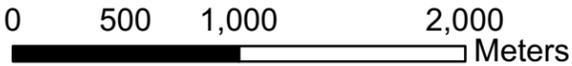


International Forest Products Limited
 FL A 19220 CP 188 VIA
 Blocks Red 5, 6, 29 Amendments
 Landform Analysis
 Produced by
 RDI Resource Design Inc
 April 19, 2014

- Roads2014
- ▭ VQO_Polygons
- ▭ RDI Landforms 2014
- ▭ Redonda2014s
- ◆ 2014_VIA_Viewpoints
- ▭ LeadingEdgeHeightAdjustment
- ▭ Reserves
- ▭ Redonda2014-SR
- ▭ Harvested_Blks. not in view
- VALUE**
- ▭ Not Visible from 2014 Viewpoints
- ▭ Visible from 2014 Viewpoints



Contents

- 1 Key Map / Cover
- 2 Contents
- 3 VIA Summary Table
- 4 Viewpoint PS6
- 5 Viewpoint PS6 Percent Alteration
- 6 Viewpoint R6
- 7 Viewpoint R6 Percent Alteration
- 8 Viewpoint R5
- 9 Viewpoint R5 Percent Alteration
- 10 All Viewpoints Lead-Edge Adjustment Simulations
- 11 2010 Interfor Photos

Visual Impact Assessment Summary Table

District: Sunshine Coast
Licensee: International Forest Products Ltd.
Licence Number: FL A 19220
Cutblocks: Red 5, 6, & 29 Amendments
Map #: 092K027
Proposed year of Harvest 2014
Proposed Silv. System: Clearcut, Leave Patches
Type of Proposed Alteration Cutblock; roads

VISUAL LANDSCAPE INVENTORY LABEL
Known Scenic Area - Partial Retention
VSUs: 297 (PR), 291 (PR), 342 (PR)
Landform #1: 297, part 291, part 342
Landform #2: part 291.

East Redonda Island is deeply incised by Pendrell Sound, which runs toward the northeast. The eastern half of the island is home to the "East Redonda Island Ecological Reserve", a preserve established for forestry research and forest growth. It is 6,212 ha (15,350 acres). The east side of East Redonda Island is dominated by 1591m high Mount Addenbroke (1591m), considered to be one of the 354 most topographically prominent mountain peaks of greater North America. Each of these summits has at least 1500 meters (4921.3 feet) of topographic prominence. The proposed development along the west side of Pendrell Sound has been designed to keep low on the very dominant (1250m) west-side landform with consideration of the visual sensitivities of visitors within the sound, including anchorages (at viewpoint PS6).

An analysis of the VSUs along the west side of Pendrell Sound found them to be a confusing and an inadequate representation of the clearly distinguishable west-side landforms. RDI delineated two key landforms as they would be seen from the three analysis viewpoints for the 2014 VIA - Viewpoints PS6, 6, and 5 (see key map on page 1). Landforms seen from viewpoints along the lower half of Pendrell Sound were considered in an earlier VIA prepared by RDI in 2012. The amendments introduced in this VIA were not considered to be an influence from those viewpoints. An update of those southerly viewpoints was not requested by Interfor.

Landform #1 is the main mountain landform reaching to 1250m elevation. Landform #2 is the low-lying landform along the shore towards the north end of the sound. Landform #1 consists of all of VSU 297, the south part of VSU 291 (291-1), which climbs up the slope to meet VSU 297 without visual differentiation, and some of VSU 342 to the south to complete the direct landform as seen cumulatively. Landform # 1 has a VQO of Partial Retention, derived from the VSUs.

Landform #2 includes only the low-lying part of VSU 291 (291-2). The remainder was merged into Landform #1. Landform #2 is backed by substantial non-visually sensitive area. The landform has a VQO of Partial Retention, derived from the VSU.

Landform #1 contains all of the proposed development, plus two small pieces of existing Red 8 extending up on the landform as seen from Viewpoint PS6. Landform #2 contains all of the existing visible portions of Red 8 and Red 22. These blocks range in age from 6 to 8 years and have either achieved, or nearly achieved Visually Effective Green-up (subject to evaluation of photos to be taken by Lindley Little).

DOES EVC EXCEED THE VQO?
Landform #1: No - Existing Visual Condition is R

Landform #2: Existing blocks are substantially greened-up and is meeting PR or M (subject to photo evaluation).

VIEWPOINTS & VIEWING CONDITIONS

Viewpoint Coordinates: see cover map (P. 1) for map locations
Viewpoint Importance: (Major/minor/potential) Important boating waterway, generally transitory viewing, opposite East Redonda Ecological Reserve. There is a fixed moorage viewpoint at Viewpoint PS6.
Viewing Distance
immediate foreground to midground (FG=0-1km, MG=1-8km, BG=8+km).

ASSESSING BASIC VQO DEFINITION; Design Considerations

Does the proposed alteration in combination with any existing Non-Veg alterations, achieve the basic VQO definition for the established VQO from each of the identified viewpoints?
Yes Landform #1, No (possibly) Landform #2

Partial Retention VQO

For Partial Retention, it means an alteration that is moderate in scale and has a design that appears natural and not angular or geometric.

If applicable, state reasons why the proposal does not achieve the basic definition and design criteria.
N/A

If applicable, which basic VQO definition would the proposed alteration in combination with any existing Non-VEG alterations meet?

