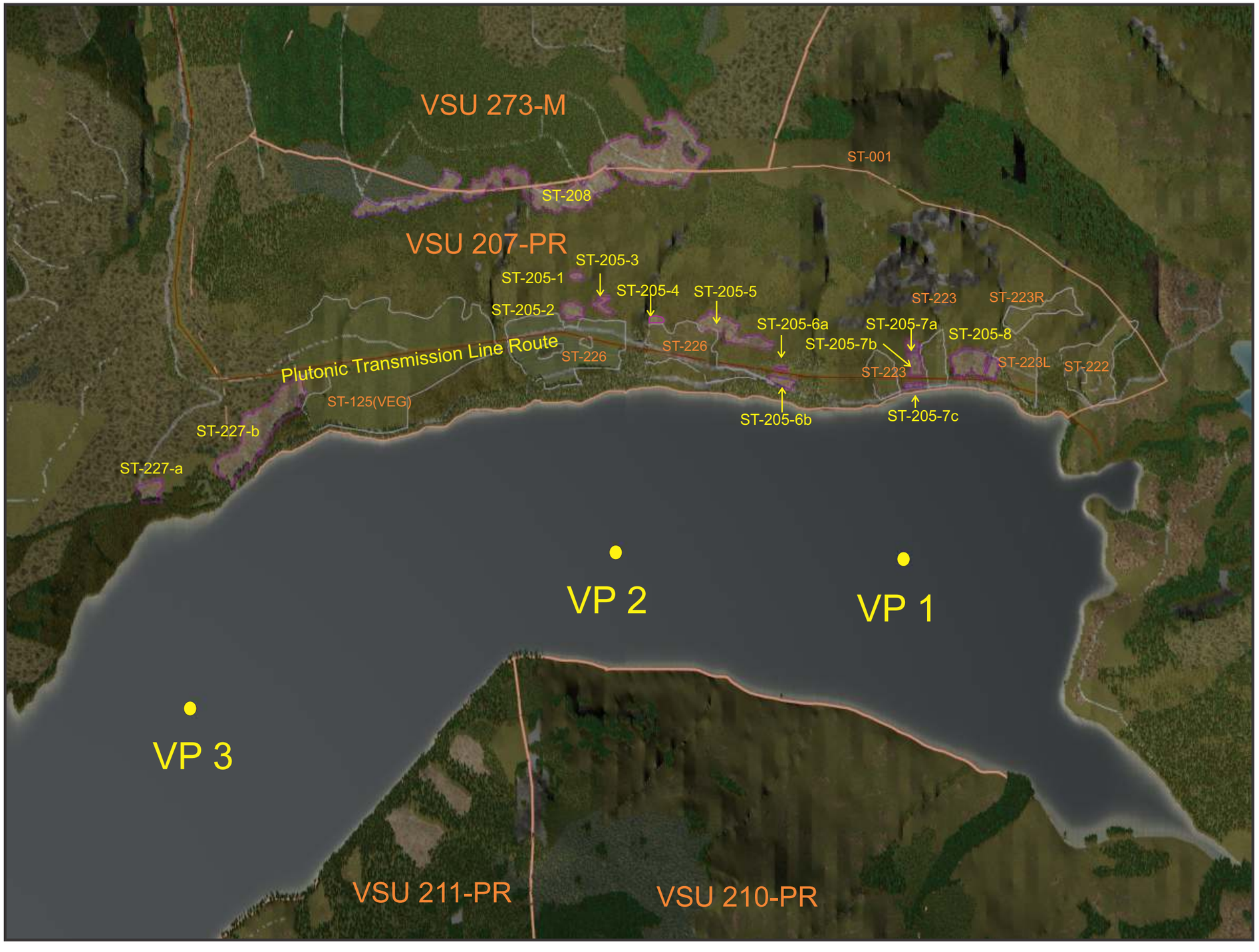


Western Forest Products TFL 39 Block 1 - Stillwater Division
ST-205 / ST-208 / ST-227 - Lois Lake VIA - December 10, 2007

WESTERN FOREST PRODUCTS INC.

RDI Resource Design Inc
Resource Planning and Visualization

Contents

Introduction

Preliminary visual assessments for VSU 207 along the north side of Lois Lake in Western Forest Products (WFP) TFL 39, Block 1 were produced by Skyline Landscape Simulations in October 2007. WFP subsequently retained the services of RDI Resource Design Inc. (RDI) of Vancouver, BC, to address the proposed visual alterations to be caused by cutblocks ST-205, ST-227, and ST-208 in themselves and in relation to a transmission line now under construction that cuts through the VSU, and make recommendations for design modifications that would best meet the intent of the established Visual Quality Objectives (VQOs). RDI has extensive expertise in all aspects of professional visual resource management and is considered very well qualified to conduct this analysis. RDI prepared computer visualizations and an impact assessment of the future visual quality of the proposed cutblocks.

