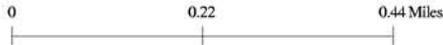


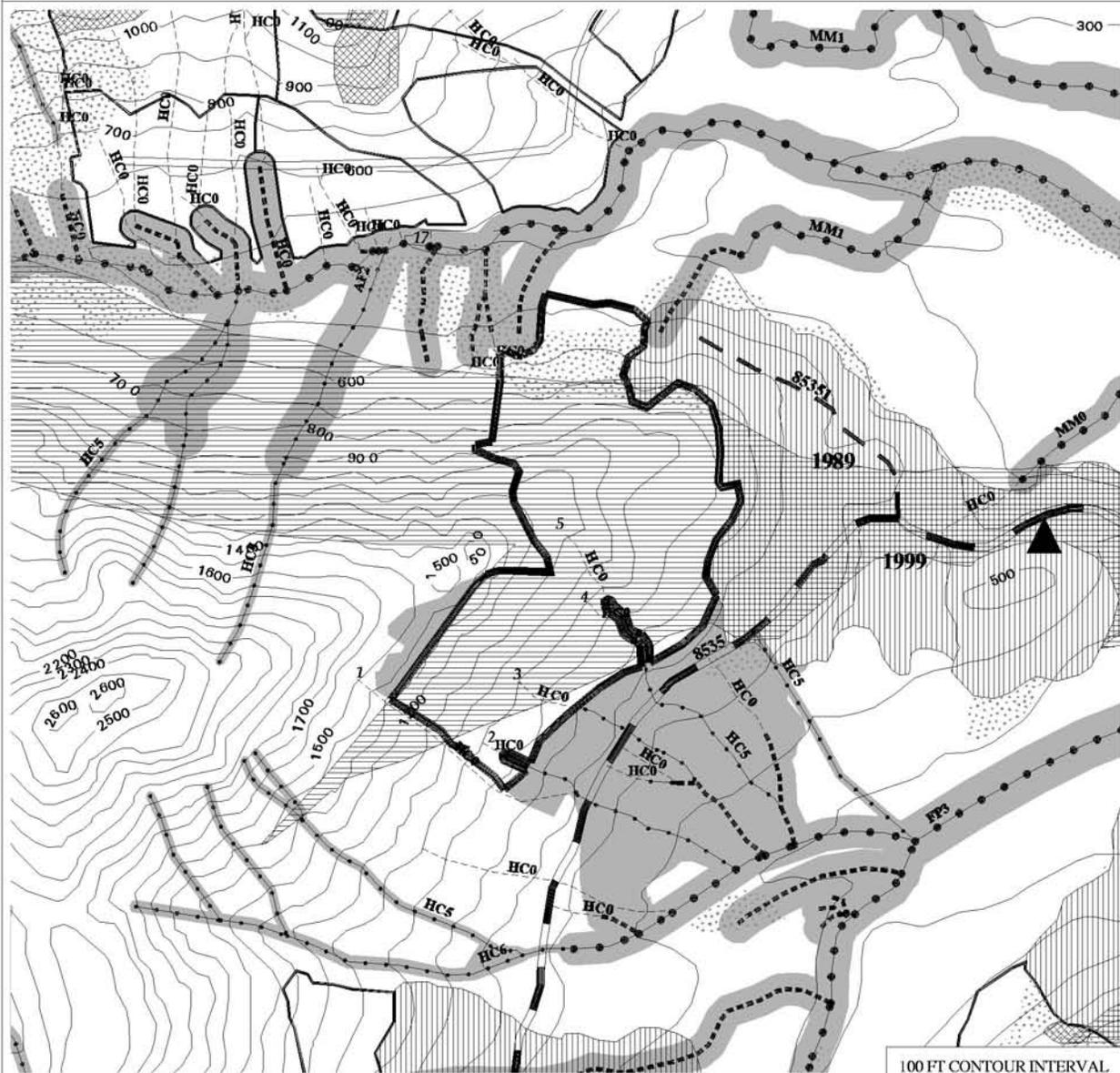
IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP

UNIT NUMBER: 130 VCU: 2100 HARVEST SYSTEM: Helicopter

UNIT 130 OCCURS IN ALTERNATIVE(S): 2 3



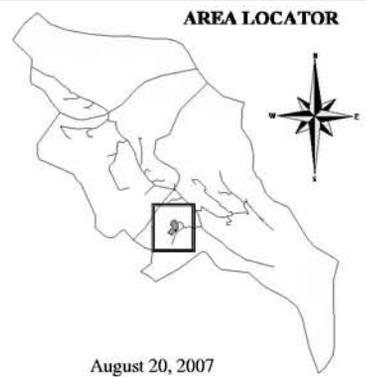
MAPSCALE 1:14000



- Existing Harvest Unit with Year Harvested
- Unit Boundary
- Adjacent Proposed Unit
- Proposed NFS Road 85343
- Temporary Road
- Existing NFS Road 8530
- NFS Road Reconstruction 8534
- Class I Stream
- Class II Stream

- Class III Stream
- Class IV Stream
- Stream Channel Type
- Stream Number – See Narrative
- High Value Marten Habitat
- Areas Dropped From Alternative(s)
- Old Growth Reserve
- Moderate Vulnerability Karst
- Slopes Greater Than 72%
- Existing Rock Pit

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- HC6
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Unit Data Card – Iyouktug Timber Sale Draft EIS
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Unit Number:	130	In Alternatives:	2, 3	Total Unit Acres:	86.3	Vol Strata Acres:	High: 9.0 Med: 72.6 Low: 4.7
VCU Number:	2100	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	721	Prescription /Percent Retention:	ST25

Summary of Concerns, Responses, BMPs and Mitigation
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SILVICULTURE:

<p>Existing Stand Condition/Vegetation: Stand consists of 12-36" DBH mountain hemlock (39% BA), 12-43" DBH western hemlock (23% BA), 16-40" DBH spruce (22% BA), and 12-40" DBH yellow-cedar (16% BA). The yellow-cedar is concentrated primarily in the eastern portion of the unit and is of exceptional quality. Many trees are 90'+ and 30"+ DBH with minimal defect. The ridge top contains many large hemlock 30-40" DBH with low defect. unit also contain several brush fields/openings. Hemlock advanced regeneration is abundant with yellow-cedar regeneration also present. Wind risk is low throughout unit.</p>
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<p>Silvicultural Objective/Desired Future Condition: Maintain or create a stand with three or more distinct age (size) classes of trees that maintains species diversity, provides for a high degree of structural diversity and meets Forest Plan scenery and high value marten habitat requirements.</p>

<p>Silvicultural Prescription: Uneven-aged management – Single tree selection. Designate up to 25 percent of existing basal (145 sq.ft.per acre) area singly and/or in small clumps or corridors to facilitate helicopter yarding. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>
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<p>TIMBER/LOGGING: Refer to Silvicultural RX and marking guides for single tree selection guidelines to facilitate helicopter yarding.</p>

<p>ENGINEERING/ROADS: N/A</p>

<p>BOTANY RESOURCES: No concerns</p>

<p>FISH/WATERSHED: Concern: Stream 1, 2 (upper), 3, 4, and 5 (upper) are class IV HC channels. Response: Category C protection (BMP 12.6, 13.14). Remove logging debris from channel (BMP 13.16). Concern: Streams 2 (lower) and 5 (lower) are Class III HC channels. Response: Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III).</p>

<p>GEOLOGY/KARST: Concern: There are about 4 acres of high vulnerability and 72 acres of moderate vulnerability karst in Unit 130. Response: The high vulnerability area in the western portion of Unit 130 is excluded from the proposed helicopter harvest to protect the features in this area and a minimum of partial suspension is require to meet karst resource objectives in the moderate vulnerability area. (BMP 13.2)</p>

<p>HERITAGE RESOURCES: No concerns</p>

<p>SCENERY/RECREATION: No concerns</p>

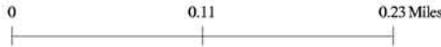
<p>SOILS/WETLANDS: Slopes range from 50-100%. Concern: About 3 acres greater than 72% slope exist in this unit. Response: These slopes are unsuitable for Timber harvest. Do not mark trees for cutting in this unit. The rest of the unit is suitable for the proposed helicopter yarding. (BMP 13.5, 13.9)</p>

