

Paper P38

Biostratigraphic Real-time Well-site Support for a NW Palawan, Offshore Philippines Appraisal Well

C.T. Naih* (Sarawak Shell Berhad), J.J. Lim (Sarawak Shell Berhad) & R. Sandom (Sarawak Shell Berhad)

Real-time biostratigraphic well-site support has been successfully applied in appraisal well, NW Palawan, offshore Philippines (Figs.1), to guide the Shell's Malampaya team to pick the 9 5/8" casing point approximately 50m above the targeted Nido carbonates.

Pre-drill evaluation of available legacy Miocene biostratigraphic data from exploration well demonstrated that nannoplankton and especially quantitative planktonic foram events could play a key role in following the stratigraphy of the well section penetrated and confidently locate the 9 5/8" casing point. In order to test the repeatability of biostratigraphic events, an exercise in a real-time environment was carried out in SSB's Geological Laboratory in Lutong, Sarawak.

Based on the results of this exercise, the full integration in the subsurface geological model and the fact that the biostratigraphic results could be obtained within 1.5 hours (ca. 30 meters) behind the bit, it was decided by the Shell's Malampaya team to request real-time biostratigraphic support,

rather than running an expensive VSP tool.

Real-time biostratigraphic started directly below the Matinloc Conglomerates. Pagasa shales directly below the conglomerates yielded planktonic foram SN10 (*Globorotalia fohsi peripheroacuta*, *Globorotalia fohsi peripheroronda*, *Globorotalia archeomenardii*) zonal assemblages of Langhian (Middle Miocene) age. Top SN9 (*Praeorbulina glomerosa circularis*) was encountered 150m above prognosis and reinforced an update of the velocity model of the Pagasa shales. The top of the SN8 zone of Langhian-Burdigalian age (*Globigerinoides diminutus*) was found 10m above prognosis. The targeted intra SN8 quantitative event increase in (*G. fohsi peripheroacuta*, *G. fohsi peripheroronda*, *Praeorbulina sicana*, *Globigerinoides diminutus*, and *Praeorbulina transitoria*) was encountered 16 meter above prognosis in the Lower Pagasa (Figs. 2).

Biostratigraphic quantitative events proved to be a valuable tool to support the drilling activities in the Camago area.

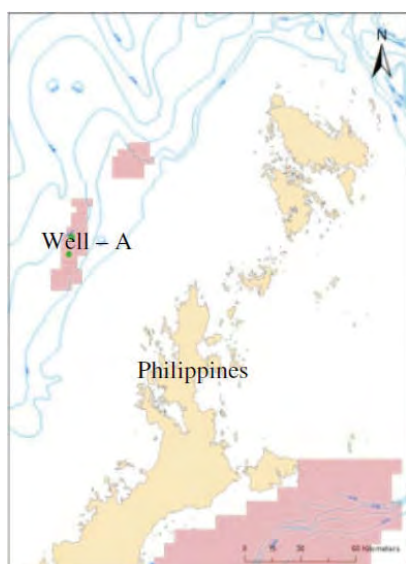


Figure 1: Location Map of Well - A.

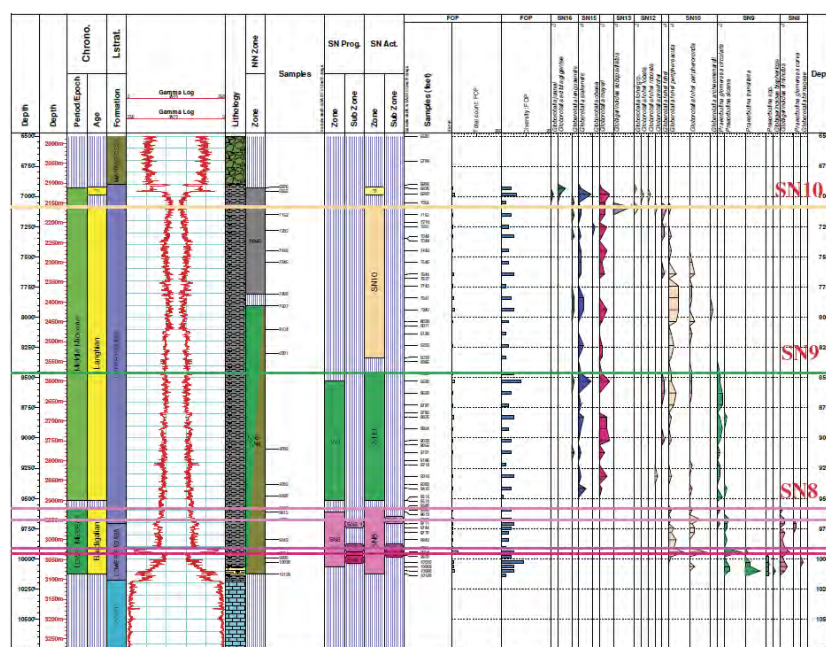


Figure 2: Micropalaeontology Distribution Chart of Well - A.