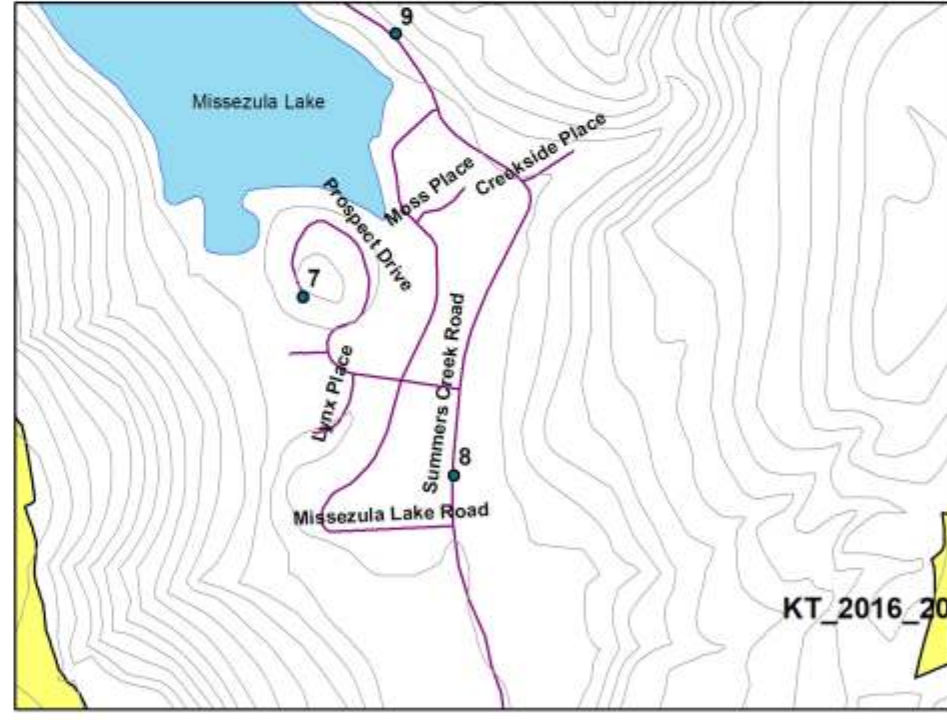
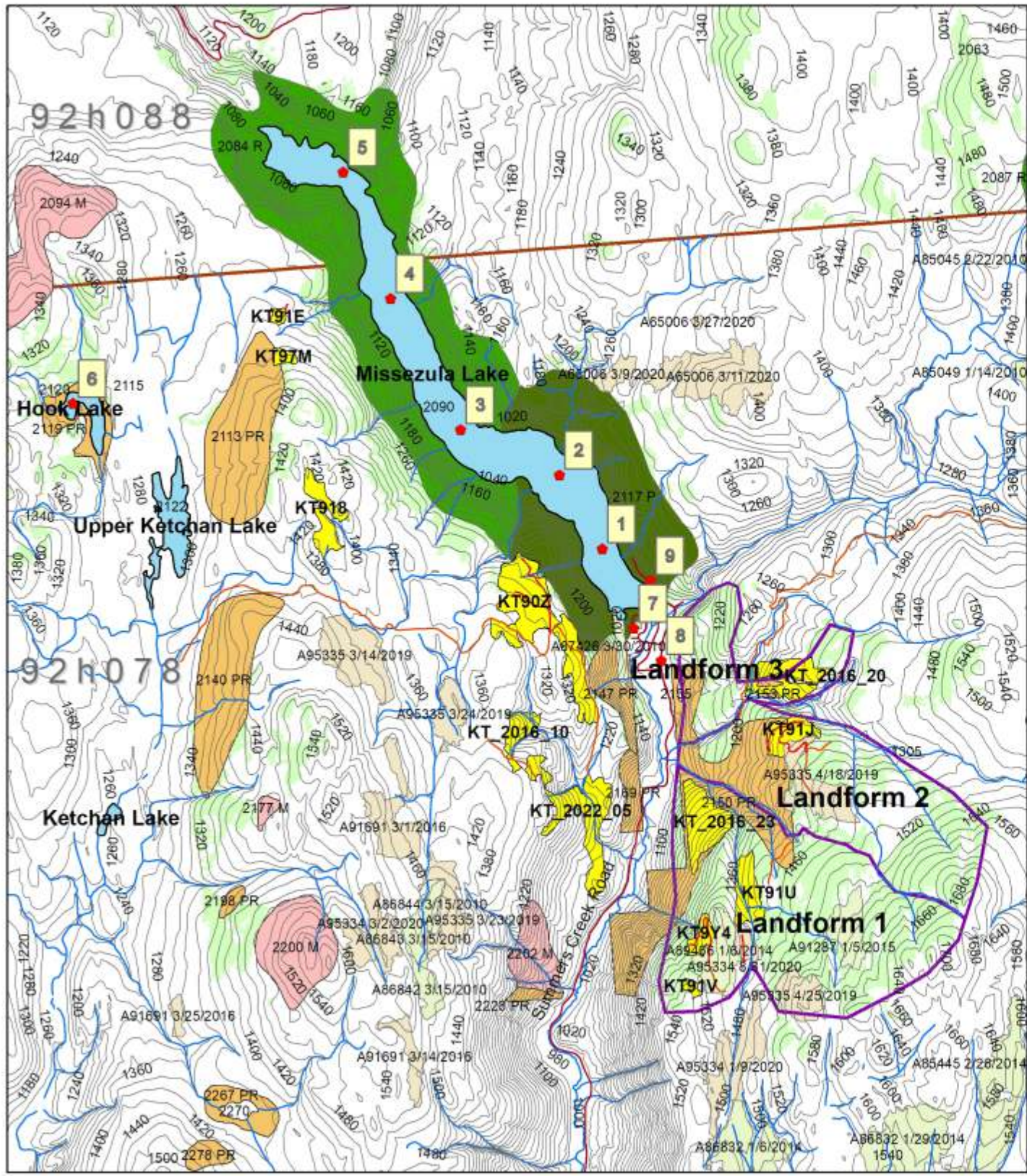


Ketchan Visual Assessment
RDI Resource Design Inc
March, 2021

- Ketchan_Viewpoints
 - road_segment_1
 - TRIM_Contours_20m
 - Proposed_Roads
 - Existing_Roads
 - watercourse_1
 - Ketchan_Landforms
 - Harvested_2010-2015
 - Harvested_2016-2020
 - Ketchan_Block
 - WTRA
 - Missezula_Lake
 - Hook_Lake
 - Upper_Ketchan_Lake
 - Ketchan_Lake
- EVQO_CD**
- M
 - P
 - PR
 - R
 - BCmapgrid
 - Not Visible
 - Visible



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Page	Item
1	Key Map
2	Contents
3	Summary
4	Viewpoint 7 with Percent Alteration
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6	Viewpoint 9
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12	Viewpoint 6

Background

David Lishman, RPF, Planning Officer, BCTS, Kamloops Business Area, assembled a visuals project file for the Ketchan chart in the Merritt TSA on February 10, 2021, and requested the RDI conduct a visual impact assessment under contract number PD18TEB007.

A total of 12 cutblocks were included for the assessment. Six of these were on the east side of Summers Creek near the south end of Missezula Lake and six were on the west side of Missezula Lake and Summers Creek. In addition, the file also contained scattered existing FTEN openings, proposed, and a few WTRA's. RDI has sorted the cutblocks for east side and west side location, and from north to south on each side.

RDI created an ArcMap project file with blocks, roads, existing cutblocks, etc. RDI acquired a 3-D digital elevation model (DEM), hydrology, and additional roads from Maps Canada Convec site. ROads and road names were also acquired from Convec. RDI used the Visual Landscape Inventory area and the current forest VRI from our archive.

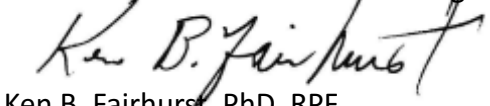
The 20m DEM was entered into Visual Nature Studio along with the cutblock data and viewpoints for simulation. RDI established 9 viewpoints from which generate visual simulations using Visual Nature Studio. Three potential viewpoints were placed on roads within the community of Missezula Lake, 4 viewpoints were placed along the lake from the south end to the north end, and 1 viewpoint was located on Hook Lake to the west of Missezula Lake. Preliminary simulations were produced from each viewpoint, noting which cutblocks were visible, if any, and the degree of visual apparency. Three Landforms were identified with the help of viewshed analysis for the landscape influenced by the cutblocks on the east side only. Visual Landscape Inventory was imported from RDI's archive and portrayed along with all other data in the ArcMap key map presented on page 1 of this document.

The Visual Sensitivity Units identified in the VLI are continuous along the lake, each with Retention and Preservation VQOs. They are somewhat scattered and insufficient in coverage south of the lake, compared to the viewshed analysis. No cutblocks are planned within the restricted visually sensitive steep lake terrain, but are present in the less restrictive or non-visually sensitive landscape where the VQO is Partial Retention. The three landforms would each merit a Partial Retention VQO. As shown in the visibility summary table, four cutblocks are likely to be visible in Landform 1, and one visible cutblock is located in Landform 2, with none visible in Landform 3. KT97M is inconsequential as seen from Hook Lake.

RDI produced simulations from each of the viewpoints. RDI didn't have the benefit of photography to assist in the analysis. Christian Shears will be providing the photos in the near future. They will be added to the report and considered in the final assessment.

Given the immediately apparent predominance of cutblock KT_2016_23 in the views as reported by RDI, BCTS agreed to having us examine selective retention within that cutblock. RDI assigned 125 sph distributed 15m to 17m trees to the cutblock. RDI produced three scenarios from 8 or the 9 viewpoints. The scenarios were: 1) bare ground, 2) 125sph retention, and 3) 125sph retention with ground snow. The snow added emphasis, but also added created visual absorption with existing patterns in the landscape given the good overall form of KT_2016_23. KT91J is horizontal seen from lake VPs, but has WTRAs.

RDI has not been provided with operational-appropriate density of retention. The 125sph number is for demonstration purposes and does not necessariy reflect the reality of post-operation visual quality. The chart "Predicting VQOs for Partial Cuts" taken from MOF's Predicting Visual Quality of Partial Cutting" is presented on the next page. It suggests 30% of 15m stems retained can achieve Partial Retention, while slightly taller trees will achieve Modification if applied across the landform. KT_2016_23 represents just 25% of the landform, but is focal and close-up to long-term viewing, so utmost caution and care is essential when selecting the final prescription. All other cutblocks are capable meeting Partial Retention.



