

Work **Safe!** Bulletin

Hydrogen Sulphide (H₂S) Knockdown DANGER!! Be Prepared to Encounter H₂S

Bulletin No.: 173
July 2000

A drilling rig employee was overcome by H₂S gas while running drill pipe into the wellbore. The well was drilled in 1995 and the operating company was in the process of adding a horizontal leg to the existing wellbore. The produced fluid in the wellbore had just been circulated out in preparation to commence drilling. The Workplace Safety and Health investigation concluded that the following factors contributed to this accident:

- The operating company was unaware that H₂S levels in the area range from 6 to 13.5%. There were therefore not prepared for a sour gas exposure, they had not informed the workers of the potential to encounter sour gas, not had they provided any H₂S detection equipment or other H₂S personal protective equipment (PPE).
- The drilling rig company did not have a safe work procedure in place for circulating sour fluids out of the wellbore and was treating the hole as 'sweet'.
- The worker was relatively new to the industry and had not received safety training on H₂S hazards.

The operating company and the subcontractor contravened the Workplace Safety & Health Act, section 4, which outlines the employer's obligation to ensure the safety of all workers by providing all necessary equipment, systems, tools, information, instruction and training.

It cannot be stressed strongly enough that H₂S is a killer. Please review your company's safe work procedures in the event of encountering sour fluids or gas, whether through drilling activity, production activity or spill. Be aware of your work environment - **if you don't know, FIND OUT!**

In Manitoba, oil production from the Lodgepole and Mission Canyon formations is sour. The Branch has gas analysis and H₂S concentration data available for most oil pools in the province.

Manitoba Conservation, Petroleum and Energy Branch is in the process of reviewing and developing policy on H₂S related safety equipment and programs to increase the level of oilfield safety, including regulation regarding training in H₂S safety for all oil field personnel.

Do not take unnecessary risks! Assume an H₂S hazard at all locations unless proper investigation and testing indicates there is no hazard present.

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