX and KLY reservoirs.

The KLX and KLY reservoirs are unique neighboring carbonate build-ups, with separate gas columns, in communication with a common aquifer. The KLY reservoir is gas filled to the spill point while the KLX reservoir is partially filled. Production started in October 1993 and cumulative production was 59.2 BSCF as of February 1995, 63% of which is from KLX. To meet the gas contract rate, the associated gas from BZZ and LL areas are combined with the gas from the KLX and KLY Fields.

A combination of reservoir monitoring, evaluating, and forecasting techniques are being employed to meet the production goal. Examples include surface and bottomhole testing, pulsed neutron logging, material balance calculations, reservoir simulation, and network modeling. Production control is enhanced by automated systems. A major objective of monitoring is to maximize benefits while satisfying the demand for gas supply.

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