Ken B. Fairhurst, PhD, RPF
RDI Resource Design Inc
March 21, 2021

Cutblock Visibility - Cutblocks ordered Eastside of Summers Creek then Westside of Missezula Lake/Summers Creek; North to South												
Side of Lake/Creek	Landform	Cutblock	VP 7	VP 8	VP 9	VP 1	VP 2	VP 3	VP 4	VP 5	VP 6 - Hook Lake	
Eastside North to South	Landform 3	KT_2016_20										
	Landform 2	KT91J			VM	V	V	V	V	V		
	Landform 1	KT91U				VM	VM					
		KT_2016_23	VV	VV	VV	VV	VV					
		KT9Y4	V	VM	V	V	VM					
		KT91V	VM		VM	VM						
Westside North to South	Landforms Not Identified due Lack of Visibility of Cutblocks	KT91E										
		KT97M									VM	
		KT918										
		KT90Z									V	
		KT_2016_10										
		KT_2022_05										

V - Visible | VV - Very Visible | VM - Minor Visibility

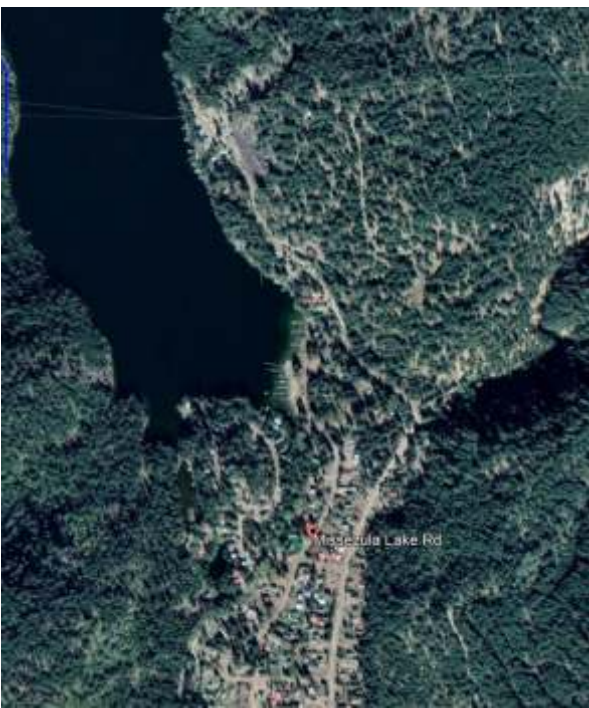
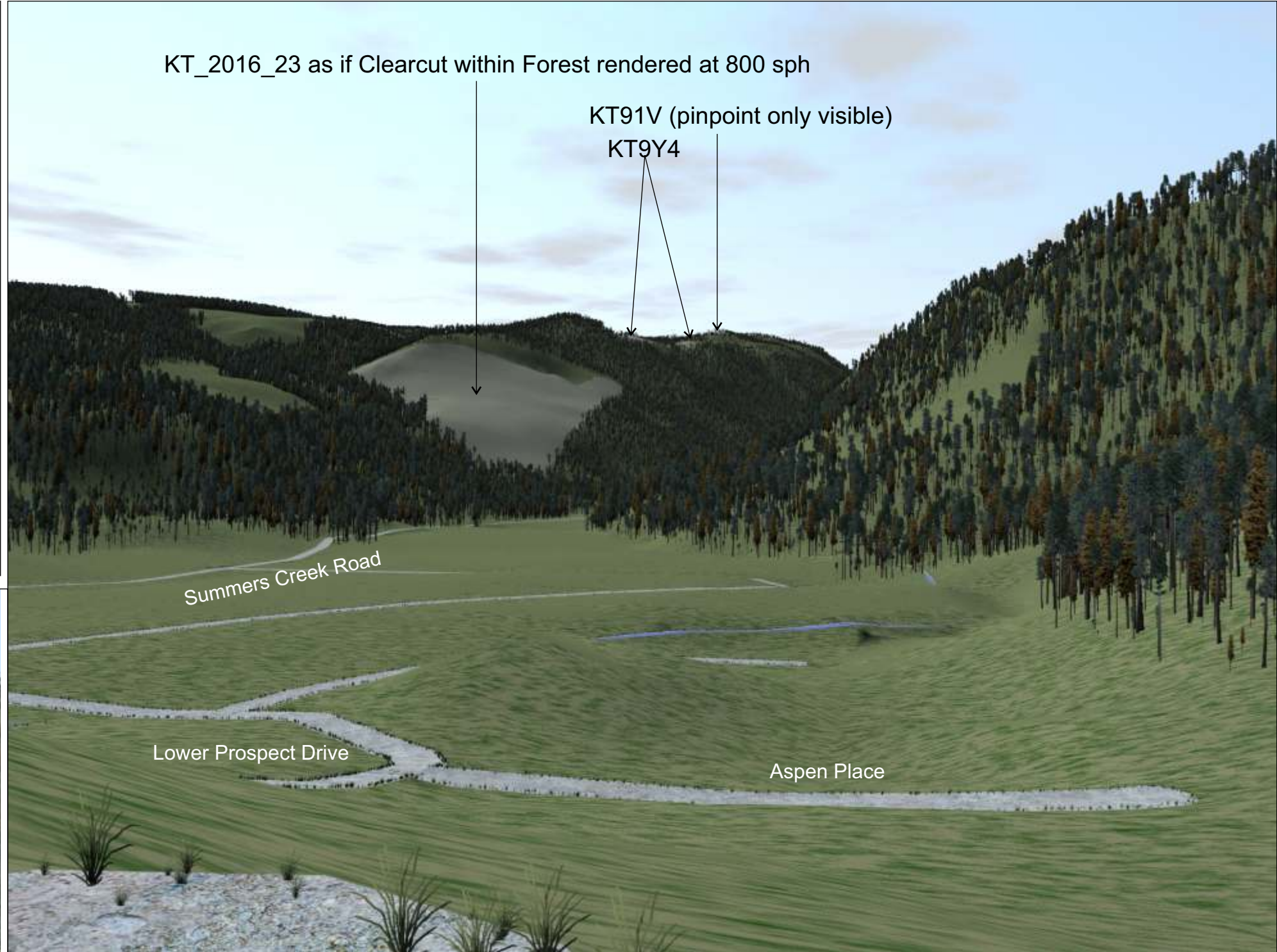
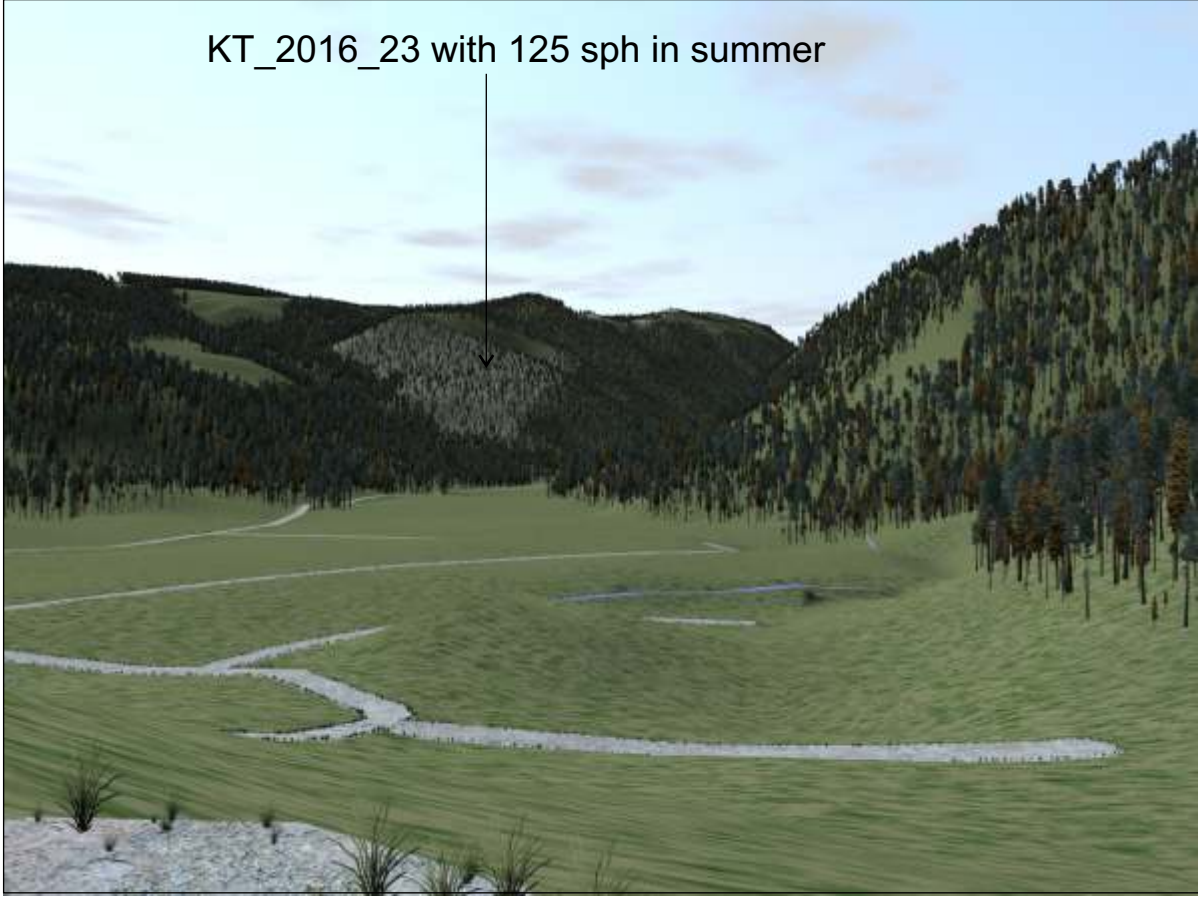
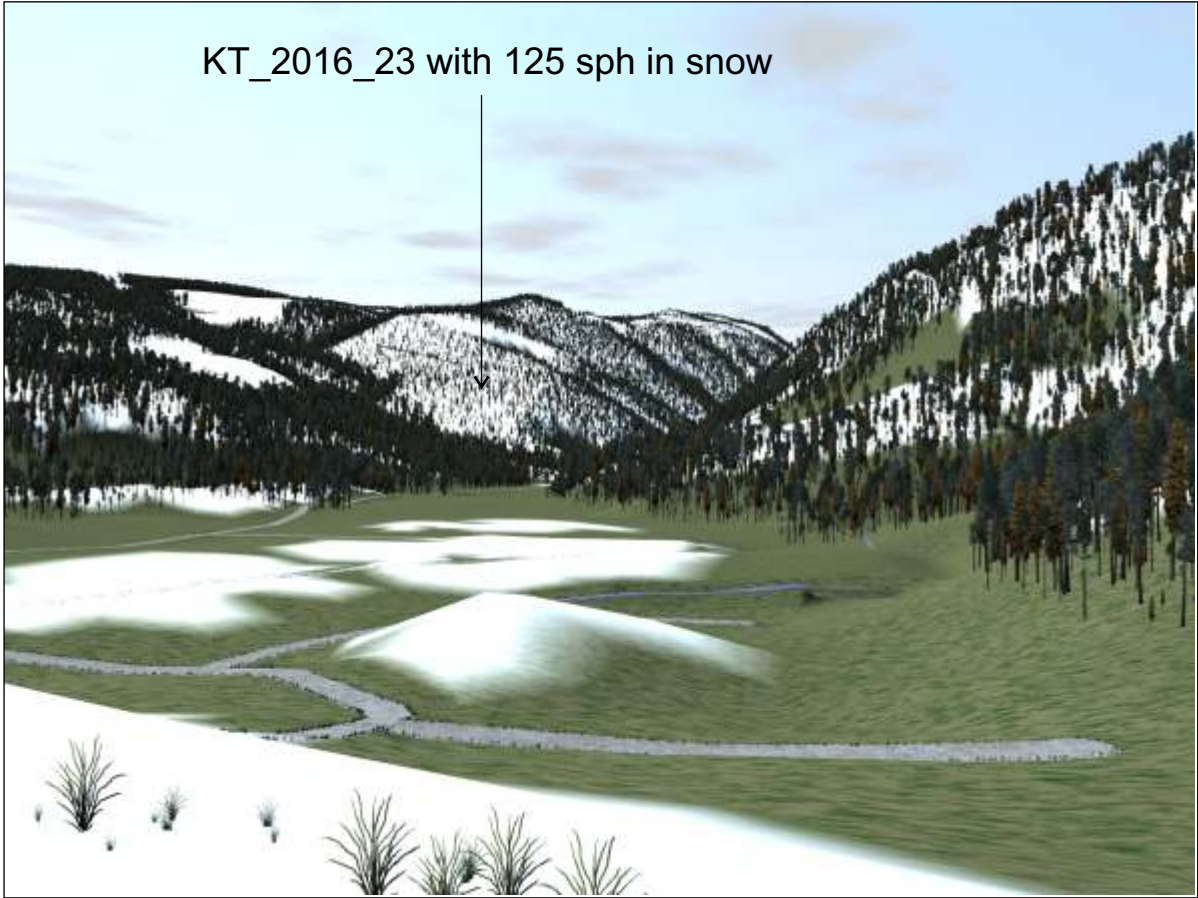


Table 10. Predicting VQOs for Partial Cuts

Percent Alteration Viewpoint 7 - Bare		
Name	AREA2	% Alt
Landform 1	157156.01	
KT_2016_23	39627.00	25.22%
KT9Y4	290.81	0.19%
KT9Y4	263.14	0.17%
KP91V	92.84	0.06%
Sum Alt	40273.80	25.63%

Volume (Stems) Removed in %	Tree Height (Meters)									
	5	10	15	20	25	30	35	40	45	50
10	R	R	R	R	R	R	R	R	PR	PR
20	R	R	R	R	R	R	PR	PR	PR	PR
30	R	R	R	R	PR	PR	PR	PR	PR	PR
40	R	R	PR	PR	PR	PR	PR	PR	PR	M
50	PR	PR	PR	PR	PR	PR	PR	M	M	M
60	PR	PR	PR	PR	PR	M	M	M	M	M
70	PR	PR	PR	M	M	M	M	M	M	M
80	PR	PR	M	M	M	M	M	M	M	M
90	M	M	M	M	M	M	M	M	M	M

Note: There is a 90% or better chance of achieving the VQO shown, within 10-40 m tree height.

