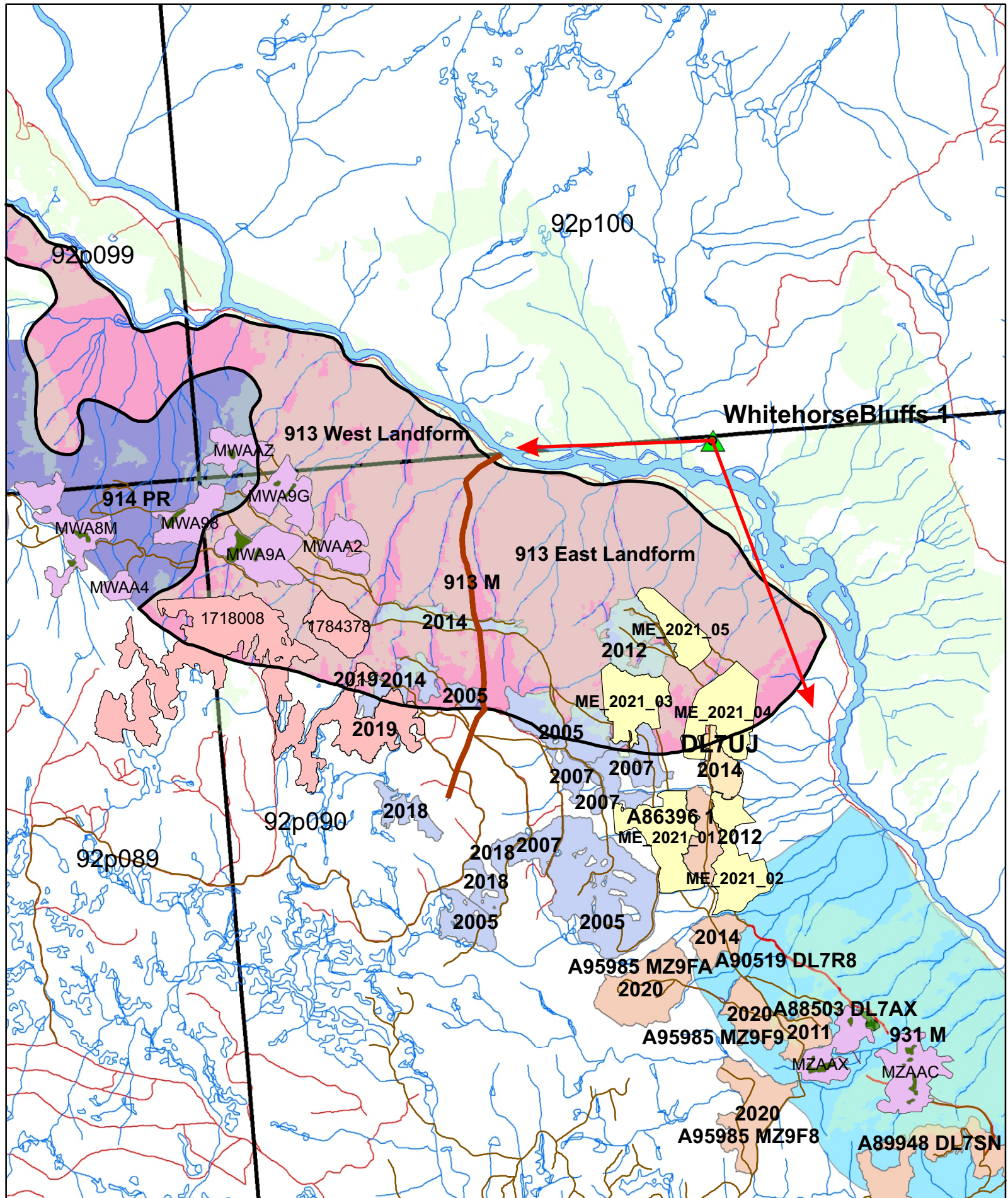
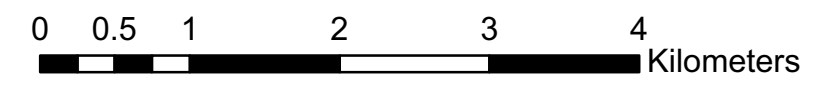


