

Nature's Calling

Boston Hollow Division – Yale Myers Forest

- Stand 7035, Compartment 96 and 97
- Crew: Carmalt, Gartner, Hodgman, Kasinskas, Meister
- Date marked: 7/24/2007 – 7/30/2007
- Date logged: TBD
- Marked volume: 100.3 MBf
 - Red oak – 61.1 MBf
 - Hickory – 10.7 MBf
 - Other hardwoods – 15.9 MBf
 - Hemlock – 12.3 MBf
- Standing basal area (ft²/ac): 101.7
- Cut volume: TBD
- Sale area: 26.8 acres
- Sale price: TBD
- Logger: TBD
- Marking:
 - LEAVE trees are marked with a BLUE RING at eight feet.
 - Boundary LEAVE trees are marked with DOUBLE BLUE DOTS at eight feet.
 - GROUP RESERVES are marked with DOUBLE BLUE DOTS at eight feet.
 - Sawtimber trees to be REMOVED are marked with BLUE STUMP SPOTS.
 - All UNMARKED trees should be REMOVED.
- Snags:
 - Existing SNAGS are marked with KILLER TREE TAPE and should be RETAINED where possible.
 - Live trees to be converted into snags are marked with Killer Tree Tape and a BLUE X. These trees should be topped at approximately 16 feet if mechanically harvested or girdled if trees are hand-felled.
- Prescription:
 - Irregular Shelterwood with group and individual reserves.
- Summary inventory data

	<i>Standing Basal Area (ft²/ac)</i>	<i>Standing Volume (MBf/ac)</i>	<i>Gingrich stocking percent</i>	<i>Mean Stand Diameter(inches)</i>	<i>Marked Basal Area (ft²/ac)</i>
<i>Stand #</i>	Total: 101.7	Total: 51.4	87.4	Sampled: 10.2	41.3
<i>6042</i>	Red/black oak: 41.7	Red/black oak: 35.2		Marked: 15.2	
	Hickory: 20	Hickory: 8			
	Sugar Maple: 6.7	Sugar Maple: 1.2			

Introduction

The Nature's Calling Sale is located on a drumlin in Westford, CT in the Boston Hollow Division of Yale Myers Forest. The highest point of the drumlin is along the eastern side of the sale, and the drumlin slopes down in a westerly direction. The sale encompasses approximately 26.8 acres in Stand 7035. The sale is bordered by a wetland reserve (Stand 7033) along the southwestern section of the sale and by Nature's Bounty, a shelterwood cut in 2000 along the northwestern section of the sale. The northernmost boundary runs through a section of Stand 7035 that currently could not support a shelterwood treatment. This northern portion of the stand could be considered for a regeneration treatment in 7 to 14 years. The eastern boundary abuts a ravine and rocky ridge. The southern edge of the sale borders a shelterwood harvested in 2000 called Cloud Forest. The Blue Trail runs north/south through the sale, dividing it into two sections.

This mixed-hardwood stand contains large sawtimber oaks and hickories in the overstory, small sawtimber maples and birches in the midstory, and an understory of witch hazel and an abundant amount of mountain laurel, especially in the northern and western portions of the sale. Groups of hemlock are found throughout the stand. The groundstory contains a sufficient amount of oak, hickory, birch, and maple regeneration, with hay-scented fern in some areas. Vegetation growth is most dense along the northern half and western edge of the sale area. Towards the south and east, especially on the higher areas of the sale, vegetation growth is less dense, most likely due to drier conditions.

The soil type in the majority of the sale area is the Woodbridge Series, which is characterized as a fine sandy loam. The Woodbridge Series is moderately well drained and is characteristically found on the tops and side slopes of drumlins. Throughout the western side of the sale where the slope is greatest, the soil is extremely stony with 2-15 percent slopes. Throughout the eastern side of the sale, the soil is very stony with 2-8 percent slopes.