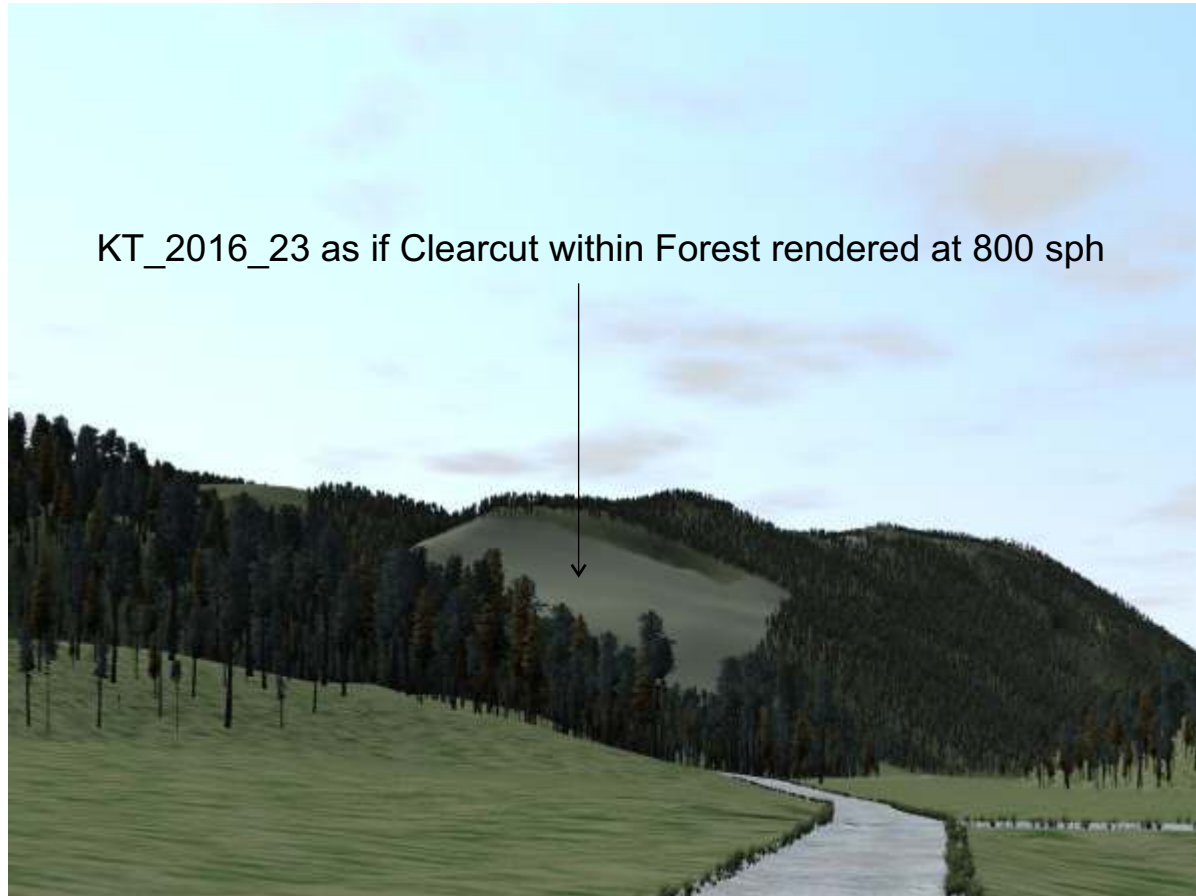


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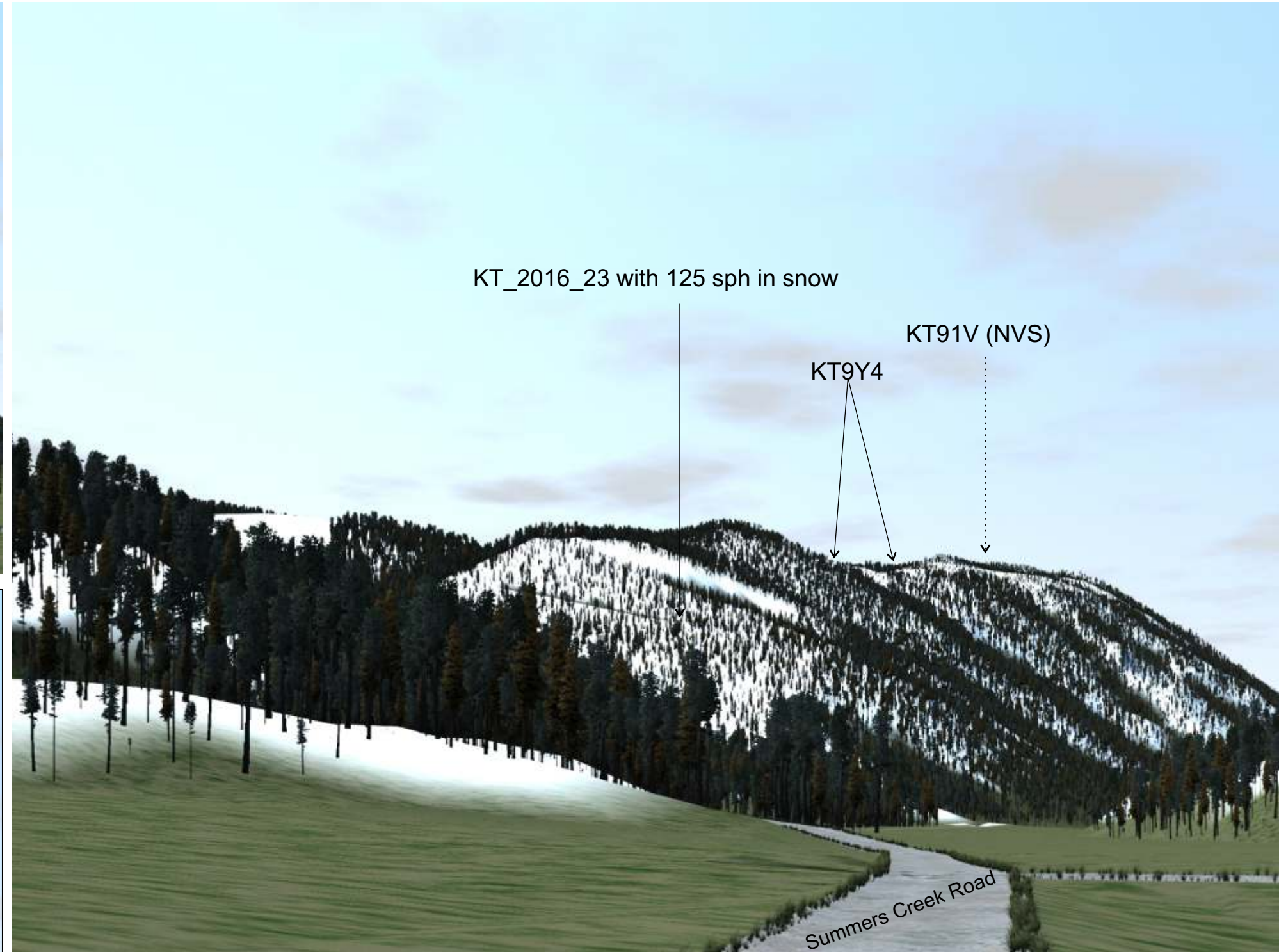


Viewpoint 7 - Top End of Prospect Drive Looking South on Hill at South End of Missezula Lake

KT_2016_23 as if Clearcut within Forest rendered at 800 sph

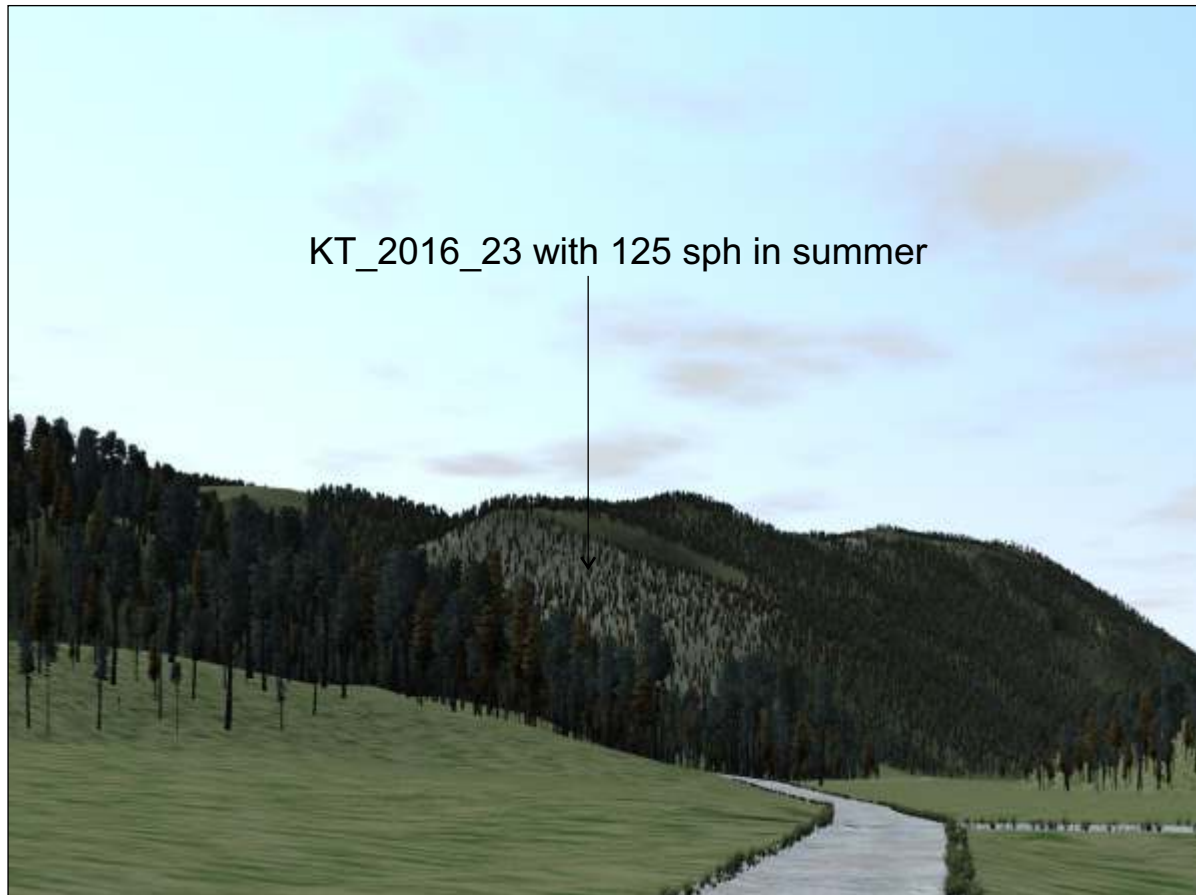


KT_2016_23 with 125 sph in snow



KT9Y4
KT91V (NVS)