**BCTS Mahood East Operating Area
Visual Impact Assessment Update 2024
Produced by
RDI Resource Design Inc
March, 2024**



- BluffsVP
- Landform_Div
- 913splitt
- River
- Reserves_East
- Mahood_Eastt
- Proposed_Blocks
- TFL_18Blocks
- Roads
- Reserves
- Proposed_Blocks
- Not Visible
- Visible
- ▲ White_Horse_1_VP
- April_9,_2021_MZAAC,MZAAX_Roads
- DL7UJ_2012
- Dec_15_Existing_Cutblocks
- Dec_6,_2021_Mahood_East_Existing_Cutblocks
- April_9,_2021_MZAAC,MZAAX_WTRA's
- Dec_15_Existing_WTRA
- Dec_15_Proposed_Roads
- A95985_Roads
- 14-DL7SM_Roads
- New Blocks Visible from Viewpoint



White Horse Bluffs - Mahood East Key Map

Contents

1	Key Map
2	Contents
3	Summary, Visibility and Percent Alteration Summary Tables
4	Update Simulations
5	Update Percent Alteration Simulations
6	Update Percent Alteration Detailed Table
7	Close-up of West Blocks



Introduction

RDI was requested on February 21, 2024 to conduct a Visual Impact Assessment (VIA) update of the Mahood East VIA completed on January 15, 2023. The request, under contract PD23TEB097, was made by Bradley White, RPF, Planning Forester and Contract Administrator, BC Timber Sales, Kamloops Business Area, Thompson Okanagan Region, Ministry of Forests. The purpose was to include nearby existing Interfor TFL 18 cutblocks 1718008 harvested in 2019 and 1784378 harvested in 2023. A data link was provided which included the Interfor cutblocks.

RDI has had involvement producing visibility studies and VIAs for the Mahood East and Mackenzie Operating Areas since 2020. All but TA1874 and the Interfor blocks were previously assessed in 2021. The reports are linked on the RDI website under the "VIAs" tab (<https://rdi3d.ca/visual-impact-assessment>). Scroll down to the BCTS section, and find by set number and listing position:

- Set 5
- 5th listing: Mahood VIA October, 2020,
- 6th listing: Mackenzie VIA May, 2021.
- Set 6
- 1st listing: Mackenzie VIA May, 2021 (containing TA1873 and TA1449 blocks),
- 2nd listing: Mahood VIA June, 2021 (containing the original TA1874-1875 block assessment), and
- 7th listing: Mahood East VIA December Final 2021 (containing MZAAX and ME blocks), and
- Set 7
- 4th listing: 2023-01_MahoodEast_RDI_VIA for the most recent.
-

Procedures

RDI entered the new data into the existing ArcMap model and created a new Visual Nature Studio model for Mahood East. Full panoramic simulations were produced from White Horse Bluffs 1, both with tree cover and bare, coloured by Visual Sensitivity Unit.

The TFL 18 cutblocks are located in the far west side of VLI_Poly 913 which has a Modification established Visual Quality Objective (eVQO). They are associated with the MW blocks also located in the western end of the visual polygon. Two cutblocks, MWAAZ (4800m view distance) and MWA98 (5300m view distance) will sit mainly within VLI_POLYGO 914 (PR VQO), at the western edge (right side as viewed from the viewpoint) of the landform. Polygons 913 and 914 are inter-mixed, with 914 only a minor sliver along the west ridge and visible from between 4800m to 6900m in distance from the Bluffs viewpoint. The remaining two cutblocks in VLI_Poly 914 are non-visually sensitive (NVS), i.e., not visible, from the viewpoint (MWAA4, MWA8M). Close-up views of the western blocks are presented on page 7. Block visibility is summarized in Table 1 (opposite).

