

# Operator Successfully Geosteers in Thin Coal Seams



**4¾-INCH GABI™ MOTOR AND REAL-TIME GAMMA RAY IMAGES HELPS DRILL TO PRODUCE AND DELIVERS 99.3% IN SEAM**

QUEENSLAND, EASTERN AUSTRALIA

## Overview

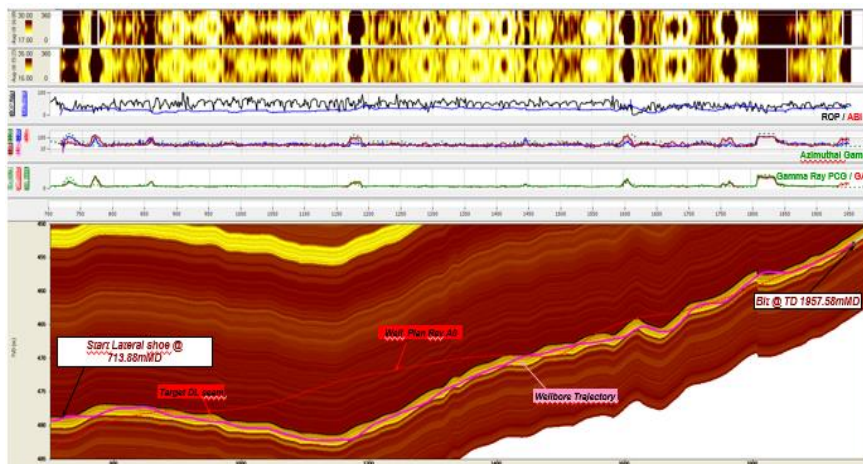
Coal seams in eastern Australia have an average thickness of 2 m (6.5 ft.) total vertical depth (TVD), and are structurally complex with extensive faulting and changes to internal seam character, in addition to severe dip changes experienced while drilling the lateral of a horizontal well. Due to the complex nature of these seams, geosteering decisions have to be made promptly to avoid drilling out of seam.

A Queensland, Australia operator achieved its drilling target and remained in seam using real-time images from a 4¾-in. GABI™ motor from Halliburton Sperry Drilling, equipped with at-bit azimuthal gamma ray and inclination sensors for improved geosteering and optimum wellbore placement. Located approximately 3.5 m (11 ft) behind the drill bit, the GABI motor provided immediate feedback on directional trends and formation changes, enabling the fastest possible decision-making. Communication between the directional driller and geosteering specialist was also key to delivering well success.

The well was drilled 99.3% in seam, and a total lateral length of 1,243 m (4078 ft) MD. Total vertical depth at the heel was 480 m (1,574 ft) TVD, and at the toe was 450 m (1,476 ft) TVD, helping the operator drill to produce and maximize asset value.



*GABI™ motor sensor package*



*To date, 80 wells have been geosteered with the GABI™ motor in Australia, for a total distance of 90,500 m (29,691 ft) at an average of 96% in seam.*

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