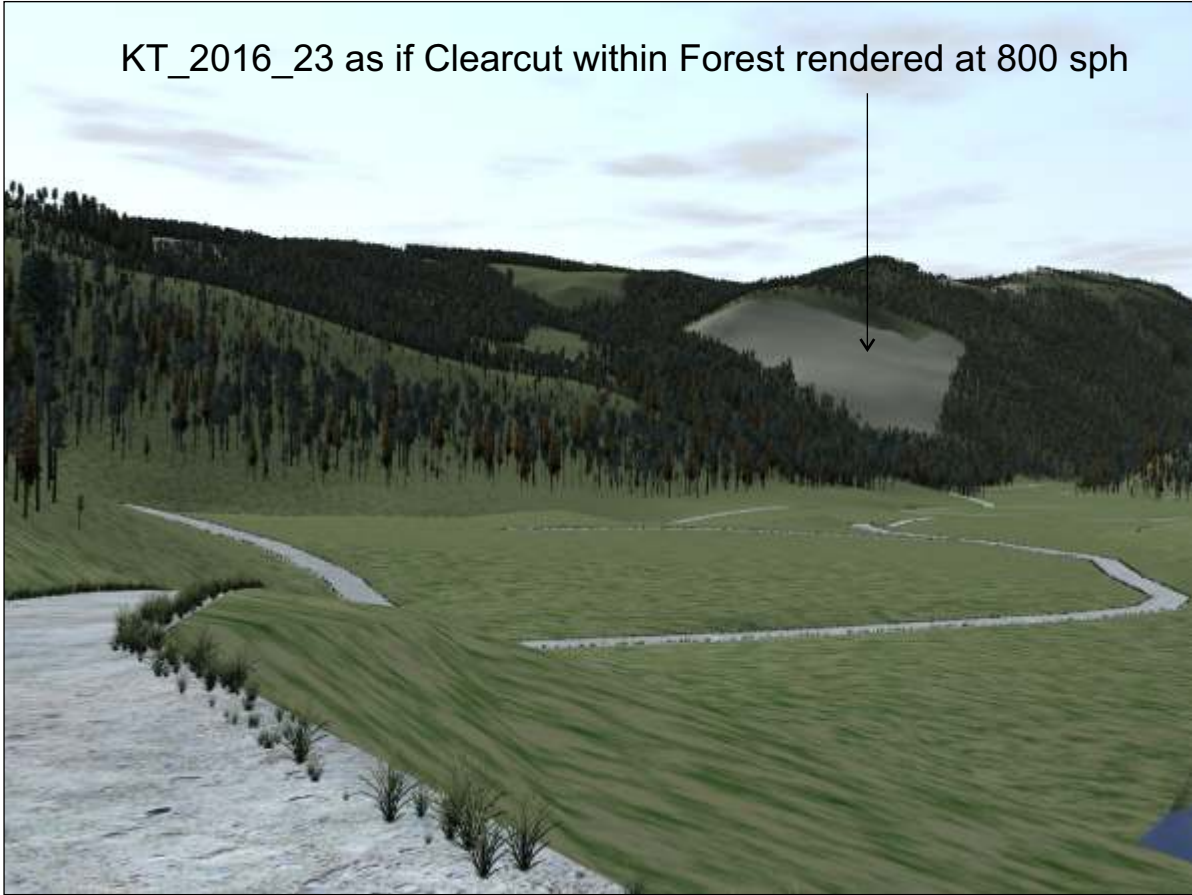
KT_2016_23 with 125 sph in summer



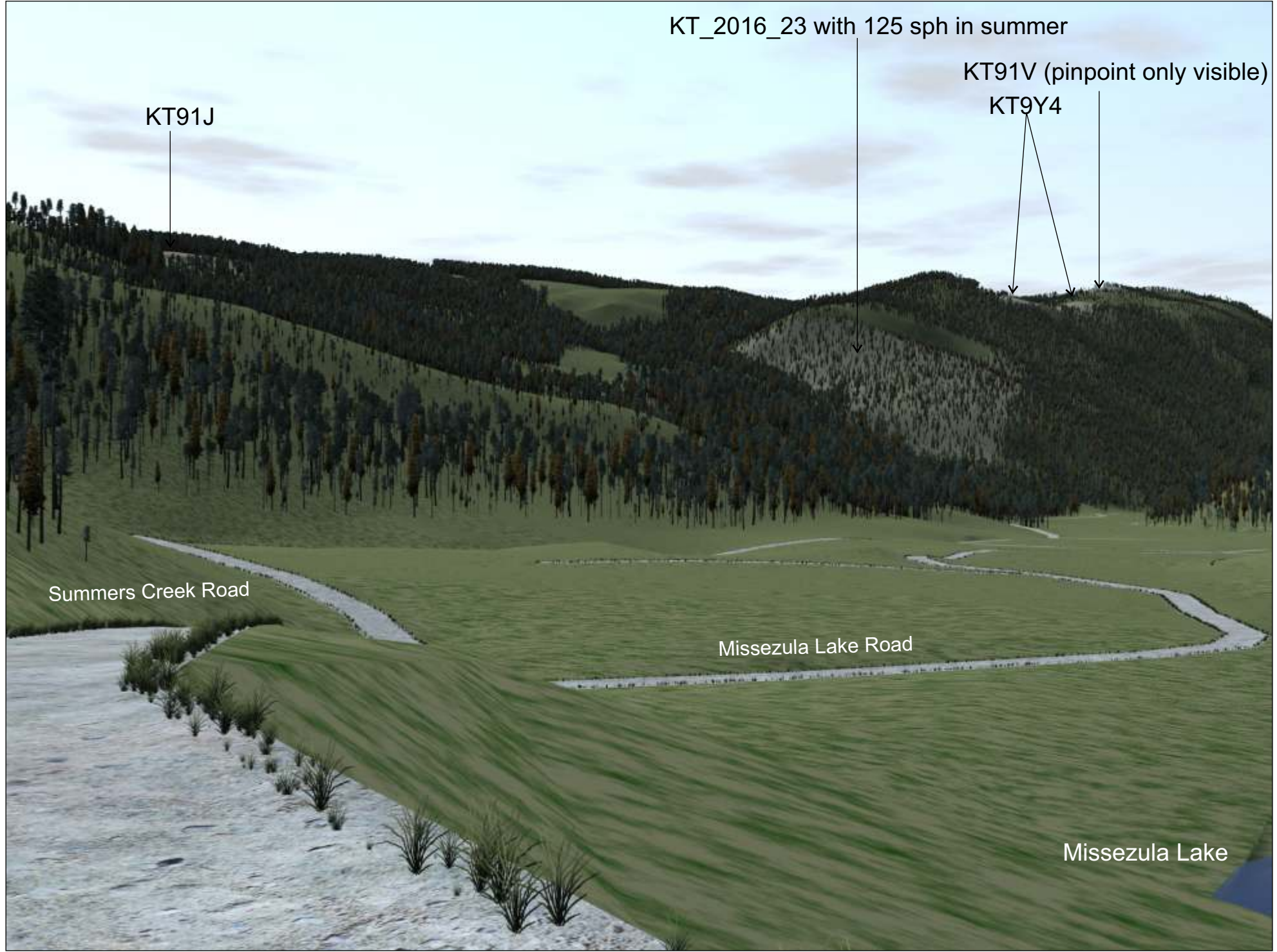
KT_2016_23 with 125 sph in winter snow



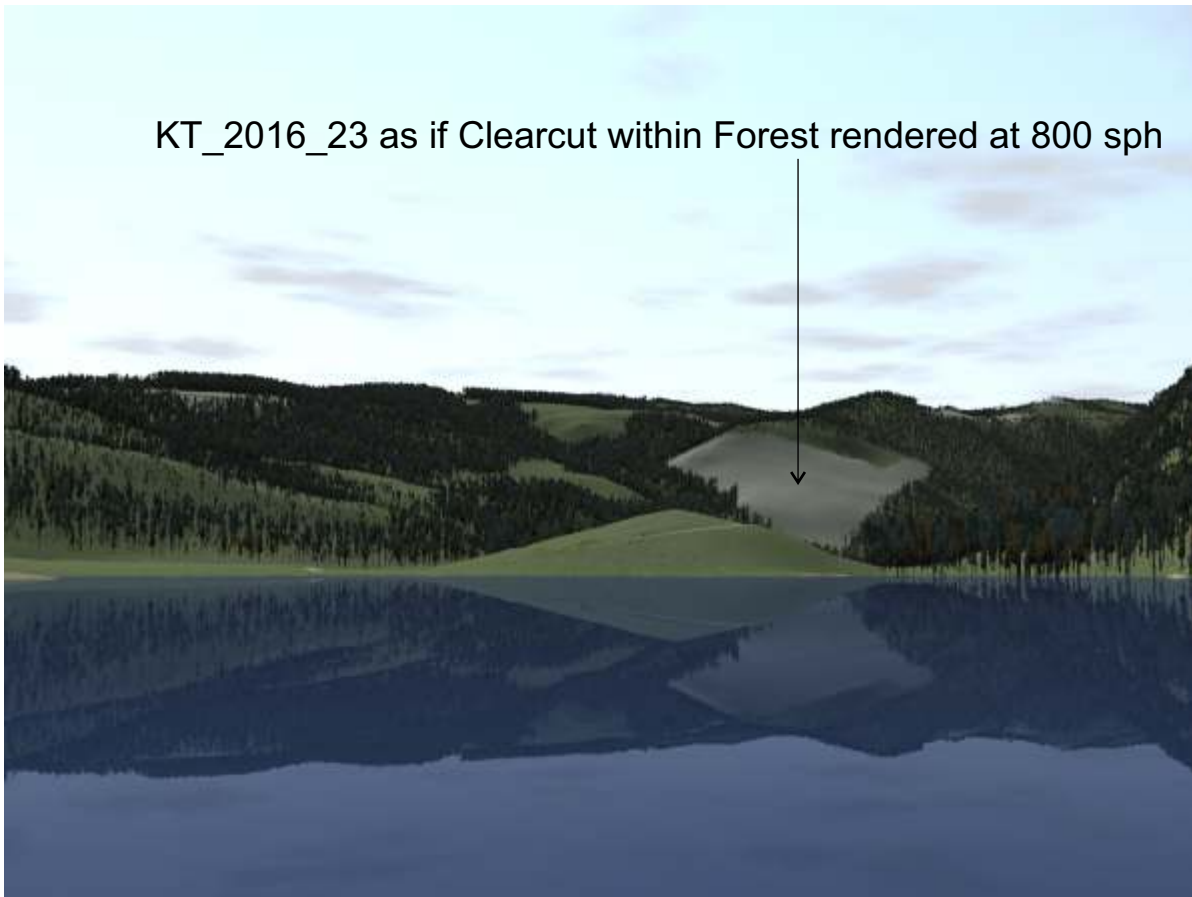
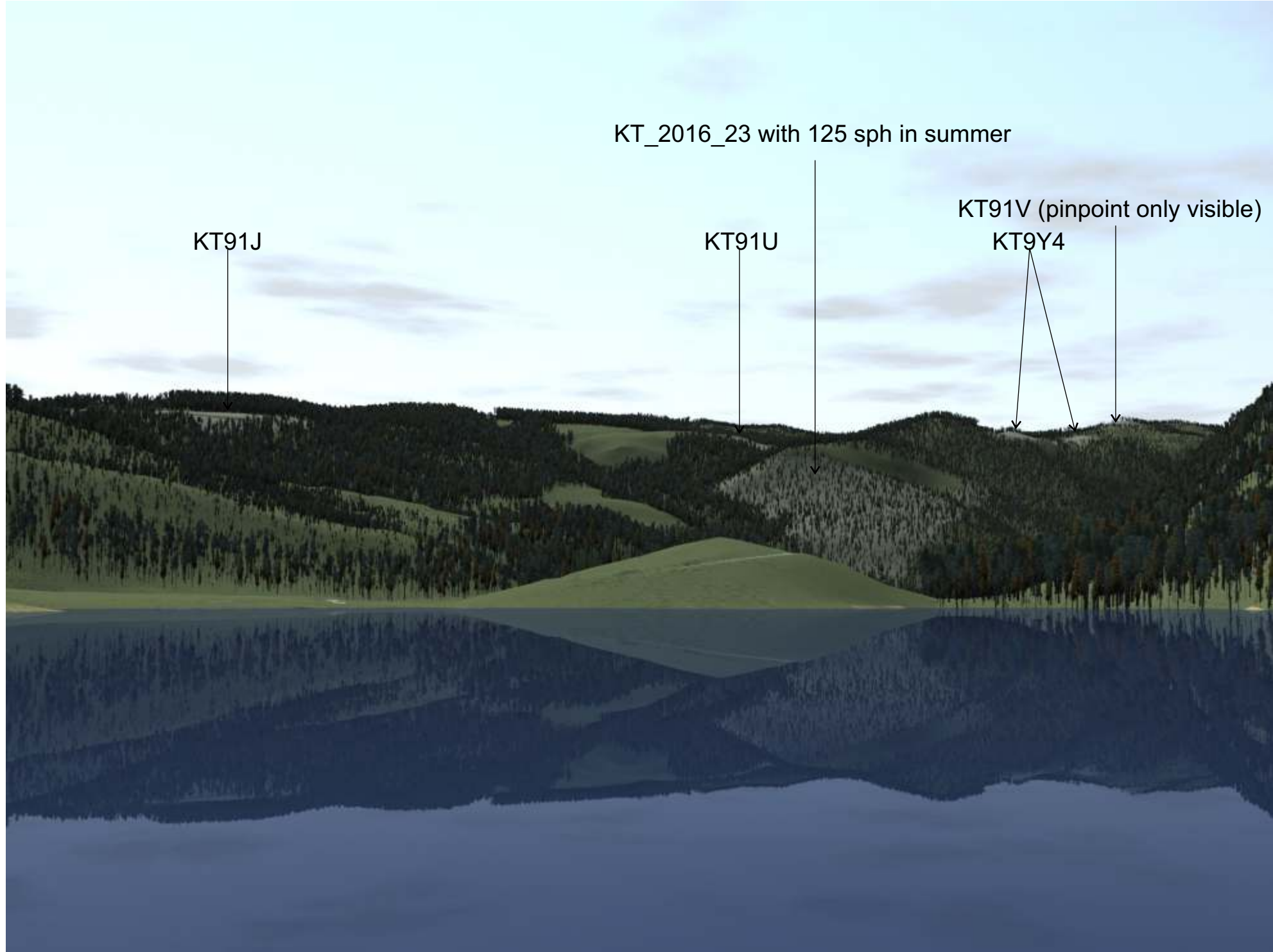
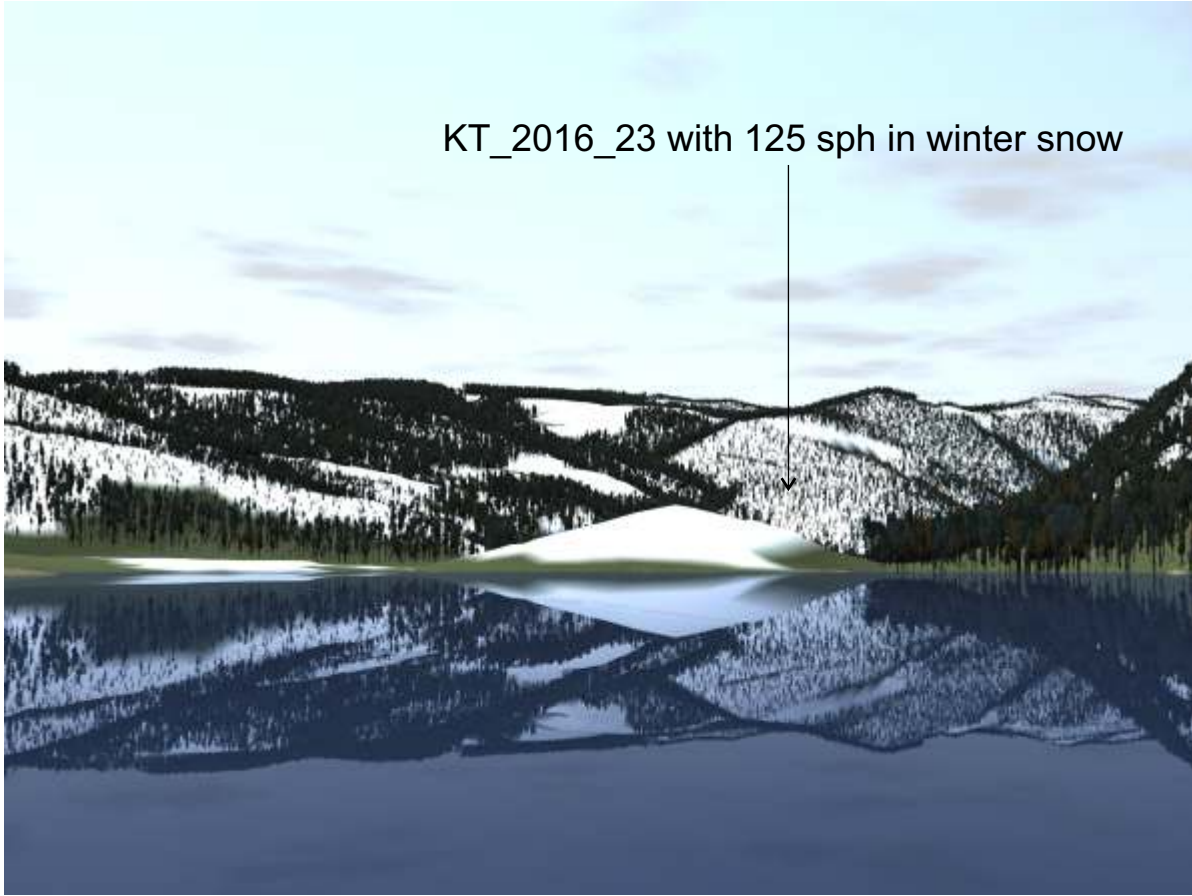
KT_2016_23 as if Clearcut within Forest rendered at 800 sph