As the visual unit is large, having a 6700m span, and the two groups of cutblocks are widely separated, RDI considered it appropriate in this analysis to divide it into East and West landforms, following a drainage which reaches the height of land and into non-visually sensitive area (NVS). As such, the MW and TFL 18 blocks would now sit in 913 West.

The 913 East landform contains the ME_2021 cutblocks towards the eastern side (see key map). As well, the visual simulations indicated that a broad band of forest along the Clearwater River may possibly be seen depending on viewer position, but was excluded from the Visual Landscape Inventory. RDI has treated this exclusion in two ways - 1) not counting it, and 2) adding it into the visual polygons for percent alteration calculations (subject to on-site evaluation by BCTS personnel).

Two others sit in VLI_POLYGO 931 (M VQO) to the south-east (left) with only MZAAC visible (see key map on page 1) and Table 1 (opposite).

The photos from the Bluffs viewpoints were provided by Ches Clem, the prior contract administrator.

Percent Alteration calculations were produced from White Horse Bluffs 1 only. The detailed linework depicting the outlined components leading to the percent alteration calculations are presented on the White Horse Bluffs viewpoint Percent Alteration page of this report (p. 5). The results are tracked in the Percent Alteration Summary Table (opposite) and in the Detailed Percent Alteration Table on page 6 of this report. A summary of cutblock visibility is presented as Table 1 on this page (opposite).

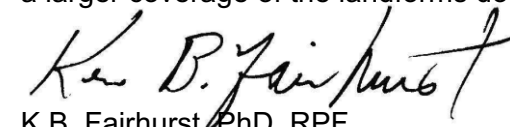
Findings and Conclusions

The Clem photography from the Bluffs viewpoints inserted on pages 2 and 6 indicates open viewing opportunity towards the landforms, with variable foreground screening. RDI chose to find the most open viewing opportunity for the analysis. Intervening trees may obscure some or all of the blocks, depending on specific viewing location. The ME blocks were assessed in the December 2021 VIA listed above (Set 6, listing 7). Viewing distance to the closest cutblock, ME_2021_05 is 1800m (near midground) while the MW blocks are mid-ground viewing distance to MZAAC is 7.1km (far midground).

The MW cutblocks, together with the TFL 18 blocks on the right-hand side of the landform (913 West Landform and 914) possess shape and pattern respectful of visual forces (ridges, or convexities) and creek draws (concavities as indicated by the watercourses the key map) with their undulating shapes along with leave areas providing connection through the blocks, and WTRAs within. The ME blocks along with existing alteration on the east side of the visual unit (913 East Landform) are more strongly geometric and could benefit by the addition of WTRAs and possible boundary re-shaping, if appropriate (see RDI's 2021 report). Those blocks are not scheduled for harvesting until 2026. With associated nonVEG existing alteration, As presented in the Table 2 - Percent Alteration Summary Table 2 (below), total Percent Alteration of the VLI_POLYGO 913 East Landform is predicted to be 1.39%, or 0.08% with the unrecorded river shore forest area included, well below the Modification Visual Quality Class (7.1% to 18.0%). See page 5 for the detailed Bluffs Percent Alteration Table. The Modification category of Visually Altered Forest allows for alteration that is very easy to see, and is a) large in scale and natural in appearance, or b) small in scale but with some angular characteristics.

As presented in the Table 2 - Percent Alteration Summary Table 2 and in detail in the Percent Alteration Table on page 6, the blocks in VLI_Poly 914 exceed the limit of PR at 18.59%. RDI recommends a merging of this visible sliver of polygon 914 with 913 West landform, with 914 representing just 2.4% of the total perspective area of the merged landform. The result is 5.84% alteration within merged West landform, within the upper range of Partial Retention Visual Quality Class. By convention, the most restrictive VQO is normally applied across the merged landform which would be Partial Retention for 913 West. However, 914's presence is extremely limited, so maintenance of the VQO for the broader landform 913 West of Modification would appear to be both justified and favoured by RDI. Either way, the 5.84% alteration is within the PR VQO limits of 1.5% to 7.0%. Perhaps in a review, the west boundary of 913 could be extended to the logical ridge line, thus incorporating MWAAZ and MWA98 and thereby resolving the issue.

