

BC HYDRO OPERATIONS - ICE OBSERVATION REPORT #10

Flight: Thursday, January 22, 2009

Report: January 22, 2009

Report by Kerry Paslawski and Martin Jasek

The responsibility for ice observations on the Peace River passes to BC Hydro from Alberta Environment (AENV) when the ice front is upstream of Dunvegan. That responsibility was transferred on January 6, 2009. The numbering of reports is a continuation of the Alberta Environment reports.

Flight Observations by Kerry Paslawski

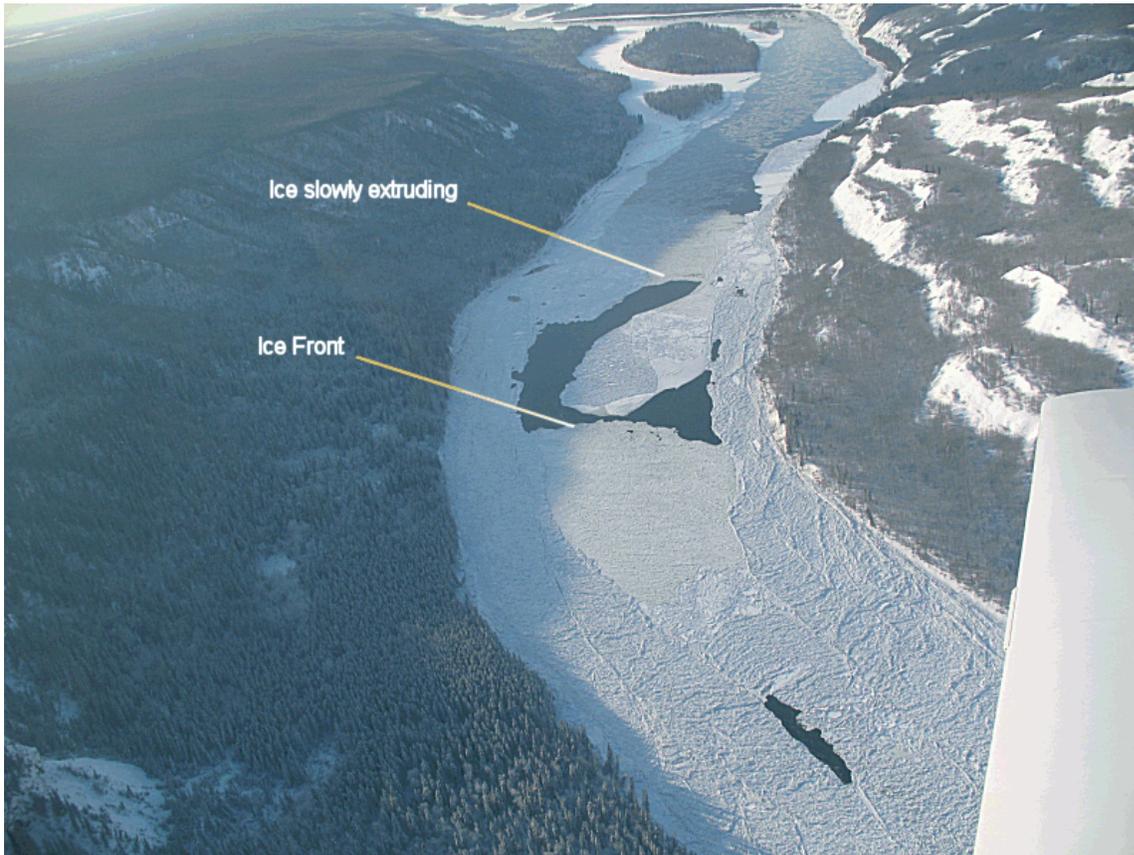
A flight observation was conducted out of the Grande Prairie Airport on Thursday January 22, 2009. Air temperature at the Clayhurst Bridge was -18 °C and at Dunvegan it was also -18 °C. The weather was clear and sunny.

Ice Observations

Location of the Ice Front: The ice front had receded 1.6 km since the last observation on Jan 19 and was located at **km 223.0 on Jan 22, 2009 14:01 MST**. This was approximately 73 km upstream of Dunvegan and about 59 km downstream of the Clayhurst Bridge near the BC/AB border. The average advance rate of the ice front recession between the last two observations was about 0.5 km/day. There was new ice however arriving at the ice front indicating that the ice front was now re-advancing. There was also evidence that the ice front had receded to **km 223.7** prior to the start of this re-advancement. Based on the change to cooler temperatures and water temperature at the BC/AB border it is estimated that the time for this ice front position (and change from recession to advance) was approximately **Jan 21, 18:00 hrs**.

Detailed Observations:

km 165	- frazil ice pan surface concentration 5%
km 173	- frazil ice pan surface concentration 5%
km 177.5	- frazil ice pan surface concentration 10%
km 181	- frazil ice pan surface concentration 5%
km 188.5	- frazil ice pan surface concentration 20%
km 191	- frazil ice pan surface concentration 10%
km 195	- frazil ice pan surface concentration 25%
km 203	- frazil ice pan surface concentration 10%
km 207	- frazil ice pan surface concentration 25%
km 210	- frazil ice pan surface concentration 15%
km 213	- frazil ice pan surface concentration 15%
km 218.5	- frazil ice pan surface concentration 25%
km 221	- frazil ice pan surface concentration 40%
km 222	- frazil ice pan surface concentration 100% - ice pan rafts extruding slowly
km 223	- ice front at 14:01 MST
km 223 to 223.5	- juxtaposed
km 223.5 to 223.7	- snow-covered brash ice and shifted consolidated ice
km 223.7	- furthest downstream extent of recent ice front recession, estimated Jan 21, 18:00 hrs
km 223.7 to 224	- consolidated
km 224	- ice is the same as the Jan 19 observational flight downstream of this point.



