



INFORMATIONAL NOTICE 05-03

November 17, 2005

Re: Alert to Operators in Southwestern Manitoba Regarding the Potential of a Gas Kick While Drilling Surface Hole

On August 1st, 2005, a gas kick was encountered while drilling surface hole at 16-36-3-29, approximately six miles North of the Pierson Field. The drilling rig reached TD on surface hole at 139 metres having experienced hard drilling at approximately 96 metres. During the process of tripping out of the hole, a gas kick was taken with 39 metres of pipe remaining in the wellbore. The gas entered the wellbore and unloaded the drilling fluid, establishing an uncontrolled flow of gas, debris, and fresh water. The drilling crew was evacuated without injury and an emergency response plan was activated. The blowout continued for a period of 45 hours. The well did not ignite and was killed using heavyweight mud.

It was determined that the rig had encountered sweet gas of normal pressure gradient trapped in the Quaternary gravels beneath a layer of cemented till which may be identified by a reduced rate of penetration during drilling. These gravels are commonly encountered while drilling surface hole in many areas of the province and are generally interpreted to be glacial-fluvial sediment that was deposited in shale bedrock erosional lows. It appears the layer of cemented till above the gravel zone created a stratigraphic/structural trap for the gas. This type of trap may be encountered in townships 3 and 4, ranges 28 and 29 W1, where there have been relatively few wells drilled.

Upon review of the information collected regarding this gas zone the Branch is designating a red flag area (shown shaded on attachment #1) within which the following conditions for drilling operations may apply:

- Conductor barrel to be installed to a minimum depth of 20 meters and be equipped with a flow diverter head.
- Continuous gas detection system is to be in operation during the drilling of surface hole and while running and cementing casing.
- The drilling fluid for surface hole is to be maintained at a minimum density of 1150 kg/m³
- Drilling flow checks are to be conducted prior to making connections and while tripping out of the hole.
- Measures must be taken to prevent swabbing during tripping such as mud ring prevention, reciprocate and rotate pipe during tripping, and frequent flow checks.

- Safety meetings are to be conducted addressing all hazards and actions associated with experiencing a gas kick during the drilling of surface hole.
- During normal logging operations the well is to be logged from TD to surface with a gamma radiation and porosity measurement tool (eg. Gamma Ray Neutron Density).
- Any other condition considered necessary or advisable by the Director.

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