Landform #1 meets PR. The proposed blocks extend along the landform for 3700m near the shore behind substantial buffers and lead-edge screening. The blocks all have irregular boundaries, a great variety of shapes and sizes, and broad retained forest areas between the blocks follow and strengthen visual forces. The plan is an amendment to the 2012 plan, adopting RDIs recommendations to substantially reduce visual impacts. Roads are subordinate if seen at all as they keep low along benches and are largely screened.

The current visualizations do not clearly indicate the advanced regeneration with much deciduous cover, and grown-over road pattern of past harvesting on the upper slopes of VSU 438, reaching into Landform #1. They also fail to indicate the steep rocky shoreline which provides much close-in interest and diversity of existing patterns.

Landform #2 may still be M. Existing blocks near or at VEG. No additional alteration planned.

More southerly blocks outside of Landform #1 were not addressed in this VIA as they have been covered in the 2012 VIA from more direct viewpoints. The overall plan addressed in the two VIAs introduces visible alteration from new and regenerating blocks along the entire west side of Pendrell Sound.

ASSESSING VISUAL DESIGN/ Design Recommendations
Does the proposed alteration(s) exhibit elements of good visual design?
Yes, as above
Does the proposed alteration(s) respond to the lines of force analysis?
Yes, as above

Design principles and practices used to blend the proposed alteration(s) with the landscape (e.g. Edge treatment & feathering, irregular boundaries, leave trees/patches, etc.)

The blocks are small and well-shaped with undulating boundaries. Broad buffers along the shore provide variable lead-edge screening. Linear continuity along the 3700m breadth along the landform has been broken up by substantial leave areas.

Specific tree measurement carried out by Interfor along the locations of leading edges found greater tree heights than indicated by the Stand_Height in the VRI file. Tree heights were adjusted in front of blocks RED 5-7 to 5-8 South (from 32m to 40m), 5-8 North to 6-1 South (from 33m to 43m), and 6-1 Main (from 33m to 45m). The visual results were determined from each viewpoint, with increased tree heights having a slight effect on increased screening and smaller and more intricate perceived block shapes as shown on the page showing all viewpoints together with edge trees adjusted. These results were not used in the percent alteration calculations given the limited number of spot trees measured, their minor overall effect, and for consistency with RDI's general VIA procedures, but were added to check the effect of accurate spot-tree measurements.

ASSESSING SCALE OF ALTERATION
(see computer simulation output on subsequent pages).

Does the total % alteration in perspective view from each viewpoint fall within the VQO guidelines? (P=0%; R=0-1.5%; PR=1.6-7.0%; M=7.1-18.0%): Yes for Landform #1; No for Landform #2 (no new alteration). See chart:

Percent Alteration from Viewpoints				VQC Achieved
	VP PS6	VP R6	VP R5	
Landform #1	2.74%	2.82%	5.34%	PR
Landform #2	4.34%	9.40%	9.06%	PR-M

*Note: Landform #2 is at or near Visually Effective Green-up (VEG) - no new development planned. If/when VEG the alteration will no longer contribute to percent alteration and will have subsided or will subside to PR. Consider separately from Landform #1.

The largest percent alteration of Landform #1 is displayed at Viewpoint R5, in the upper range of Partial Retention Visual Quality Class. Of the 5.34% within the 500 hectare landform from that viewpoint, a single block, Red 5-8 contributes over half of the total (2.81% as shown on page 9). While the shape of Red 5-8 is satisfactory, its scale and prominence from that viewpoint is likely to draw attention. Consideration should be given to some leave area(s) within the block. It was noted that when lead-edge tree heights were adjusted to the measured heights provided by Interfor, the adjustment was most noticeable in Red 5-8, reducing the scale somewhat, and improving the shape.

Due to limits of accuracy of the terrain model, tree heights ion the VRI, and digitizing, RDI assigns a standard margin of error (ME) of + or - 0.05. For example, Landform #1 could range from 5.07% to 5.61% from Viewpoint R5 (ME=0.27%), all within in the upper range of Partial Retention within the large landform.

Are there existing human-made alterations visible in the Landform #1 showing no or poor design? No
Are there existing human-made alterations visible in the Landform #2 showing no or poor design? Possibly, but greening-up substantially (6-8 years) or already greened-up (VEG).

FOREGROUND ALTERATIONS AND SCREEN DESIGN:

Is the proposed alteration within 1 kilometer of the viewing locations?
YES (Paddlers can travel close to the shore)
Does vegetative or landform screening exist?
YES (shoreline vegetative screening is continuous)
If yes, what type: Mainly conifers; rock forms

Would the screen hide proposed operations?

Partially only, depending on viewing location.

Is vegetative screening designed properly ie responds to lines of force, Shape & scale and remains a viable unit for future removal? YES

Is vegetative screen expected to be windfirm?
YES

ADDITIONAL CONSIDERATIONS

Does the EVC in adjacent units exceed the Visual Quality Class for those units and how would this affect the management of the present unit proposed for alteration?

Yes in Landform #2 which has no new alteration proposed and is rapidly greening-up, but may still be considered to be Modification. Subject to review of new photos to be provided by Lindley Little.

