

AMOCO AUSTRALIA PETROLEUM COMPANY
KOORKAH NO. 1

DISCUSSION BY INTERVAL

17¹/₂" Hole (Cont'd)

Mud Properties (Cont'd)

Recommended mud properties are compared against actual mud properties below:

<u>Mud Property</u>		<u>Programmed</u>	<u>Actual</u>
Density	lb/gal	8.9 - 9.2	8.8 - 9.3 *
Yield Value	lbs/100 ft ²	8 - 20	10 - 20
10 sec gel	lbs/100 ft ²	6 - 15	6 - 12
10 min gel	lbs/100 ft ²	15 - 20	20 - 35
API Fluid Loss	cc/30 min	<20	4.2 - 10.7
Bentonite	ppb	20 - 30	25 - 27.5
Nitrate	ppm	150 - 250	Not run - KNO ₃ shortage
pH		10.5 - 11.0	10.2 - 11.7

* The mud weight was subsequently raised to 9.8 ppg prior to running casing.

HOLE PROBLEMS

Two types of hole problems were experienced.

The first problem was the presence of "gumbo" clays. These clays caused blocking of the flowline, heavy mud losses over the shakers and problem running back to bottom after connections. A partial solution may have been to drill with a controlled drilling rate of up to 100 ft/hr and if possible, increased pump rates. The flowline became blocked with gumbo at 2530 ft, 3953 ft, 4172 ft and 4588 ft.

Hole instability was the second problem. Upon running in to log, the tool was unable to pass 4048 ft. When running in to clean out the hole, a gumbo ball was pushed to bottom, and the lower 1000 feet of hole had to be reamed back.