<p>WILDLIFE: Concern: Unit contains high value marten habitat. High deer use was observed in the north portion of the unit. Response: Proposed harvest system will not create openings greater than 2 acres in size within this habitat. Retention of 75% of the basal area will meet marten standards and guidelines and help to maintain deer habitat. Concern: Pluck post identified in the unit. Surveys did not identify a goshawk or sharp-shinned hawk nest site. Response: If a goshawk nest is identified in or adjacent to the unit, contact the project biologist; follow Forest Plan direction for the development of the nest buffer. Maintain a 600-foot no-harvest buffer that is windfirm around other active raptor nests if identified and restrict harvest and road building activities from March 1 to July 31 within the buffer. Concern: Bear den located in unit. Response: Maintain a 200-foot forested buffer around den sites.</p>
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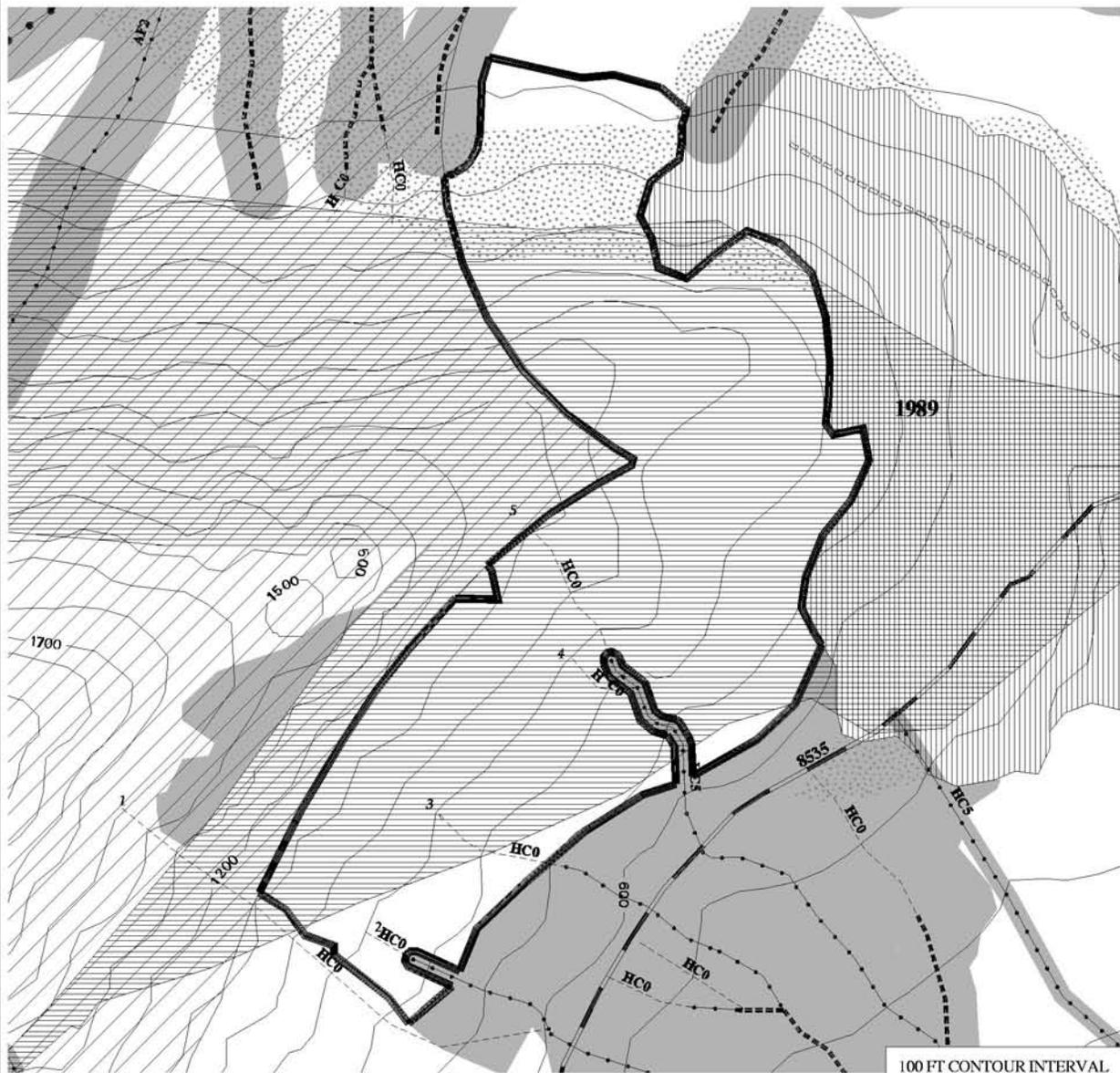
IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP

UNIT NUMBER: 130 VCU: 2100 HARVEST SYSTEM: Helicopter

UNIT 130 OCCURS IN ALTERNATIVE(S): 4



MAPSCALE 1:7200

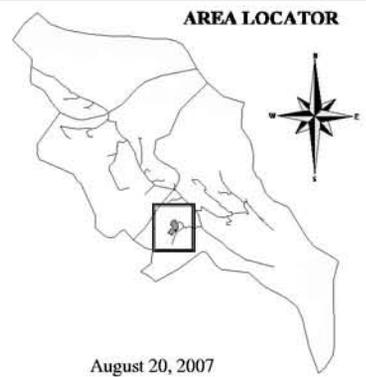


100 FT CONTOUR INTERVAL

- Existing Harvest Unit with Year Harvested Unit Boundary
- Adjacent Proposed Unit
- Proposed NFS Road
- Temporary Road
- Existing NFS Road
- NFS Road Reconstruction
- Class I Stream
- Class II Stream
- Class III Stream

- Class IV Stream
- Stream Channel Type
- Stream Number – See Narrative
- High Value Marten Habitat
- Areas Dropped From Alternative(s)
- Inventoried Roadless
- Old Growth Reserve
- Moderate Vulnerability Karst
- Slopes > 72%
- Existing Rock Pit

- HC6
- 1



August 20, 2007

Unit Data Card – Iyouktug Timber Sale Draft EIS					
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Unit Number:	130	In Alternatives:	4	Total Unit Acres:	69.6	Vol Strata Acres:	High: 8.1 Med: 59.1 Low: 2.4
VCU Number:	2100	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	569	Prescription /Percent Retention:	ST25

Summary of Concerns, Responses, BMPs and Mitigation
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SILVICULTURE:

<p>Existing Stand Condition/Vegetation: Stand consists of 12-36" DBH mountain hemlock (39% BA), 12-43" DBH western hemlock (23% BA), 16-40" DBH spruce (22% BA), and 12-40" DBH yellow-cedar (16% BA). The yellow-cedar is concentrated primarily in the eastern portion of the unit and is of exceptional quality. Many trees are 90'+ and 30"+ DBH with minimal defect. The ridge top contains many large hemlock 30-40" DBH with low defect. Unit contains several brush fields/openings. Hemlock advanced regeneration is abundant with yellow-cedar regeneration also present. Wind risk is low throughout unit.</p>
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<p>Silvicultural Objective/Desired Future Condition: Maintain or create a stand with three or more distinct age (size) classes of trees that maintains species diversity, provides for a high degree of structural diversity and meets Forest Plan scenery and high value marten habitat requirements.</p>

<p>Silvicultural Prescription: Uneven-aged management – Single tree selection. Designate up to 25 percent of existing basal (145 sq.ft.per acre) area singly and/or in small clumps or corridors to facilitate helicopter yarding. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>
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<p>TIMBER/LOGGING: Refer to Silvicultural RX and marking guides for single tree selection guidelines to facilitate helicopter yarding.</p>

<p>ENGINEERING/ROADS: N/A</p>

<p>BOTANY RESOURCES: No concerns</p>

<p>FISH/WATERSHED: Concern: Stream 1, 2 (upper), 3, 4, and 5 (upper) are class IV HC channels. Response: Category C protection (BMP 12.6, 13.14). Remove logging debris from channel (BMP 13.16). Concern: Streams 2 (lower) and 5 (lower) are Class III HC channels. Response: Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III).</p>

<p>GEOLOGY/KARST: Concern: There are about 57 acres of moderate vulnerability karst in Unit 130. Response: A minimum of partial suspension is require to meet karst resource objectives. (BMP 13.2 and 13.9)</p>
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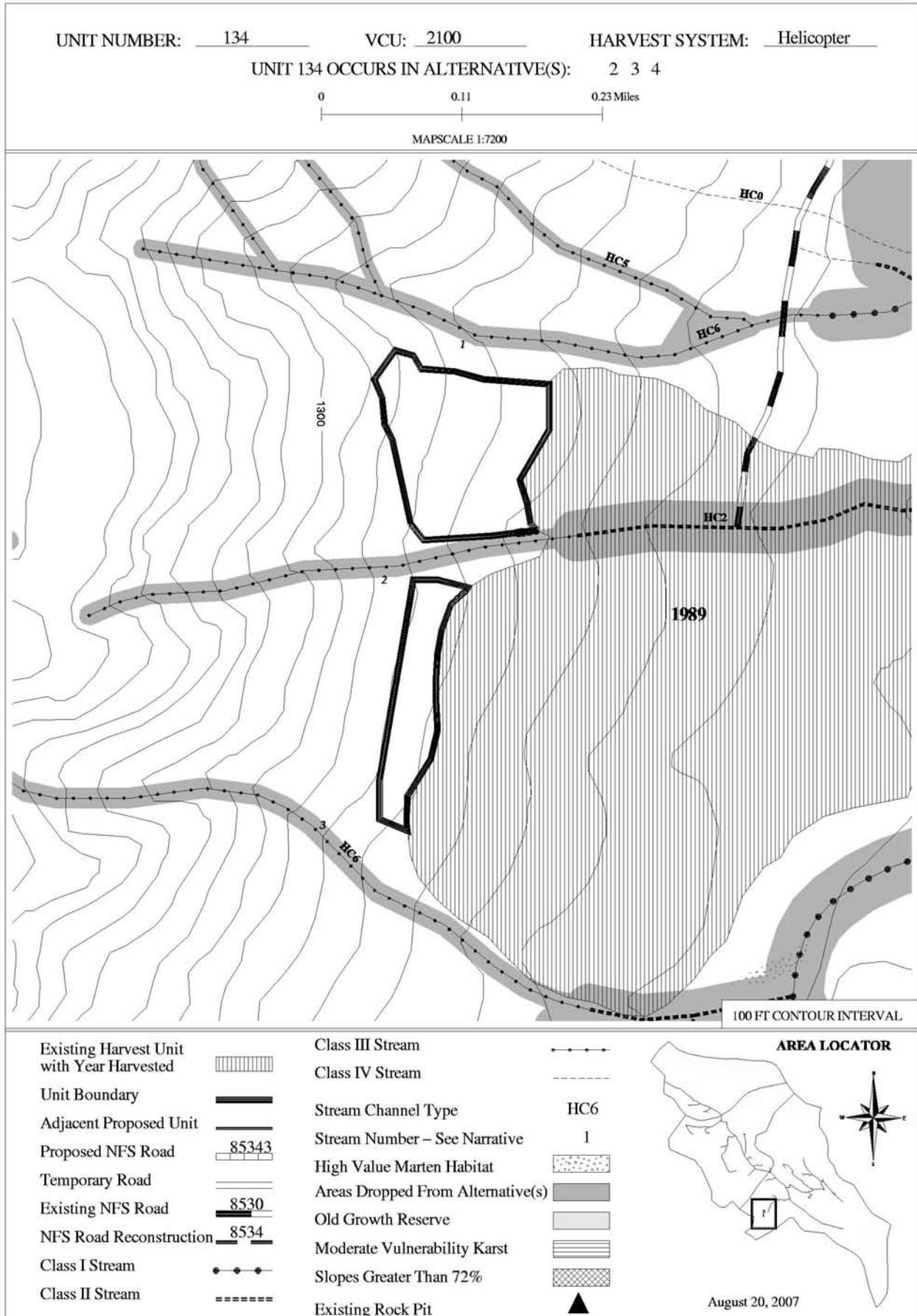
<p>HERITAGE RESOURCES: No concerns</p>