MZAAC will introduce 1.82% of well-shaped alteration in VLI_Poly 931 in the left distance and has a Modification VQO, 7.1km from the Bluffs. Results for each Percent Alteration vary as expected from previous reports due to a larger coverage of the landforms down to the river.



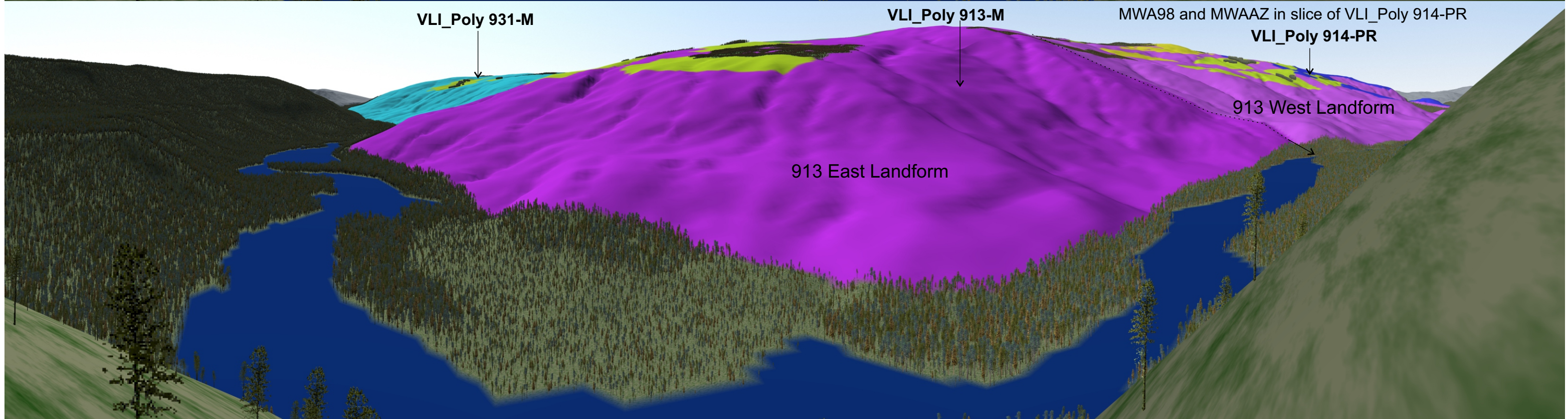
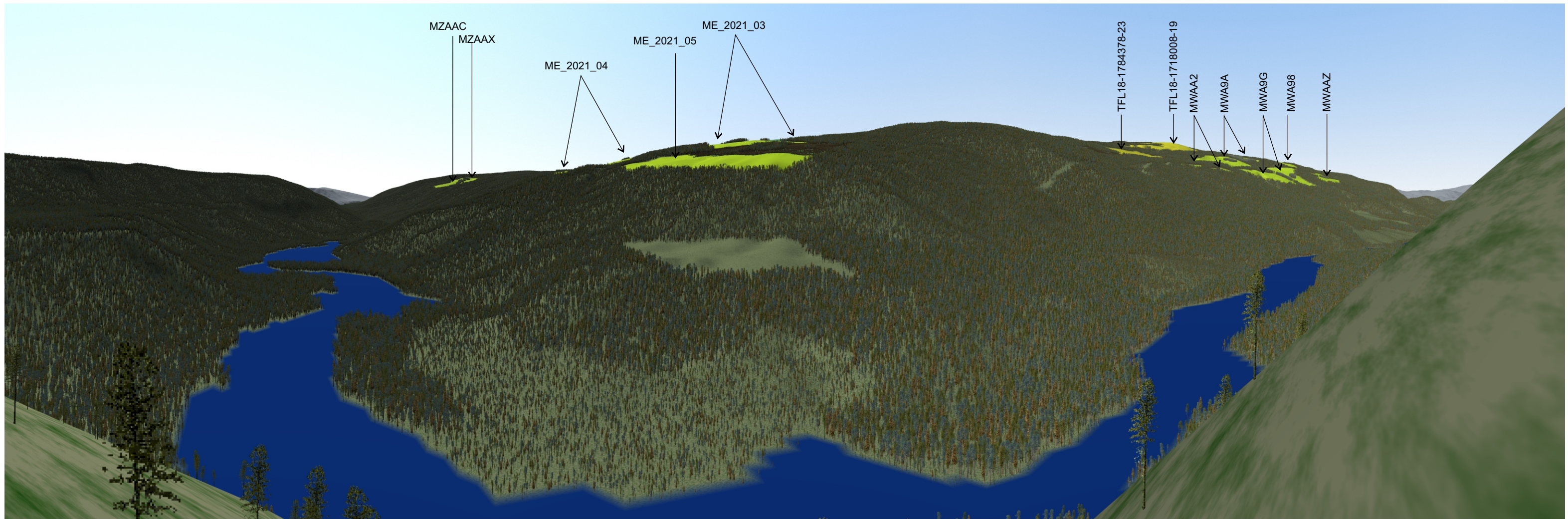
K.B. Fairhurst PhD, RPF
RDI Resource Design Inc
March 15, 2024