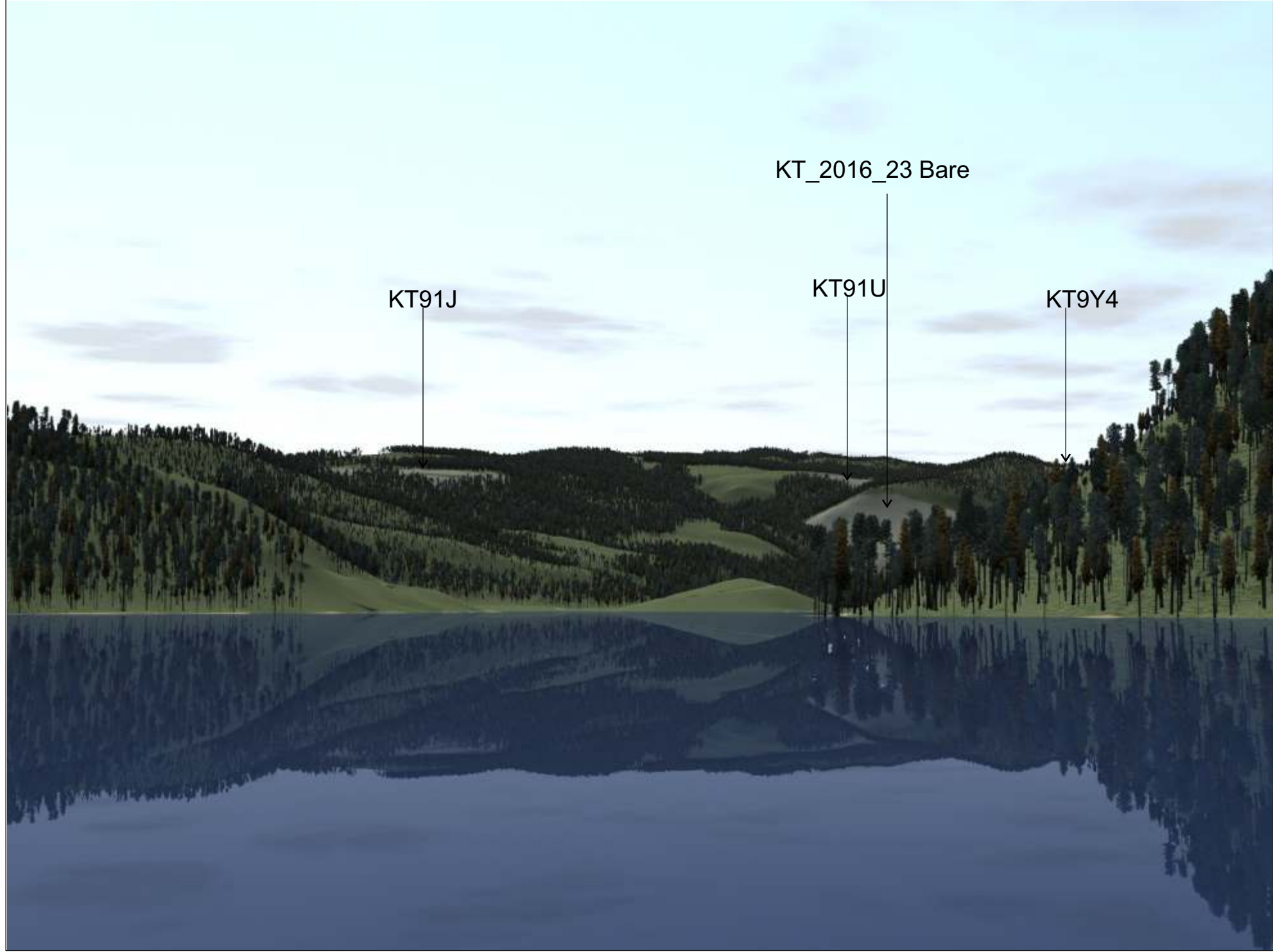
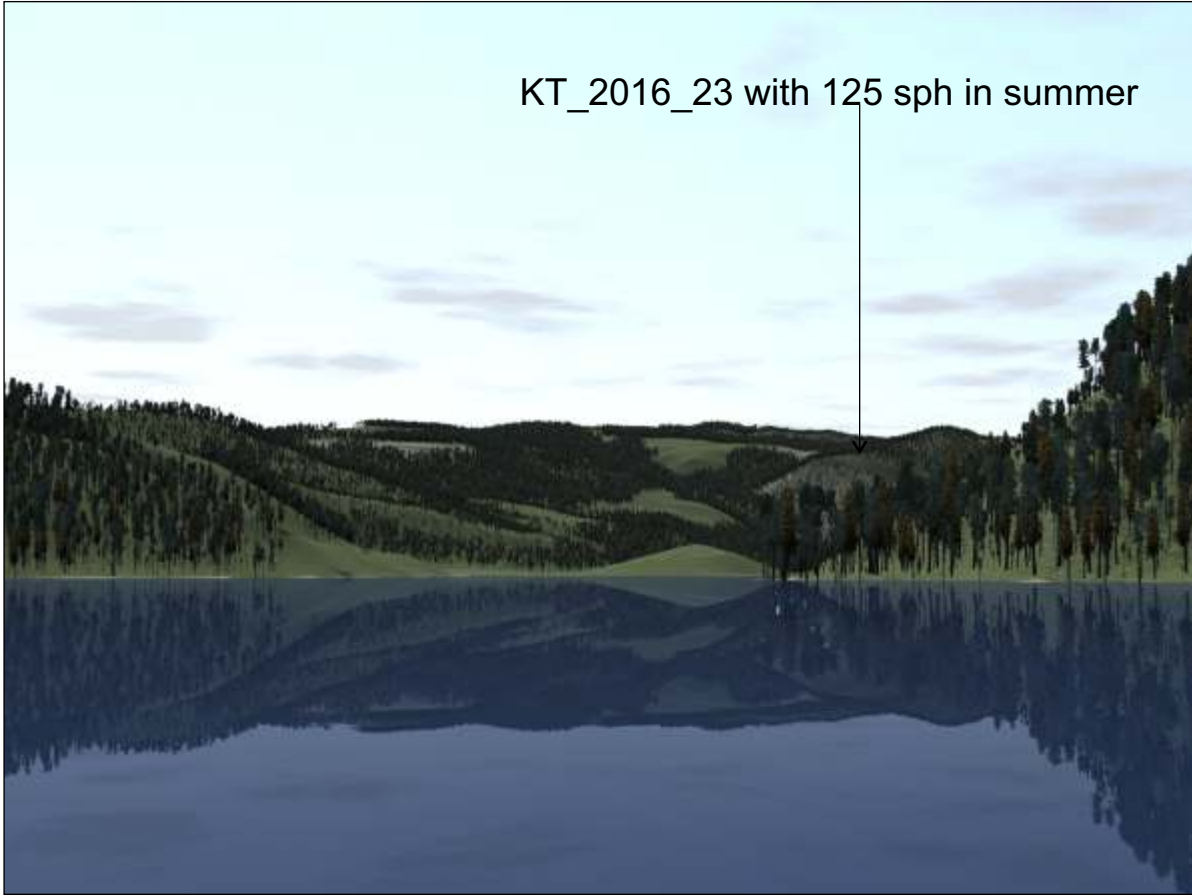
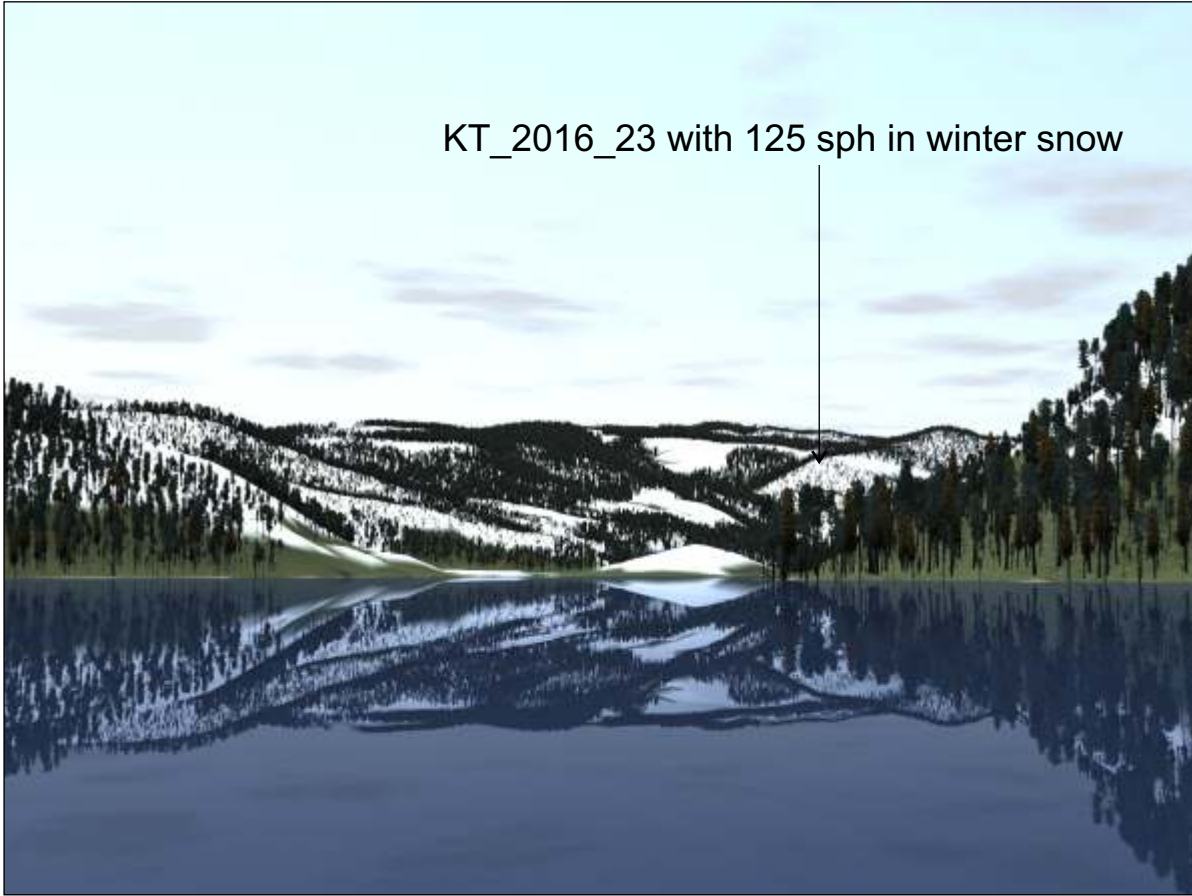
KT_2016_23 with 125 sph in summer