In the section of the sale that juts out towards the southeast, the soil type is of the Paxton-Montauk complex, which is an extremely stony, fine sandy loam with 3-15 percent slopes. These soils are well drained and typical of side slopes of drumlins and glacial till deposits.

There is a small pocket of Charlton-Chatfield complex just south of the corridor reserve where the slope is steepest. This soil is a fine sandy loam with 3-15 percent slopes and is very rocky. It is well drained to excessively drained.

The following table lists the site indices of important commercial species for the soil types present in the sale area:

Species/ soil series	Woodbridge	Charlton/Chatfield	Paxton/Montauk
Northern red oak	72	56	67.5
Sugar maple	65	55.5	70

Silvicultural Goals

The harvest area has been marked for an irregular shelterwood with individual and group reserves with the following goals:

1. To promote the establishment and release of seedlings: The treatment will open up growing space on the forest floor for advanced regeneration to establish.
2. To retain vigorous, large-diameter crop trees: The treatment will allow desirable regeneration to establish where not currently present by retaining large, well-formed seed trees of desirable species. This will also provide structural diversity and future economic value as growth is focused on high quality trees.
3. To conserve valuable sawtimber for the future: The treatment will retain groups of sugar maple reserves currently in the mid-story, which will continue to gain value and provide structural diversity.
4. To maximize current timber value: The value of medium to large sawtimber trees will be realized now before the trees begin to senesce or natural disturbance agents cause loss of value.
5. To provide structural and species diversity: Seed trees and individual and group reserves will provide structural diversity as well as partial shade conducive to the establishment of regeneration. Individual reserves will help to ensure species diversity in the regenerating stand and adaptability to future timber markets.

6. To protect existing wildlife in the area and create future habitat for wildlife: The large open areas between seed trees and reserves will provide excellent early successional habitat and forage for wildlife, such as deer, turkey, ruffed grouse, and woodcock. Group reserves will provide thermal cover for wildlife and create a mosaic of patches to allow wildlife dispersal across a generally more open landscape following the harvest. Existing snags and those to be created will provide good habitat for cavity nesting birds. An Allegheny ant mound of about 4-5 feet in diameter has been marked and should be preserved.
7. Fifty-foot buffers have been maintained along wetlands and seeps to maintain shade cover over these sensitive areas. Additionally, a corridor of intact forest has been retained, connecting the wetland reserve in Stand 7033 to uncut areas outside of the harvest area.

Silvicultural Treatments

Within the harvest area, leave trees are marked with a blue ring. Sawtimber trees to be removed are marked with blue stump spots. Firewood and pulp trees are not marked, but should be removed. The operator has the option of utilizing these small diameter trees as they see fit or simply cutting them and leaving the trees on-site. Boundary leave trees are marked with double blue dots at approximately eight feet.

Spacing of seed tree oaks to be retained in the stand was set at approximately 60-90 feet depending on site conditions. Spacing was wider towards the northern area of the stand due to moister soil conditions. Wider spacing was also implemented in areas where hay-scented fern was present in hopes of creating a high-light environment to hinder the spread of the fern. This spacing was used to allow for adequate growing space to be opened for advanced regeneration release and establishment. The treatment will release advanced regeneration and allow new regeneration to establish from mast events from the residual seed trees. Residual seed trees and reserves will provide a partial shade environment conducive to the establishment of regeneration. The residual seed trees will also have large amounts of above ground growing space and will add volume and economic value. Seed trees were selected for their form, height and crown size, therefore allowing the best genetics present in the sale area to supply the seed source for future generations and improve the overall genetics of the stand. A conscious effort was made to retain a mixture of seed trees including red oak, black oak, white oak, hickory, red and sugar maple, and white and black birch. This diversity in seed sources will function to provide a variety of forage types for wildlife and help to ensure future stand diversity and resilience. Future stand diversity is a desirable characteristic from both an ecological and economic perspective as it allows for adaptation to changing timber markets and environmental conditions.

