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Exploratory Research Window Burning

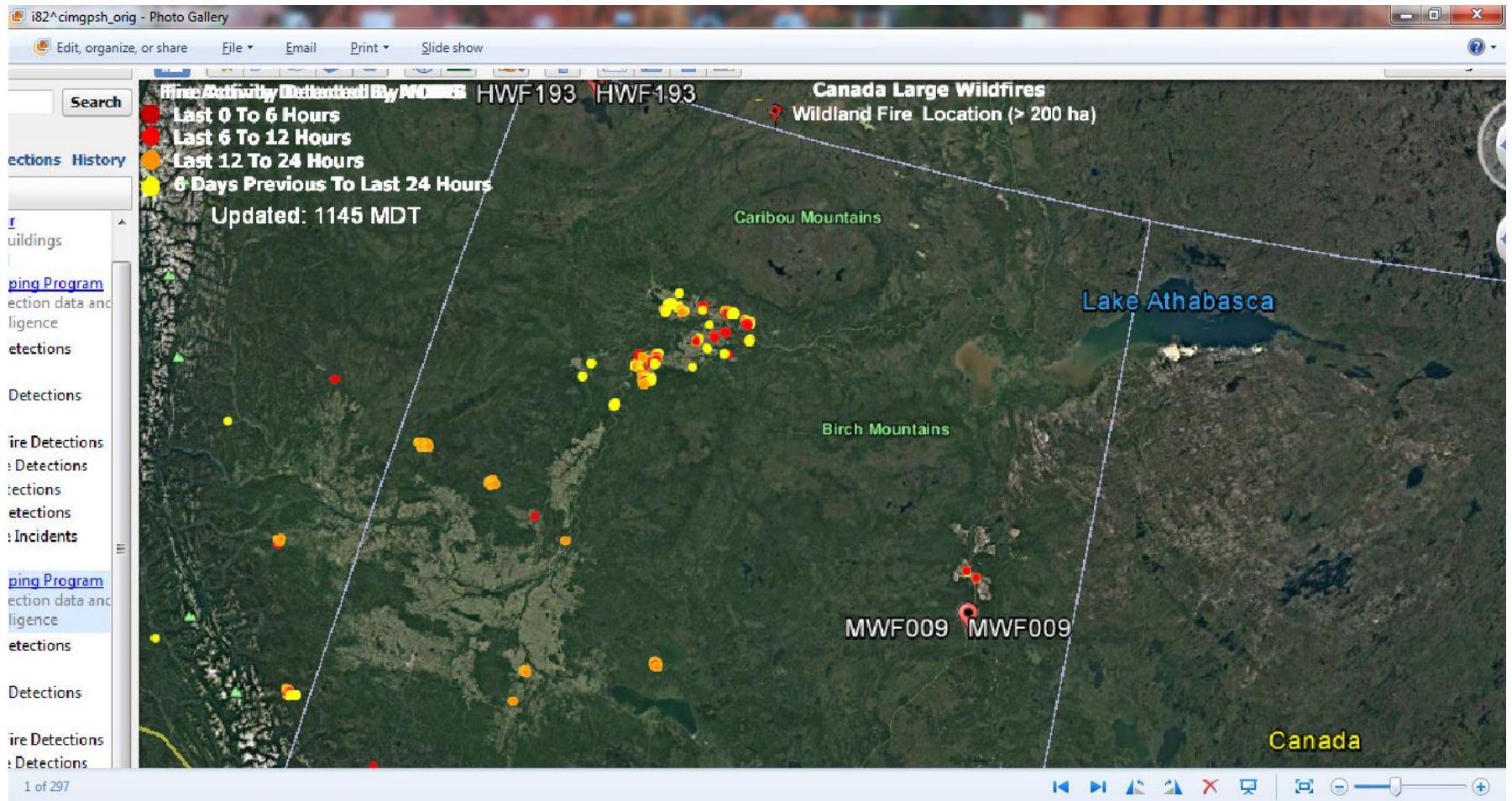
2016 Test Burning & Project Plan Development

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Background

- NW Alberta lands sales have led to significant burning projects
- Land owners require burning permits during “Fire Season” (March 1st – October 31st)
- This type of large scale burning (windrows) is often deferred to after the established fire season
- Windrow burning outside fire season poses less fire escape risk, but has other public safety concerns e.g. smoke which can lead to health issues and increased traffic accidents
- Local forestry and municipal authorities have engaged in discussions aimed at identifying potential burning options

Burning Situation – Nov 3



Approach

- Alberta has engaged FPInnovations to develop a project aimed at identifying conditions for safe windrow burning (during fire season)
- Exploratory research was conducted in September and October to identify project needs and methodology
- Findings to be used to assist project planning



Test Burn Results Oct 12th

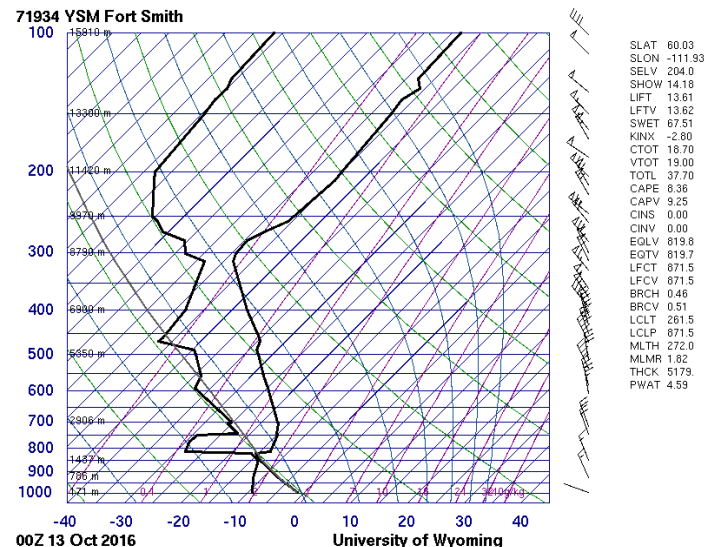
Findings

1. Windrow #1 moisture content dropped roughly 3% from mid-September readings
2. Fine fuel availability increased ignition success
3. Multiple ignition points significantly increased windrow consumption time
4. Fuel moisture content of 20% or less provided for full consumption but contributed to active fire behaviour e.g. firewhirls
5. In-drafts were recorded up to 22 kmh
6. Burning debris transported considerable distances both within and outside test windrows
7. 5 metre fuel break (east end of target windrows) provided a control point, but did not prevent spotting
8. Overcast skies and low cloud ceiling contributed to smoke accumulation immediately over the test site



Future Work

- Goal is to identify and validate potential burning conditions and time frames suitable for windrow removal
- FPInnovations currently working with Alberta staff to develop Detailed Project Plan
- Current project thinking / focus likely to be on:
 - Fuel moisture content
 - Non-target fuel values
 - Fire Guards
 - Venting conditions
- Additional input welcomed!





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Questions?