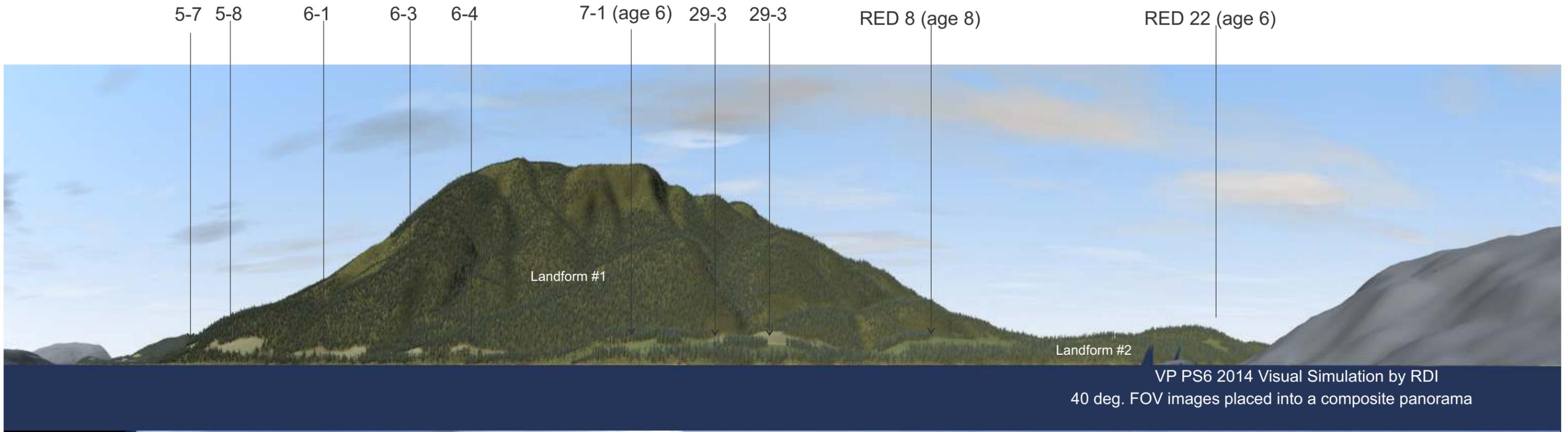
Proposed alteration in Landform #1 is not affected as Landform #2 is low and mainly seen separately from Landform #1

Has this VIA submission incorporated all known alterations proposed within the Visual Sensitivity Units for the next 5 years? (i.e. all blocks proposed by the same or different licensees) YES

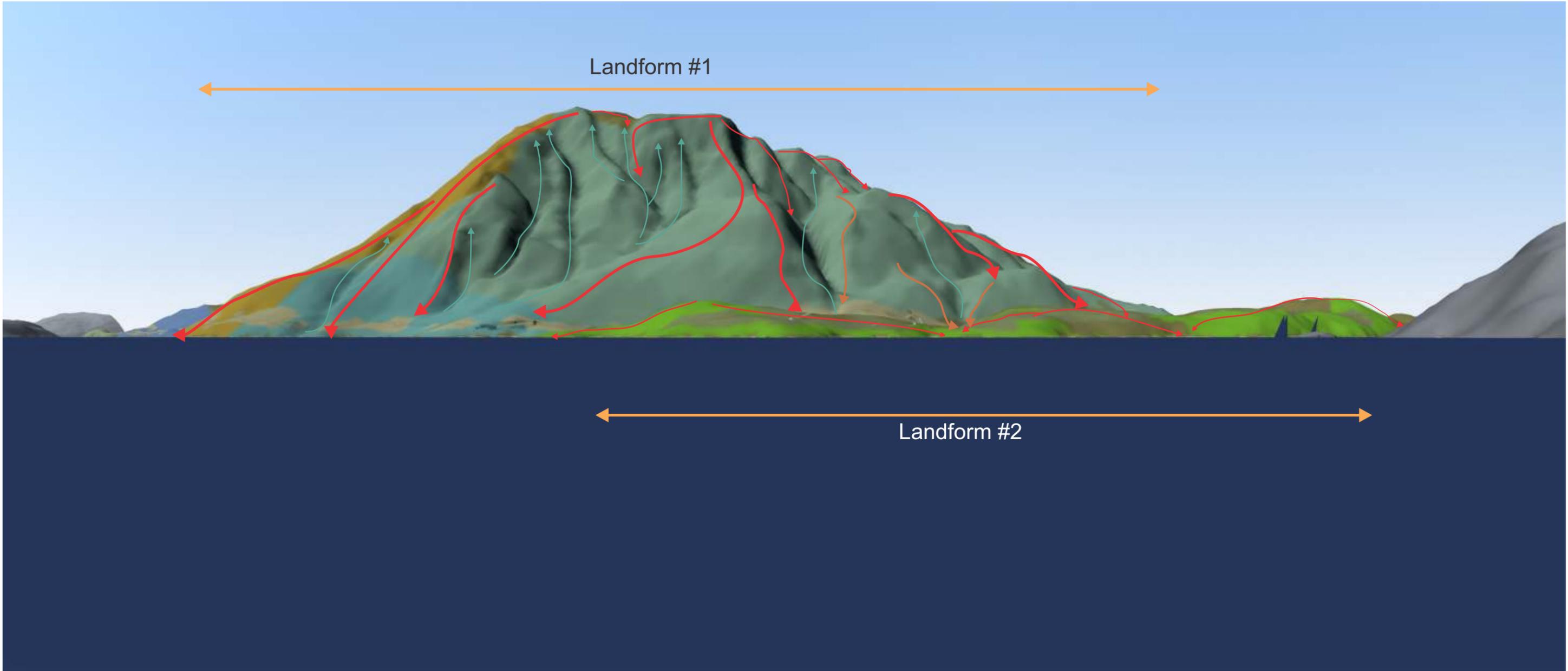
Completed by: Ken B. Fairhurst, Ph. D., R.P.F.
RDI Resource Design Inc
604-689-3195 / www.rdi3d.com
Date Completed: April 16, 2014



