

**Data Repository Item A - Sample location information**

Sample name	General location	Lat (°N)	Long (°W)	Notes	Analysis
<b><i>Beaver Lake Fm. sandstone and mudstone</i></b>					
16JT03LA	Hillslope east of Beaver Lake	62.028750	141.811944	Massive lithic sandstone on hillslope	Detrital zircon U-Pb geochron.
16JT13LA	Hillslope north of Beaver Lake	62.051583	141.771666	Cross-stratified lithic sandstone in streamcut	Detrital zircon U-Pb geochron.
16JT12LA	Hillslope north of Beaver Lake	62.060555	141.782500	Carbonaceous mudstone exposed near poorly exposed tuff	Palynology and paleobotany
16JT14LA	Hillslope north of Beaver Lake	62.049444	141.739722	Carbonaceous mudstone	Palynology
16JT17-A, B	Hillslope north of Beaver Lake	62.054361	141.741666	Carbonaceous mudstone exposed within measured section	Paleobotany
WP87-M	Southwest flank of Euchre Mtn.	62.040286	142.216613	Thin mudstone within lowermost massive green-buff sandstones	Palynology
WP87-SS	Southwest flank of Euchre Mtn.	62.040346	142.216504	Lowermost green-buff massive sandstones	Detrital zircon geochron.
WP87-TS	Southwest flank of Euchre Mtn.	62.040284	142.216613	Light grey tuffaceous very-fine-grained sandstone and siltstone	Detrital zircon U-Pb geochron.
WP97	Southwest flank of Euchre Mtn.	62.030055	142.172222	Carbonaceous mudstone exposed within lithic sandstone succession	Paleobotany
<b><i>Intrusions in lower Beaver Lake Fm. sandstone and conglomerate</i></b>					
16JT09LA	Hillslope north of Beaver Lake	62.054694	141.786389	Subhorizontal mafic intrusion in sandstone/mudstone	$^{40}\text{Ar}/^{39}\text{Ar}$ geochronology
16JT25LA	Hillslope north of Beaver Lake	62.630556	141.786111	Subvertical mafic intrusion in basal conglomerate	$^{40}\text{Ar}/^{39}\text{Ar}$ geochronology
<b><i>Chisana Formation lavas</i></b>					
CHI-1232	Bonanza Creek Canyon	62.095380	141.843800	Massive andesite flow exposed along Bonanza Creek	$^{40}\text{Ar}/^{39}\text{Ar}$ geochronology
CHI-1438	Bonanza Creek Canyon	62.091330	141.849070	Massive andesite flow exposed along Bonanza Creek	$^{40}\text{Ar}/^{39}\text{Ar}$ geochronology
16JT02LA	Hillslope east of Beaver Lake	62.028833	141.812222	Andesite lava exposed 3 m below basal conglomerate	$^{40}\text{Ar}/^{39}\text{Ar}$ geochronology
16JT07LA	Hillslope east of Beaver Lake	62.054083	141.786666	Andesite lava exposed immediately below basal conglomerate	$^{40}\text{Ar}/^{39}\text{Ar}$ geochronology
16JT16LA	Hillslope north of Beaver Lake	62.052778	141.740833	Andesite lava exposed immediately below basal conglomerate	$^{40}\text{Ar}/^{39}\text{Ar}$ geochronology
<b><i>Dike intruding Totshunda Fault zone</i></b>					
01TOT	Cooper Pass	62.264230	142.522190	Feldspar dike intruding Nabesna pluton <0.5 km west of Totshunda fault	$^{40}\text{Ar}/^{39}\text{Ar}$ geochronology

Note: datum WGS84 for all samples