

# Caroline Livestock Study

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The objective of the Caroline Livestock Study (CLS) study has been to examine productivity and health information from domestic livestock as one indicator of the potential long-term environmental impact of oil and natural gas developments in a rural area. Detailed biological accounting methods were developed to measure the health and productivity of cow-calf herds in an area with intensive oil and gas production. From 1991 through calving 2007, cow production records from 21,474 recorded bull contacts were examined from nine different area cow-calf herds. The median risks for non-pregnancy, abortion, calving late, stillbirth, and calf mortality for local herds did not differ substantially from other published reports. One of the limitations of this study has been the relatively small number of herds and limited geographic scope. In 2006, the results of a much larger study known as the Western Canada Study of Animal Health

Effects Associated with Exposure to Emissions from Oil and Natural Gas Field Facilities were released. Much of the protocol for this study was modeled after the CLS study. Reproductive performance in the two studies, as measured by the percentage of cows that failed to become pregnant, aborted, had a stillborn calf, or had a calf that died before weaning, was very

similar.

Final Report