<p>SCENERY/RECREATION: No concerns</p>

<p>SOILS/WETLANDS: Slopes range from 20-80%. Concern: Areas greater than 72% slope exist in this unit. Response: Involve a soil scientist during layout to verify small inclusions where slopes over 72% are suitable for timber harvest. Areas to the west and southwest of Unit 130 dropped for stability concerns (BMP 13.5).</p>

<p>WILDLIFE: Concern: Unit contains high value marten habitat. High deer use was observed in the north portion of the unit. Response: Proposed harvest system will not create openings greater than 2 acres in size within this habitat. Retention of 75% of the basal area will meet marten standards and guidelines and help to maintain deer habitat.</p>
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IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP



Unit Data Card – Iyouktug Timber Sale Draft EIS
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Unit Number:	134	In Alternatives:	2, 3, 4	Total Unit Acres:	13.7	Vol Strata Acres:	High: 0 Med: 13.7 Low: 0
VCU Number:	2100	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	110	Prescription /Percent Retention:	ST25

Summary of Concerns, Responses, BMPs and Mitigation
--

SILVICULTURE:

Existing Stand Condition/Vegetation: Stand consists 16-48" DBH western hemlock (46% BA) and 16-55" DBH spruce (54% BA). There is a considerable number of 40-50" DBH low defect spruce and hemlock in this unit (5-7/acre). There are also pockets of abundant advanced regeneration throughout the unit. Wind risk is low throughout unit.

Silvicultural Objective/Desired Future Condition: Maintain or create a stand with three or more distinct age (size) classes of trees that maintains species diversity, provides for a high degree of structural diversity and meets Forest Plan scenery and high value marten habitat requirements.

Silvicultural Prescription: Uneven-aged management – Single tree selection. Designate up to 25 percent of existing basal (213 sq.ft.per acre) area singly and/or in small clumps or corridors to facilitate helicopter yarding. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.

TIMBER/LOGGING: Refer to Silvicultural RX and marking guides for single tree selection guidelines to facilitate helicopter yarding.

ENGINEERING/ROADS: N/A

BOTANY RESOURCES: No concerns

FISH/WATERSHED: **Concern:** Streams 1, 2, and 3 are Class III HC channels. **Response:** Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III).

GEOLOGY/KARST: No carbonate bedrock found within unit. No karst resource concerns identified.

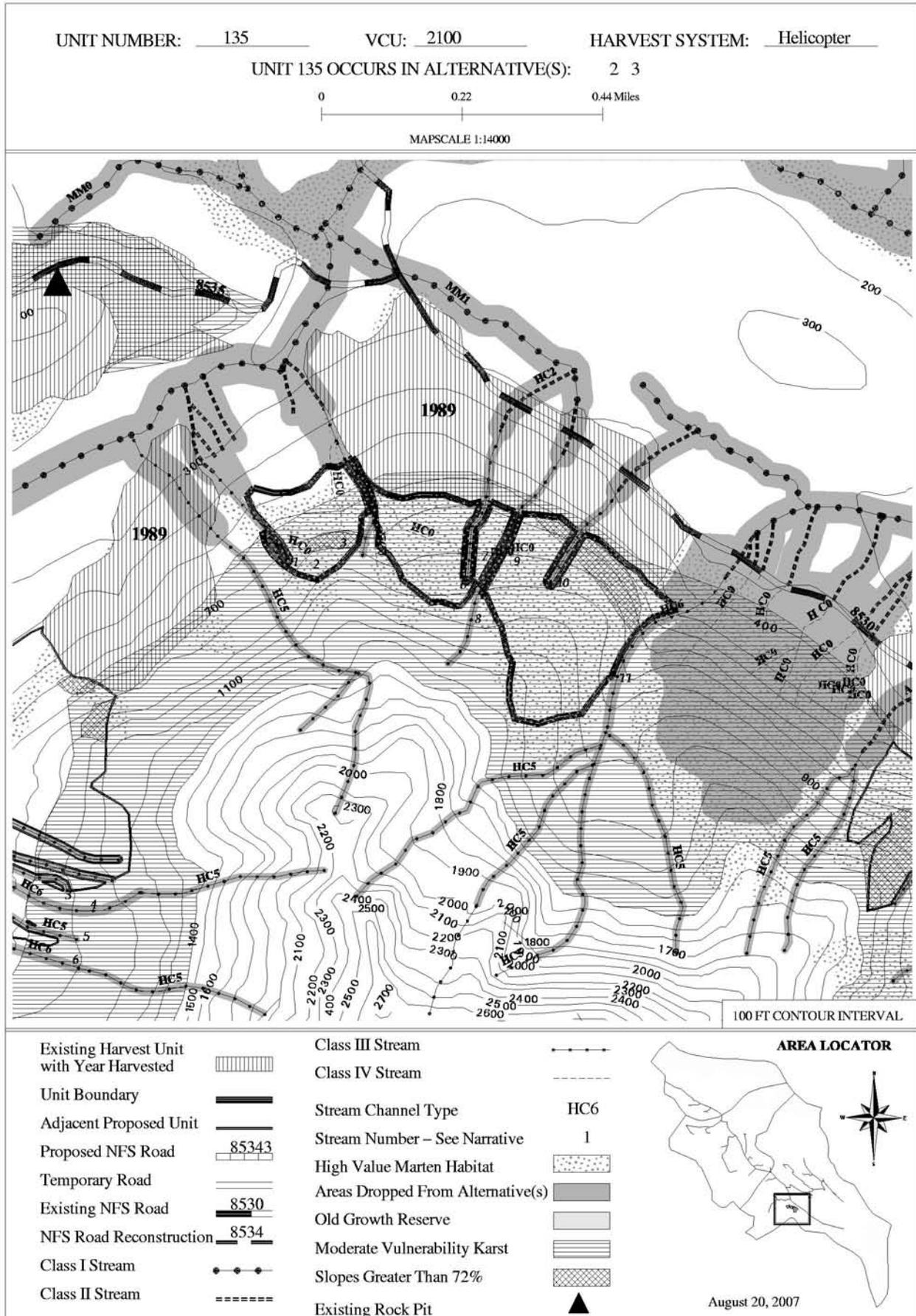
HERITAGE RESOURCES: No concerns

SCENERY/RECREATION: No concerns

SOILS/WETLANDS: Slopes range from 30-60% in Unit 134. **Concern:** A minimum of partial suspension is required to meet soil quality standards (BMP 13.9). **Response:** Unit is proposed as full suspension, which exceeds partial suspension requirements. Areas to the north, west and south of Unit 134 dropped for stability concerns (BMP 13.5).

WILDLIFE: No concerns

IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP



Unit Data Card – Iyouktug Timber Sale Draft EIS
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Unit Number:	135	In Alternatives:	2, 3	Total Unit Acres:	64.7	Vol Strata Acres:	High: 62.3 Med: 1.8 Low: 0.6
VCU Number:	2100	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	667	Prescription /Percent Retention:	ST25

Summary of Concerns, Responses, BMPs and Mitigation
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SILVICULTURE:

<p>Existing Stand Condition/Vegetation: Stand consists of 12-40" DBH western hemlock (68% BA), 20-36" DBH spruce (19% BA), 16-40" DBH mountain hemlock and 9-24" DBH yellow-cedar (11% BA). There are cliffs in the lower elevations of the units, just above the existing managed stand. The area above the cliffs is the most productive. Hemlock advanced regeneration is abundant with yellow-cedar regeneration also present. Wind risk is low throughout unit.</p>

<p>Silvicultural Objective/Desired Future Condition: Maintain or create a stand with three or more distinct age (size) classes of trees that maintains species diversity, provides for a high degree of structural diversity and meets Forest Plan scenery and high value marten habitat requirements.</p>

<p>Silvicultural Prescription: Uneven-aged management – Single tree selection. Designate up to 25 percent of existing basal (186 sq.ft.per acre) area singly and/or in small clumps or corridors to facilitate helicopter yarding. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>
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<p>TIMBER/LOGGING: Refer to Silvicultural RX and marking guides for single tree selection guidelines to facilitate helicopter yarding.</p>

<p>ENGINEERING/ROADS: N/A</p>

<p>BOTANY RESOURCES: No concerns</p>

<p>FISH/WATERSHED: Concern: Streams 1, 4, 6, 8, 10, and 11 are Class III HC channels. Response: Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III). Concern: Streams 2, 3, 5, 7, and 9 are Class IV HC channels. Response: Category C protection (BMP 12.6, 13.14). Remove logging debris from channel (BMP 13.16).</p>

<p>GEOLOGY/KARST: Concern: There are about 60 acres of moderate vulnerability karst in Unit 135. Response: A minimum of partial suspension is required to meet karst resource objectives (BMP 13.9).</p>
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<p>HERITAGE RESOURCES: No concerns</p>

<p>SCENERY/RECREATION: No concerns</p>

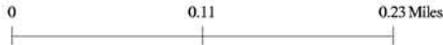
<p>SOILS/WETLANDS: Slopes range from 55-120% in Unit 135. There are about 7 acres of slopes greater than 72% in Unit 135. About 6 of those acres are in the cliffs along the northeastern boundary of the unit above the backline of the clearcut. Concern: Timber harvest may accelerate landsliding on slopes over 72% gradient. Response: Avoid the slopes over 72% during layout as they are unsuitable for harvest (BMP 13.5). Concern: A minimum of partial suspension is required to meet soil quality standards in the rest of the unit (BMP 13.9). Response: Unit is proposed as full suspension, which exceeds partial suspension requirements. Areas to the west and south of Unit 135 dropped for stability concerns. An onsite analysis for suitability on slopes over 72% was conducted on this unit as per Forest Plan Standards (soil resource report).</p>
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<p>WILDLIFE: Concern: Unit contains high value marten habitat. Response: Proposed harvest system will not create openings greater than 2 acres in size within this habitat. Retention of 75% of the basal area will meet marten standards and guidelines.</p>

