

Lithology	Shale
Formations	Ahmadi and Wara
Sections	12¼ in and 8½ in
Dogleg severity	11°/100 ft

**Background**

Due to wellbore stability issues, lubricity requirements, and depleted zones, Kuwait Oil Company historically used nonaqueous fluid to drill the buildup section in challenging shale formations. However, to meet new environmental regulations, the operator needed an alternative drilling fluid that would satisfy both operational and environmental objectives. M-I SWACO deployed a high-performance, water-base mud (HPWBM) incorporating KLA-STOP\* liquid polyamine shale additives and POROSEAL\* copolymeric filtration-control sealing additives. The additives enabled Kuwait Oil Company to drill the target sections in a record 11 days.

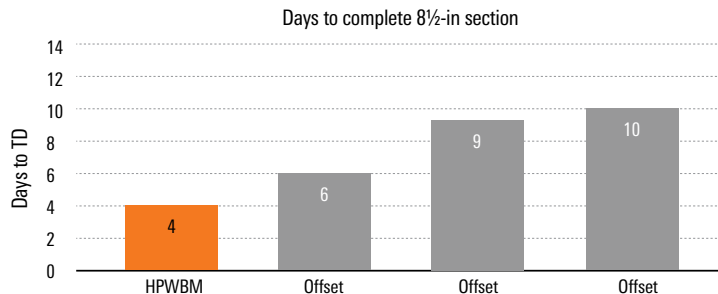
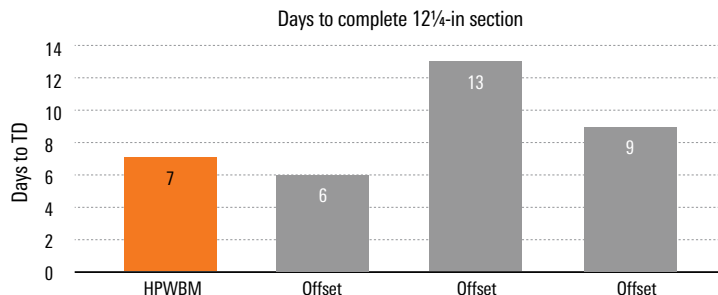
**Technology**

- KLA-STOP liquid polyamine shale additive
- POROSEAL copolymeric filtration-control sealing additive
- G-SEAL PLUS\* wellbore stabilizing agent

\*Mark of M-I L.L.C.  
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# Kuwait Oil Company Drills Through Challenging Shale Sections in Record 11 Days

Water-base mud with KLA-STOP and POROSEAL additives delivers high drilling performance while meeting environmental regulations



*The customized drilling fluid included a clay hydration suppressant, shale-sealing additive, and a customized bridging package. Kuwait Oil Company drilled and cased the 12¼-in and 8½-in sections nearly 7 days faster than the offset wells average with no wellbore stability or differential sticking issues.*