

### Palm Valley No. 8A

Palm Valley No. 8 was side-tracked as Palm Valley No. 8A from a depth of 1,464 m. Dynadrilling of the side-tracked hole took place with aquagel/salt/PAC-R mud to a depth of 1,574 m. A steering tool was used to control borehole orientation over this interval. A conventional build assembly was then used to 1,599 m. Drilling continued from 1,599 to 1,666 m using both a dynadrill and a conventional build assembly. Dynadrilling with aquagel/salt/PAC-R mud continued from 1,666 to 1,703 m with a steering tool used to control borehole deviation and direction from 1,666 m. Two fishing jobs were performed in this interval; the first at 1,673 m to retrieve a dynadrill rotor and bearing pack, and the second at 1,703 m for the dynadrill rotor, bearing pack and "U" joint housing left in the hole.

Dynadrilling of 8½" hole with aquagel/salt/PAC-R mud resumed, following reaming of undergauge hole, to a depth of 1,837 m. A steering tool was in use to this depth. The hole was then displaced with water and blown dry. Air drilling continued from 1,837 to 2,246 m. There was a change to air/foam drilling from 2,246 m due to the influx of saline formation water from the Pacoota Sandstone into the hole from a depth of 2,244 m. Air/foam drilling continued to a depth of 2,400 m, which was reached on 3 March 1993.

While reaming the hole following a bit run, complications arose resulting in a jammed bit at 2,273 m, an apparent twist off below a tool joint at 1,896 m and a stuck and packed off drill pipe.

Extensive fishing operations were then undertaken over the next fifteen days (refer to page 68). These, however, were unsuccessful and the well was plugged back to a depth of 1,397 m and converted to a Mereenie Sandstone water well, over the interval from 946.8 to 953.5 m. The rig was released on 19 March 1993, 103 days from spud.

## 2.2 Geology

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Palm Valley No. 8, spudded in the outcropping Hermannsburg Sandstone, penetrated a thick sequence of interbedded sandstone and siltstone prior to intersecting the siltstone and thinly interbedded shale unit comprising the Parke Siltstone. A total of 638.9 m of Devonian Pertnjara Group sediments were encountered. The well then penetrated a 577.5 m sequence of Silurian to Early Devonian Mereenie Sandstone sediments, consisting predominantly of sandstone interbedded with minor siltstone and shale.

The conformably underlying Early to Late Ordovician Larapinta Group comprised a 1,316.5 m sequence of variably interbedded sandstone, siltstone and shale with minor carbonate interbeds occasionally present. Penetrating the Carmichael Sandstone, Stokes Siltstone, Stairway Sandstone, Horn Valley Siltstone, and Pacoota Sandstone, the Palm Valley No. 8 well reached total depth at 2,539 m, 127 m into the Pacoota Sandstone P3 unit.