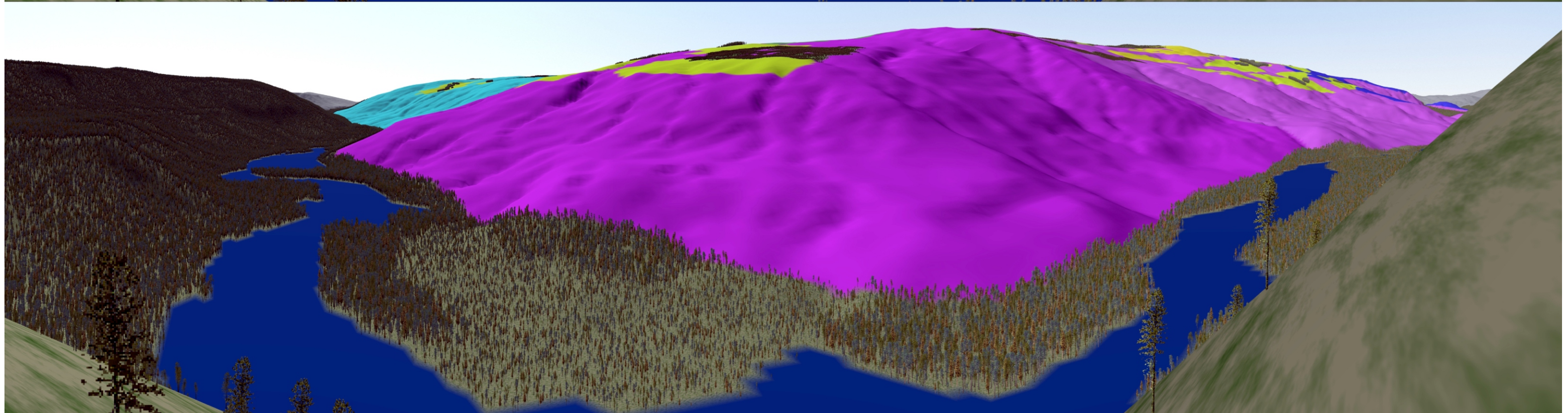
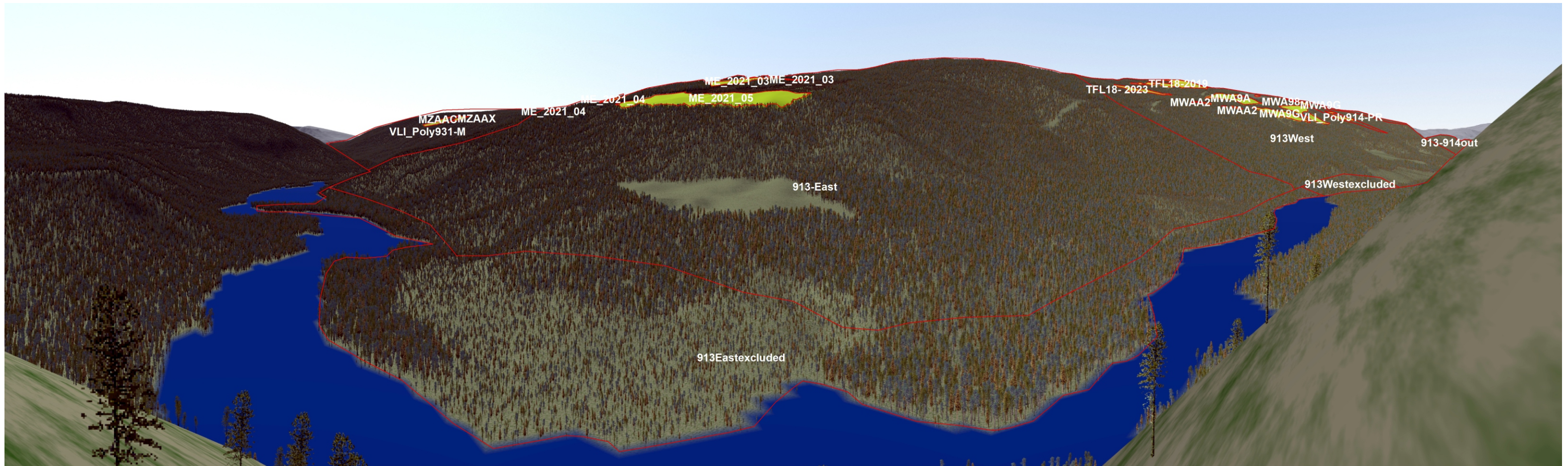
Table 1