In addition to seed trees, individual and group reserves have been retained throughout the harvest area. In many instances, hemlock individual or group reserves have been retained in close association with oak seed trees to provide structural diversity and thermal cover for wildlife and to provide shade for the boles of the seed trees to prevent epicormic sprouting. Sugar maples have been retained where present in the midstory to provide structural diversity and to allow these generally pole- and small sawtimber-sized trees to increase in volume and economic value. Other well-formed hardwood species have been retained as reserves in areas. Group reserves have also been retained where ecologically sensitive areas were present, where unique mixtures of species were identified, or where pole-sized trees were already well-established and not suppressed.

During harvest activities, the operator should crush mountain laurel whenever possible to free up growing space to allow for the establishment of advanced regeneration. It is anticipated that the mountain laurel will rebound, but the crushing activity will give regeneration a chance to grow above the laurel and avoid being shaded out.

The next treatment of the sale area should be an overstory removal, or final cut of a shelterwood cutting cycle. The sale area will be ready for an overstory-removal when the advanced regeneration has been well

established throughout the site and hardwood tree species have fully occupied the growing space made available by this harvest. It is anticipated that this will require 7 to 14 years. At this time, the seed trees should be of higher volume, and will provide sufficient economic returns to cover the operational costs of the overstory removal.

The sale area borders a wetland and seep in the southwestern end. Special attention should be given to following boundary trees to avoid disturbing these sensitive areas. The operator should seek to avoid damaging advanced regeneration where present and use previous skid trails whenever possible. Care should also be taken not to damage residual seed trees and reserves during harvest activity as these trees represent the future economic value of the stand.

Wildlife Considerations

Wildlife benefits of this treatment include the creation of early successional habitat and the preservation of existing wildlife habitat. A large ant mound has been marked and should be preserved. Three trees around the mound have been marked with pink flagging. This area has been noted on the map and should not be disturbed. Other wildlife habitat will be maintained through the retention of individual and group reserves of hemlocks for thermal cover, and white oaks, hickories, and red maples for mast source for wildlife. Existing snags and cavity trees have been marked for retention with killer tree tape to provide habitat for cavity nesting birds and several live trees have been marked to be converted into snags to create the next generation of den trees. A corridor of unharvested forest has been retained connecting the wetland in Stand 7033 with other areas of the Boston Hollow division that are not included in this harvest. This will increase habitat connectivity and serve as a corridor for amphibian dispersal.

Logging Operations

Landings and access

The landing location for this harvest is located in the Nature's Bounty sale area on the west side of Nagy Road. This landing can be easily accessed from the sale area via an old skid trail that runs through the central area of the sale.

Skid trail locations

Skid trail access to the harvest area is from Nagy Road. A well-established skid trail connects the landing area to the sale area. Previous skid trails exist throughout the sale area and should be used to access the interior of the sale area. Skid trail locations have not been formally marked for this sale, with the exception of a crossing of the corridor reserve. An existing skid trail has been marked with yellow and black striped flagging at the point where the corridor reserve can be crossed to access the southwestern portion of the sale. Areas adjacent to the wetland may become seasonally wet, and corduroy is recommended for any skid trails that are used to access these areas. When stonewalls are present, existing breaks in stonewalls should be utilized whenever possible. Any new breaks must be repaired following harvest operations.

The site contains some steep terrain, and erosion along skid trails may be a concern. The construction of waterbars and laying slash across skid trails should be used as needed to prevent erosion.

Wetlands & Streams

A wetland is located directly adjacent to the harvest area along the southwestern edge, as indicated on the attached map.

Snags

Den trees and snags have been marked with killer tree tape, and should be retained whenever possible to enhance wildlife habitat and structural diversity. Live trees that are currently being used as den trees should be converted to snags and have been marked with killer tree tape and a blue X. These trees should be topped at 16 feet if the logging operation is mechanized or girdled if the trees will be hand-felled.