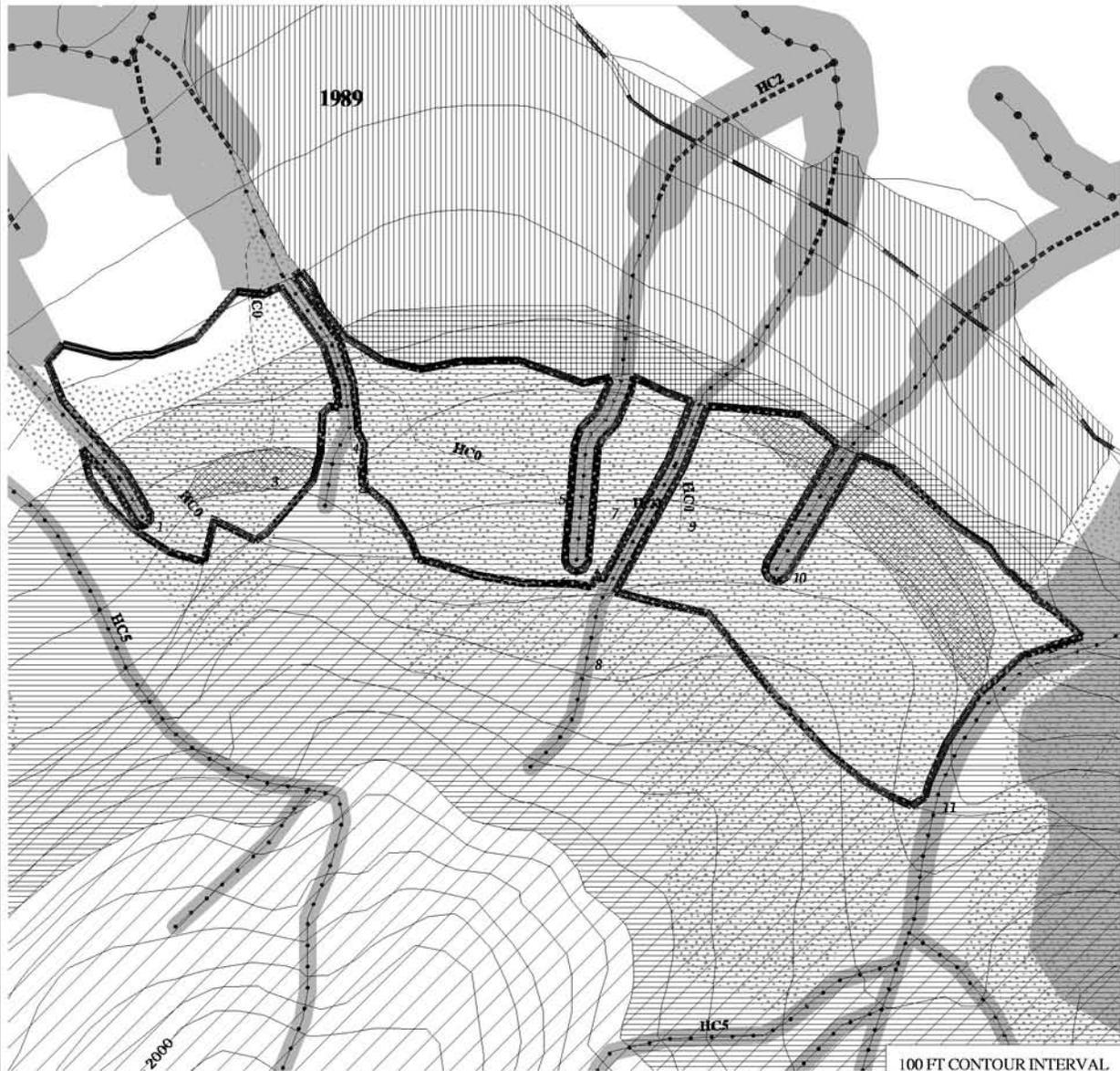
IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP

UNIT NUMBER: 135 VCU: 2100 HARVEST SYSTEM: Helicopter

UNIT 135 OCCURS IN ALTERNATIVE(S): 4



MAPSCALE 1:7200



100 FT CONTOUR INTERVAL

- Existing Harvest Unit with Year Harvested Unit Boundary
- Adjacent Proposed Unit
- Proposed NFS Road
- Temporary Road
- Existing NFS Road
- NFS Road Reconstruction
- Class I Stream
- Class II Stream
- Class III Stream

- Class IV Stream
- Stream Channel Type
- Stream Number – See Narrative
- High Value Marten Habitat
- Areas Dropped From Alternative(s)
- Inventoried Roadless
- Old Growth Reserve
- Moderate Vulnerability Karst
- Slopes > 72%
- Existing Rock Pit

- HC6
- 1



August 20, 2007

Unit Data Card – Iyouktug Timber Sale Draft EIS
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Unit Number:	135	In Alternatives:	4	Total Unit Acres:	50.9	Vol Strata Acres:	High: 48.5 Med: 1.8 Low: 0.6
VCU Number:	2100	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	526	Prescription /Percent Retention:	ST25

Summary of Concerns, Responses, BMPs and Mitigation
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SILVICULTURE:

<p>Existing Stand Condition/Vegetation: Stand consists of 12-40" DBH western hemlock (68% BA), 20-36" DBH spruce (19% BA), 16-40" DBH mountain hemlock and 9-24" DBH yellow-cedar (11% BA). There are cliffs in the lower elevations of the units, just above the existing managed stand. The area above the cliffs is the most productive. Hemlock advanced regeneration is abundant with yellow-cedar regeneration also present. Wind risk is low throughout unit.</p>

<p>Silvicultural Objective/Desired Future Condition: Maintain or create a stand with three or more distinct age (size) classes of trees that maintains species diversity, provides for a high degree of structural diversity and meets Forest Plan scenery and high value marten habitat requirements.</p>

<p>Silvicultural Prescription: Uneven-aged management – Single tree selection. Designate up to 25 percent of existing basal (186 sq.ft.per acre) area singly and/or in small clumps or corridors to facilitate helicopter yarding. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>
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<p>TIMBER/LOGGING: Refer to Silvicultural RX and marking guides for single tree selection guidelines to facilitate helicopter yarding.</p>

<p>ENGINEERING/ROADS: N/A</p>

<p>BOTANY RESOURCES: No concerns</p>

<p>FISH/WATERSHED: Concern: Streams 1, 4, 6, 8, 10, and 11 are Class III HC channels. Response: Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III). Concern: Streams 2, 3, 5, 7, and 9 are Class IV HC channels. Response: Category C protection (BMP 12.6, 13.14). Remove logging debris from channel (BMP 13.16).</p>

<p>GEOLOGY/KARST: Concern: There are about 46 acres of moderate vulnerability karst in Unit 135. Response: A minimum of partial suspension is required to meet karst resource objectives (BMP 13.9).</p>
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<p>HERITAGE RESOURCES: No concerns</p>

<p>SCENERY/RECREATION: No concerns</p>

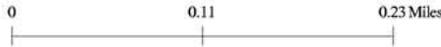
<p>SOILS/WETLANDS: Slopes range from 55-120% slope in Unit 135. There are about 7 acres of slopes greater than 72% in Unit 135. About 6 of those acres are in the cliffs along the northeastern boundary of the unit above the backline of the clearcut. Concern: Timber harvest may accelerate landsliding on slopes over 72% gradient. Response: Avoid the slopes over 72% during layout as they are unsuitable for harvest (BMP 13.5). Concern: A minimum of partial suspension is required to meet soil quality standards in the rest of the unit (BMP 13.9). Response: Unit is proposed as full suspension, which exceeds partial suspension requirements. Areas to the west and south of Unit 135 dropped for stability concerns. An onsite analysis for suitability on slopes over 72% was conducted on this unit as per Forest Plan Standards (soil resource report).</p>
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<p>WILDLIFE: Concern: Unit contains high value marten habitat. Response: Proposed harvest system will not create openings greater than 2 acres in size within this habitat. Retention of 75% of the basal area will meet marten standards and guidelines.</p>