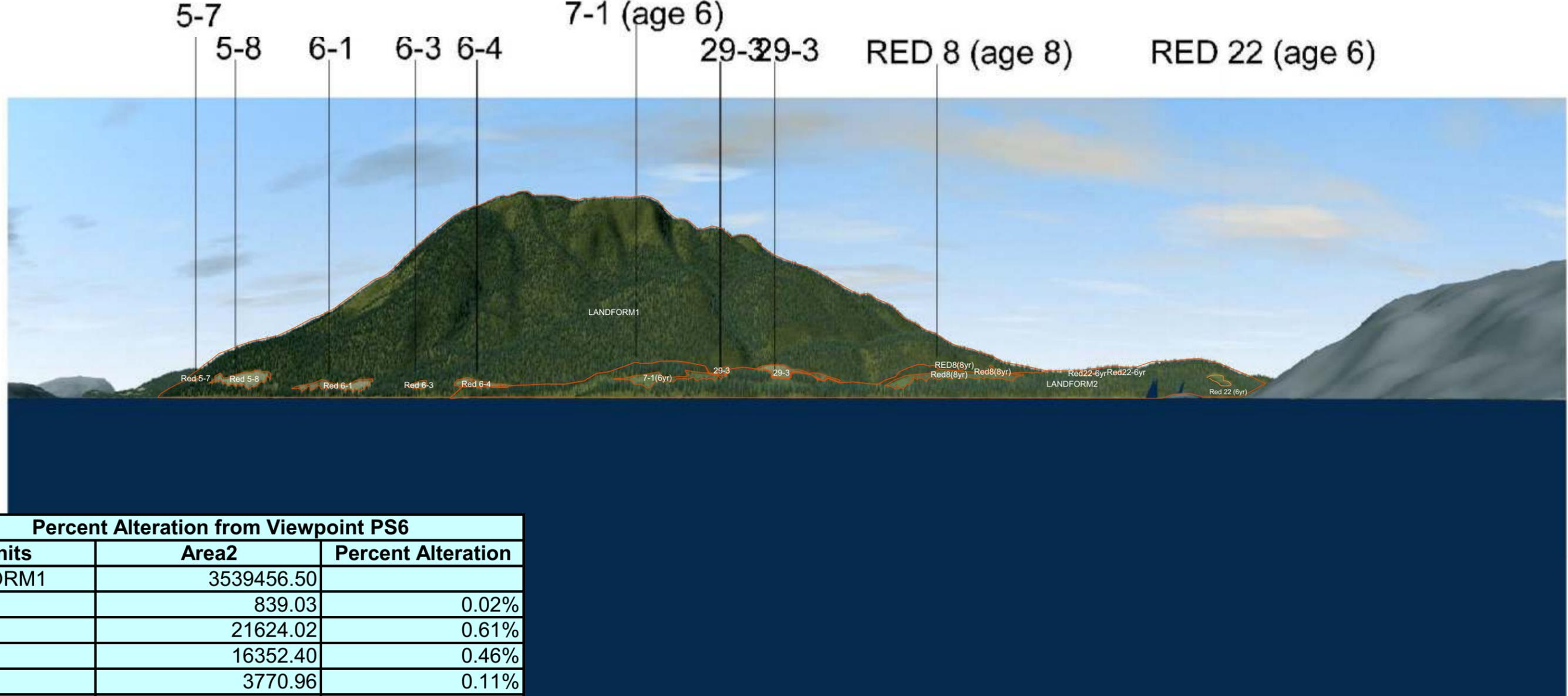
K.B. Fairhurst, Ph.D., R.P.F.



VP PS6 2014 Photos (82-85) by Lindley Little



- Visual Force Convexity
- Visual Force Concavity



Percent Alteration from Viewpoint PS6		
Units	Area2	Percent Alteration
LANDFORM1	3539456.50	
Red 5-7	839.03	0.02%
Red 5-8	21624.02	0.61%
Red 6-1	16352.40	0.46%
Red 6-3	3770.96	0.11%
Red 6-4	8156.86	0.23%
Red 29-3	2493.08	0.07%
Red 29-3	16346.94	0.46%
Red 7-1(6yr)	22884.56	0.65%
Red8 (8yr)	3063.57	0.09%
Red 8(8yr)	1323.77	0.04%
Sum Landform #1	96855.21	2.74%
LANDFORM2	759093.89	
Red8(8yr)	31668.78	4.17%
Red22-6yr	835.03	0.11%
Red22-6yr	456.43	0.06%
Sum Landform #2	32960.24	4.34%

Initial RDI Redonda 2014 - PS6 @ 40deg FOV

placed into a composite panorama

No adjustment made for lead-edge trees found to be taller than in VRI.
See effects of adjustment on page 10.