The criteria for visual quality assessment of the proposed harvest plan were derived from WFP's Forest Stewardship Plan (2006), standard BC Ministry of Forests and Range (BCMOFR) Visual Impact Assessment Procedures, and design guidelines described in the BCMOFR Visual Landscape Design Training Manual. The Integrated Land Management Bureau (ILMB), through the BCMOFR, establishes the VQOs which provide guidance as to the extent and character of visible alteration in a particular landscape if it is within a known Scenic Area.

Plutonic Power Corporation Inc. (PPC) is presently constructing a transmission line corridor through VSU 207. Transmission lines have the potential to create a strong and enduring visual impact which may result in a constraint on forest management activity within a particular Visual Sensitivity Unit (VSU) to meet the VQOs. However, transmission lines are not similarly constrained by VQO's.

As development of the line will cause a portion of forest to become isolated from practicable harvest when the lines are installed, WFP was caused to prepare a harvest plan to access the timber that would become isolated. Block ST-205 is primarily designed to utilize that timber, plus a blowdown area. The proposed line would enter along the western edge of VSU 207, run parallel to existing roads and through existing cutblocks (ST-125, ST-226, ST-223L, and ST-223) and through pieces of the proposed ST-205. The lower edge of the transmission line right-of-way boundary is greater than 300m from the shore where it runs through ST-125, under 200m from the shore through ST-226, and frequently less than 30m from the shore where it crosses though the eastern parts of ST-205. As the line itself is not constrained by VQOs, it was considered appropriate to remove the visual contribution of the line when evaluating the proposed timber harvest necessitated by the line placement.

VSU 207 has a VQO of Partial Retention (PR). The FRPA definition of PR is "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 (a) is easy to see, (b) is small to moderate in scale, and (c) has a design that appears natural and is not angular or geometric."

The Existing Visual Condition (EVC), measured in the same terms as VQOs, was determined to have the characteristics of Partial Retention as seen from the analysis viewpoints and as described further in this report (see cover map).

The variety of terrain and extent of past harvesting provides at least a moderate Visual Absorption Capability (VAC) in the VSU, indicating that land-use alteration has a moderate capability of fitting in with the vegetative variety, rock and soil patterns, and terrain variety, provided scale, form and line are compatible with existing patterns for both line placement and the proposed timber harvest operations. The open areas also will reduce the amount of clearing required for the right-of-way, further increasing the VAC of the line.

Procedures

Existing and proposed cutblocks, the transmission line route location, terrain, and forest cover data were placed in Visual Nature Studio 2 visualization software. Forest cover shapefile polygons with height and species attributes were imported into the VNS projects. The forest heights and species attributes allow VNS to correctly reveal overall forest textures and screening capacities. As ST-125 was considered to have achieved Visually Effective Green-up (VEG), it was not considered in the calculations.

Existing blocks ST-226, ST-222, ST-223, ST-223R, and ST-223L were all considered. Block ST-205, ST-227, and ST-208 along the upper ridge of the VSU (addressed in a previous assessment) are included in this assessment.

The transmission line route was assigned a clearing width of 40 metres, although actual clearing widths will vary. Double-pole transmission line support structures with a height of 25 metres were added at location points provided.

Panoramic (3-image), 60 degree FOV/30mm lens, high-resolution renderings were produced from the 3 Viewpoints, plus a single aerial overview (see cover). Perspective view percent alteration calculations were made in ArcMap using the rendered images. The contributions of each block and the line were measured against the full VSU extent in perspective view.

Findings

Viewpoint 1
Percent Alteration
New - 1.51% (ST-227+ST-208=0.034%; ST-205=1.48%) -
T-line area - 1.04%
Existing (T-line area removed) - 6.55% (PR)
Existing and T-Line - 7.59% (exceeds PR by 1%)
Total - 9.10% (exceeds PR by 2%)
Net with ST-227 and ST-208 only; T-line removed from calculation - 6.58%
Net (all)- 8.07% (T-Line removed from calculation) - exceeds PR by 1%.

Viewpoint 2
Percent Alteration
New - 1.88% (ST-227+ST-208=0.12%; ST-205=1.76%)
T-line area - 1.08%
Existing (T-line area removed) - 5.77% (meets Partial Retention)
Existing and T-Line - 6.84%
Total - 8.73%
Net with ST-227 and ST-208 only; T-line removed from calculation - 5.89%
Net (all)- 7.65% (T-Line removed from calculation) - exceeds PR by 0.65%.

Viewpoint 3
Percent Alteration
New - 1.47% (line, form, and scale of new alteration meet PR design criteria)
Existing (T-line area removed) - 2.31% (meets Partial Retention)
Existing and T-Line - 3.99%
Total - 5.46%
Net - 3.78% (T-Line removed from calculation) - meets PR%.

