



5X INCREASE IN ROP WITH *ULTERRA'S DRILL BITS.*

DRILLING OBJECTIVES

Ulterra was awarded the primary bit supplier for three sections of an operator's drilling campaign for offshore Malaysia in 2020-21. The drilling campaign consisted of 6 wells, two oil producers and four water injectors. The formation consists of claystone interbedded with siltstone and sandstone. Proceeding the completion of their first drilling campaign, the primary goal was to achieve directional control with an RSS tool, as well as improved bit durability and increased ROP.

MALAYSIA



DRILL BIT SELECTION

Ulterra and the operator collaborated on three drill bit designs, which are: 12.25" SPL519, 8.5" SPL519 and 6.75" U513S. All three designs are fitted with Ulterra's Blaze cutters and customized to suit the application and fulfill customer specifications for compatibility with selected RSS. Ulterra provided a quick turnaround time, from design-to-delivery, which contributed to a smooth supply chain process.

DRILLING RESULTS

The results showed higher ROP across the board compared to an earlier drilling campaign. In the 12.25" section, it achieved the directional challenges despite the soft formation with instantaneous ROP hitting above 300ft/hr - 5x faster. In the 8.5" section, although drilling with a long and complex BHA, the instantaneous ROP range was within 200-220 ft/hr - 4x faster. In the 6.75" section, even with controlled ROP of 100-150ft/hr, it is still 2x faster as well.

The high durability of an Ulterra's bit could be seen on the bit's good dull condition. On average, one bit was used in two wells. In the 6.75" hole section, one bit was used in four wells, accumulated 3,913 ft of the interval, and dulled green (0-0-NO).

Overall, an outstanding drilling performance with Ulterra's drill bits in this campaign were accomplished. In addition to providing customized drill bits for this project, Ulterra's team provided bit run reports with MSE analyses and excellent customer support. All components added to the success of this drilling project.