5-7

5-8

6-1

6-3

6-4

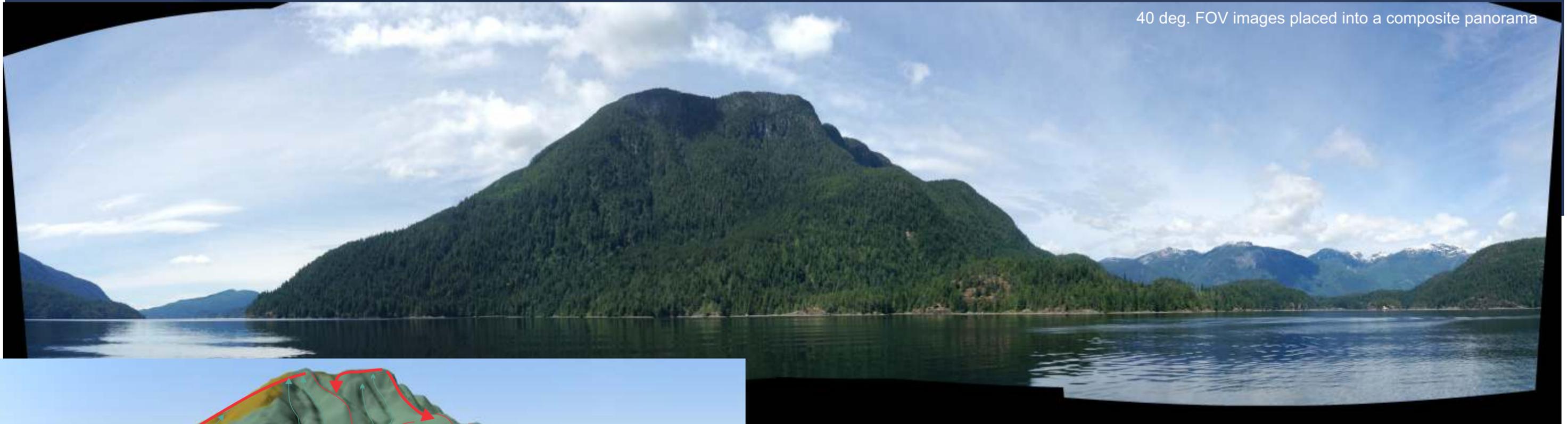
7-1 (age 6)

RED 8 (age 8)

