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# Shallow Gas Deposits

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## CAGC INFORMATION ALERT

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The following is a safety advisory regarding the hazards associated with shallow gas deposits that have been encountered in the Mackenzie Delta and Tuktoyaktuk Coastlands Areas. During recent geophysical and geotechnical operations, substantial shallow gas deposits and subsequent gas flows have been encountered, in order to mitigate the risks associated with these gas deposits, the following advisory has been issued.

If you have any questions, please contact Rick Turner (rturner@neb-one.gc.ca) at (403) 299-3868 or Alan Murray (amurray@neb-one.gc.ca) at (403) 299-3903.

### **Background**

This is an area of shallow biogenic gas deposits. The operator is to familiarize themselves with Section 19, of the *Canada Oil and Gas Geophysical Operations Regulations*; "Drilling Shot Holes for Charges". All necessary precautions shall be made while drilling shot holes to ensure that any released gas is not ignited. The following precautions, as a minimum, are to be taken:

#### **1) Shot holes**

- There must be no open ignition sources such as generators, heat sources, or smoking;
- All unnecessary electrical is turned off;
- The engine is equipped with air intake shut-offs that can be activated by the driller;
- The drilling rig is positioned, with respect to the wind, so that gas encountered during drilling will not accumulate in the vicinity of the rig;
- A check valve is to be installed on the kelly hose;
- Water vents must be left open and never closed while drilling or loading water;
- Water must be loaded from a source that has low potential for gas with the suction hose placed well below the bottom of the ice. This condition also applies to obtaining camp water from a frozen water body where shallow gas may be a concern;
- Use alternate means of communication to report the encountering of shallow gas, not the cab radio in the rig that has encountered the gas;

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- There shall be two means of egress on drill rigs;
- Crews should be outfitted with fire retardant clothing;
- If gas is encountered while drilling, a flowing hole report, that indicates the shot hole location, must be submitted, without delay, to a Safety Officer;
- If gas is encountered, explosives shall not be detonated in the encountering shot hole until approval is received by a Safety Officer.