Aesthetics

The Blue Trail, a public hiking trail, runs through the center of the sale area. A 25-foot buffer on either side of the trail has been marked and no logging operations should cross the trail, with the exception of the central skid trail that is marked on the map. The harvest will be visible from the trail, and therefore informative signs should be displayed for visitors using the blue trail, in hopes of assuaging concerns.

The maximum allowable slash height should not exceed six feet and slash should be broadcast across the site as opposed to consolidated in piles where possible.

Cultural Legacies

Several colonial-era stonewalls and rock piles are in the vicinity of the subject harvest area. While common to the area, these should be retained intact as much as possible due to their cultural and historic value. Breaching of stonewalls, if necessary, should be kept to a minimum; existing breaks in stonewalls should be utilized whenever possible. No foundation holes or other potential hazards have been noted in the harvest area.

Residual stand damage

Skid trails should be located to protect crop trees, reserves, and minimize ground disturbance. Skid trail rutting should not exceed 18 inches. If possible the harvest should be conducted in the winter when the ground is frozen to avoid damage and wet conditions around the wetland area and seep.

Operator's Notes:

Cutting guidelines for:

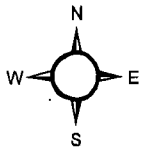
Nature's Calling

Stand # 7035 - Yale Myers Forest

- LEAVE trees are marked with a BLUE RING at eight feet. Sawtimber trees to be REMOVED are marked with BLUE STUMP SPOTS.
- All UNMARKED trees should be REMOVED.
- Boundary LEAVE trees are marked with DOUBLE BLUE DOTS (:) at eight feet.
- GROUP RESERVES are marked with DOUBLE BLUE DOTS (:) at eight feet.
- Snags are marked with KILLER TREE TAPE and should be RETAINED where possible.
- Live trees to be CONVERTED TO SNAGS are marked with KILLER TREE TAPE and a BLUE X and should be topped at 16 feet if the operator is mechanized or girdled if trees will be hand-felled.
- Skid trails should be located to protect leave trees and group reserves and minimize ground disturbance.
- Access will be from the skid trail accessed by Nagy Road.
- Previously used skid trails are present from past harvests and should be used whenever possible.
- A wetland (southwest boundary) and seep (corridor reserve) are located along the southwestern boundary of the sale and should be avoided. The corridor reserve can be crossed at a point marked by yellow and black striped flagging. Corduroy may be necessary on skid trails in the southwestern portion of the sale if conditions are wet.
- Avoid disturbance of the ant mound marked on the map. Three trees around it have been marked with pink flagging.
- Disturbance to stone walls should be avoided and minimized where necessary.

