



Public Lands Division
Land Use Operations Branch
Petroleum Land Use & Reclamation Section

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Industry Directive 2002-01

Key Word(s): river valleys; setback; wellsite

SLOPE AND BREAK SETBACK GUIDELINES

REQUIREMENTS

Setbacks are required for wellsites and associated infrastructure located near ravines or rivers where the slopes may be unstable. A setback represents what is considered a safe distance based on information provided about the physical characteristics of a site. For the purposes of this directive, "breaks" are considered to be the point where ground instability occurs owing to slope steepness.

Other Influencing Factors

Other factors are considered in determining setbacks on public land. Input from other agencies such as Fish and Wildlife, may result in significantly increasing the setback for such items such as a key/critical wildlife or waterfowl zone (e.g., Trumpeter Swan habitat, caribou habitat). In some situations, additional setbacks may be encouraged for aesthetic reasons (i.e., along recreational rivers, locations near camping areas, etc.). These concerns are not addressed in this directive.

PROCEDURE

Establishing Setbacks

Several factors are considered when establishing setbacks. These are:

- variability of river breaks,
- variability of ground stability,
- history of slope stability in the area,
- potential mitigative measures,
- other information specific to the site.

Ravines/Seasonal Watercourses

The minimum setback is 15 m from the edge of the breaks to the edge of the wellsite. This distance may be modified if a geotechnical report is submitted that supports the requested change.

Permanent (non-seasonal) Watercourses and Immediate Tributaries

The minimum setback is 45 m from the edge of the breaks to the edge of the wellsite. This distance may be modified if a geotechnical report is submitted that supports the requested change. (Note: An immediate tributary is a tributary that runs directly into a permanent water course.)

In All Cases

In all cases where the minimum setback applies:

- the perimeter of the wellsite must be bermed with material that will ensure fluids are contained; and
- the location of on-site sumps must be approved by the Land Manager before construction.

Note: Care must be taken to ensure soil texture and improper sump location do not lead to migration of fluids, resulting in contamination of a watercourse or additional loading of the slope.

Increased Setback

Local conditions or factors may result in the setback being increased. These are:

- topographic indicators (i.e., steepness of slope or tension cracks);
- soil indicators (i.e., clay and silty soil are more prone to slumping);
- hydrologic indicators (i.e., indicators of wetness and poor drainage such as ponding on the slope);
- susceptibility to river shifts (i.e., such shifts can undercut the toe of the slope, possibly resulting in slope movement);
- vegetation indicators (i.e., removal or a lack of vegetation will likely increase slope instability);
- fish and wildlife concerns;
- access concerns (i.e., cannot undercut toe of slope, load the head or cause water to pond); and
- oil or gas production requirements (as stated by company regarding the specific site).

Unstable Slope

When an application is received for a wellsite, and if the Land Manager believes the slope of the river may be unstable, the company will be required to submit a geotechnical report for the site. This report can be requested for a point at any distance from the river or stream where the site may show signs of instability. The report must prove the site is stable before the wellsite will be approved.

River Benches

Approval may be given for wellsites to be located on stable river benches, provided the wellsite is outside the minimum setback and any additional setback required based on local conditions. This site must not be susceptible to seasonal flooding.

OTHER

Setback limits may be reduced if a plan submitted from a geotechnical engineer adds information that confirms the short- or long-term stability of a site, including access routes.

Development may be considered on locations within the setback distance if the proponent proves the site is acceptable. If there is any possibility the site may be unstable, the proponent must provide geotechnical reports clarifying the site's stability or instability.

Compliance/enforcement is by Condition, as required.

Definitions

Breaks — the point at which ground instability occurs owing to slope steepness.

Immediate tributary — a tributary that runs directly into a permanent water course.

Land Manager — a Departmental Officer with delegated authority under the Public Lands Act or an Inspector under the Mines and Minerals Act (Part 8). The focus of the Land Manager is either operational land use or range/agriculture.

CONTACT

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