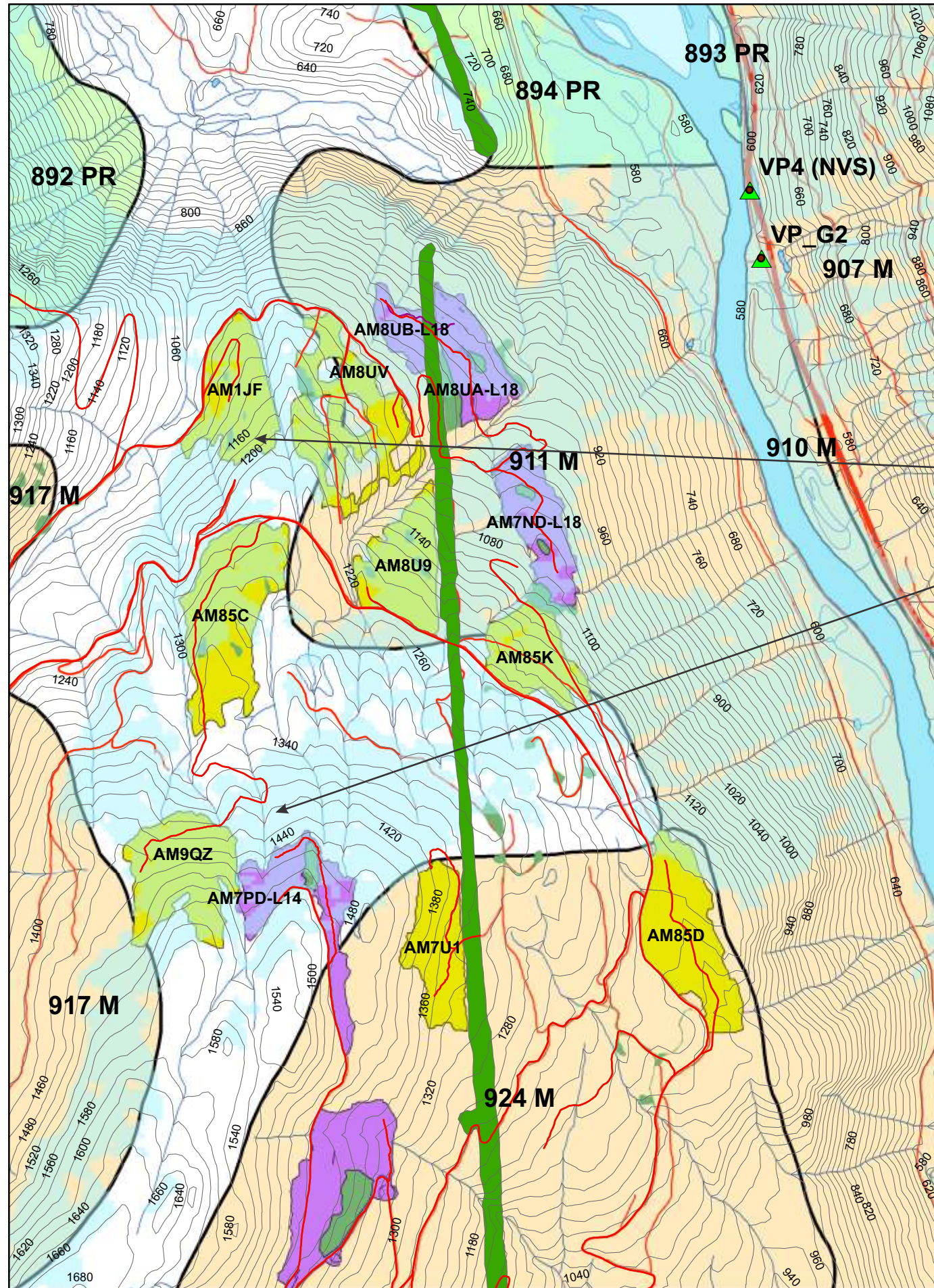


Avola Mountain Visual Assessment
TSL's TA0940, 0941, 0942, 0943
RDI Resource Design Inc
May, 2020