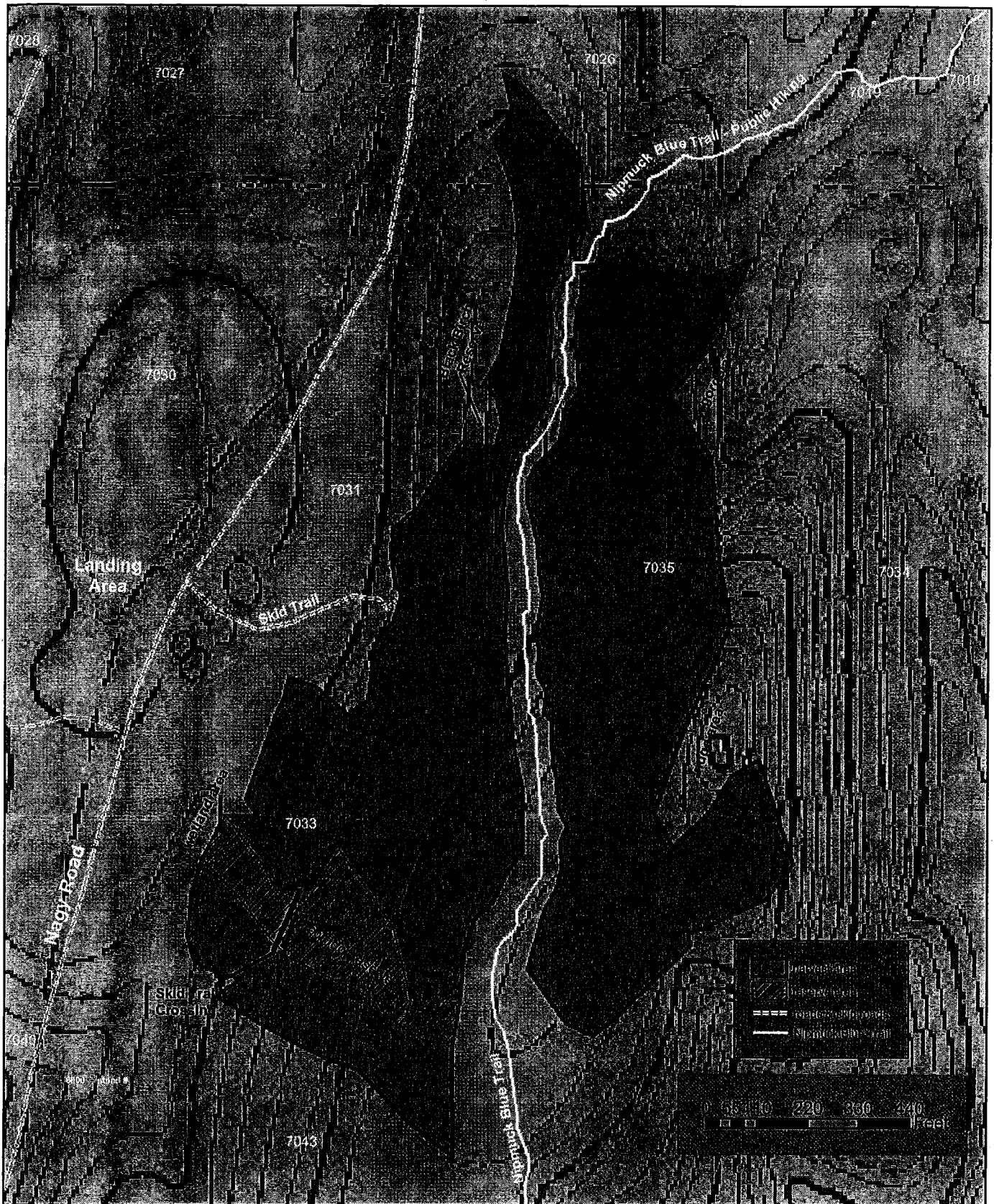
*****Note to Forest Manager:**

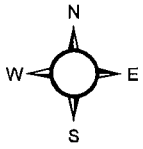
On the east side of the Blue Trail, the southern sale boundary was extended after an initial marking of the sale. Trees that had been boundary dotted were converted to a vertical line and should be considered cull trees or sawtimber trees. Leave trees along this premature boundary line have one blue dot and a blue ring. This section of the sale should be pointed out to the operators to avoid confusion.