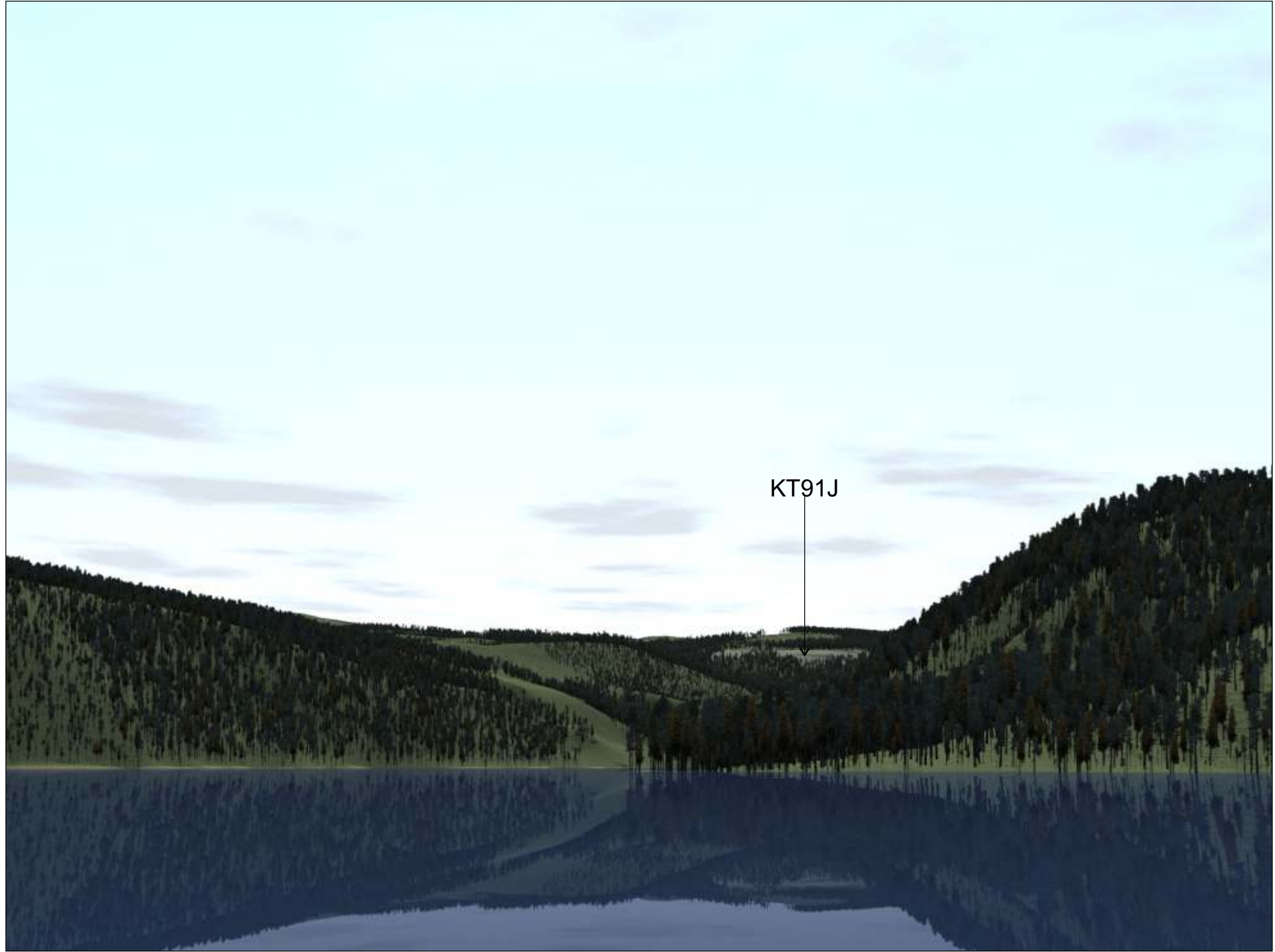
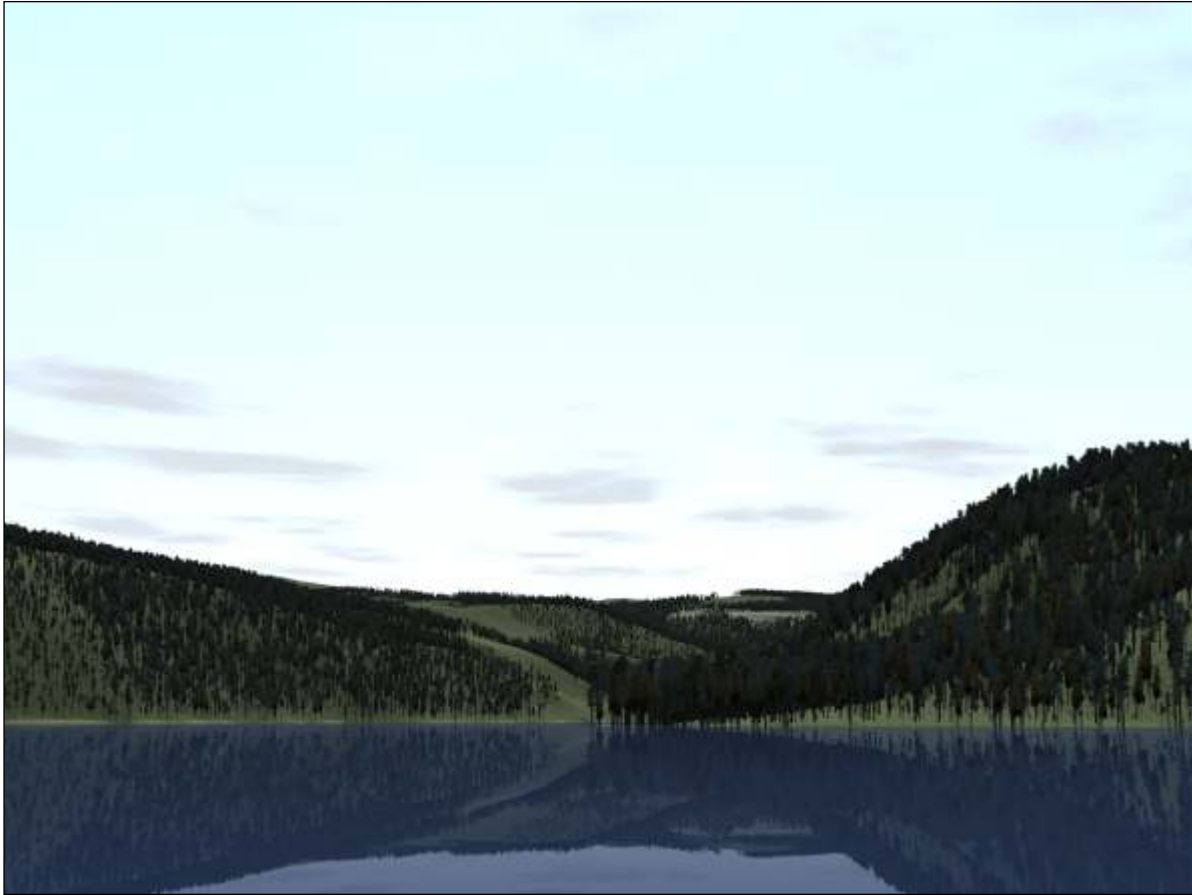
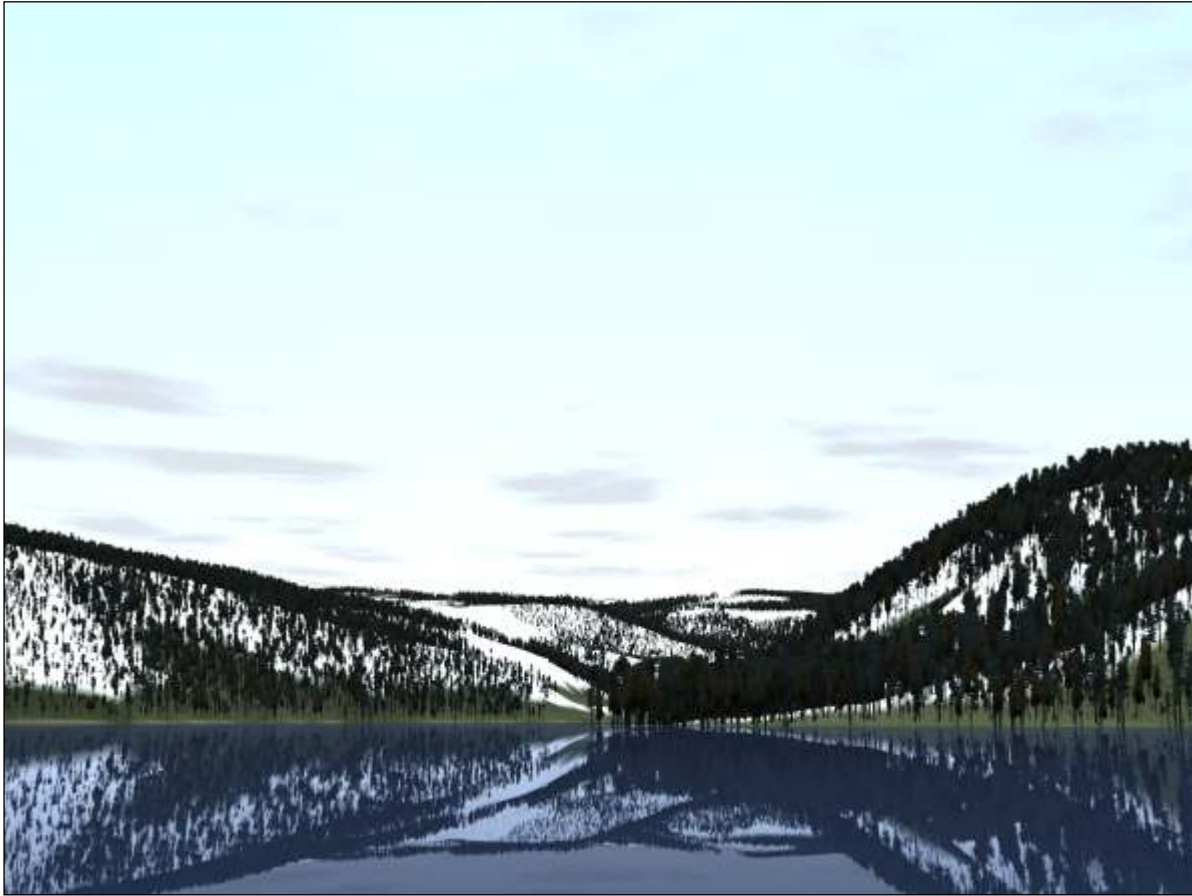
Viewpoint 9 - Missezula Lake Road - South-East Side of Missezula Lake