Mahood Blocks Visibility by Visual Polygon / Landform				
931	nonVLI-NVS	913 East	913 West	914
MZAAC	ME_2021_01-NVS	ME_2021_03	MWA9G	MWAAZ
MZAAX-NVS	ME_2021_02-NVS	ME_2021_04	MWAA2	MWA98
	Between 931 and 913 East	ME_2021_05	MWA9A	MWAA4-NVS
			MWAA2	MWA8M-NVS
			TFL18-2023	
			TFL18-2019	

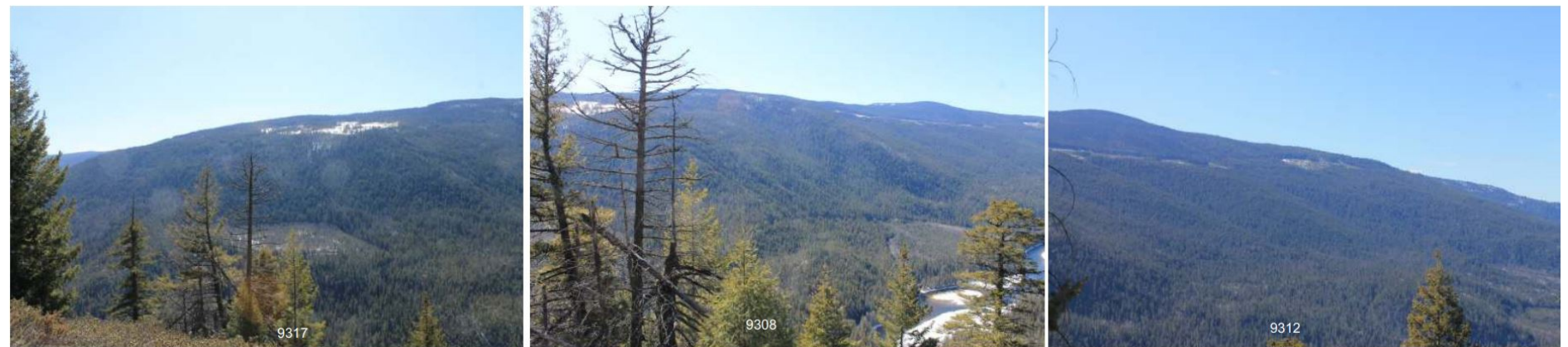
Table 2

Percent Alteration Summary by VLI Poly	
VLI Poly/Landform	%Alt
931	1.82%
913 East	1.39%
913 East with shore	0.80%
913 West	5.53%
913 West with shore	5.21%
*914 - see comments	18.59%
914+913	5.84%

