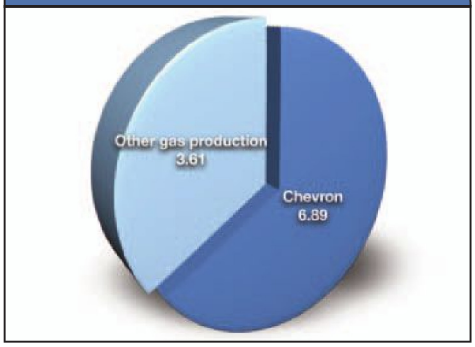
PROJECT HIGHLIGHT

# THE CHUCHUPA FIELD

- **Field:** Chuchupa, Guajira Department
- **Operator:** Chevron
- **First discovered:** 1973
- **Production commencement:** 1977
- **Subsea reservoir depth:** 1,580 metres
- **Reservoir depletion:** 45 percent
- **Estimated gas in place:** 70.8 bcm (2.5 tcf)
- **Proportion of total Colombian daily output from the Chuchupa field:** 80 percent
- **2009 production:** 18.9 mcm (667 mcf) per day
- **Production increase:** 7.08 mcm (250 mcf) per day
- **Investment:** $250 million
- **Wells implemented:** 15
- **Type of gas:** non-associated

**Chevron's role in gas production 2009**
bcm




**SOURCE:** BP Statistical Review 2009, Chevron

**The Chuchupa field is Colombia's most significant source of natural gas in terms of production,** accounting for 80 percent of daily output. It is one of only four fields in the country that holds more than 900 million barrels of oil or equivalent. The field was discovered in 1973 in the shallow waters of the Guajira Basin off the northeast coast at a subsea reservoir depth of 1,580 metres and entered production in 1977. While much of the gas in the Llanos Basin is injected into oil reservoirs to maintain pressure, Chuchupa is a dry gas field and thus ideal for production.

Chuchupa, along with the onshore Ballena and Riohacha fields, is currently operated by Chevron in partnership with Ecopetrol. The field has been in production for 30 years and an estimated 45 percent of its gas extracted so far. Gas produced in Guajira is shipped via the Ballena-Barrancabermeja pipeline to serve the domestic market in central Colombia or through the Promigas line to the north coast. Excess gas can also be exported via pipeline to western Venezuela.

In 2002 production from the field began to decline due to reservoir depressurisation. Studies revealed that without enhanced recovery, gas flow would end by 2016. In response, Ecopetrol signed the Guajira Association Contract Extension (GACE) in 2003 with ChevronTexaco. GACE stipulated that the Texas Petroleum Company, Chevron's Colombian subsidiary, would operate the field until the end of 2016 and maintain a 43-percent share. To reverse the decline, Chevron planned to introduce artificial lift through gas compression in the Ballena field. Altogether, the GACE represents an investment of $250 million, which is borne entirely by Chevron.

In 2006 Chevron conducted extensive reservoir characterisation studies, which included acquisition of additional seismic data and the drilling of three horizontal wells. The results of this research were promising. In December 2009 Chevron and Ecopetrol revealed gas-in-place estimates of 70.8 bcm (2.5 tcf) with an additional 18 metres of gas in the reservoir column. The discovery of additional assets may be leading other players into Caribbean waters. In January 2011 Spanish firm Repsol formed a joint venture with Ecopetrol and Petrobras to explore the neighbouring Tayrona block.

Currently Chevron operates two production platforms in the field. To date, 15 wells have been drilled: seven horizontal, seven slanted and one vertical. Transfer lines have been built to connect platforms A and B and the Ballena station. Since implementation, the GACE project has increased production by 7.08 mcm (250 mcf) per day to a 2009 average of 18.9 mcm (667 mcf) per day. At this rate of production, Chuchupa should continue to produce gas until at least 2030.