

The 17-1/2" hole section was drilled using a fresh-water dispersed mud system. CO₂ was observed to be a problem as were the gumbo clays drilled between 771.1 m and 1398.4 m (2530 - 4588 ft). The inability to off load work boats in 7-14' seas necessitated some dilution with seawater. This caused some mud stability problems that would have been avoided, had the work boat been able to offload.

A total of 19.5 hours was spent handling gumbo related problems. Additionally, 10.5 hours of reaming resulted when wireline logs encountered a bridge at 1235.3 m (4053 ft). Subsequent logging operations were performed without incident.

Future wells drilled in the area should be expected to exhibit similar problems; therefore the mud system should be designed to handle carbonate contamination while suffering few derogatory effects. The mud system used on the Koorkah No 1 performed admirably - especially the closed-loop mud processing system used to control mud rheologies and dilution requirements. An overall hole interval dilution rate of 1.48 bbl per ft of hole drilled is extremely acceptable when considering the amounts of rapidly dispersing clays (gumbo) drilled. Hole stability problems would have been virtually nonexistent had the workboats been able to offload the supplies necessary to maintain operations.

Future wells drilled where gumbo shales are encountered can be expected to have problems logging; therefore the wellsite conditions at logging point should be evaluated for mud weight increases prior to attempting wireline logs.

12-1/4" HOLE INTERVAL

A total of 406 hours (16.9 days) was spent drilling and evaluating the 12-1/4" hole section drilled between 1599 and 3148.9 m (5246 - 10,331 ft) (including 68 hours for plug and abandonment, anchor handling, etc.). No production casing was run and the well was permanently plugged and abandoned on 25 December 1985. The total gross well cost incurred is estimated to have been \$4.86 MM.

A 16.0 ppg FCCT (to leak off) was obtained at 1600.5 m (5251 ft). Drilling continued to 3148.9 m (10,331 ft) RKB requiring 236.5 rotating hours to complete.

Very few operational problems were encountered. Carbon dioxide was again encountered below 2133.6 m (7000 ft). Subsequent alkalinity problems were addressed successfully via lime additions. The solids control system again functioned admirably. Comparisons with the Tilana No 1 well show savings of approximately 7000 bbls of drillwater dilution and associated chemical additions over the same interval.

Following logging operations, Koorkah No 1 was plugged and abandoned as a dry hole.