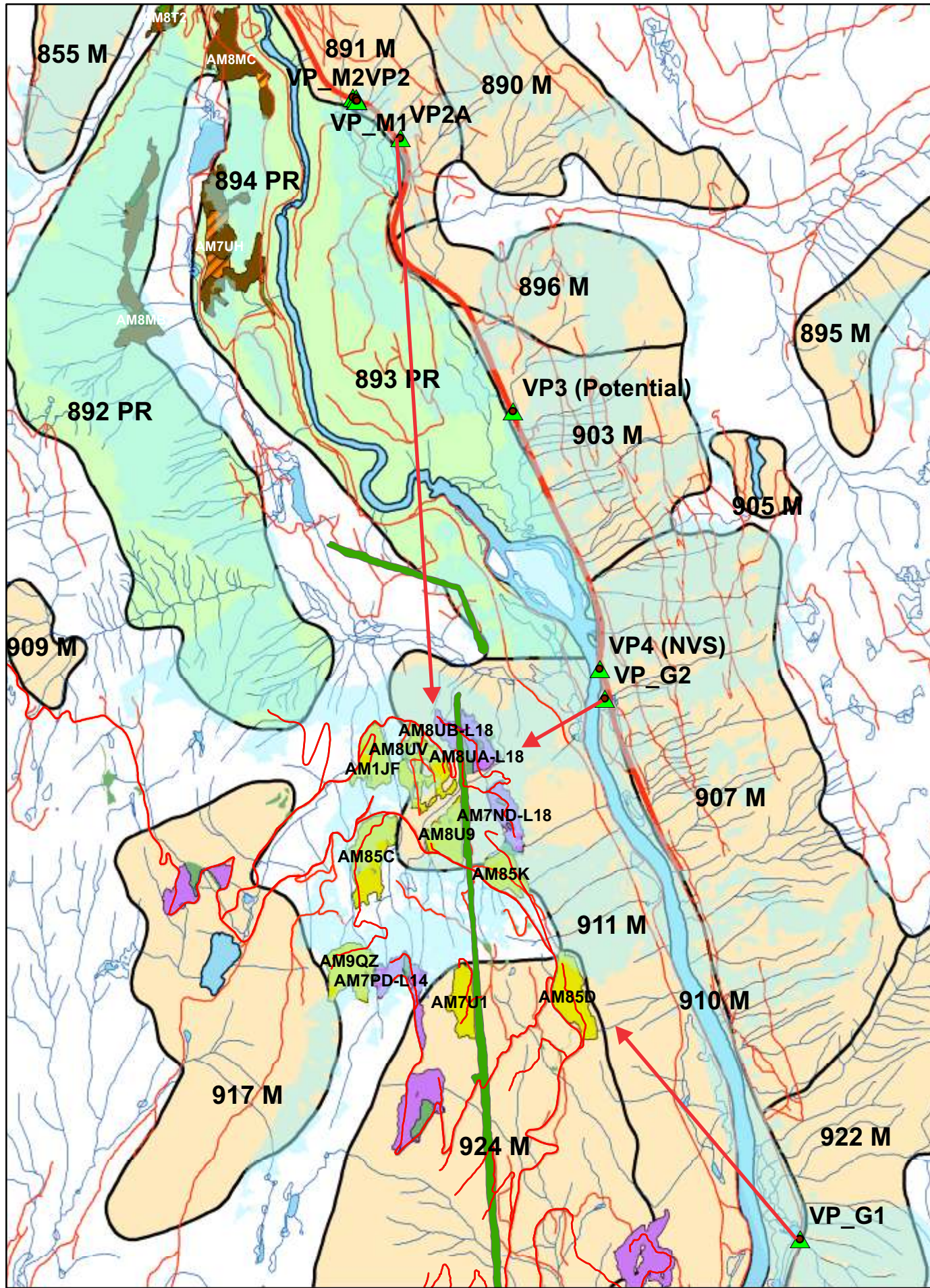


Legend

- AvolaMtn_VPs
 - April_15,_2020_Avola_Mountain_Roads
 - Contours
 - ▲ Viewpoints
 - April_15,_2020_Avola_Mountain_Roads
 - A93882_AM8UB_rd
 - P_Line
 - Stratton_Road_Clip
 - Not Visible
 - Visible not in VLI - Modification VQO adjacent and appropriate
 - Harvested2014-2018
 - April_15,_2020_Avola_Mountain_WTRA's
 - April_15,_2020_Avola_Mountain_Blocks
 - ▲ MessiterPhotoPoints2015
 - Highway
 - Road_Clip
 - AM7UH_NHZ
 - AM7UH_WTRA
 - AM8M8_WTRAS
 - AM8MC_NHZ
 - AM8T2_WTRAS
 - AM8MB-RDleave
 - A93635-2015
 - TRIM_Waterlines
 - <all other values>
- REC_EVQO_CODE**
- M
 - PR

See key map on page 2 for full viewpoint coverage





Avola Mountain Visual Assessment
TSL's TA0940, 0941, 0942, 0943
RDI Resource Design Inc
May, 2020

Legend

- AvolaMtn_VPs
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- ▲ Viewpoints
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- <all other values>
- REC_EVQO_CODE**
- M
- PR

See key map on page 1 for close-up coverage of cutblocks



Contents

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2	Key Map Wide Depicting Viewpoints
3	Contents
4	Assessment Report
5	Viewpoint 2A Close-up with Simulation and Photo
6	Viewpoint 2A with Simulation with VSUs and VQOs
7	Viewpoint 2A Percent Alteration and Visual Force Analysis
8	Viewpoint 2A Photos
9	Viewpoint G1 Simulation and Photos
10	Viewpoint G2 Simulation and Photos

**TDI Resource Design Inc Visual Assessment – Avola Mountain FSR
BCTS TSL's TA0940 Cutblocks AM85C, AM9QZ; TA0941 Cutblocks AM85D, AM7U1; TA0942
Cutblocks AM1JF, AM8UV; TA0943 Cutblocks AM85K, AM8U9.**

1. Introduction

RDI Resource Design Inc was requested on May 20, 2020, to assess the Avola Mountain FSR cutblock group by Ches Clem, RPF, Planning Forester BCTS Kamloops Business Area, Clearwater Field Team, under the current multi-year contract PD18TEB007. The request was accompanied by a link to the data package required for the project. RDI had gained familiarity with the area during a field tour with BCTS personnel on October 8, 2015 during which time photographs were taken of the project area. Subsequent to the field tour, RDI conducted a Visual Assessment of what were called the Stratton Cutblocks, completed by RDI on March 20, 2016. The new cutblocks are on the same landform as the Stratton cutblocks which were harvested in 2018 and which are further addressed in this current analysis for their contribution to the overall visual quality. The existing and proposed cutblocks are indicated on the key map close-up on page 1.

The viewing opportunities towards the cutblocks are brief while driving southwards along Highway 5, and are intermittent due to roadside screening. Commencing at the rest-stop at the top of the hill (Viewpoint 2A), the hillside on which the cutblocks are to be located may be seen focally to tangentially for approximately 800 metres travelling south on Highway 5 (36 seconds at 80 kph). Ches Clem photographed several views near Viewpoint 2A, which RDI used as the analysis viewpoint. Lower down, when travelling south, the hillside is obscured by roadside vegetation. Ches took photos from glimpse views that he discovered at the bottom of the hill on Highway 5 near the North Thompson River. RDI called these Viewpoints G1 and G2. Neither the existing cutblocks nor any of the new cutblocks are visible from these points and have been recorded as such in this report. Cutblock visibility from the viewpoints is shown in Chart 1. The viewpoints are indicated on the key map on page 2.

Chart 1 - Avola Mountain Cutblock Visibility, by Viewpoint							
TSL	Cutblock	VP 2A	VP G1	VP G2	VLI_Polygon	Gross_Ha	WTRA
TA0941	AM85D	NVS	NVS	NVS	fully within 924-M	22.78	N
TA0941	AM7U1	NVS-NOTCH	NVS	NVS	mainly within 924-M	15.21	N
TA0940	AM85C	V	NVS	NVS	fully outside 911-M	28.02	Y
TA0940	AM9QZ	V	NVS	NVS	mainly outside 917-M	21.85	N
TA0942	AM1JF	V	NVS	NVS	fully outside, between 911 and 917	17.63	Y
TA0942	AM8UV	V	NVS	NVS	partly outside 911-M	23.53	*Y
TA0943	AM85K	V	NVS	NVS	partly outside 911-M	13.64	N
TA0943	AM8U9	V	NVS	NVS	fully within 911-M	16.25	Y
Existing	AM7ND-L18	V	NVS	NVS	fully within 911-M	13.28	Y
Existing	AM8UA-L18	V	NVS	NVS	fully within 911-M	12.01	Y
Existing	AM8UB-L18	V	NVS	NVS	fully within 911-M	5.28	N
Existing	AM7PD_L14	V	NVS	NVS	mainly outside 924-M	15.54	**Y
V - Visible; NVS - not visible; NVS-Notch - skyline notch only; RDI applied M VQO rating to cutblocks outside of VLI							
* AM8UV also has advanced regen in early patch cuts; ** AM7PD also has dispersed residuals - see report							