Conclusions

Based on percent alteration, the EVC of VSU 207 meets Partial Retention from all 3 viewpoints with the transmission line area contribution removed, and from 2 of 3 viewpoints with the transmission line contribution included. While a few existing openings exhibit some aspects of rectiliniarity, the verbal definition of Partial Retention is considered to be met, broadly, for the VSU from each viewpoint. Proposed blocks ST-205, ST-227, and ST-208 are well-designed alterations that will result in a minor (<2%) increase in apparent change in the landscape. The addition of ST-227 and ST-208 to the EVC with the transmission line area contribution removed will keep the VSU within PR limits. The transmission line and blowdown induced operation (ST-205) will result in a visually acceptable alteration in VSU 207, slightly exceeding VQO targets in 2 of 3 viewpoints. The FSP allows for such exceptions under Paragraphs 4.6.4 and 4.6.5 (see descriptions, page 4).

Ken B. Fairhurst, R.P.F.

Visual Impact Assessment Summary Table

District: Sunshine Coast
Licensee: Western Forest Products Inc. TFL 39
Cutblocks: Blocks ST-205, ST-208, ST-227
Map #'s: 092F089; 092J090
Proposed year of Harvest: 2008
Proposed Silvicultural System: Retention
Type of Proposed Alteration: Cutblocks; Roads
Additional Alteration: Plutonic Power Corporation Inc. Transmission Line

VISUAL LANDSCAPE INVENTORY LABELS

Established Scenic Area; Objective established under FPC (grandparented):
VSU 207 VQO = Partial Retention (PR), VSU 274 = Modification (M)

DOES EVC EXCEED THE VQO? YES No **X**

The characteristics of a cutblock or road under Partial Retention are (i) easy to see; (ii) small to medium in scale; and (iii) natural and not rectilinear or geometric in shape.

The characteristics of a cutblock or road under Modification are (i) very easy to see; and (ii) are (A) large in scale and natural in appearance; or (B) small to medium in scale but with some angular characteristics.

The Existing Visual Condition (EVC) of VSU 207 has characteristics of PR. The EVC of VSU 274 is Retention (difficult to see).

EVC is further discussed in relation to the proposed alteration in following sections of the VIA.

VIEWPOINTS & VIEWING CONDITIONS

Viewpoint Coordinates:

Viewpoint	Latitude	Longitude	ELV.	FOV/Lens/Frames	View Distance	VP Type
VP1	49.861488	124.18034	133m	60 deg./30mm (3)	920 m to ST-205-7 (FG)	Lake
VP2	49.861666	124.2009	133m	60 deg./30mm (3)	1120 to ST-205-2 (FG)	Lake
VP3	49.854349	124.23096	136m	60 deg./30mm (3)	1200m to ST-227-2 (FG)	Lake

Forest Stewardship Plan Category of Alteration Definitions for Visual Quality

Western Forest Products FSP 2006 Sections 4.6.1 to 4.6.5 address constraints affecting areas with the Categories of Alteration of Partial Retention and Modification. Sections 4.6.4 and 4.6.5 describe allowances and exceptions. These are discussed when assessing the definition, design, and percent alteration of the proposed alteration in relation to existing alteration in the following sections of the VIA.

Section 4.6.4 allows for a road or cutblock within a Category of Alteration that may be rectilinear or geometric in shape or have angular characteristics and not appear natural in shape where and to the extent: (a) the cutblock or road borders a: (i) previously harvested cutblock in which stumps and course woody debris created by that harvesting are no longer visible from the viewpoint; (ii) road; (iii) structure; (iv) other disturbance; or (v) natural feature, that is rectilinear, geometric in shape, or otherwise does not appear natural; or (b) there is no other practicable option having regard to: (i) the size, topography or engineering constraints of the cutblock or road; or (ii) the safety of workers or road users.

Section 4.6.5 provides exceptions where alternative characteristics are permitted. if (a)(i) the timber is under immediate threat from: (A) insects; (B) disease; or (C) decay due to blowdown; or (ii) it is not practicable to apply the result or strategy in Paragraph 4.6.2 to such harvesting or construction, the FSP holder (c) may design a road or cutblock consistent with characteristics of alteration different from those that would otherwise apply under Paragraph 4.6.2; and (d) will, if it applies subparagraph (c), design a road or cutblock to be consistent with the characteristics of alteration that, under Paragraph 4.6.2, apply to the first Category of Alteration in the table in Paragraph 4.6.2 below the Category of Alteration that would otherwise apply that will enable the harvesting of timber or road construction in a practicable manner.

ASSESSING BASIC VQO DEFINITION

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 **X** No

If applicable, state reasons why the proposal does not achieve the basic definition:

The EVC of VSU 207, overall, meets the characteristics of Partial Retention.