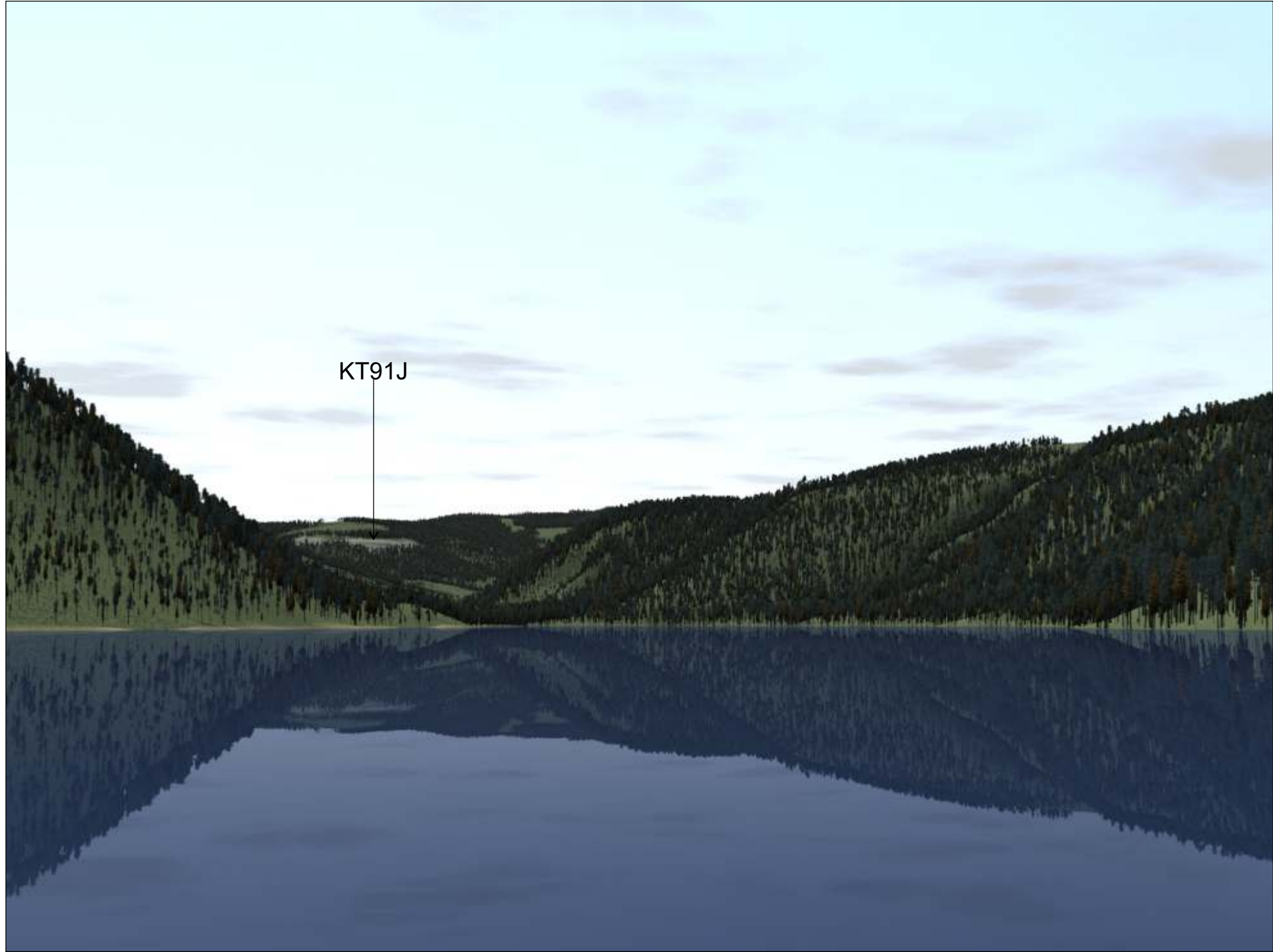
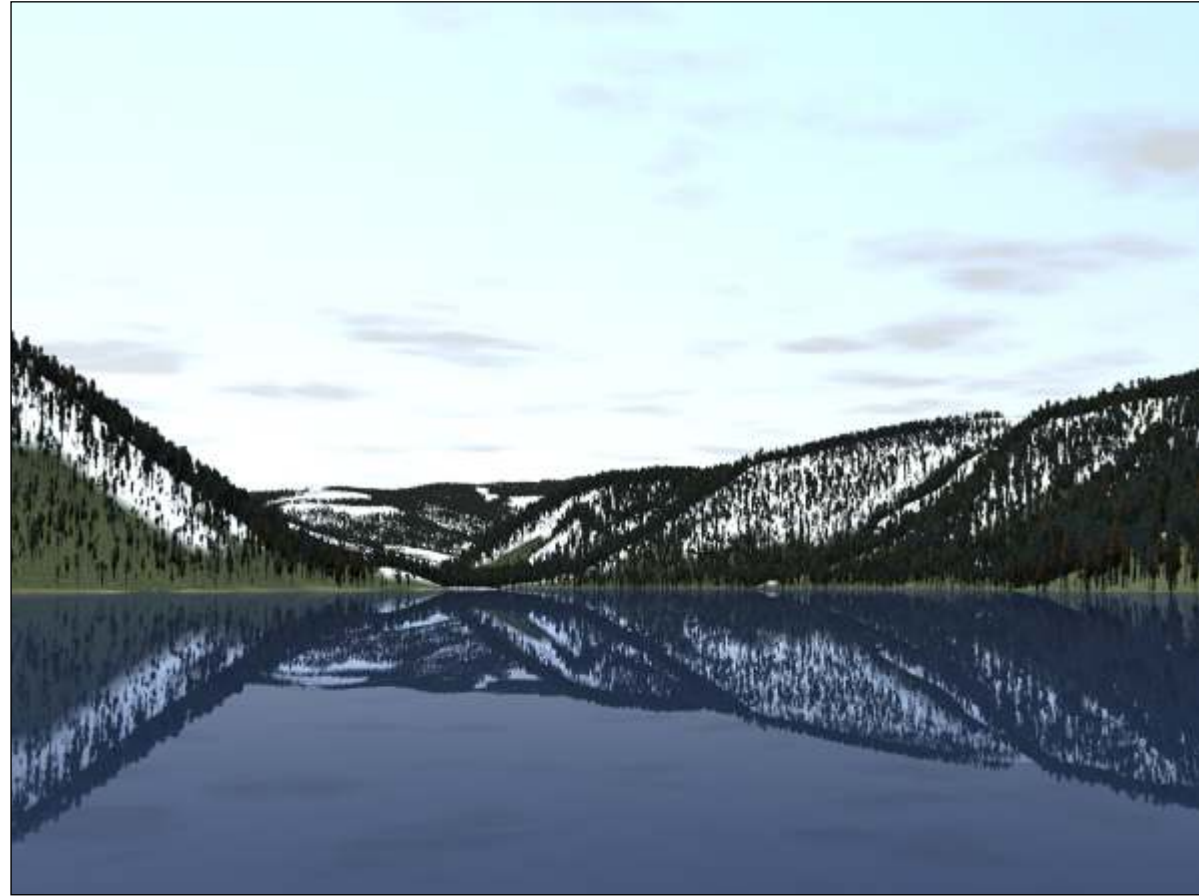
Viewpoint 1- Missezula Lake - 660 Metres North of South End along Centreline