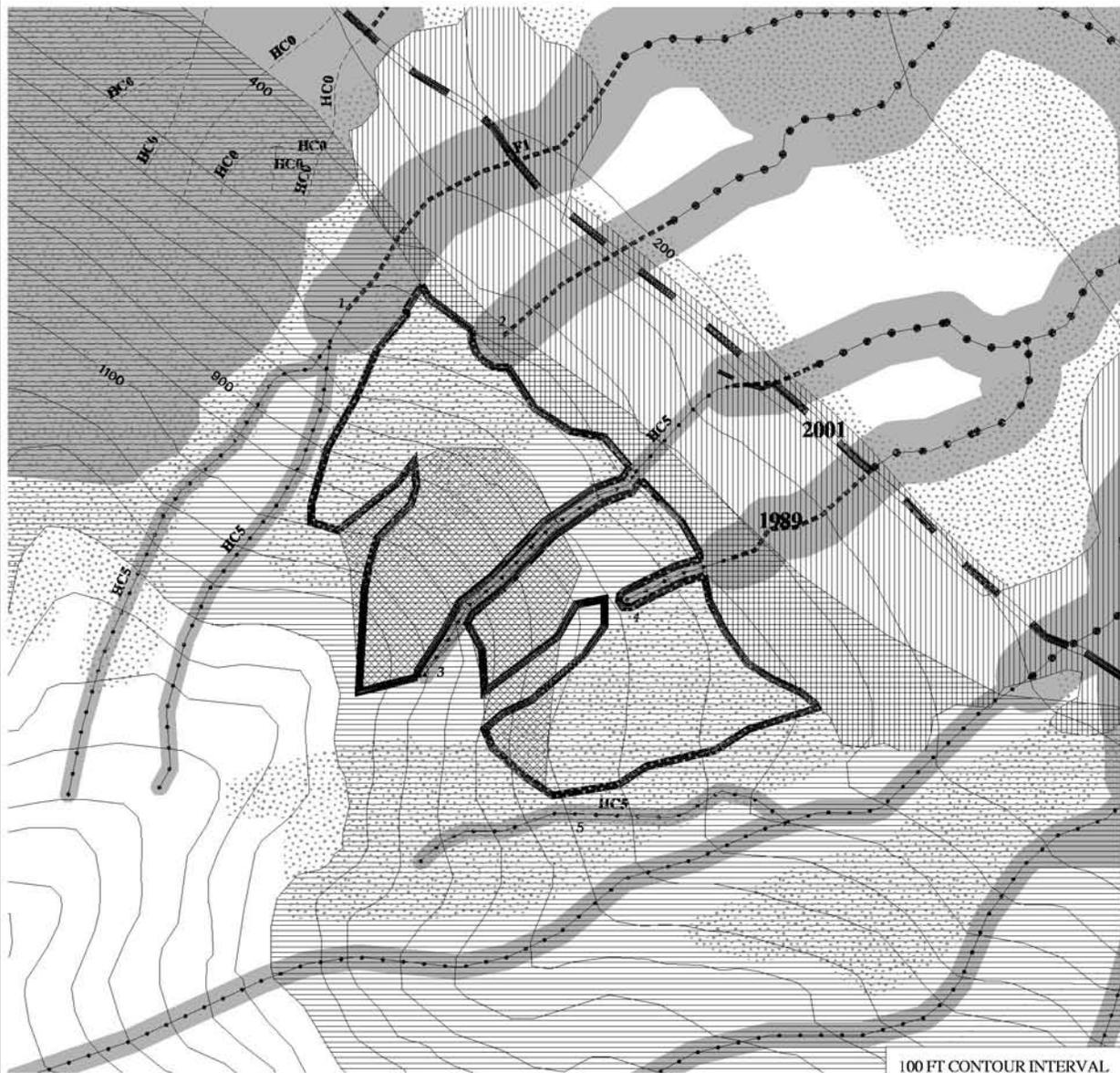
IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP

UNIT NUMBER: 138 VCU: 2100 HARVEST SYSTEM: Helicopter

UNIT 138 OCCURS IN ALTERNATIVE(S): 2 3



MAPSCALE 1:7200



100 FT CONTOUR INTERVAL

- Existing Harvest Unit with Year Harvested
- Unit Boundary
- Adjacent Proposed Unit
- Proposed NFS Road 85343
- Temporary Road
- Existing NFS Road 8530
- NFS Road Reconstruction 8534
- Class I Stream
- Class II Stream

- Class III Stream
- Class IV Stream
- Stream Channel Type
- Stream Number – See Narrative
- High Value Marten Habitat
- Areas Dropped From Alternative(s)
- Old Growth Reserve
- Moderate Vulnerability Karst
- Slopes Greater Than 72%
- Existing Rock Pit

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- HC6
- 1
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-
-



Unit Data Card – Iyouktug Timber Sale Draft EIS
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Unit Number:	138	In Alternatives:	2, 3	Total Unit Acres:	30.1	Vol Strata Acres:	High: 20.3 Med: 0 Low: 9.8
VCU Number:	2100	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	254	Prescription /Percent Retention:	ST25

Summary of Concerns, Responses, BMPs and Mitigation
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SILVICULTURE:

<p>Existing Stand Condition/Vegetation: Stand consists 12-40" DBH mountain hemlock (39% BA), 16-50" DBH spruce (33% BA), 12-28" DBH western hemlock (17% BA) and 20-28" DBH yellow-cedar (13% BA). The area just above the existing managed stand is the most productive. Hemlock advanced regeneration is abundant with yellow-cedar regeneration also present. Wind risk is high.</p>
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<p>Silvicultural Objective/Desired Future Condition: Maintain or create a stand with three or more distinct age (size) classes of trees that maintains species diversity, provides for a high degree of structural diversity and meets Forest Plan scenery and high value marten habitat requirements.</p>

<p>Silvicultural Prescription: Uneven-aged management – Single tree selection. Designate up to 25 percent of existing basal (184 sq.ft.per acre) area singly and/or in small clumps or corridors to facilitate helicopter yarding. This unit contains stream buffers with RAW zones. For RAW zone retain trees less than 16" DBH within specified distance (refer to fish/watershed section) from windward (southeasterly) edge of stream buffers to minimize windthrow in buffer. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>
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<p>TIMBER/LOGGING: Refer to Silvicultural RX and marking guides for single tree selection guidelines to facilitate helicopter yarding.</p>

<p>ENGINEERING/ROADS: N/A</p>

<p>BOTANY RESOURCES: No concerns</p>

<p>FISH/WATERSHED: Concern: Stream 1 (upper), 3, 4 (upper) and 5 are Class III HC channels.</p>
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<p>Response: Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III). Concern: Stream 1 (lower) is a Class II AF channel. Response: Category A protection (BMP 12.6, 13.14). No harvest within 140 feet of channel or on active portion of fan (RIP III). Concern: Streams 2 and 4 (lower) are Class II HC channels. Response: Locate unit above blue and white flagged channels if feasible. Category A protection (BMP 12.6, 13.14). No harvest within 100 feet and side-slope break (RIP III).</p>

<p>Concern: Windthrow risk is high. Response: Manage for windfirmness 120 feet beyond no-cut buffers.</p>

<p>GEOLOGY/KARST: Concern: All of Unit 138 is moderate vulnerability karst. Response: A minimum of partial suspension is required to meet karst resource objectives (BMP 13.9).</p>

<p>HERITAGE RESOURCES: No concerns</p>

<p>SCENERY/RECREATION: No concerns</p>

<p>SOILS/WETLANDS: Slopes range from 65-120% in Unit 138 There are about 13 acres of slopes greater than 72% in Unit 138. There is evidence of past landslides and current slumping. These are highly unstable areas. Concern: Timber harvest may accelerate landsliding on slopes over 72% gradient.</p>

<p>Response: Avoid the slopes over 72% during layout as they are unsuitable for harvest (BMP 13.5). The rest of the unit is suitable for the proposed helicopter with a minimum of partial suspension to meet soil quality standards. (BMP 13.9) Area to the southeast of Unit 138 dropped for stability concerns. An onsite analysis for suitability on slopes over 72% was conducted on this unit as per Forest Plan Standards (soil resource report).</p>

<p>WILDLIFE: Concern: Unit contains high value marten habitat. Response: Proposed harvest system will not create openings greater than 2 acres in size within this habitat. Retention of 75% of the basal area will meet marten standards and guidelines.</p>

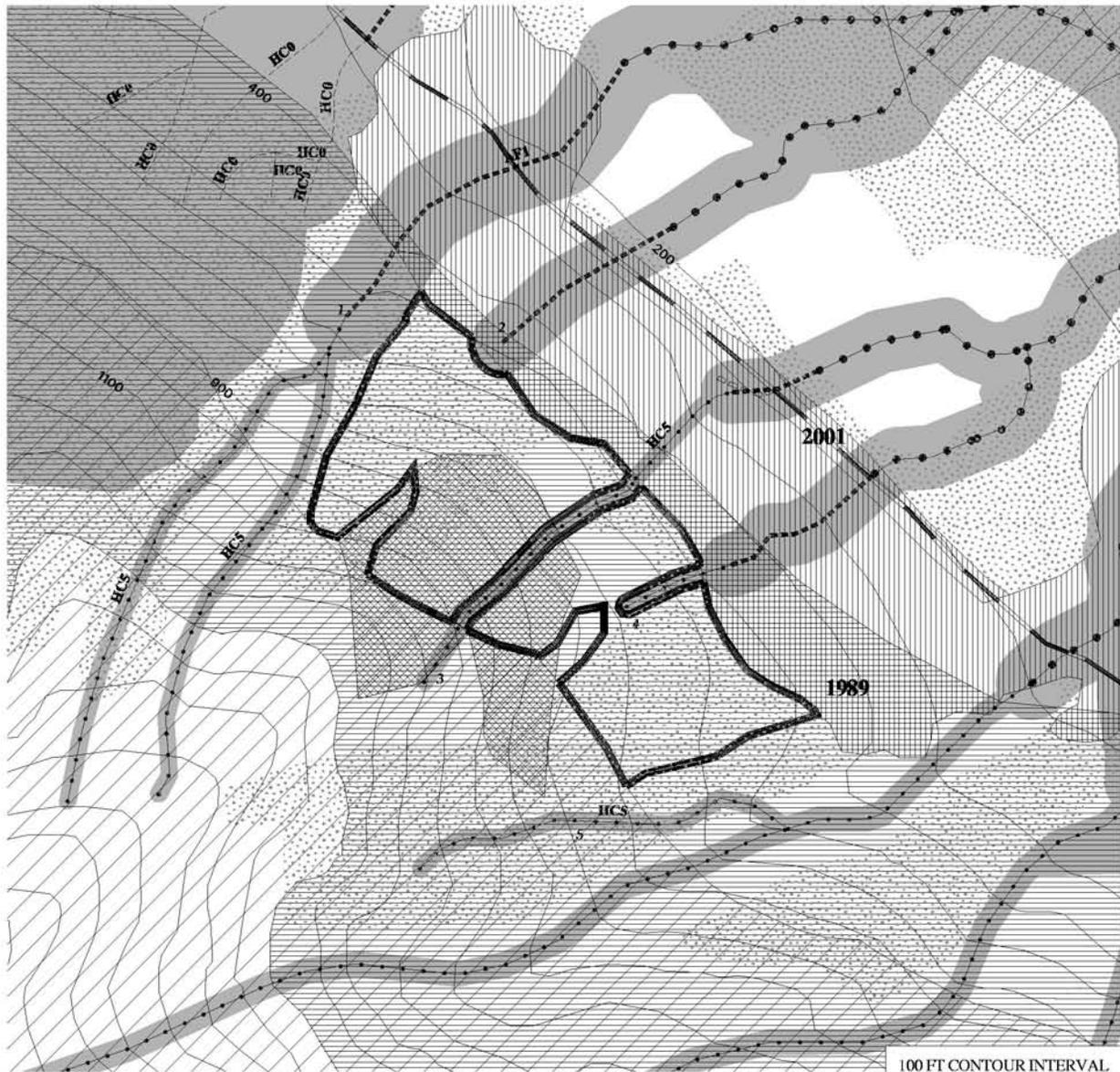
IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP