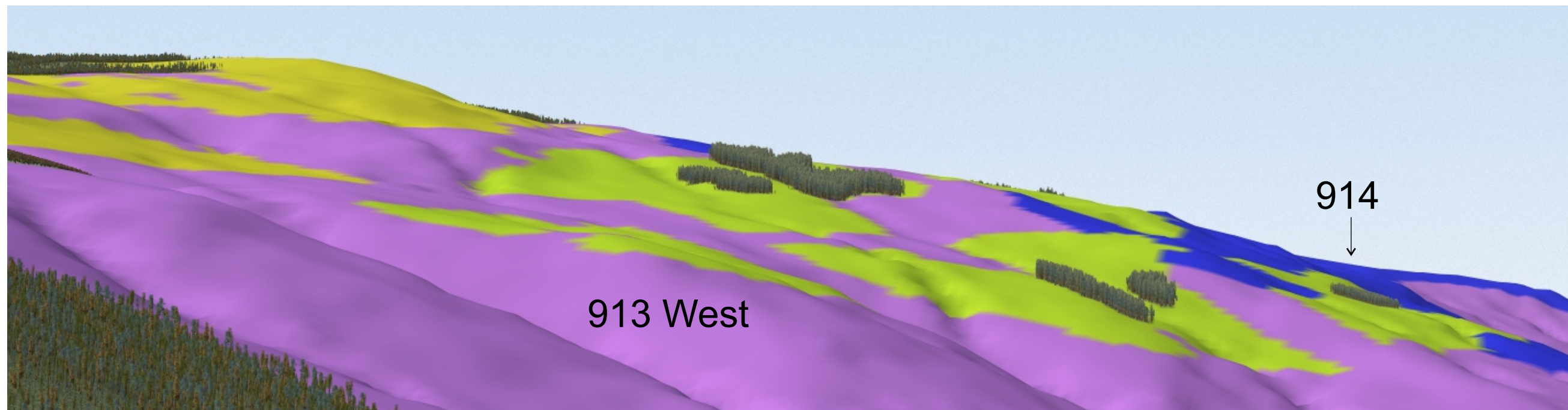
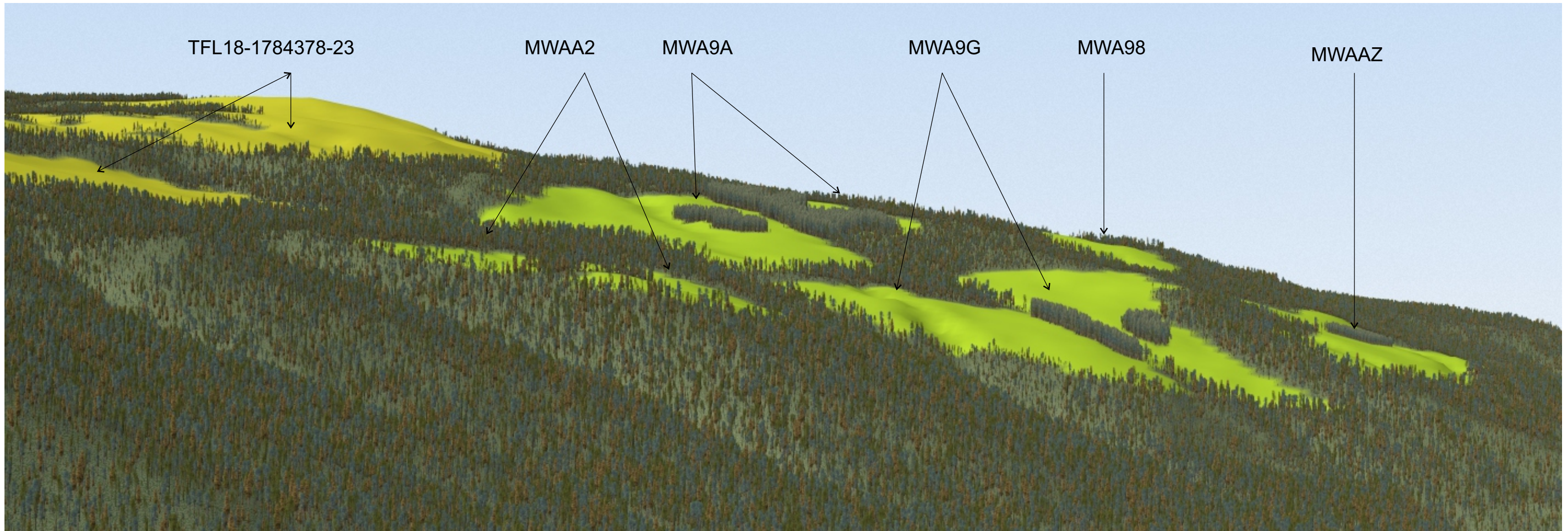