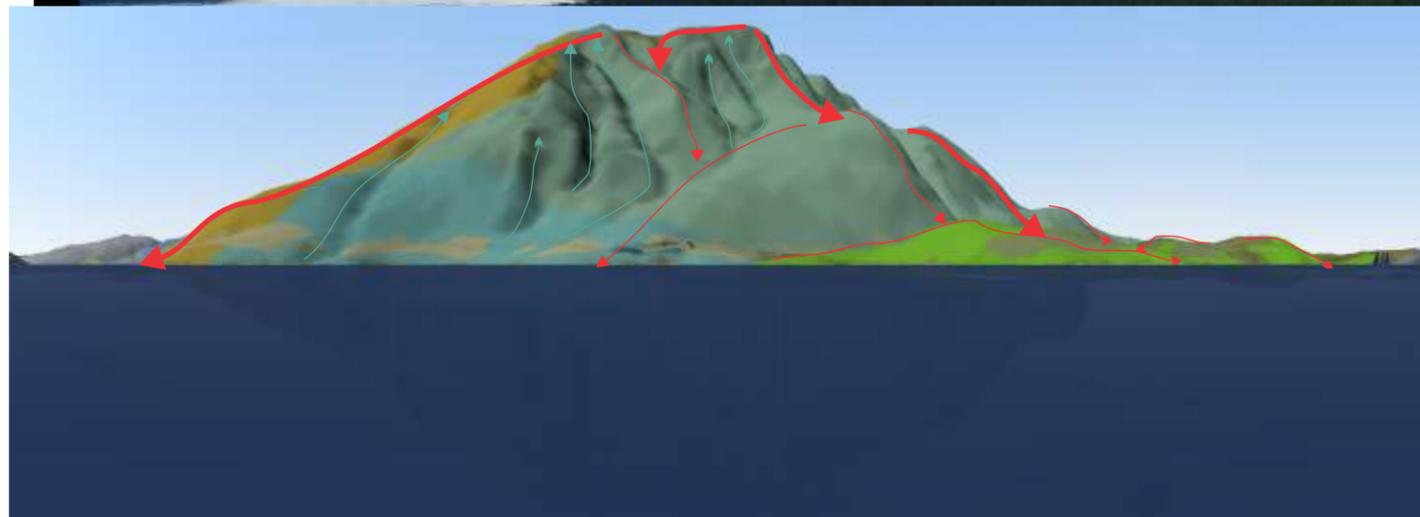


VP R6 2014 Visual Simulation by RDI

40 deg. FOV images placed into a composite panorama

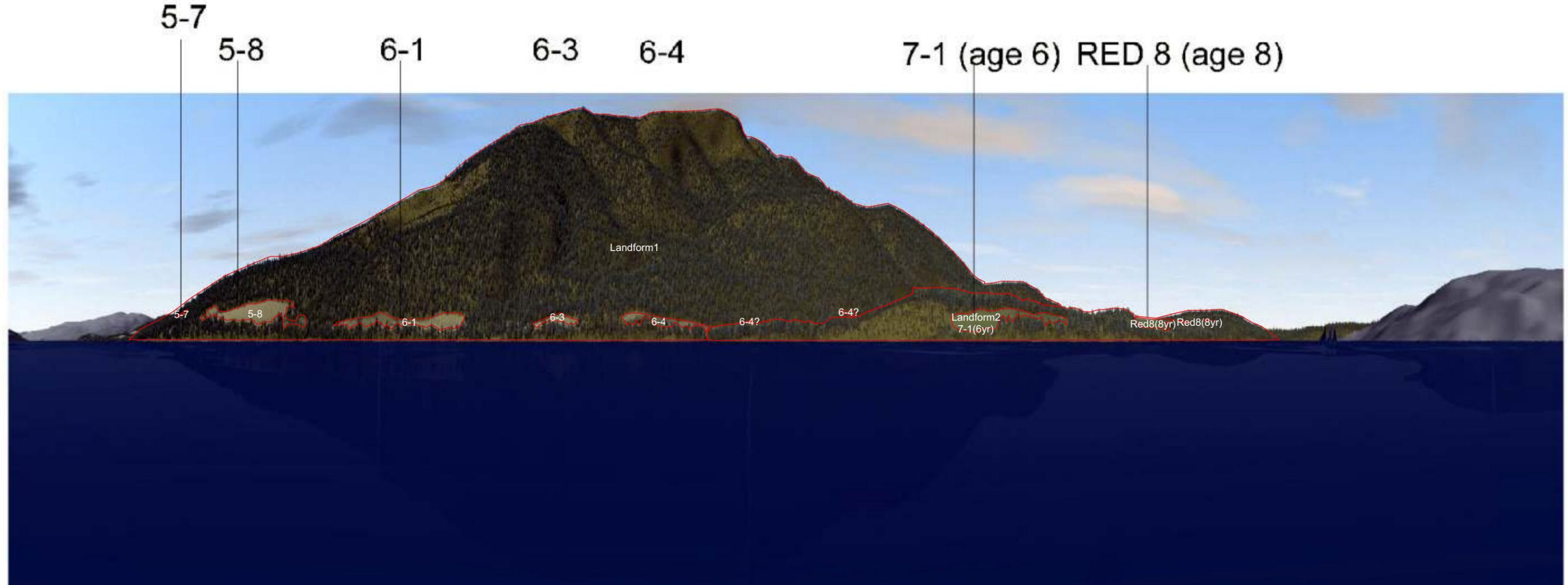


VP R6 2014 Photos (86-90) by Lindley Little



 Visual Force Convexity
 Visual Force Concavity

RDI Redonda 2014 Viewpoint R6



Percent Alteration from Viewpoint R6		
Units	Area2	Percent Alteration
Landform #1	4490709.43	
5-7	589.43	0.01%
5-8	51424.41	1.15%
6-1	41920.22	0.93%
6-3	9132.54	0.20%
6-4	21318.74	0.47%
6-4?	1855.86	0.04%
6-4?	293.46	0.01%
Sum Landform #1	126534.67	2.82%
Landform #2	655586.66	
7-1(6yr)	49606.43	7.57%
Red8(8yr)	11319.81	1.73%
Red8(8yr)	496.81	0.08%
Red8(8yr)	176.04	0.03%
Red8(8yr)	28.68	0.00%
Sum Landform #2	61627.78	9.40%

RDI Redonda 2014 - R6 @ 40deg FOV

No adjustment made for lead-edge trees found to be taller than in VRI.
See effects of adjustment on page 10.