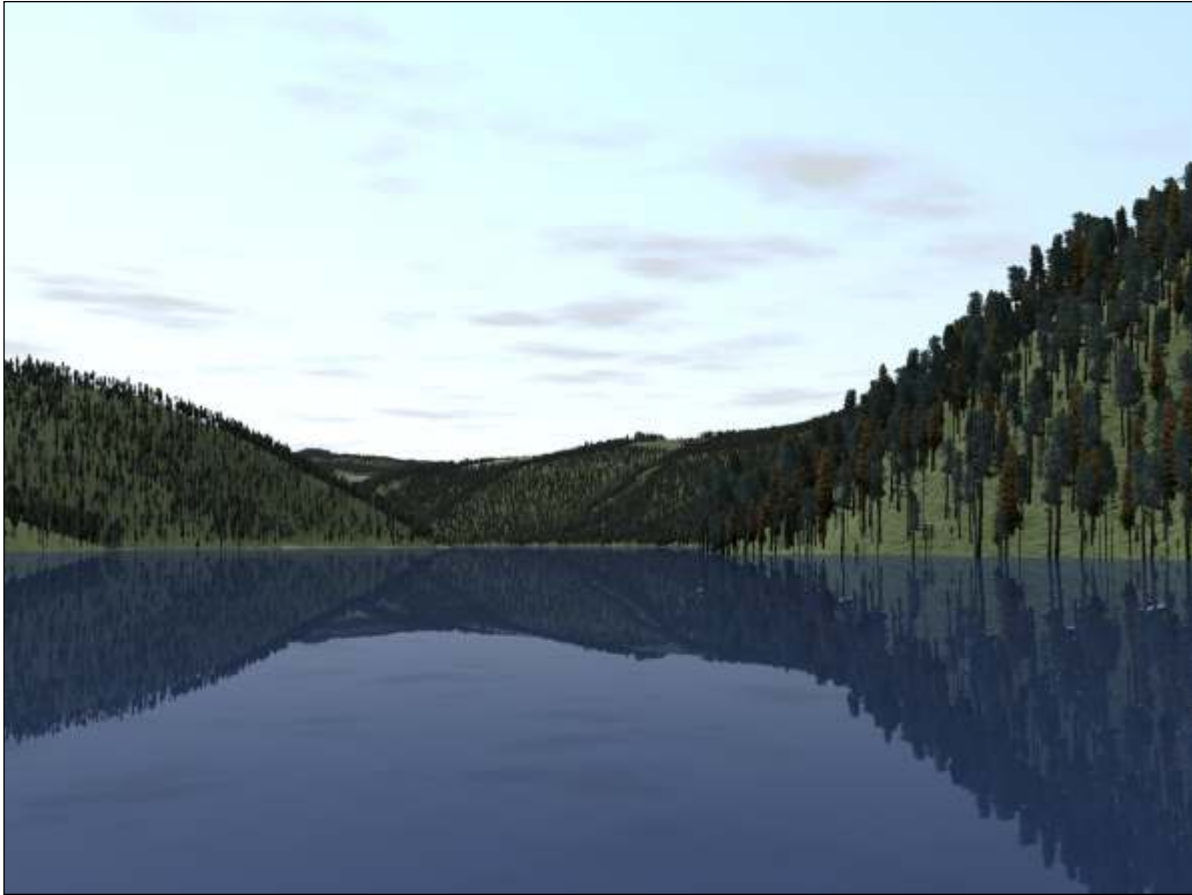
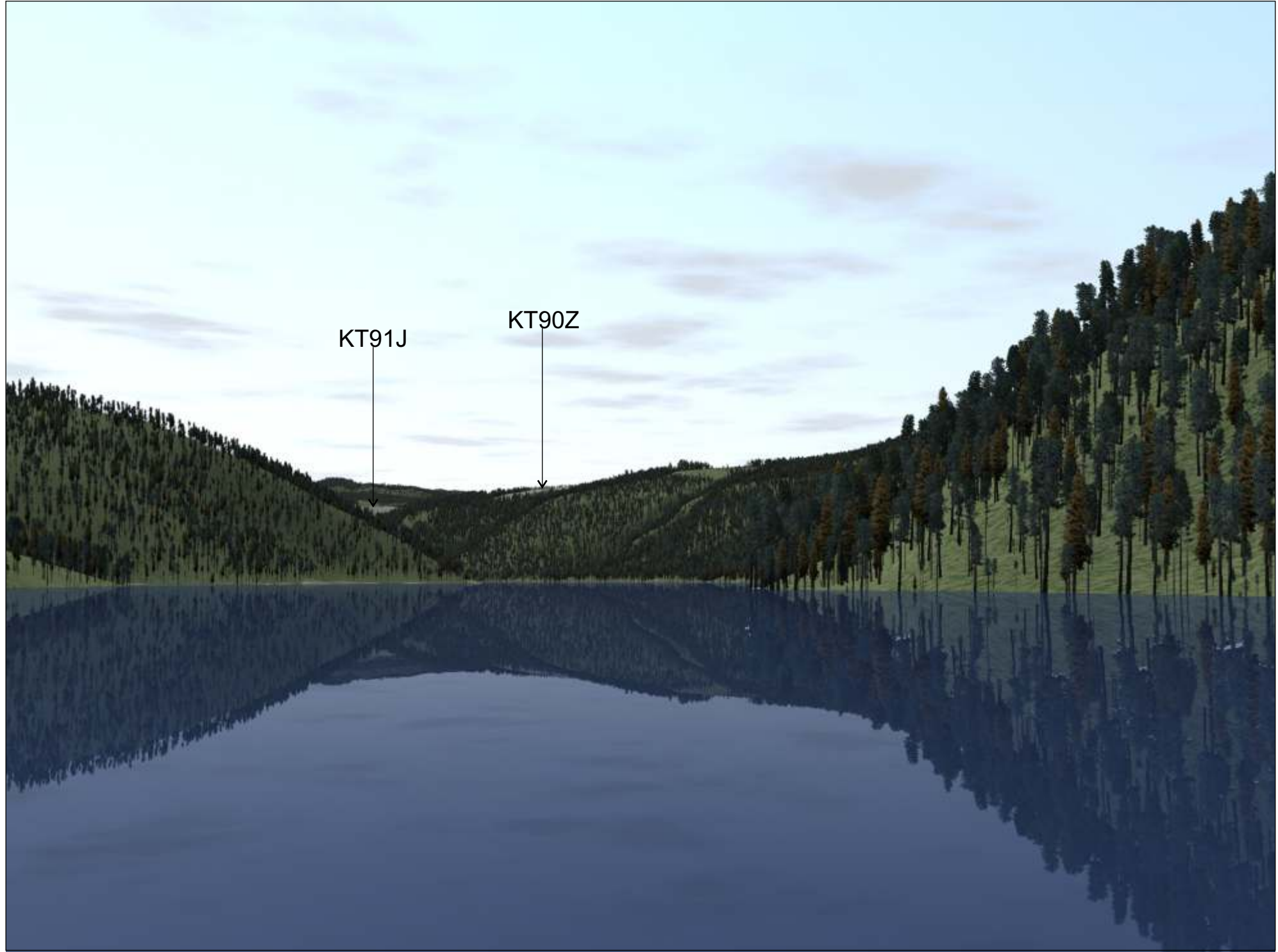
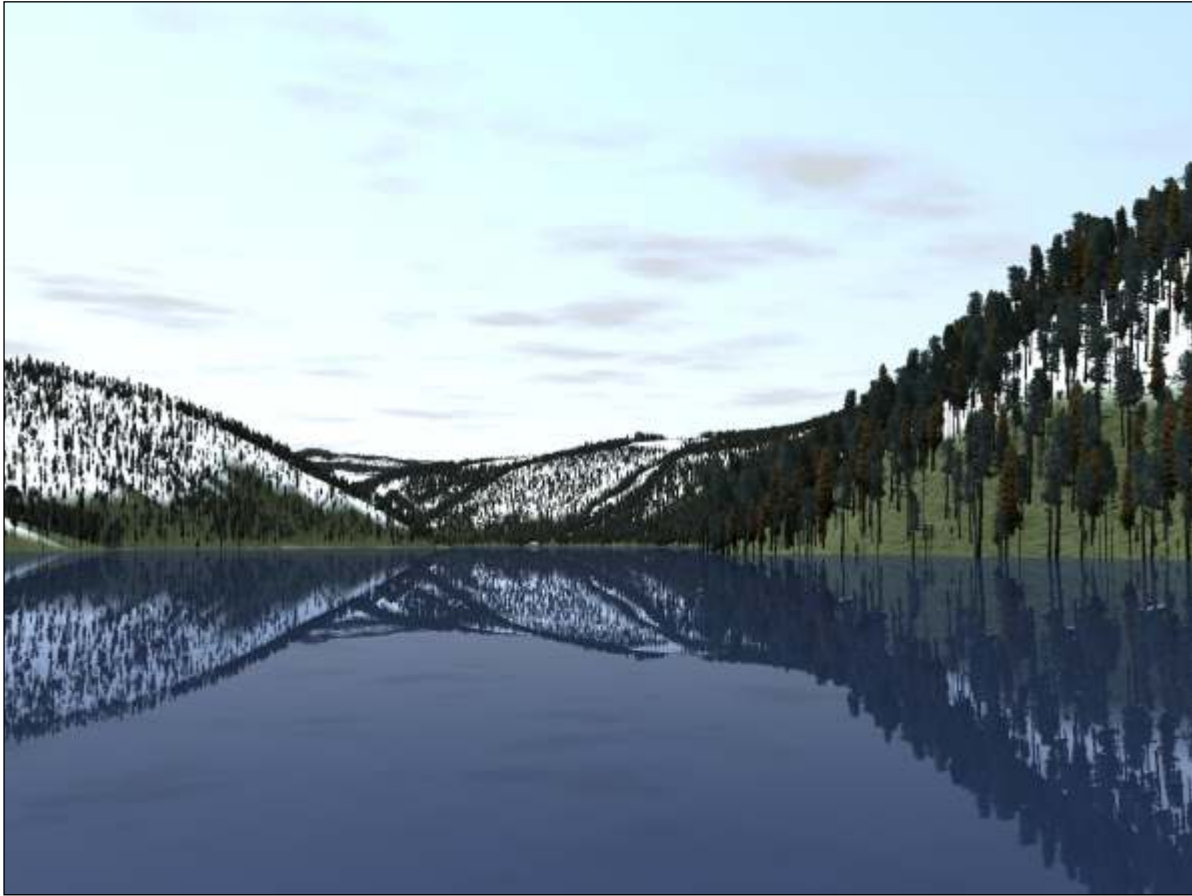
Viewpoint 2- Missezula Lake - 1500 Metres North of South End along Centreline



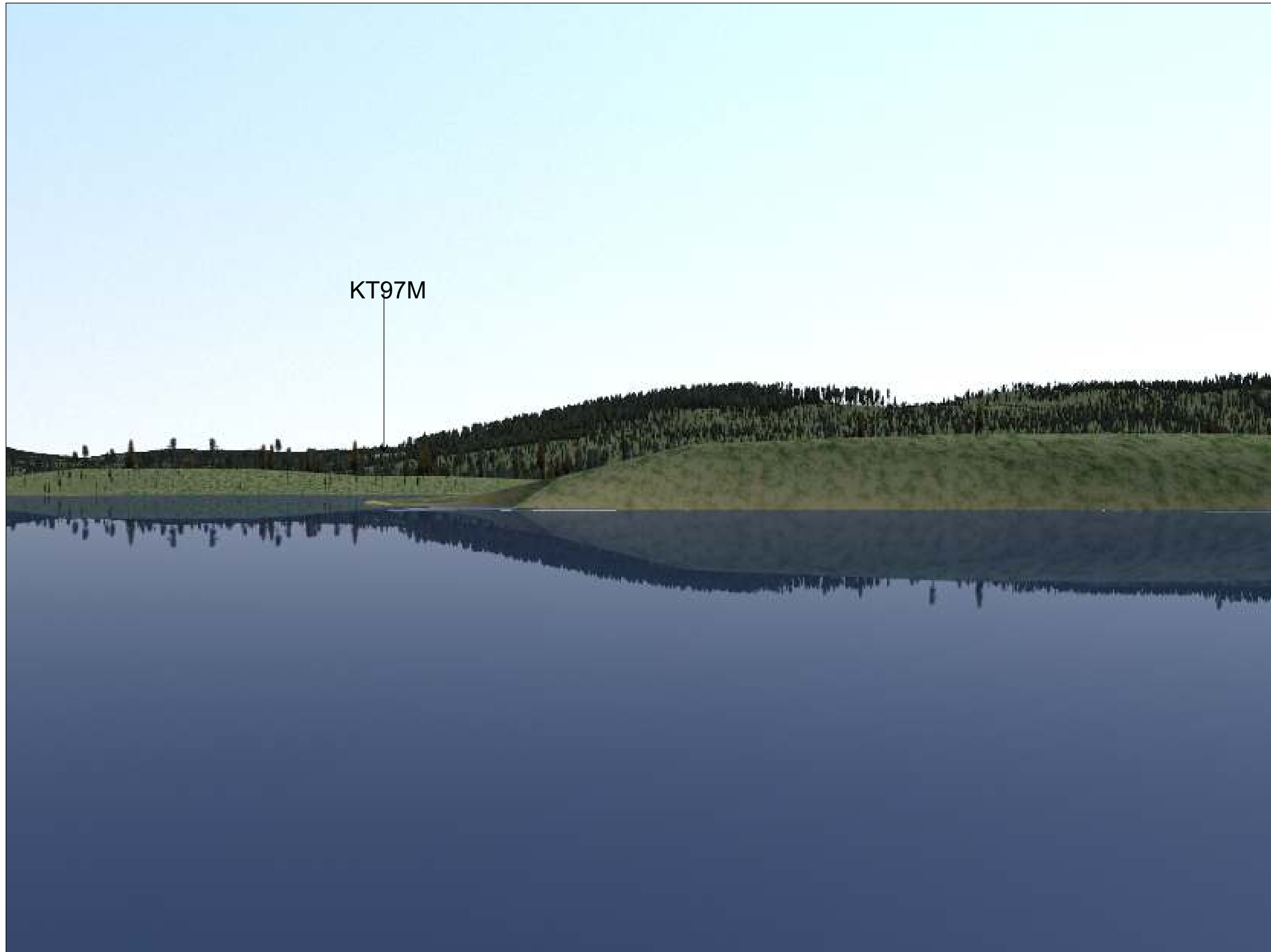
Viewpoint 3- Missezula Lake - 2640 Metres North of South End along Centreline



Viewpoint 4- Missezula Lake - 4122 Metres North of South End along Centreline



Viewpoint 5- Missezula Lake - 5472 Metres North of South End along Centreline



KT97M

Viewpoint 6- Hook Lake Looking East to KT97M