The cutblocks including the existing openings are in the distant middle ground except AM9QZ which is in close background. All cutblocks are on a landform located 6.5 km to over 8 km away from a transitory Highway 5 viewpoint 50 m from a rest-stop. There is no viewing opportunity from the rest-stop due to road-edge vegetative screening. The landform is mainly within VLI Polygon 911 which has an established Visual Quality Objective (VQO) of Modification (M). According to the Forest Planning and Practices Regulation, Modification means an alteration of a forest landscape resulting from the presence of cutblocks or roads, such that, when assessed from a viewpoint that is representative of significant public viewing opportunities, the alteration is "very easy to see, and is large in scale and natural in appearance, or is small in scale with some angular characteristics". Though not in the Regulations, the range of percent alteration in perspective (camera) view generally associated with Modification is 7.1% to 18%. A large area of visibility is present between Polygon 911 and 917 as determined by viewshed analysis (indicated by the lightly shaded blue areas on the key maps, pages 1 and 2). This un-rated area includes existing and proposed cutblocks as shown in Chart 1 above.

Several existing and proposed cutblocks have WTRA's which assist in design and visual absorption. These are noted in Chart 1 and on the map on page 1. In addition to the WTRA's, the largest opening, AM8UV already contains an array of patch cuts within the block boundary harvested in 1998. The patch cuts are considered to be exhibiting visually effective green-up (VEG) given their age (18 years) and will contribute to visual absorption of the new harvesting.

According to Tyson Leudtke, AM7PD has group retention in the WTRA and dispersed residuals throughout, both enhancing visual absorption: "Within the block and within the RMA's of S6-1 and S6-2, retain 50% of the Bl, Cw, Hw stems in the 20-25 cm dbh classes (17.5-27.4 cm dbh). Also within the block retain all Bl, Cw, Hw greater than 67.6 cm for contribution to future lichen dispersal and stand level biodiversity", and "Group Retention- Leave trees are located in WTRA-1 (1.2 ha) which contains mature SxBl. The WTRA is identified to contribute to stand level biodiversity."

2. Summary of Findings

Percent Alteration in Perspective (Camera) View

Percent alteration calculations from Viewpoint 2A on Page 7 show that the landform containing the cutblocks will be altered by just over 7% (5.24% new; 1.84% existing), approximating the upper end of the Partial Retention Visual Quality Class. If the hydro line is included, the total alteration would rise by 1.34% to be 8.43% - low-end Modification VQO which is well within the established VQO for the landform's VSUs, including the non-rated areas considered to be Modification by RDI, by relationship to the VSUs on the landform. Table 2 on page 7 shows the percentage contribution of each opening and totals. These are discussed separately in the next two sections.

Proposed Openings

Of the eight new cutblocks, two will be NVS (AM85D, AM7U1), the latter of which will be perceivable only as a notch in the forested skyline. The six cutblocks that will be visible from Viewpoint 2A have good shape and create a visually interesting array in themselves, and in relation to the four existing openings that are already seen on the landform. Gross cutblock sizes shown in Chart 1 average 20.53 ha for visible new cutblocks, 11.53 for visible existing, and 16.7 ha overall. The new openings emulate the shapes, forms, and lines present in the landform and its visual force lines (as analysed on page 7). The cutblocks will also serve to further divert attention away from the straight transmission line travelling up the hill. AM9QZ is the largest new cutblock at 1.38% of the landform in perspective view and repeats the shape of the landform. It is only the third largest in plan view at 21.85 ha, being exceeded by its immediate neighbour AM85C at 28 ha which is the smallest opening in perspective view (0.51%), and AM8UV at 23.53 ha (0.94% perspective). The differential of smaller size and largest percent alteration of AM8UV suggests the effects of steeper slope and lack of WTRA by comparison. The ROW is 1.34% of the landform but grabs the eye much more. Collectively, AM8UV is the next largest opening at 0.94% of the landform, however, the older patch cuts and the WTRA together serve to break up the opening into 5 components in perspective view with the largest single opening at just 0.54% and settles in easily. AM8U9 has a straight upper boundary due to the adjacent regen, but is fairly small (0.9%), and contains a prominent retention patch (WTRA) to deflect attention. AM1JF and AM85C are small (0.7% and 0.51% respectively) and well-shaped, and provide a repeating pattern below AM9QZ, acting as a trio. Finally, AM85K is small (0.79%), well-shaped, and forms a pattern with the existing cutblocks AM7ND and AM7U8 on the east side of the hydro line.

Existing Openings

AM7ND and AM8UA are located on the east side of the hydro line. Both are small and well-shaped with WTRAs. BCTS has successfully responded to RDI's suggestion in 2016 for a leave patch in AM8UA by adding a substantial WTRA which breaks the original angularity and overall scale of exposure. AM8UA and AM8UB divert the eye laterally across the hydro line. RDI did not address AM7PD in the 2016 report, but given the tree retention addressed in the Introduction, together with its small size, shape emulating the ridgeline, and close relationship to the larger AM9QZ, the opening is only a minor influence, mainly in winter.

The image sheets provide the opportunity to compare the photography with the 3-D model prepared by RDI. See pages 5 through 8 for VP2A simulations, photos, and analyses. Additional simulations and Ches Clem's photos are presented on pages 9 and 10 covering viewpoints G1 and G2. No cutblocks are seen from these glimpse views.