Mahood East Percent Alteration - Whitehorse Bluffs Viewpoint		
NAME	AREA (in Perspective)	% Alt
VLI_Poly913-M	1630703.89	
ME_2021_04	105.04	0.01%
ME_2021_04	283.01	0.02%
ME_2021_05	17778.54	1.09%
ME_2021_03	1815.23	0.11%
ME_2021_03	129.88	0.01%
MVA9G	2022.38	0.12%
MVA9G	2070.83	0.13%
MVAA2	116.88	0.01%
MVAA2	32.62	0.00%
MVAA2	165.42	0.01%
MVA9A	2203.28	0.14%
MVA9A	48.89	0.00%
MVA9A	37.13	0.00%
TFL18- 2023	1095.80	0.07%
TFL18-2019	2516.08	0.15%
Sum Alt 913M	30421.02	1.87%
VLI_Poly913M-split-East Landform	1444248.066	
ME_2021_04	105.04	0.01%
ME_2021_04	283.01	0.02%
ME_2021_05	17778.54	1.23%
ME_2021_03	1815.23	0.13%
ME_2021_03	129.88	0.01%
Sum Alt 913-split- East Landform	20111.69	1.39%
913-M-East Landform not in VLI along river	1064204.03	
Sum 913 East Landform Area in Perspective	1444248.07	
Sum Area 913M if Area not in VLI is included	2508452.09	
Sum Alt 913 Split-East Landform + nonVLI area along river	20111.69	0.80%
VLI_Poly913M-West Landform	186455.8245	
MVA9G	2022.38	1.08%
MVA9G	2070.83	1.11%
MVAA2	116.88	0.06%
MVAA2	32.62	0.02%
MVAA2	165.42	0.09%
MVA9A	2203.28	1.18%
MVA9A	48.89	0.03%
MVA9A	37.13	0.02%
TFL18- 2023	1095.80	0.59%
TFL18-2019	2516.08	1.35%
Sum Alt 913 West Landform	10309.33	5.53%
913-West Landform in VLI along river	11299.22	
Sum 913 West Landform Area in Perspective	186455.82	
Sum Area 913 West Landform if Area not in VLI is included	197755.05	
Sum Alt 913 West Landform if Area not in VLI is included	10309.33	5.21%
VLI_Poly914-PR	4619.91	
MVA9Z	596.09	12.90%
MVA98	262.85	5.69%
Sum Alt 914 (edge sliver - not valid for measurement)	858.94	18.59%
Sum Area in Perspective if included with 913 West Landform	191075.73	
Overall Sum Alt 913 West Landform with 914 alt included	11168.27	5.84%
VLI_Poly931-M	53085.00	
MZAAC	663.90	1.25%
MZAAX	304.23	0.57%
Sum Alt 931M	968.13	1.82%
913-914-Lake Area - out of range - not used	4014.29	n/a



Ches Clem Photos 2020



White Horse Bluffs 1 Simulation Close-up