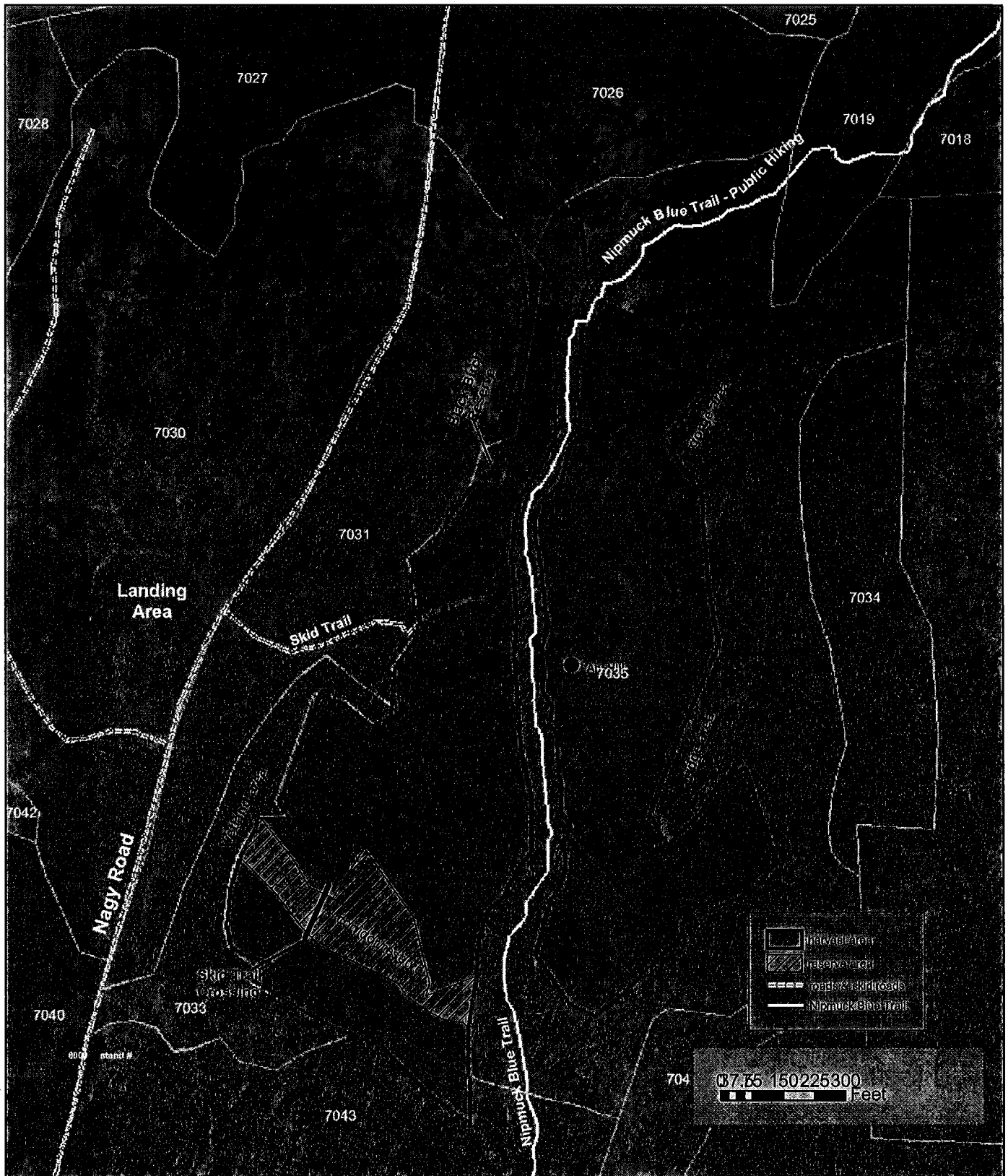
Nature's Calling Sale Map: Stand #'s 7033 & 7035

Boston Hollow Division Compartments 96 & 97 26.8 acres 100.3 Mbf





Nature's Calling Sale Map
Stand's 7033 & 7035
Boston Hollow Division
Compartments 96 & 97
26.8 acres 100.3 Mbf



YALE MYERS FOREST

SALE NAME: Nature's Calling/Hobson's Choice

COMPARTMENT(S):

SUMMARY

SUMMARY DATE: 4/24/2008

PREPARER: Richard Caml

*Note: fields in gray contain formulae and should not be modified.

	Gross	Expenses	Net
Revenue (\$)	\$96,846.8	\$64,283.8	\$32,562.97
Sawlog	\$96,846.8	\$64,283.8	\$32,562.97
Veneer	\$0.00	\$0.00	\$0.00

Volume (Mbf)	0.00	0.000
Sawlog	0.00	0.000
Veneer	0.00	0.000

Stumpage (\$/Mbf)	\$0.00	\$0.00
-------------------	--------	--------

Net Mbf	Mbf Cut	(Tom over) or Mill over
0.00	0.000	0.000