3. Conclusion and Recommendation

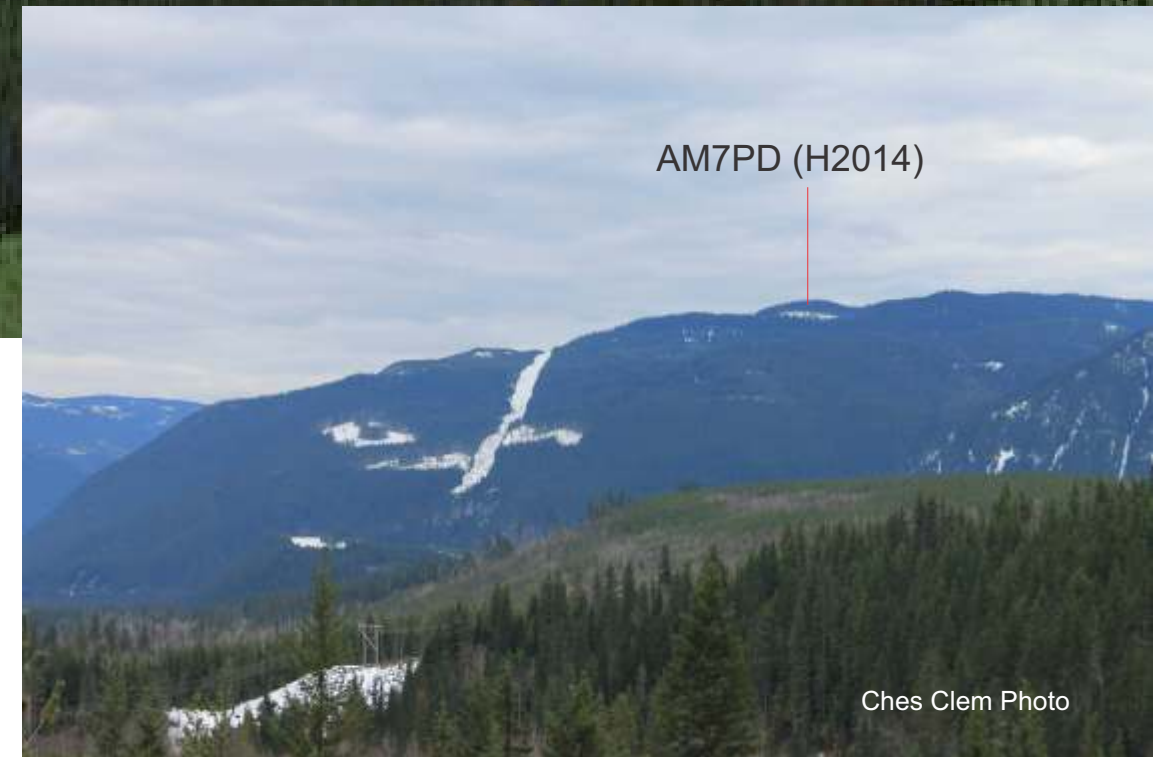
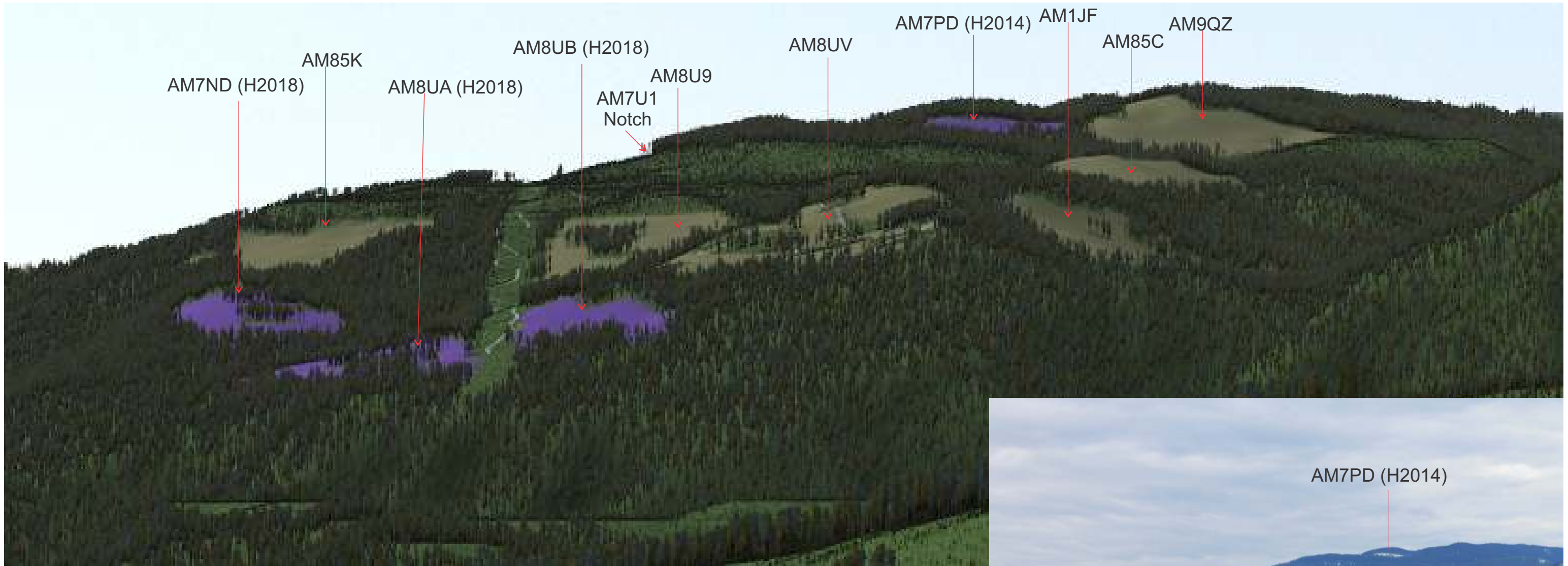
The cutblocks proposed for the Avola Mountain FSR landform appear to have the capability of easily meeting the Modification VQO in themselves and overall, in relation to the existing openings on the landform, as seen in distant middle ground from viewing opportunities travelling south along Highway 5 from the rest-stop at and around Viewpoint 2A for about 1km. The blocks, in total, create a favourable pattern and draw the eye away from the hydro-line, diminishing the effect of the line itself. If any recommendations were to be made, RDI suggests consideration the addition of one or more WTRAs in AM8QZ to reduce its relative over-representation compared to its size in plan view.