From VP 1, existing non-veg block ST-223 has two, small, vertically-oriented, somewhat angular openings (see photo, VP 1 image sheet). Visual force lines are maintained and repeated in the existing alteration. The photo likely over-emphasises the edge effect due to cast shadows and current colour contrast which will subside. Overall, the VSU from this viewpoint exhibits the characteristics of Partial Retention and good design.

From VP 2, ST-226 is somewhat horizontal along the upper edges, but highly natural along the lower edges, and small to medium in scale (VP 2 image sheet). Major visual force lines are maintained. The photo (see VP 3 image sheet) likely over-emphasises the effect due to the high colour contrast which will subside. From VP 3, all existing openings exhibit characteristics representative of Partial Retention, including ST-223 which is more obliquely seen and therefore less broad and not linearly oriented as depicted in the photo in the VP 3 image sheet. Visual force lines are maintained. The photo on the VP 3 image sheet is more representative of the visual experience approaching VP 2 and not that at VP 3.

A transmission line is currently under construction (clearing phase) which crosses the entire width of VSU 207. The overall visual impact of this line is not known as clearing widths will vary. The visual impact or the right-of-way is expected to be fairly low where the line travels through recently altered lands where only minor clearing will be necessary, However the transmission line has created a situation where timber will be isolated from practicable harvest and has therefore required an ”emergency” harvest plan.

Analysis by Cutblock

Block ST-205

Block ST-205 was mainly designed to access the timber affected by the transmission line development ahead of line installation, but also will enable the utilization of blowdown timber in a timely manner. The block has 7 openings which are mainly small and non-rectilinear and maintain and work with the visual force lines. One opening (205-7 on the key map on the cover of this report) is small but somewhat vertically rectilinear by necessity as it is confined by creeks on both sides and is located between existing openings (ST-223). Design suggestions from RDI were accepted that reduced the height and angularity of this opening. The blowdown portion is self-defined, and is identified as ST-205-8 on the key map (see cover).

Block ST-227

Block ST-227 will lay along the western edge of the VSU near the fish-farm installation. The block is well-designed to utilize intervening screening to be scarcely apparent from any viewpoint.

Block ST-208

Block ST-208 will lay along the upper edge of the VSU along the ridgeline, along the major visual force line of the ridge. A greater portion of the block is within VSU 274 which has a Modification VQO. The block is well-designed, utilizing intervening screening to be scarcely apparent as a skyline alteration from VP’s 1 and 2 and very small and non-rectilinear from VP 3. Some skyline change will be noticeble.

Summary of Proposed Alterations

Proposed alterations are small and, with one exception caused by adjacent constraints, non-rectilinear. ST-227 and ST-208 are small, non-rectangular and mainly non-evident The predicted visual quality condition slightly exceeds the VQO for VSU 207 from 2 of the 3 viewpoints, attributed fully to ST-205, necessitated by the transmission line development and blowdown (exceptions per Paragraphs 4.6.4 and 4.6.5 in FSP). The proposed alteration meets the VQO from VP 3.

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

N/A R PR X (VP 3) M X (Vp's 1 and 2) MM EM

See image sheets which follow for simulations and photography for each viewpoint

ASSESSING VISUAL DESIGN/ Design Recommendations

Does the proposed alteration(s) exhibit elements of good visual design?

YES X No

Component openings are small and irregular in shape. One opening (ST-205-7) is more rectilinear, but was influenced by creeks and existing alteration. ST-205-8 is the self-defined blowdown patch which exhibits good design. Skyline effects in ST-208 may be created by a wildlife tree patch.

Does the proposed alteration(s) respond to the lines of force analysis?

YES X No

If No why?

See Lines of Force images for each viewpoint.

Describe the 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.)

ASSESSING SCALE OF ALTERATION

Viewpoint 1
Percent Alteration
New - 1.51% (line, form, and scale of new alteration meet PR design criteria)
(ST-205 -1.48%; ST-227 - 0.004%; ST-208 - 0.03%)
T-line area - 1.04%
Existing - 6.55% (PR)
Existing and T-Line - 7.59% (exceeds PR by 1%)
Total - 9.10% (exceeds PR by 2%)
Net - 8.07% (T-Line removed from calculation) - exceeds PR by 1%.

Viewpoint 2
Percent Alteration
New - 1.88% (line, form, and scale of new alteration meet PR design criteria)
(ST-205 -1.76%; ST-227 - 0.05%; ST-208 - 0.07%)
T-line area - 1.08%
Existing - 5.77% (meets Partial Retention)
Existing and T-Line - 6.84%
Total - 8.73%
Net - 7.65% (T-Line removed from calculation) - exceeds PR by 0.65%.

Viewpoint 3
Percent Alteration
New - 1.47% (line, form, and scale of new alteration meet R-PR design criteria)
(ST-205 -0.75%; ST-227 - 0.26%; ST-208 - 0.46%)
T-line area - 1.68%
Existing - 2.31% (meets Partial Retention)
Existing and T-Line - 3.99%
Total - 5.46%
Net - 3.78% (T-Line removed from calculation) - easily meets PR%.