UNIT NUMBER: 138 VCU: 2100 HARVEST SYSTEM: Helicopter

UNIT 138 OCCURS IN ALTERNATIVE(S): 4



MAPSCALE 1:7200



100 FT CONTOUR INTERVAL

- Existing Harvest Unit with Year Harvested Unit Boundary
- Adjacent Proposed Unit
- Proposed NFS Road 85343
- Temporary Road
- Existing NFS Road 8530
- NFS Road Reconstruction 8534
- Class I Stream
- Class II Stream
- Class III Stream

- Class IV Stream
- Stream Channel Type
- Stream Number – See Narrative
- High Value Marten Habitat
- Areas Dropped From Alternative(s)
- Inventoried Roadless
- Old Growth Reserve
- Moderate Vulnerability Karst
- Slopes > 72%
- Existing Rock Pit

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- HC6
- 1



Unit Data Card – Iyouktug Timber Sale Draft EIS					
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Unit Number:	138	In Alternatives:	4	Total Unit Acres:	25.2	Vol Strata Acres:	High: 17.9 Med: 0 Low: 7.3
VCU Number:	2100	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	220	Prescription /Percent Retention:	ST25

Summary of Concerns, Responses, BMPs and Mitigation
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SILVICULTURE:

<p>Existing Stand Condition/Vegetation: Stand consists 12-40" DBH mountain hemlock (39% BA), 16-50" DBH spruce (33% BA), 12-28" DBH western hemlock (17% BA) and 20-28" DBH yellow-cedar (13% BA). The area just above the existing managed stand is the most productive. Hemlock advanced regeneration is abundant with yellow-cedar regeneration also present. Wind risk is high.</p>
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<p>Silvicultural Objective/Desired Future Condition: Maintain or create a stand with three or more distinct age (size) classes of trees that maintains species diversity, provides for a high degree of structural diversity and meets Forest Plan scenery and high value marten habitat requirements.</p>

<p>Silvicultural Prescription: Uneven-aged management – Single tree selection. Designate up to 25 percent of existing basal (184 sq.ft.per acre) area singly and/or in small clumps or corridors to facilitate helicopter yarding. This unit contains stream buffers with RAW zones. For RAW zone retain trees less than 16" DBH within specified distance (refer to fish/watershed section) from windward (southeasterly) edge of stream buffers to minimize windthrow in buffer. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>
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<p>TIMBER/LOGGING: Refer to Silvicultural RX and marking guides for single tree selection guidelines to facilitate helicopter yarding.</p>

<p>ENGINEERING/ROADS: N/A</p>

<p>BOTANY RESOURCES: No concerns</p>

<p>FISH/WATERSHED: Concern: Stream 1 (upper), 3, 4 (upper) and 5 are Class III HC channels. Response: Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III). Concern: Stream 1 (lower) is a Class II AF channel. Response: Category A protection (BMP 12.6, 13.14). No harvest within 140 feet of channel or on active portion of fan (RIP III). Concern: Streams 2 and 4 (lower) are Class II HC channels. Response: Locate unit above blue and white flagged channels if feasible. Category A protection (BMP 12.6, 13.14). No harvest within 100 feet and side-slope break (RIP III). Concern: Windthrow risk is moderate to high. Response: Manage for windfirmness 120 feet beyond no-cut buffers.</p>
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<p>GEOLOGY/KARST: Concern: All of Unit 138 is moderate vulnerability karst. Response: A minimum of partial suspension is required to meet karst resource objectives (BMP 13.9).</p>

<p>HERITAGE RESOURCES: No concerns</p>

<p>SCENERY/RECREATION: No concerns</p>

<p>SOILS/WETLANDS: Slopes range from 65-120% in Unit 138 There are about 13 acres of slopes greater than 72% in Unit 138. There is evidence of past landslides and current slumping. These are highly unstable areas. Concern: Timber harvest may accelerate landsliding on slopes over 72% gradient. Response: Avoid the slopes over 72% during layout as they are unsuitable for harvest (BMP 13.5). The rest of the unit is suitable for the proposed helicopter with a minimum of partial suspension to meet soil quality standards. (BMP 13.9) Area to the southeast of Unit 138 dropped for stability concerns. An onsite analysis for suitability on slopes over 72% was conducted on this unit as per Forest Plan Standards (soil resource report).</p>
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<p>WILDLIFE: Concern: Unit contains high value marten habitat. Response: Proposed harvest system will not create openings greater than 2 acres in size within this habitat. Retention of 75% of the basal area will meet marten standards and guidelines.</p>

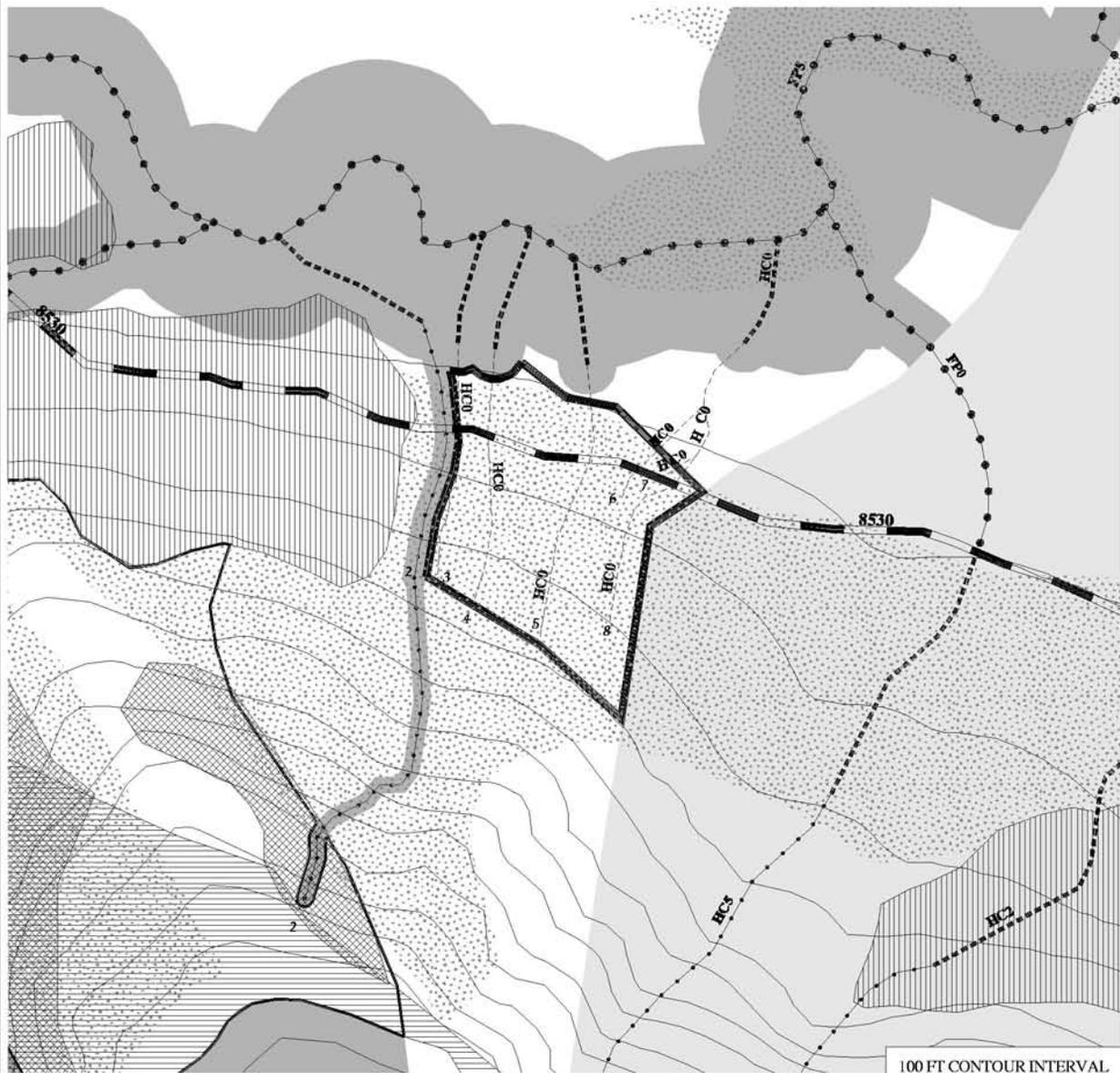
IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP

UNIT NUMBER: 142 VCU: 2100 HARVEST SYSTEM: Cable

UNIT 142 OCCURS IN ALTERNATIVE(S): 2 3 4 5



MAPSCALE 1:7200

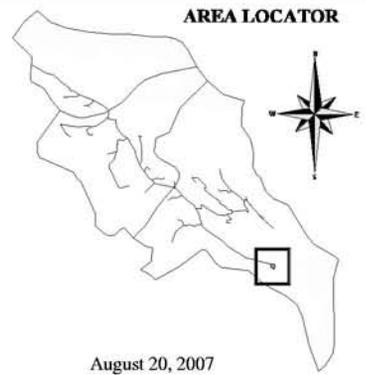


100 FT CONTOUR INTERVAL

- Existing Harvest Unit with Year Harvested
- Unit Boundary
- Adjacent Proposed Unit
- Proposed NFS Road 85343
- Temporary Road
- Existing NFS Road 8530
- NFS Road Reconstruction 8534
- Class I Stream
- Class II Stream

- Class III Stream
- Class IV Stream
- Stream Channel Type
- Stream Number – See Narrative
- High Value Marten Habitat
- Areas Dropped From Alternative(s)
- Old Growth Reserve
- Moderate Vulnerability Karst
- Slopes Greater Than 72%
- Existing Rock Pit