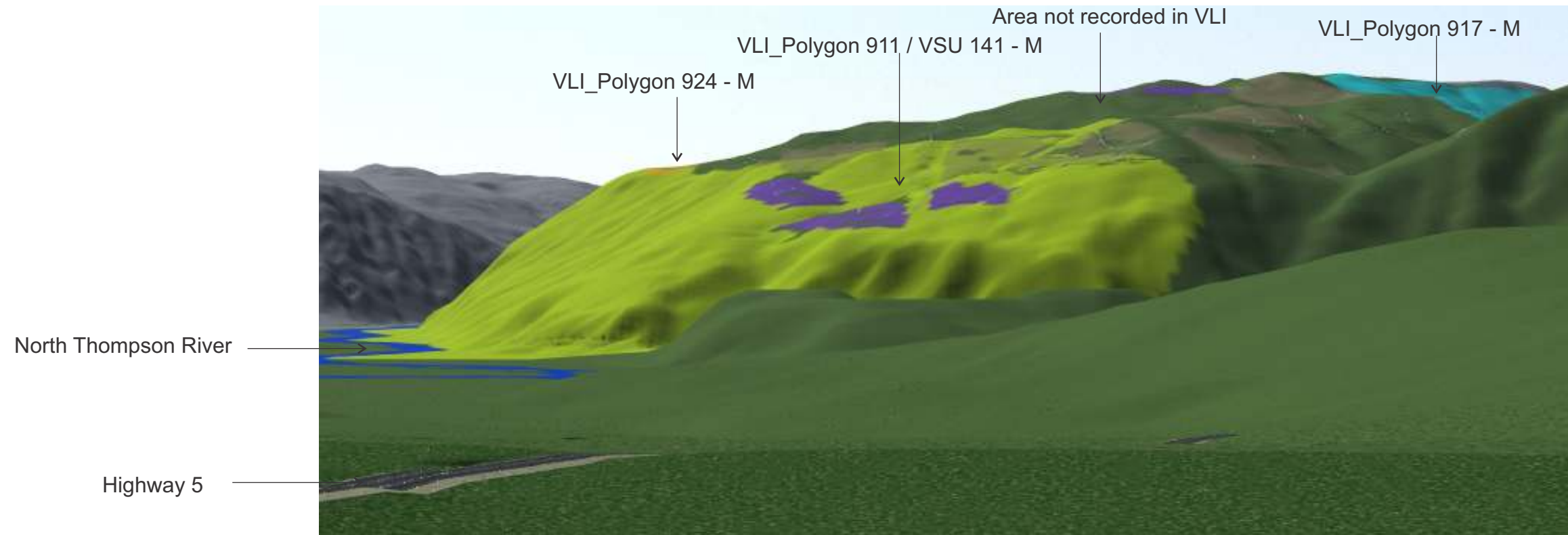
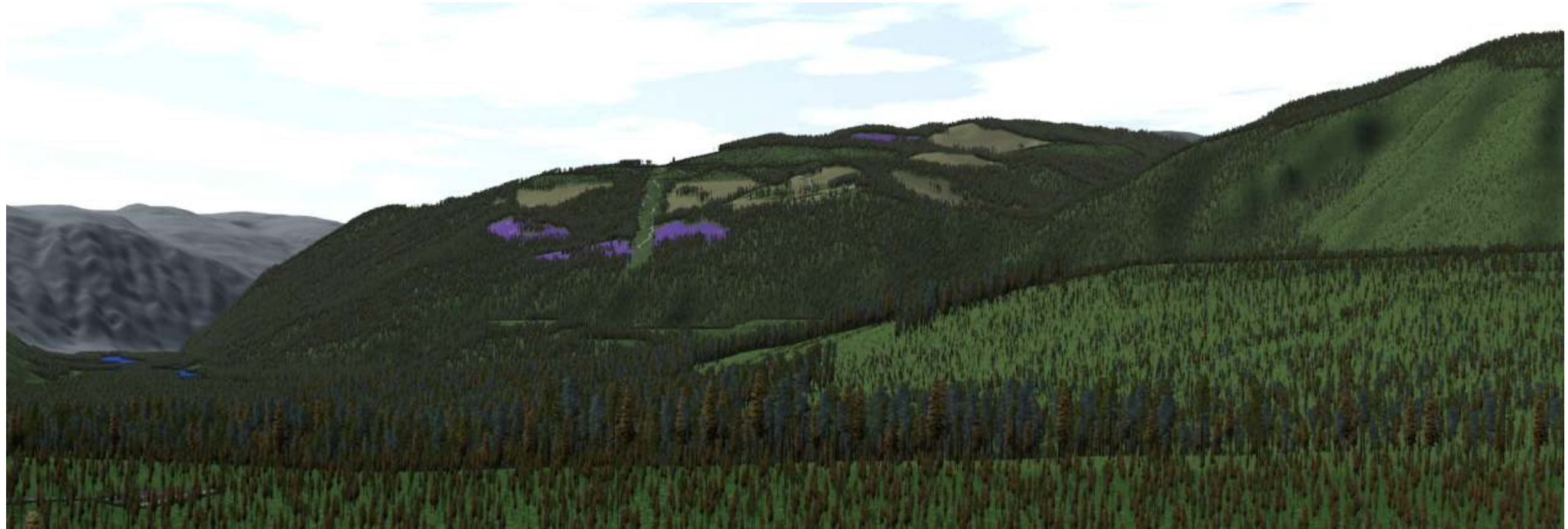
Kenneth B. Fairhurst, PhD, RPF
RDI Resource Design Inc
May 31, 2020