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%)
No, not from VP 1 and 2, due to need to harvest in ST-205 only, advanced by transmission line construction and blowdown.

Are there existing human-made alterations visible in the unit showing no or poor design?
At one time, existing cutover (ST-125) was large and dominant. Now with visual green-up, the block has subsided towards natural appearing.

Perspective View Percent Alteration Calculations
(see image sheets for calculation outlines)

VIEWPOINT 1					
VP1 New	**Units^2**	**Percent**	**Block Total**		
VSU207	1798041				
ST-205-7	9094.26	0.51%	26605.94	1.48%	**ST-205**
ST-205-8	14277.45	0.79%			
ST-205-5	2788.22	0.16%			
ST-205	446.01	0.02%			
ST-227	74.2	0.00%	74.2	0.0041%	**ST-227**
ST-208	153.34	0.01%	542.48	0.03%	**ST-208**
ST-208	277.84	0.02%			
ST-208	111.3	0.01%			
Total New	27222.62	1.51%		1.51%	
VP1 Existing					
ST-226-1-E	10504.03	0.58%			
St-226-2-E	5477.75	0.30%			
ST-226-2-E	2810.58	0.16%			
ST-223	15039.37	0.84%			
ST-223	19199.38	1.07%			
ST-223	1862.69	0.10%			
ST-223	1123.28	0.06%			
T-Line	10664.75	0.59%			
T-Line	2564.74	0.14%			
T-Line	4502.15	0.25%			
T-Line	922.33	0.05%			
ST-222	8483.88	0.47%			
ST-223R	2880.35	0.16%			
St-223L	38038.34	2.12%			
ST-223R	9982.02	0.56%			
ST-205-7a	2389.55	0.13%			

Total Existing+T-line	**136445.2**	**7.59%**
Existing (T-line area removed)	**117791.2**	**6.55%**
New	**27222.62**	**1.51%**
New+E-T	**145013.8**	**8.07%**
Total N+E+T	**163667.8**	**9.10%**
T-line area	**18653.97**	**1.04%**

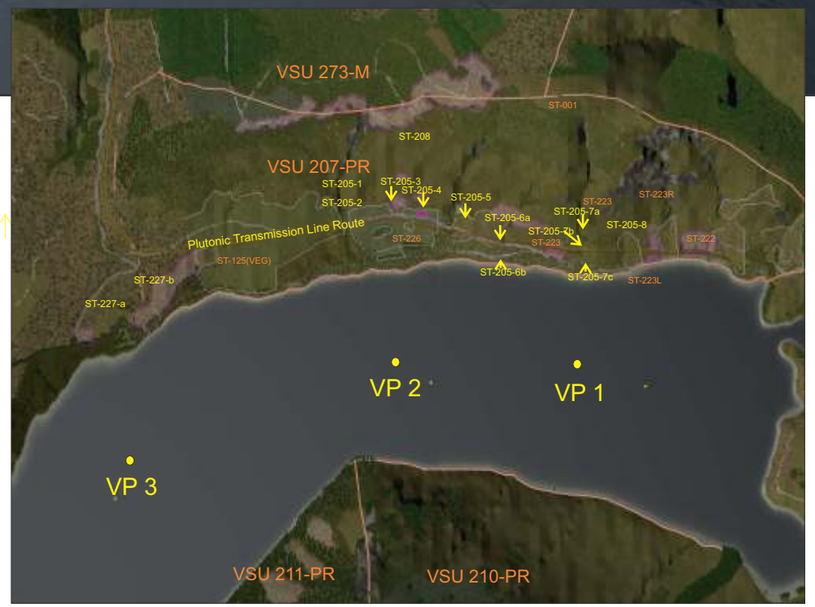
Viewpoint 2					
VP2 New	**Units^2**	**Percent**	**Block Total**		
ST-205-5	20471.33	1.08%	33352.86	1.76%	**ST-205**
ST-205-4	1755.27	0.09%			
ST-205-3a	440.42	0.02%			
ST-205-3b	1104.27	0.06%			
ST-205-2	5464.84	0.29%			
ST-205-1	861.59	0.05%			
ST-208	146.38	0.01%	1393.18	0.07%	**ST-208**
ST-208	231.13	0.01%			
ST-208	706.22	0.04%			
ST-208	309.45	0.02%			
ST-205-6a	1345.67	0.07%			
ST-205-8	873.14	0.05%			
ST-227	191.32	0.01%	882.13	0.05%	**ST-227**
ST-227	690.81	0.04%			
ST-205-6a	1036.33	0.05%			
Total New	**35628.17**	**1.88%**	**35628.17**	**1.88%**	**New**
VP2 Existing					
VSU207	1894303				
ST-226-2-E	26183.98	1.38%			
ST-226-1-E	73718.39	3.89%			
ST-226-2-E	2294.57	0.12%			
ST-223R-E	2961.34	0.16%			
ST-222-E	629.18	0.03%			
ST-223L-E	3481.01	0.18%			
T-Line	6634.59	0.35%			
T-Line	802.52	0.04%			
T-Line	3130.47	0.17%			
T-Line	3844.39	0.20%			
T-Line	5975.89	0.32%			

