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Oil Level Measurements and Borehole Logging in Production Wells.

Two practical examples within Akzo Nobel brine fields.

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Abstract:

Akzo Nobel Salt is producing from diapir salt domes at five places in Europe: Hvornum (Denmark), Stade-Süd en Hollenbeck (Germany) and Heiligerlee en Zuidwending (The Netherlands).

Two cases will be discussed:

- Blanket oil level measurements in well HB-1 (Germany).
- Borehole logging in older production wells. HL-G (The Netherlands).

Blanket Oil level measurements.

For the development of a new brine production well it is very important to regulate the oil blanket level at the correct depth. Determination of the blanket level can be executed in two ways:

- Indirect
- Direct

The indirect determination of the blanket depth is by means of pressure and volume calculations based on caliper logs. Direct determination of the blanket depth can be provided by means of logging.

As practical example we will discuss a situation with a new production well HB-1 in Germany.

Borehole Logging in older production wells.

Within Akzo Nobel Salt a reasonable amount of production wells with an age of about 35-40 years exists. A granted permission to enlarge the cavity in height and diameter resulted in a further increase in cavern lifetime.

Today, we know too little of the actual technical situation of these wells. In order to reduce the possibility of an unexpected failure of one of the caverns it is of utmost importance to know the condition of the completion of these wells. It is therefore necessary to investigate the condition of the wells by executing some bore hole logs.

With reference to a calamity in well HL-G the objectives and results of the activities will be presented.