RDI Redonda Viewpoint R6 2014 Percent Alteration

4-6, 4-2

5-7

5-8

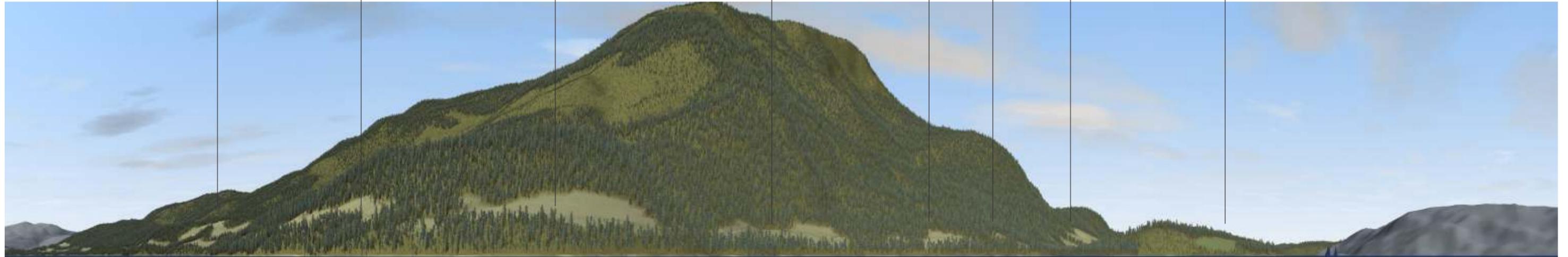
6-1

6-3

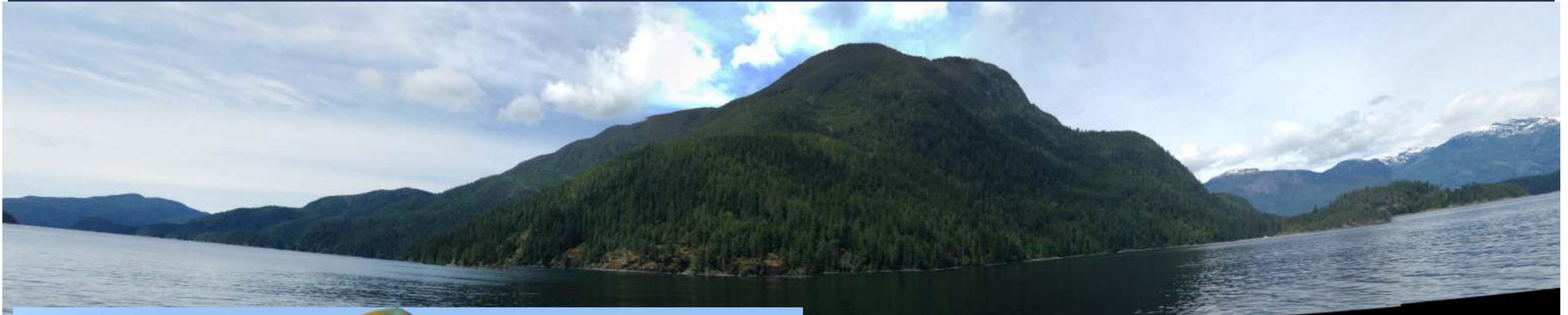
6-4

29-3

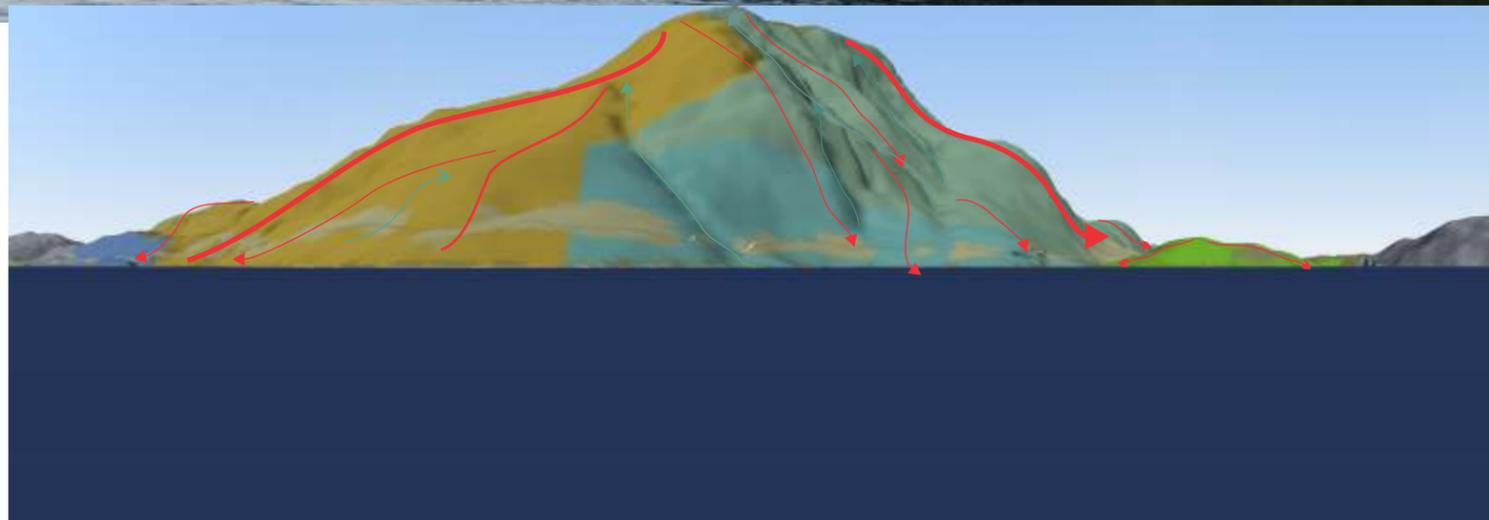
7-1 (age 6)



VP R5 2014 Visual Simulation by RDI
40 deg. FOV images placed into a composite panorama



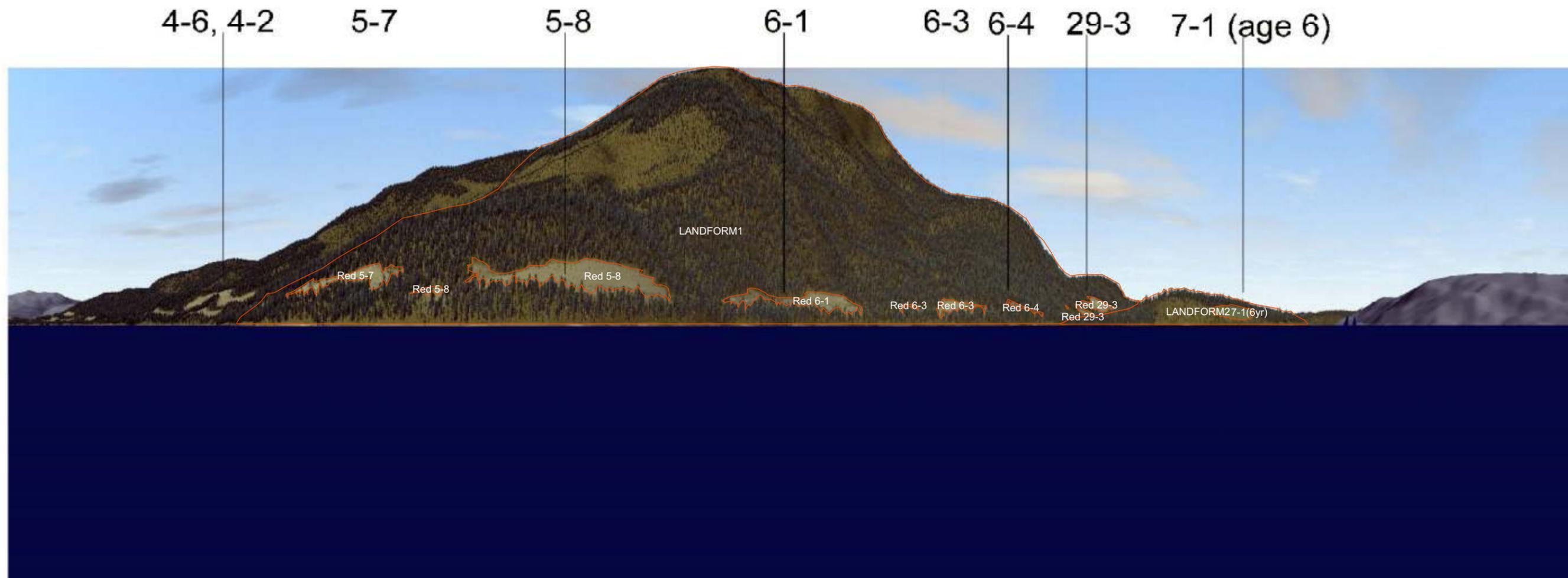
VP R5 2014 Photos (95-99) by Lindley Little



Landform #1 has a northeast aspect which creates deep shade for most of the day throughout the year.
Shore line rock features add variety; upper past harvesting still evident but fully VEG.