Looking upstream at the ice front on Jan 22, 2009, 14:01 hrs. Significant shore-ice has caused a narrowing of the channel upstream of the ice front causing ice pans to extrude through narrow opening.



Extruded ice pan rafts arriving at the ice front at 13:58 hrs. Flow direction is left to right.

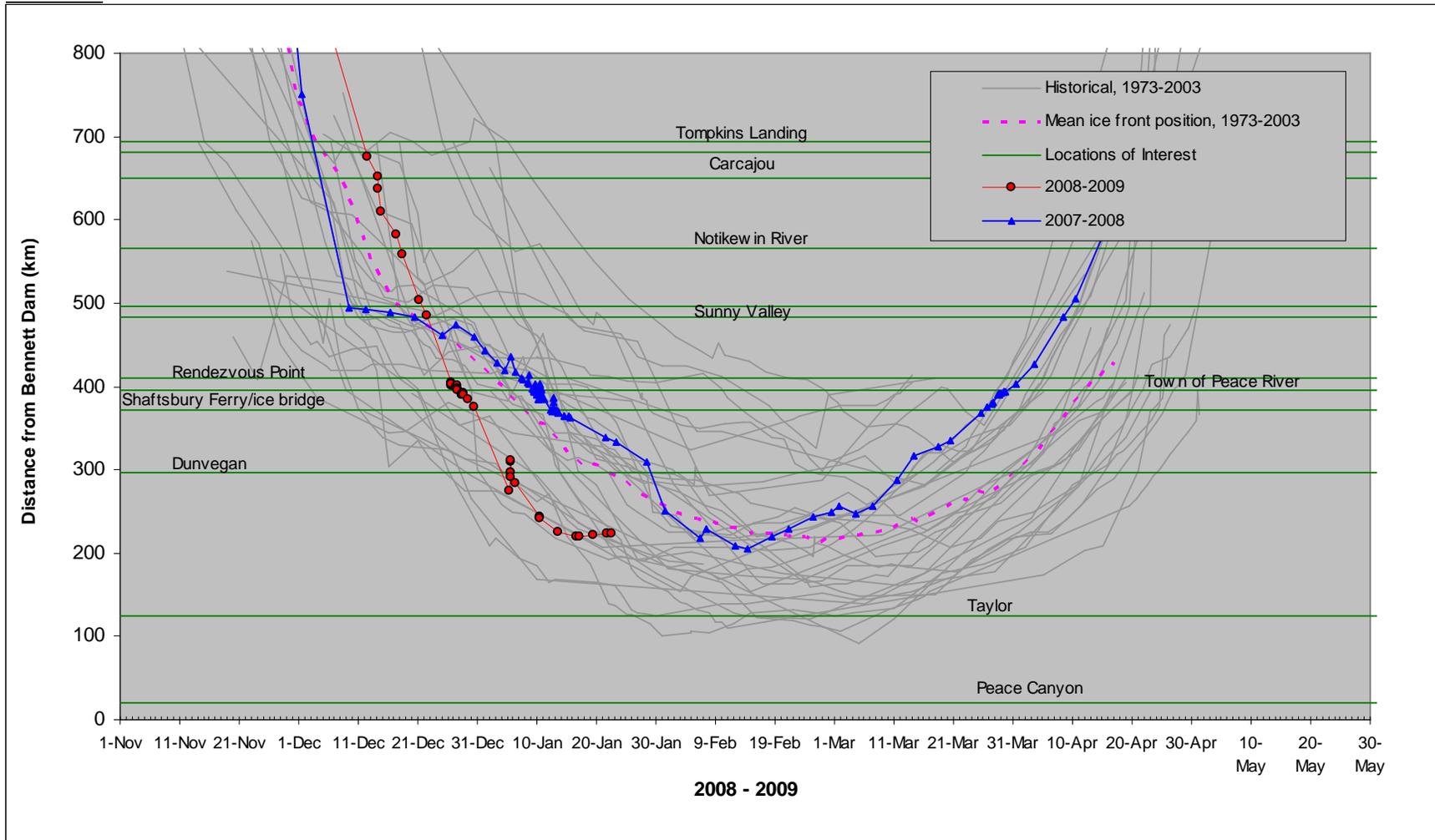


Looking downstream at ice pans slowly extruding through shore ice constriction at 13:59 hrs. Ice front is near the top portion of the photograph.

Environment Canada Forecast Temperatures (°C)			
		Fort St. John	Town of Peace River
		Max/Min	Max/Min
Thr	22-Jan-09	-19 / -23	-15 / -24
Fri	23-Jan-09	-25 / -27	-22 / -26
Sat	24-Jan-09	-21 / -25	-23 / -29
Sun	25-Jan-09	-16 / -24	-22 / -33
Mon	26-Jan-09	-6 / -18	-14 / -26
Normal Max/Min		-10 / -18	-10 / -21

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Ice Front



The next ice observation flight is scheduled for Monday, January 26, 2009.