RDI Resource Design Inc
May 31, 2020



Avola Mountain Development Area from Viewpoint 2A Close-up



Avola Mountain Development Area from Viewpoint 2A with VQOs on Bare Land

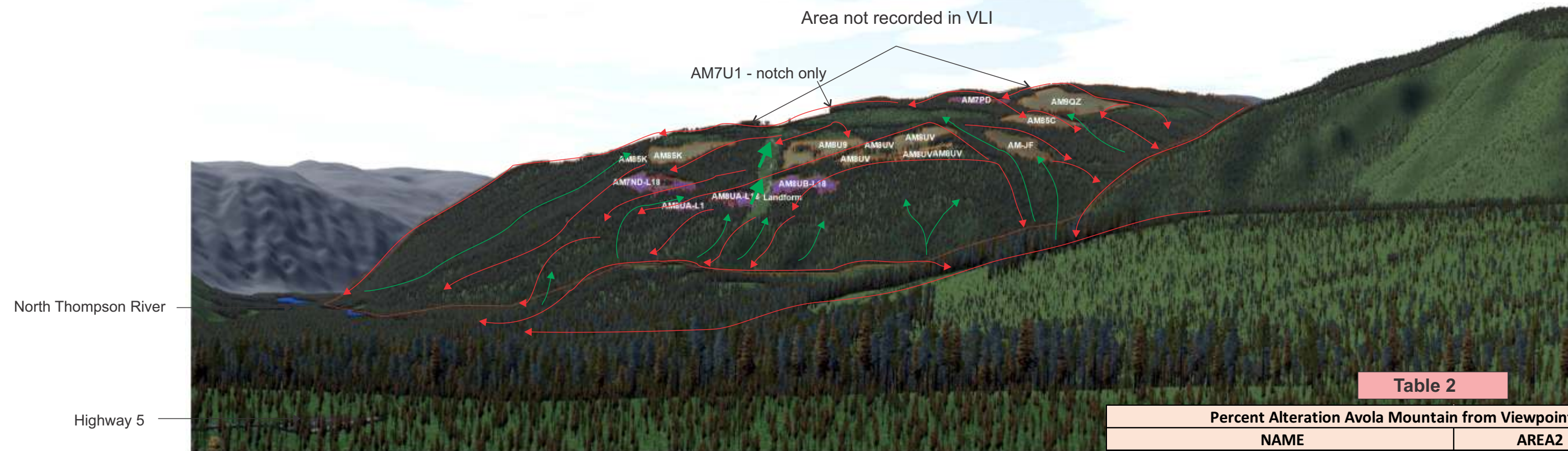
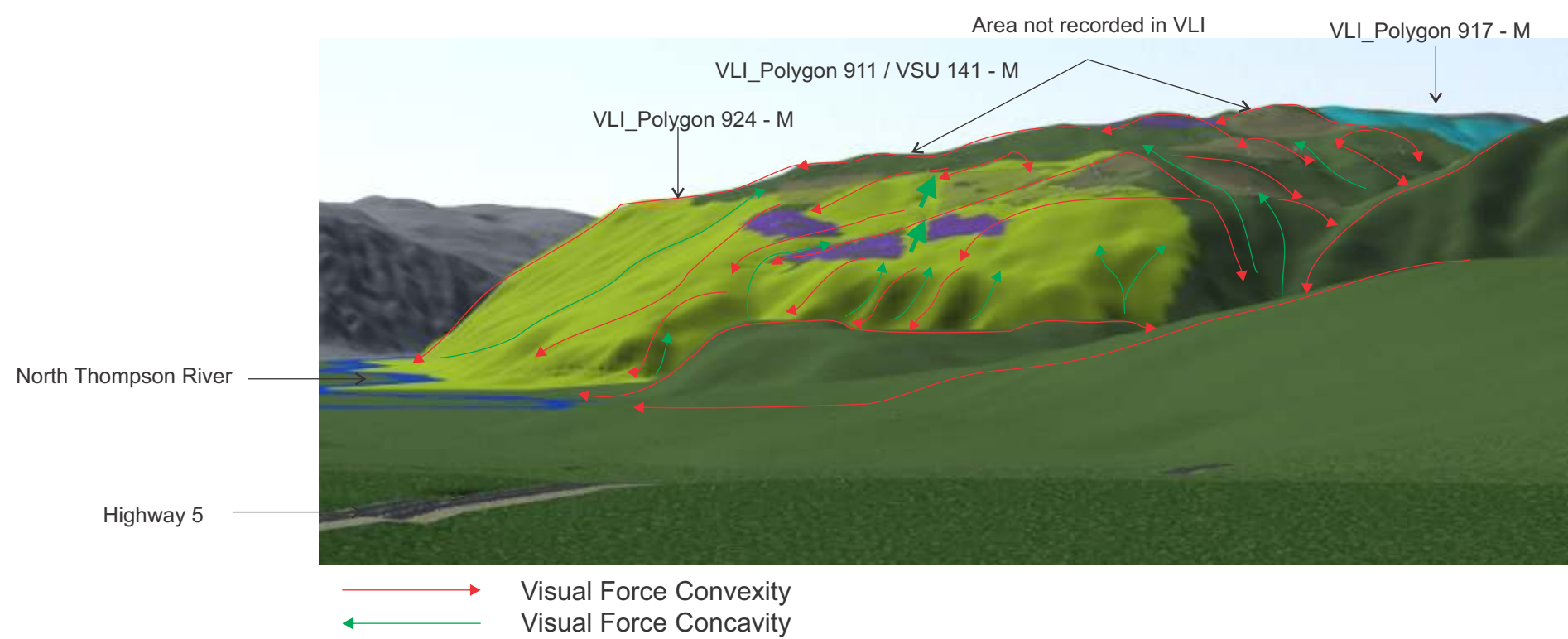