→ Visual Force Convexity
→ Visual Force Concavity

RDI Redonda 2014 - Viewpoint R5



Percent Alteration from Viewpoint R5		
Units	Area2	Percent Alteration
LANDFORM1	4852986.87	
Red 5-7	38257.82	0.79%
Red 5-8	136591.47	2.81%
Red 6-1	49843.38	1.03%
Red 6-3	1892.50	0.04%
Red 6-3	12392.56	0.26%
Red 6-4	3966.10	0.08%
Red 29-3	8573.62	0.18%
Red 29-3	2134.38	0.04%
Red 29-3	144.08	0.00%
Red 5-8	5251.99	0.11%
Sum Landform #1	259047.90	5.34%
LANDFORM2	182523.86	
Red 27-1 (Age 6)	16528.40	9.06%
Sum Landform #2	16528.40	9.06%

RDI Redonda 2014 - R5 @ 40deg FOV

No adjustment made for lead-edge trees found to be taller than in VRI.
See effects of adjustment on page 10.

RDI Redonda 2014 - Viewpoint R5 Percent Alteration

VP PS6



VP R6

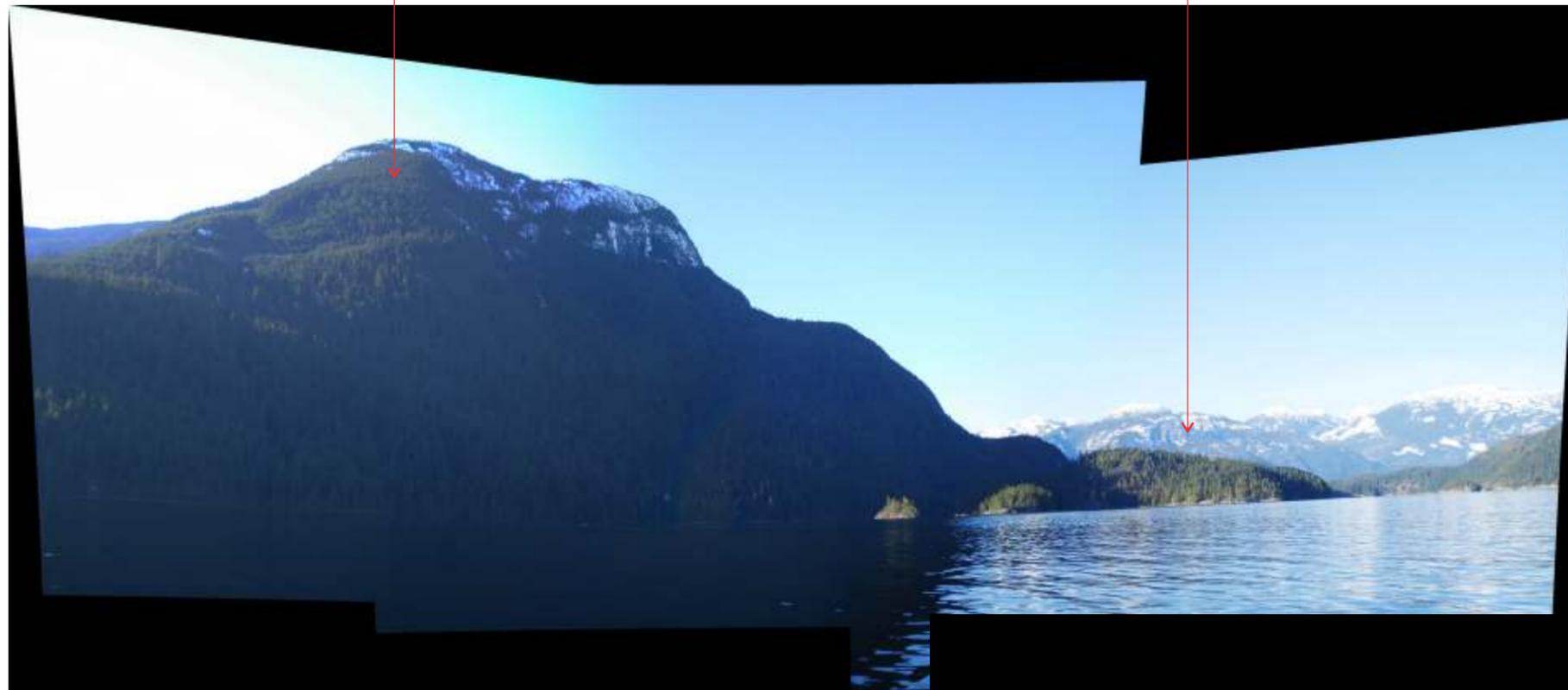


VP R5



Landform #1

Landform #2



Landforms #1 & #2 from Viewpoint R5.
 Interfor Photos December 11, 2010 at 10:35am PST.
 Landform #1 has a northeast aspect
 which creates deep shade
 for most of the day throughout the year.
 No alteration noticeable in Landform #2

Landform #1 looking at south boundary at centre with VSUs further south on left.
 Viewpoint R5 approx. Interfor photos December 11, 2010 at 10:35am PST.
 Landform #1 has a northeast aspect which creates deep shade
 for most of the day throughout the year.
 Shore line rock features and upper past harvesting still evident though fully VEG.