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- HC6
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August 20, 2007

Unit Data Card – Iyouktug Timber Sale Draft EIS					
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Unit Number:	142	In Alternatives:	2, 3, 4, 5	Total Unit Acres:	14.6	Vol Strata Acres:	High: 14.0 Med: 0.6 Low: 0
VCU Number:	2100	Harvest System:	C	Net Estimated Harvest Volume (MBF):	325	Prescription /Percent Retention:	CC

Summary of Concerns, Responses, BMPs and Mitigation
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SILVICULTURE:

<p>Existing Stand Condition/Vegetation: Stand consists 12-28" DBH western hemlock (54% BA) and 16-36" DBH spruce (46% BA). There is a large area of older windthrow adjacent to the existing road which is likely non-salvageable. The upslope portion of the stand is intact and has good volume. Wind risk is high throughout unit.</p>
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<p>Silvicultural Objective/Desired Future Condition: Create an even-aged managed stand of the same species composition as the original stand that meets Forest Plan scenery and high value marten habitat requirements, uses an economical regeneration method, and is windfirm, free of mistletoe infection and growing at full site potential.</p>

<p>Silvicultural Prescription: Even-aged management – clearcut: This unit includes a class III stream buffer on the northwestern boundary with a RAW zone. For RAW zone retain trees less than 16" DBH within specified distance (refer to fish/watershed section) from windward (southeasterly) edge of stream buffer to minimize windthrow in buffers. This unit is all high value marten habitat. Designate reserve trees of sufficient size and condition within high value marten habitat to meet marten standards and guidelines. Clump trees and locate in RAW zone where possible as specified under wildlife section. If sufficient trees cannot be located in RAW zone designate additional trees in clumps adjacent to RAW zone where possible.</p>

<p>TIMBER/LOGGING: This unit is comprised of one cable setting.</p>
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<p>ENGINEERING/ROADS: N/A</p>

<p>BOTANY RESOURCES: No concerns</p>

<p>FISH/WATERSHED: Concern: Stream 2 is a Class III HC channel. Response: Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III). Manage for windfirmness within 120 feet of v-notch on eastern side. Concern: Streams 3-8 are Class IV HC0 channels within the unit that run into Class II HC channels below unit. Response: Category C protection (BMP 12.6, 13.14). Remove logging debris from channel (BMP 13.16). Locate unit boundary above blue and white flagged channels.</p>
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<p>GEOLOGY/KARST: No carbonate bedrock found within unit. No karst resource concerns identified.</p>

<p>HERITAGE RESOURCES: No concerns</p>

<p>SCENERY/RECREATION: Concern: Unit crosses a VPR. Response: Incorporate landscape architect input during layout to meet VQO of Maximum Modification</p>

<p>SOILS/WETLANDS: Slopes range from 25-55% in Unit 142. A minimum of partial suspension is required to meet soil quality standards. (BMP 13.9) Area to the south of Unit 142 dropped for stability concerns (BMP 13.5)</p>
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Summary of Concerns, Responses, BMPs and Mitigation

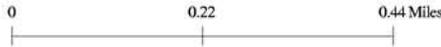
WILDLIFE: Concern: Unit contains high value marten habitat. **Response:** Retain 10-20% of original stand structure as measured by basal area or trees per acre in high value marten habitat. Maintain an average of 4 large live trees/acre (20-30" DBH or larger), 3 snags or decadent trees/acre (20-30" DBH or larger), and 3 large, downed trees/acre (20-30" DBH or larger and 10 feet long). Where trees this large are not available, substitute next largest trees. Retained trees can be clumped to maintain a reasonable assurance of windfirmness and to minimize operational difficulties. **Concern:** Red-tailed hawk observed adjacent to unit. **Response:** Maintain a 600-foot no-harvest buffer that is windfirm around active raptor nest sites if identified and restrict harvest and road building activities from March 1 to July 31 within the buffer.

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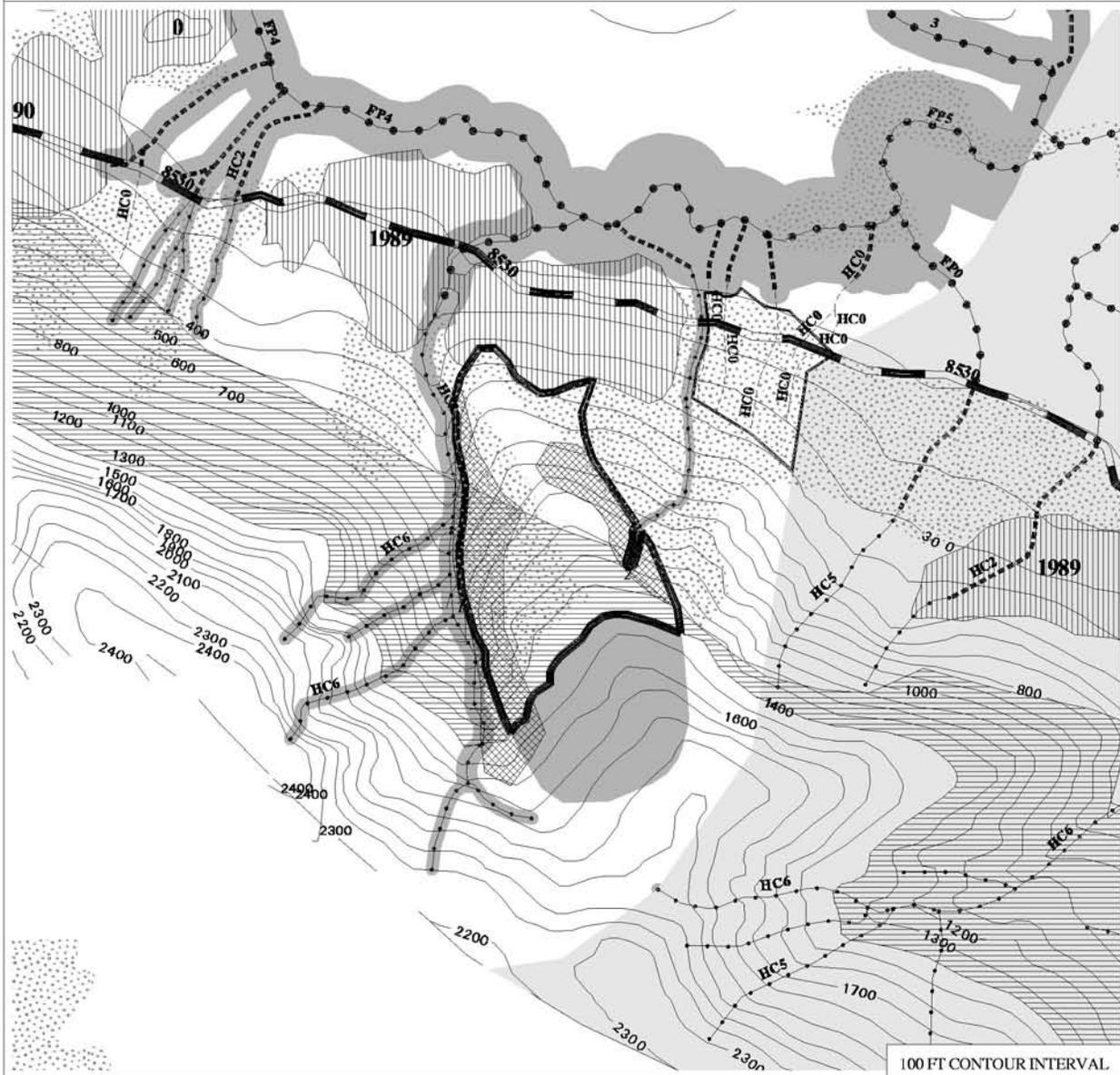
IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP

UNIT NUMBER: 143 VCU: 2100 HARVEST SYSTEM: Helicopter

UNIT 143 OCCURS IN ALTERNATIVE(S): 2 3



MAPSCALE 1:14000

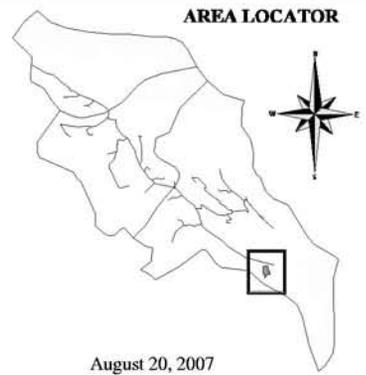


100 FT CONTOUR INTERVAL

- Existing Harvest Unit with Year Harvested
- Unit Boundary
- Adjacent Proposed Unit
- Proposed NFS Road 85343
- Temporary Road
- Existing NFS Road 8530
- NFS Road Reconstruction 8534
- Class I Stream
- Class II Stream

- Class III Stream
- Class IV Stream
- Stream Channel Type
- Stream Number – See Narrative
- High Value Marten Habitat
- Areas Dropped From Alternative(s)
- Old Growth Reserve
- Moderate Vulnerability Karst
- Slopes Greater Than 72%
- Existing Rock Pit

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- HC6
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Unit Data Card – Iyouktug Timber Sale Draft EIS
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Unit Number:	143	In Alternatives:	2, 3	Total Unit Acres:	47.8	Vol Strata Acres:	High: 25.1 Med: 17.3 Low: 5.4
VCU Number:	2100	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	529	Prescription /Percent Retention:	ST25

Summary of Concerns, Responses, BMPs and Mitigation
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SILVICULTURE:

Existing Stand Condition/Vegetation: Stand consist 12-43" DBH western hemlock (37% BA), 9-30" mountain hemlock (37%BA), 9-30" DBH yellow-cedar (14% BA - NW corner) and 24-43" DBH spruce (12% BA). There are several areas of exposed rock and cliffs and slides are present on the steeper slopes. Western hemlock and yellow-cedar advanced regeneration present but not abundant. Wind risk is moderate throughout unit.

Silvicultural Objective/Desired Future Condition: Maintain or create a stand with three or more distinct age (size) classes of trees that maintains species diversity, provides for a high degree of structural diversity and meets Forest Plan scenery and high value marten habitat requirements.

