hydrostatic or hydraulic pressure, palsas are formed by cryosuction in more-or-less the same way as the hummocks that appear on our roads every spring. Besides the abundant water supply, their apparent affinity for boggy ground is due to bare spots where the wind has removed most or all of the snow cover, allowing frost to penetrate deeper into the subsurface than in the surrounding areas. Once a palsa has begun to form, its continued growth is favored by its increasing surface elevation, which the wind is more likely to keep clear of snow. Moreover, as the palsa rises higher above the water table, its covering of wetland vegetation starts to dry out, which makes it a more effectual insulator of the frozen core. An increase in surface albedo, brought about by a change in vegetation from peat mosses to lighter-colored plant species such as Cladonia (reindeer or cup lichens) may also influence palsa formation.

Heave is also the underlying cause of frost creep, the downslope movement of soil in response to cyclic expansion and contraction induced by freeze-thaw action. In combination with solifluction or gelifluction (its frozen-ground equivalent), frost creep operates on gradients as low as 1° but is most effective on 5°-20° slopes. Landforms are genetically similar and are usually classified morphologically. Features include lobes, benches, sheets, and streams.

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Staff changes at the Oil and Gas Division

New Hires

Bismarck office
David Burns – Engineering Technician
Tom Delzer – Engineering Technician
Kevin Connors – Carbon Capture and Storage Supervisor

Dickinson office
Cody Flammond – Field Inspector
Robyn Koppinger – Field Technician

Farewell

Long-time employee Karla Lorentzen retired from her Office Assistant position on July 15 after 22 years of service to the Oil and Gas Division.