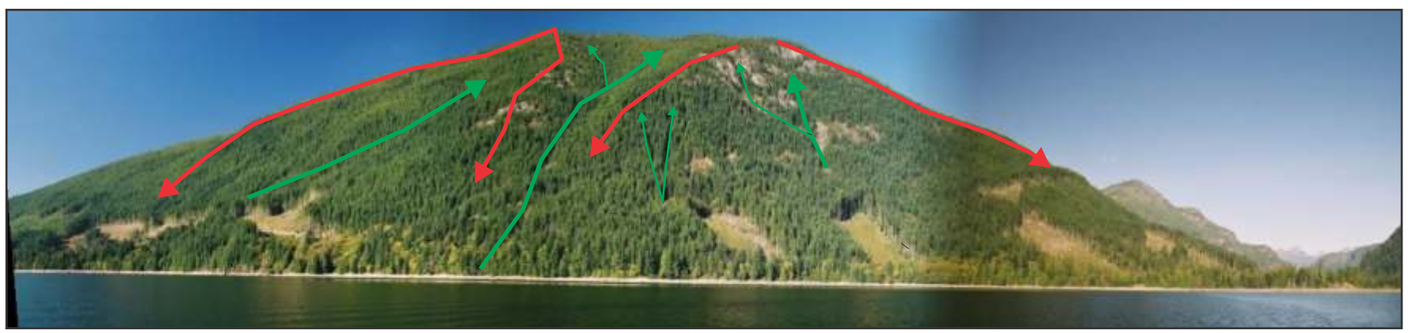
Total E+T	**129656.3**	**6.84%**
E (T area removed)	**109268.5**	**5.77%**
New	**35628.17**	**1.88%**
New+E (T removed)	**144896.6**	**7.65%**
Total N+E+T	**165284.5**	**8.73%**
T-line area	**20387.86**	**1.08%**

VIEWPOINT 3					
VP3 New	**Units^2**	**Percent**	**Block Total**		
VSU207	1314937				
227-1	936.65	0.07%	3376.84	0.26%	**ST-227**
227-2	2440.19	0.19%			
205-1	703.01	0.05%	9799.78	0.75%	**ST-205**
205-2	2705.23	0.21%			
205-3	405.35	0.03%			
205-4	575.27	0.04%			
205-5	5410.92	0.41%			
208-1	4366.85	0.33%	6105.65	0.46%	**ST-208**
208-2	1255.09	0.10%			
205-7	483.71	0.04%			
Total	19282.27	1.47%	19282.27	1.47%	**All New**
VP3 Existing					
VSU207	1314937				
ST-223R-E	2387.24	0.18%			
ST-223L-E	1734.55	0.13%			
ST-222-E	163.79	0.01%			
T-Line	1816.88	0.14%			
T-Line	2452.19	0.19%			
T-Line	1332.67	0.10%			
ST-226-2-E	7787.83	0.59%			
ST-226-1a-E	4067.77	0.31%			
ST-226-1-bE	5440.01	0.41%			
T-Line	16462.42	1.25%			
ST-226-1b-E	8817.61	0.67%			

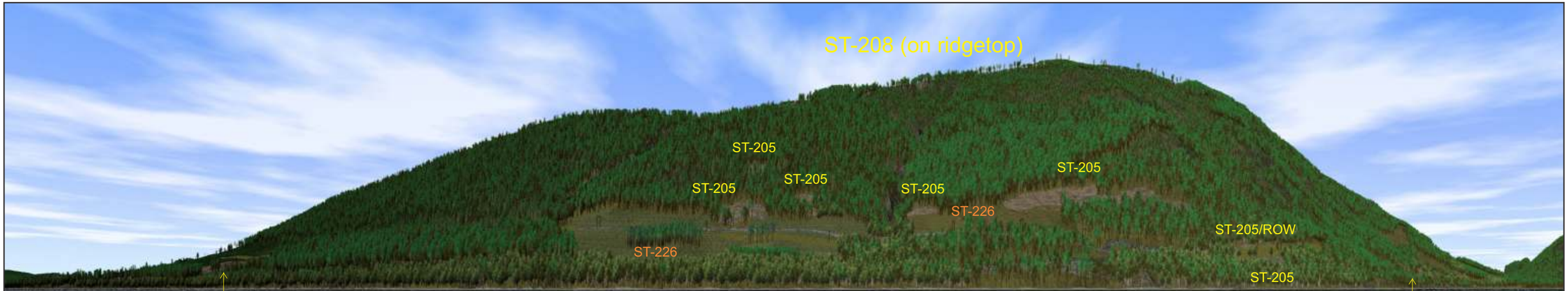
Total Existing+T-line	**52462.96**	**3.99%**
Existing (T-line area removed)	**30398.8**	**2.31%**
New	**19282.27**	**1.47%**
New+E-T	**49681.07**	**3.78%**
Total N+E+T	**71745.23**	**5.46%**
T-line area	**22064.16**	**1.68%**