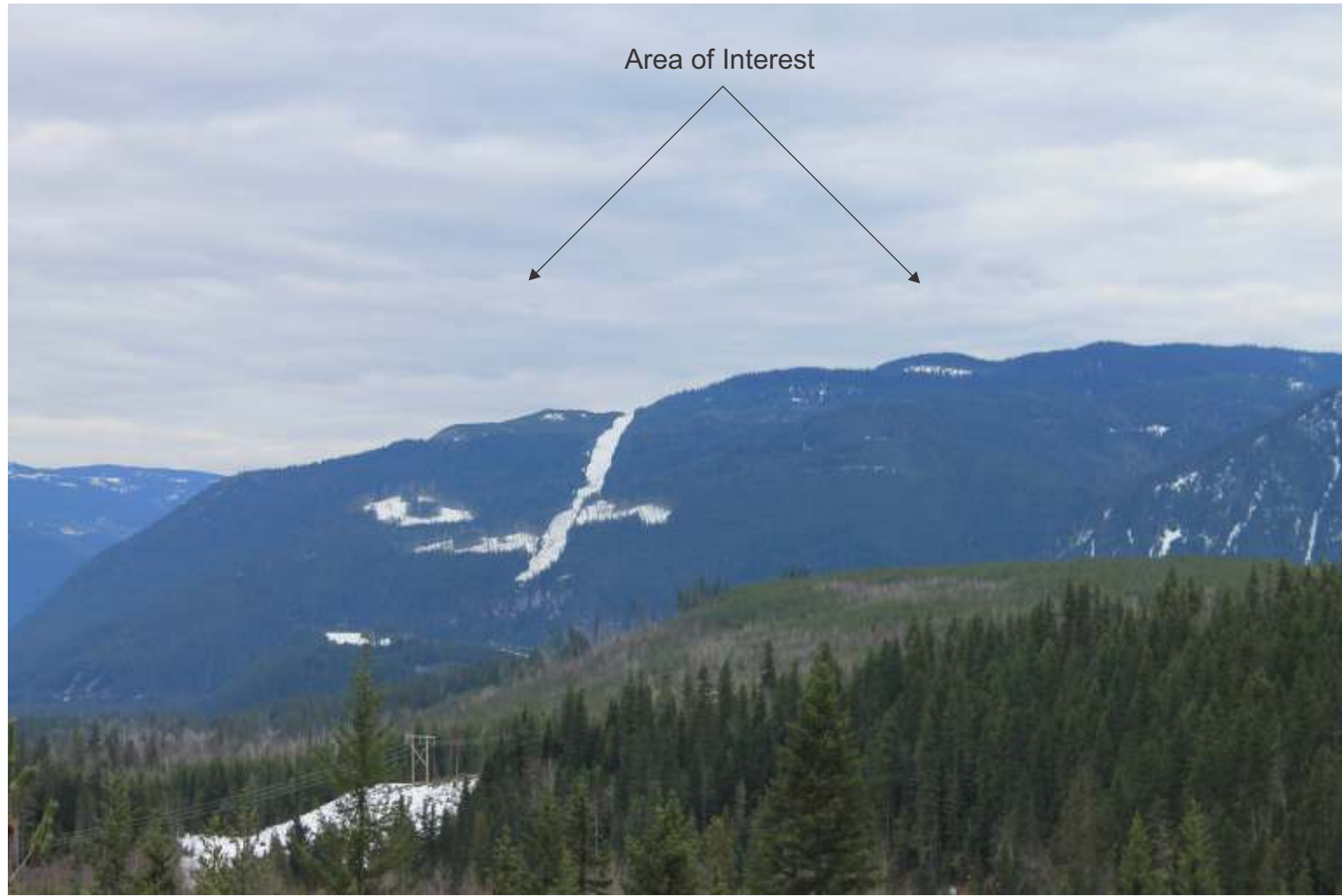
Table 2

Percent Alteration Avola Mountain from Viewpoint 2A		
NAME	AREA2	%Alt
Landform (VLI_Polygo 911, 919, + unmeasured)	856359.33	
AM85K	6772.28	0.79%
AM85K	112.03	0.01%
AM8U9	7733.05	0.90%
AM8UV	1718.80	0.20%
AM8UV	4601.40	0.54%
AM8UV	1401.68	0.16%
AM8UV	260.61	0.03%
AM8UV	77.82	0.01%
AM1JF (net)	6018.96	0.70%
AM85C	4398.20	0.51%
AM9QZ	11792.51	1.38%
Sum Alt - New	44887.34	5.24%
AM7PD-L14	1682.50	0.20%
AM7ND-L18	4840.34	0.57%
AM8UA-L18	899.80	0.11%
AM8UA-L18	2461.44	0.29%
AM8UB-L18	5913.60	0.69%
Sum Alt - Existing	15797.68	1.84%
Sum Alt - New and Existing	60685.03	7.09%
P-line ROW	11465.20	1.34%
Sum Alt with P-line ROW included	72150.23	8.43%



Avola Mountain Cutblocks from Viewpoint 2.2 Close-up with Percent Alteration Calculation and Visual Force Analysis

M0



Ches Clem Photo

Ches Clem Photo

M2



Ches Clem Photos (RDI panorama)