Silvicultural Prescription: Uneven-aged management – Single tree selection. Designate up to 25 percent of existing basal (205 sq.ft.per acre) area singly and/or in small clumps or corridors to facilitate helicopter yarding. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.

TIMBER/LOGGING: Refer to Silvicultural RX and marking guides for single tree selection guidelines to facilitate helicopter yarding.

ENGINEERING/ROADS: N/A

BOTANY RESOURCES: No concerns

FISH/WATERSHED: **Concern:** GIS-mapped streams 1 and 2 are class III HC channels. **Response:** Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III).

GEOLOGY/KARST: **Concern:** There are about 25 acres of high vulnerability and 25 acres of moderate vulnerability karst in unit 980. **Response:** The high vulnerability area to the south of the unit is excluded from the proposed helicopter harvest to protect the features in this area and a minimum of partial suspension is require to meet karst resource objectives in the moderate vulnerability area. (BMP 13.2 and 13.9)

HERITAGE RESOURCES: No concerns

SCENERY/RECREATION: No concerns

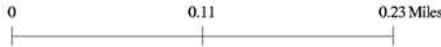
SOILS/WETLANDS: Slopes range from 55-120% in Unit 143. There are about 23 acres of slopes greater than 72% in Unit 143. There is evidence of past landslides in the unit. **Concern:** Timber harvest may accelerate landsliding on slopes over 72% gradient. **Response:** Avoid the slopes over 72% during layout as they are unsuitable for harvest (BMP 13.5). **Concern:** A minimum of partial suspension is required to meet soil quality standards in the rest of the unit (BMP 13.9). **Response:** Unit is proposed as full suspension, which exceeds partial suspension requirements. Areas to the east and west of Unit 143 dropped for stability concerns. An onsite analysis for suitability on slopes over 72% was conducted on this unit as per Forest Plan Standards (soil resource report).

WILDLIFE: **Concern:** Unit contains high value marten habitat. **Response:** Proposed harvest system will not create openings greater than 2 acres in size within this habitat. Retention of 75% of the basal area will meet marten standards and guidelines.

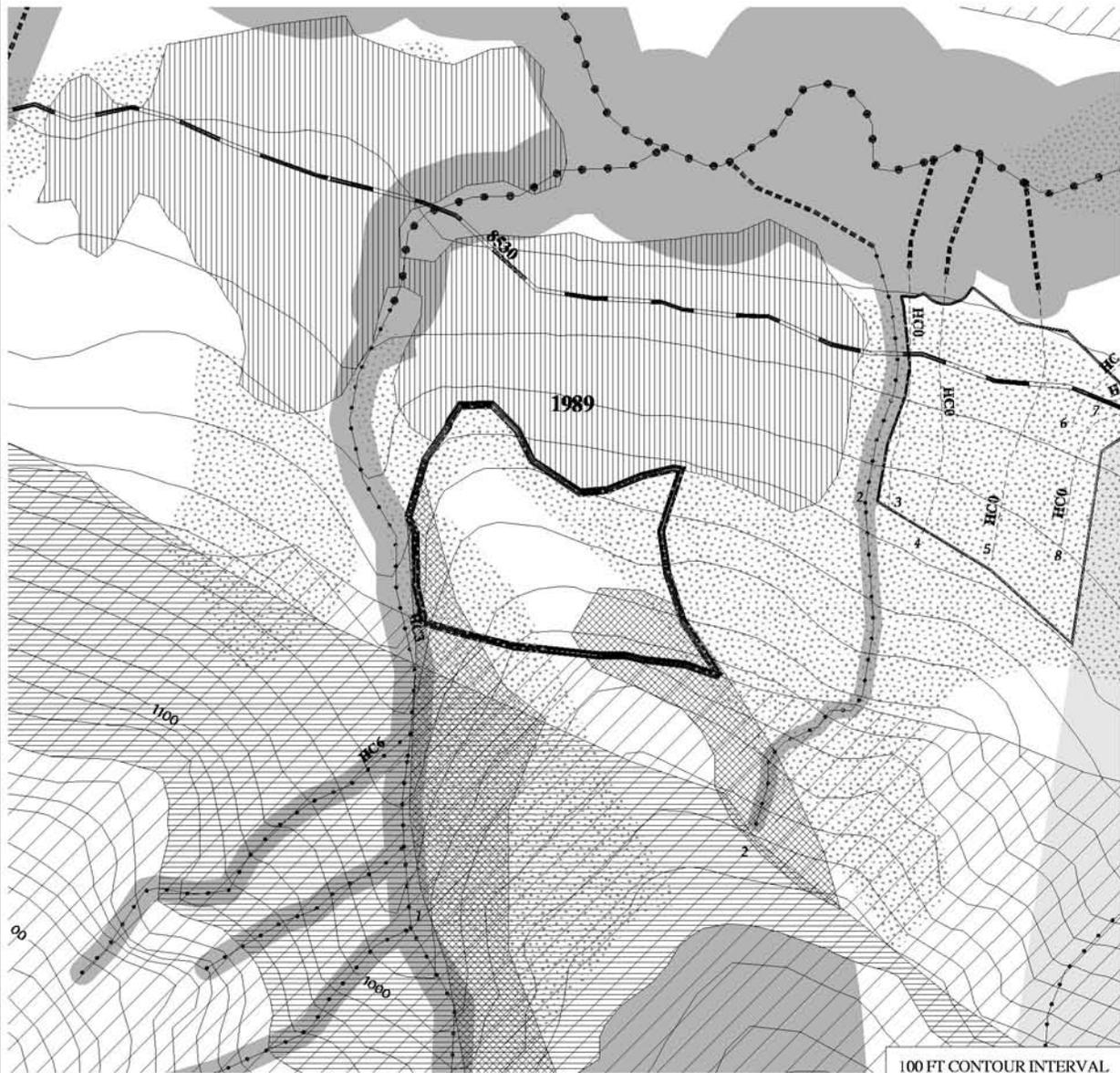
IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP

UNIT NUMBER: 143 VCU: 2100 HARVEST SYSTEM: Helicopter

UNIT 143 OCCURS IN ALTERNATIVE(S): 4



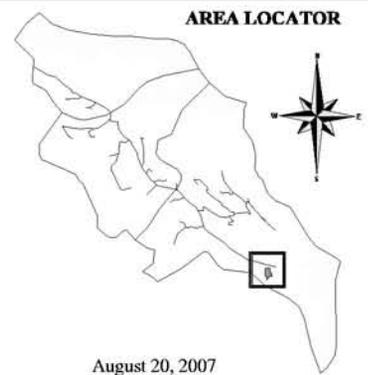
MAPSCALE 1:7200



- Existing Harvest Unit with Year Harvested Unit Boundary
- Adjacent Proposed Unit
- Proposed NFS Road
- Temporary Road
- Existing NFS Road
- NFS Road Reconstruction
- Class I Stream
- Class II Stream
- Class III Stream

- Class IV Stream
- Stream Channel Type
- Stream Number – See Narrative
- High Value Marten Habitat
- Areas Dropped From Alternative(s)
- Inventoried Roadless
- Old Growth Reserve
- Moderate Vulnerability Karst
- Slopes > 72%
- Existing Rock Pit

- HC6
- 1



Unit Data Card – Iyouktug Timber Sale Draft EIS
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Unit Number:	143	In Alternatives:	4	Total Unit Acres:	13.4	Vol Strata Acres:	High: 7.8 Med: 5.6 Low: 0
VCU Number:	2100	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	124	Prescription /Percent Retention:	ST25

Summary of Concerns, Responses, BMPs and Mitigation
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SILVICULTURE:

<p>Existing Stand Condition/Vegetation: Stand consist 12-43" DBH western hemlock (37% BA), 9-30" mountain hemlock (37%BA), 9-30" DBH yellow-cedar (14% BA - NW corner) and 24-43" DBH spruce (12% BA). There are several areas of exposed rock and cliffs and slides are present on the steeper slopes. Western hemlock and yellow-cedar advanced regeneration present but not abundant. Wind risk is moderate throughout unit.</p>
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<p>Silvicultural Objective/Desired Future Condition: Maintain or create a stand with three or more distinct age (size) classes of trees that maintains species diversity, provides for a high degree of structural diversity and meets Forest Plan scenery and high value marten habitat requirements.</p>

<p>Silvicultural Prescription: Uneven-aged management – Single tree selection. Designate up to 25 percent of existing basal (205 sq.ft.per acre) area singly and/or in small clumps or corridors to facilitate helicopter yarding. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>
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<p>TIMBER/LOGGING: Refer to Silvicultural RX and marking guides for single tree selection guidelines to facilitate helicopter yarding.</p>

<p>ENGINEERING/ROADS: N/A</p>

<p>BOTANY RESOURCES: No concerns</p>

<p>FISH/WATERSHED: Concern: GIS-mapped streams 1 and 2 are class III HC channels. Response: Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III).</p>

<p>GEOLOGY/KARST: No carbonate bedrock found within unit. No karst resource concerns identified.</p>

<p>HERITAGE RESOURCES: No concerns</p>

<p>SCENERY/RECREATION: No concerns</p>

<p>SOILS/WETLANDS: Slopes range from 55-120% in Unit 143. There are about 3 acres of slopes greater than 72% in Unit 143. There is evidence of past landslides in the unit. Concern: Timber harvest may accelerate landsliding on slopes over 72% gradient. Response: Avoid the slopes over 72% during layout as they are unsuitable for harvest (BMP 13.5). Concern: A minimum of partial suspension is required to meet soil quality standards in the rest of the unit (BMP 13.9). Response: Unit is proposed as full suspension, which exceeds partial suspension requirements. Areas to the east and west of Unit 143 dropped for stability concerns. An onsite analysis for suitability on slopes over 72% was conducted on this unit as per Forest Plan Standards (soil resource report).</p>
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<p>WILDLIFE: Concern: Unit contains high value marten habitat. Response: Proposed harvest system will not create openings greater than 2 acres in size within this habitat. Retention of 75% of the basal area will meet marten standards and guidelines.</p>