Percent Alteration
New - 1.51% (ST-205: 1.48%; ST-208: 0.03%; ST-227: 0.004%)
Existing and T-Line - 7.59%
Existing (T-line removed) - 6.55%
Total - 9.10%
Net - 8.07% (T-Line removed from calculation)

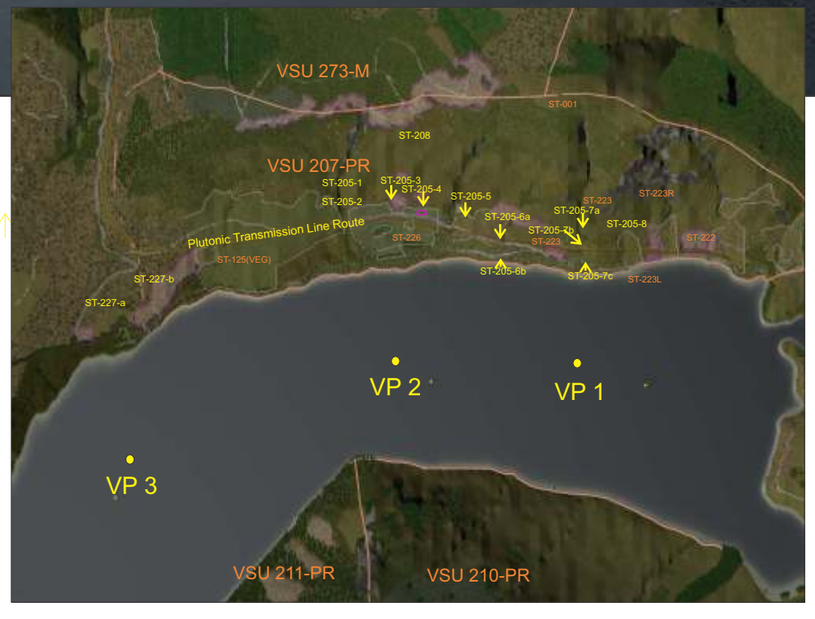


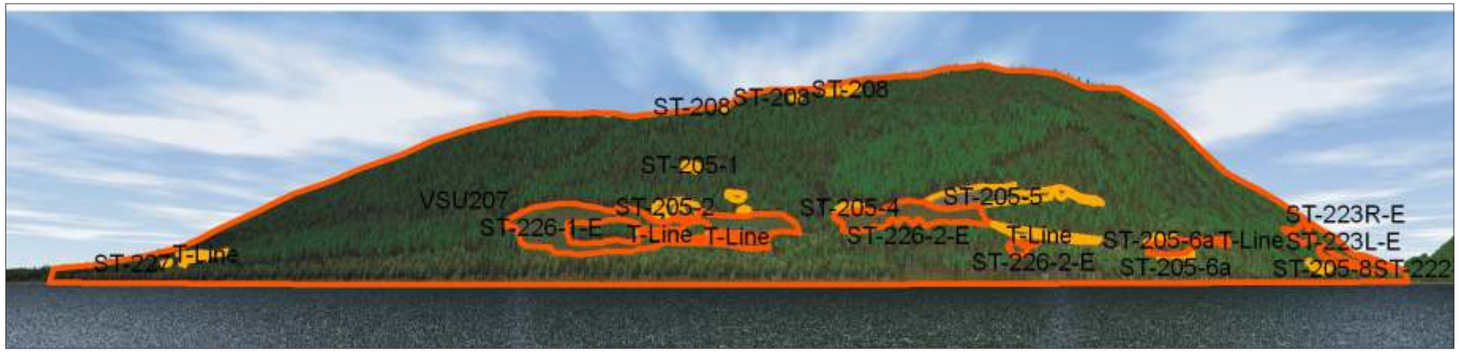


Viewpoint 1

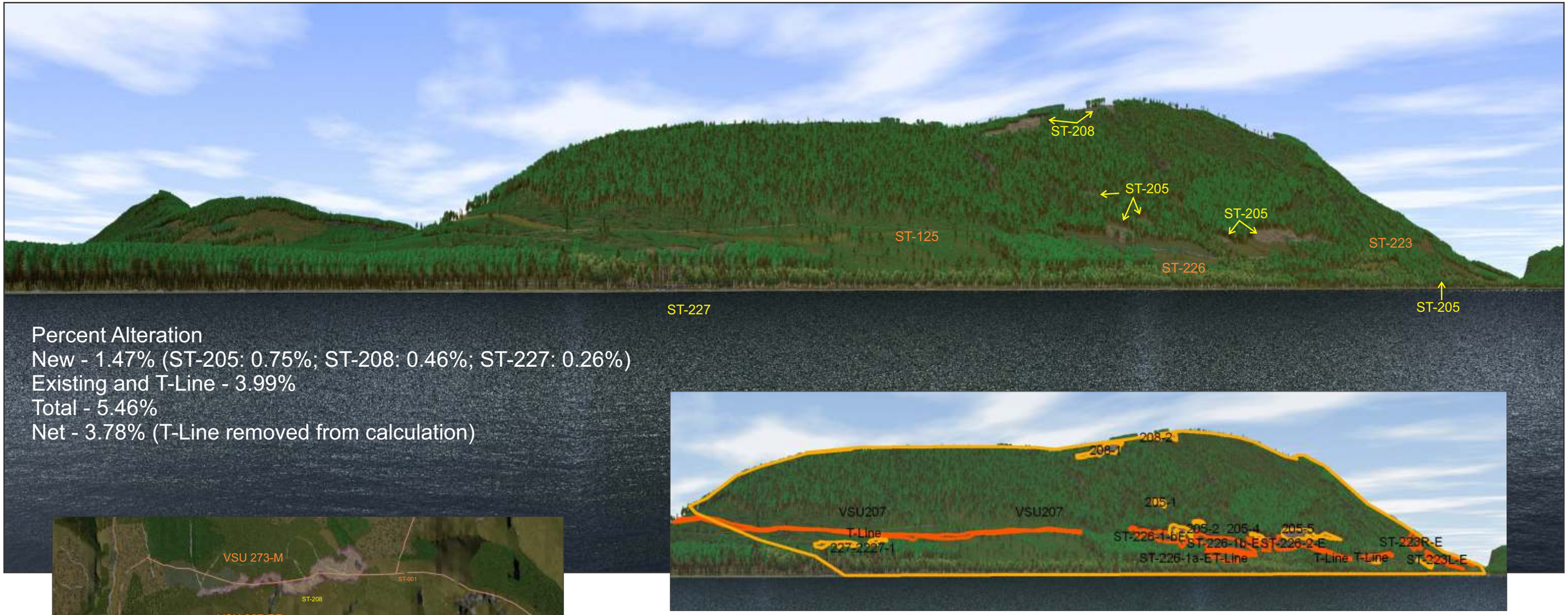


Percent Alteration
New - 1.88% (ST-205: 1.76%; ST-208: 0.07%; ST-227: 0.05%)
Existing and T-Line - 6.84%