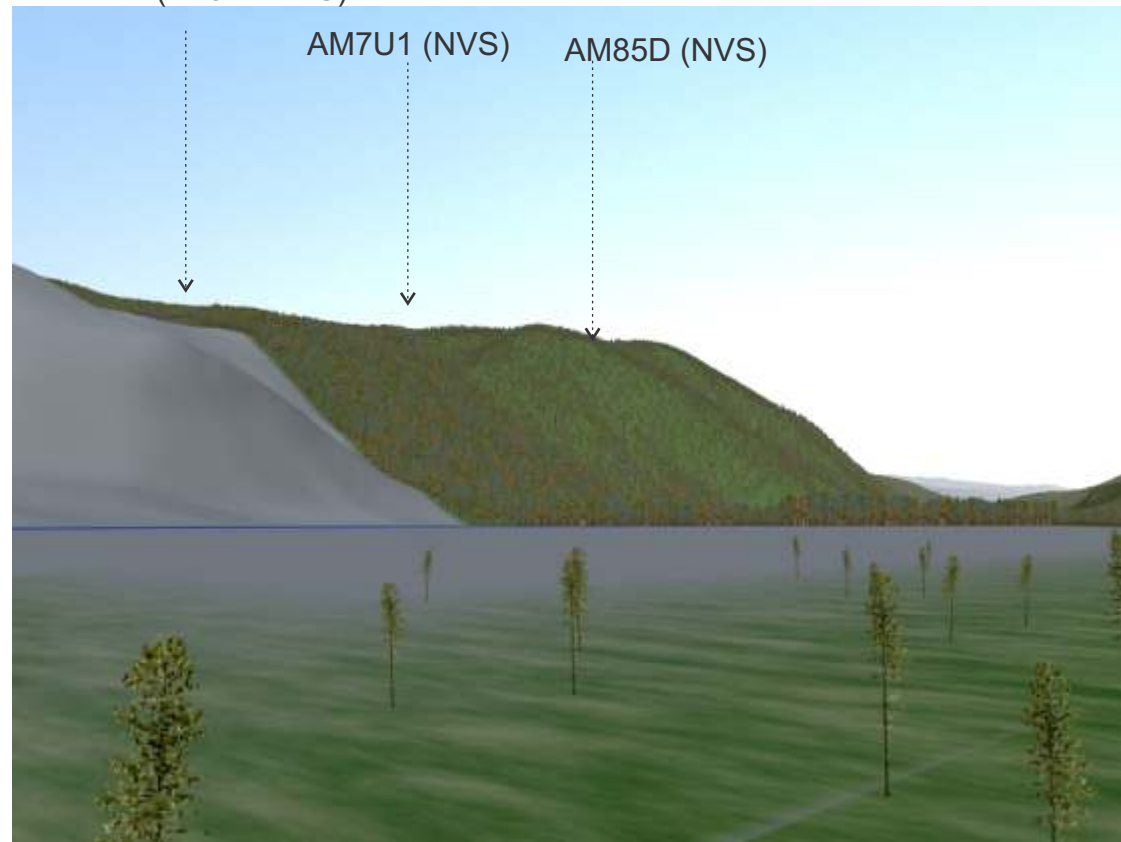
M3

Avola Mountain Development Area Photos

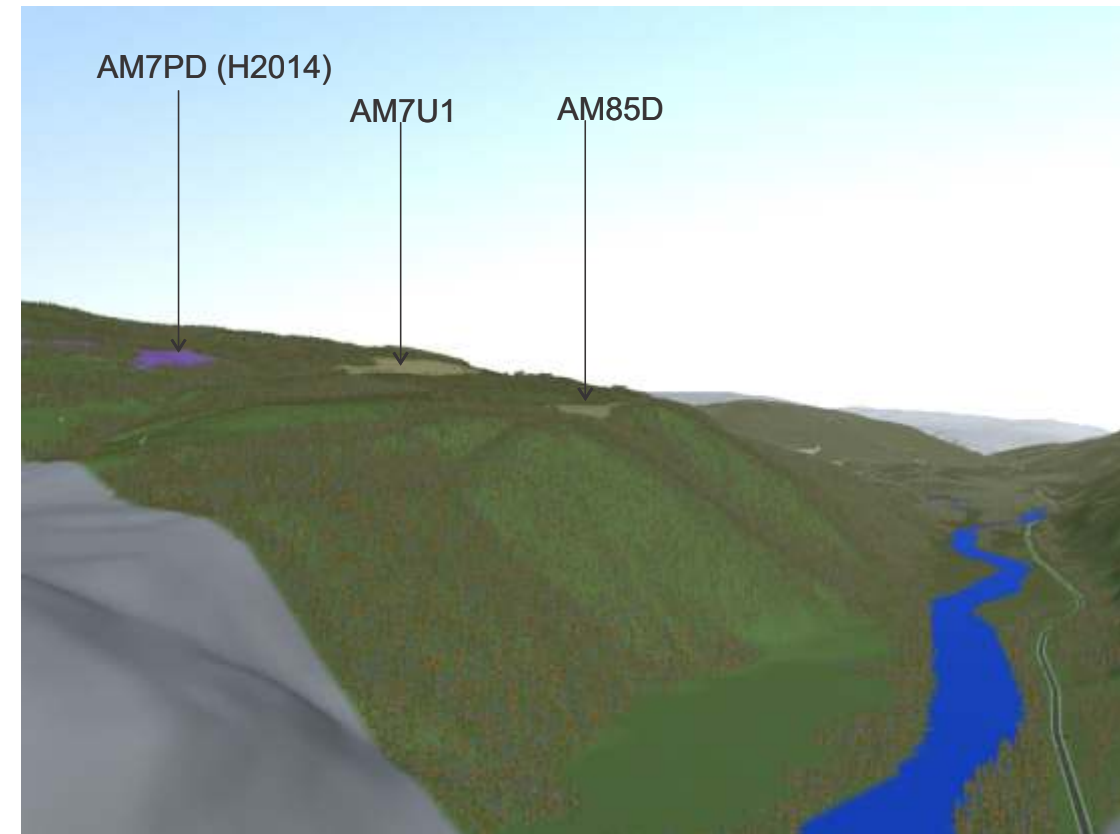


Ches Clem Photos (RDI panorama)

AM7PD (H2014-NVS)

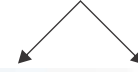


No openings seen from viewpoint

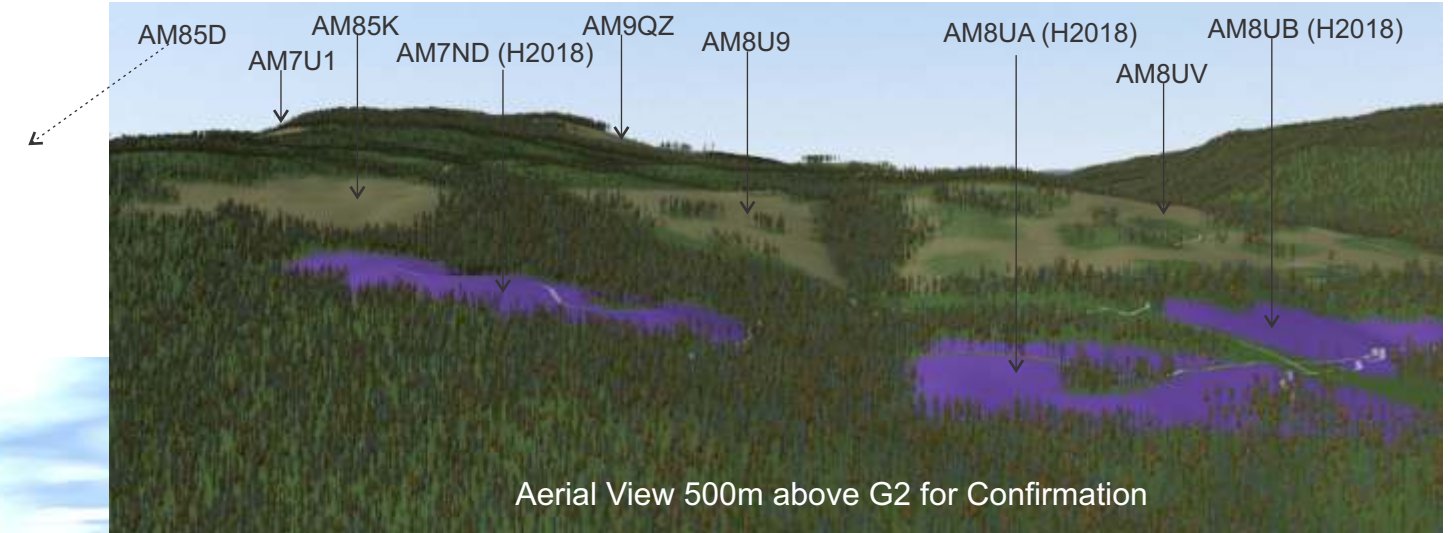


Validation of openings seen from 500m above viewpoint

Area of Interest

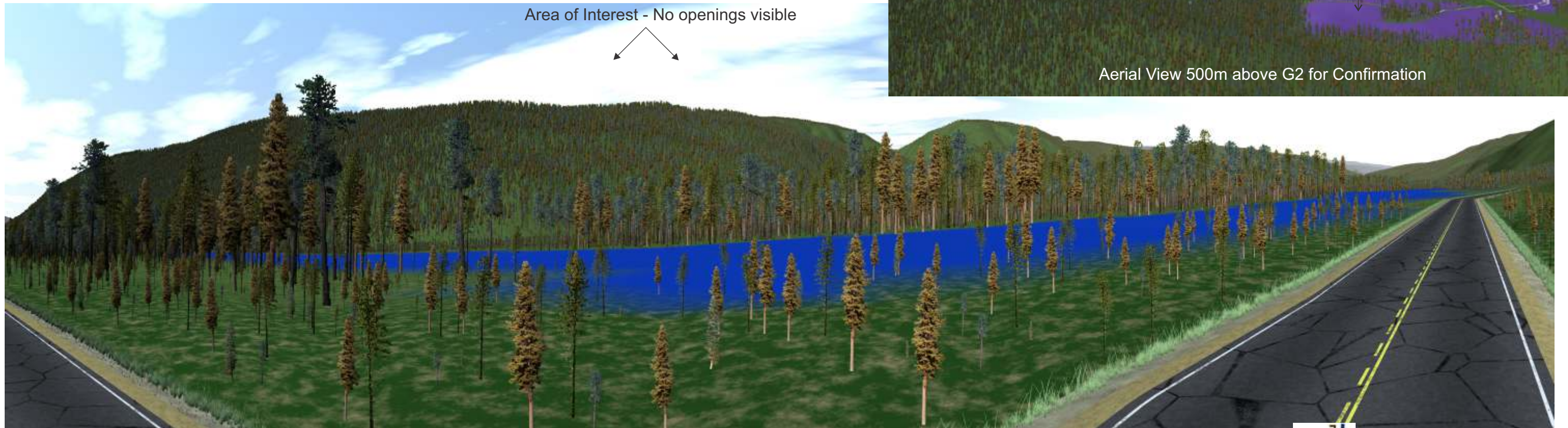
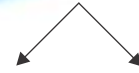


Ches Clem Photos (RDI panorama)



Aerial View 500m above G2 for Confirmation

Area of Interest - No openings visible



Viewpoint G2 Plus Overview (+500M)