Existing (T-line removed) - 5.77%
Total - 8.73%
Net - 7.65% (T-Line removed from calculation)





Viewpoint 2



Percent Alteration
New - 1.47% (ST-205: 0.75%; ST-208: 0.46%; ST-227: 0.26%)
Existing and T-Line - 3.99%
Total - 5.46%
Net - 3.78% (T-Line removed from calculation)

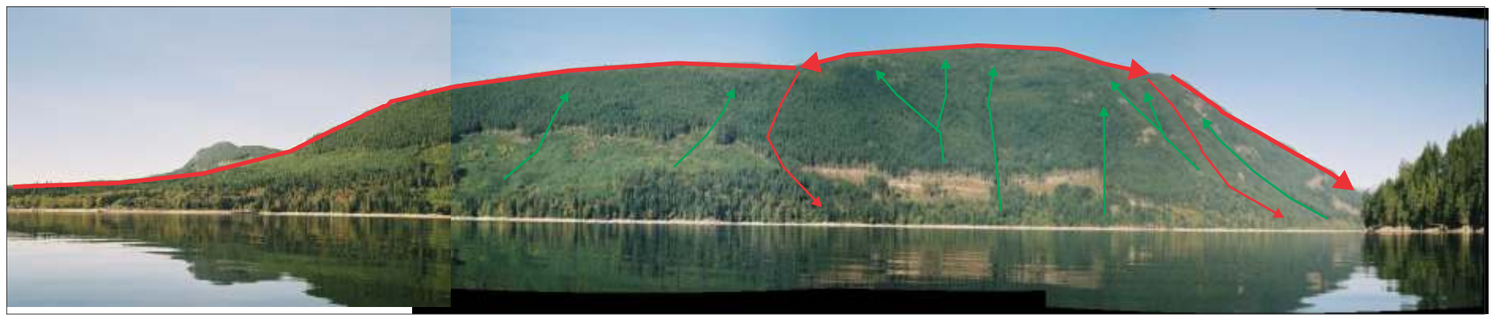


Photo taken from point east of Viewpoint 3

Viewpoint 3

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