

IDAHO PANHANDLE NATIONAL FORESTS

2450
Commercial Sales - Proposed

04-2420-01

STARS # 08403

BUSSEL PEAK TIMBER SALE REPORT
AND
APPRAISAL

DISTRICT

SUPERVISOR'S OFFICE

Prepared Edwin R. Odegaard
By

Reviewed for Advertisement

Date _____

By _____

Date _____

Reviewed _____
By

Date _____

Reviewed _____
By

Date _____

I hereby certify that this sale meets
the requirements of Secretary's
Regulation 36 CFR 223.30.

Staff Officer, Timber

Date

Bussel Peak Timber Sale Timber Sale Report

I. Location

The sale area is 2,638 acres in size and is located in sections 15, 22, 23, 24, 25, 26, 35 T44N, R2E and sections 18, 19, 30 T44N, R3E Boise Meridian, Shoshone County, Idaho. The timber stand atlas compartment number is 484, St. Joe Ranger District, Idaho Panhandle National Forests. Harvest is planned on 194 acres, and timber subject to agreement harvest is planned on 240 acres. The sale area lies in the Bussel Creek drainage.

II. Relationship to the Environmental Document and Other Uses

This sale is prepared under the direction of the Bussel 484 EIS, approved by the Forest Supervisor Ranatta McNair on May 21, 2008. The purpose of this sale is timber harvest. This sale lies in Forest Plan Management Area One.

A. Relationship to Private Land/Rights-of-Way: No road construction or reconstruction will be needed in this sale. All harvest units and potential helicopter landing locations are located on and are adjacent to Forest Service lands. Purchaser operations shall avoid private lands to the north and east of unit 41.

Access: The Bussel Peak sale can be accessed from St. Maries Idaho by taking state highway three north an estimated .5 miles to the junction of FH 50. From the Junction of FH50 proceed east up the St. Joe river east approximately 33.6 miles to it's junction with road 321 (Marble Creek). Proceed approximately 8.6 mile up the Marble Creek road until it connects with Forest Road 758 (Eagle Creek). The sale area and units can be accessed from the Eagle Creek road via roads 1498, 3660, 3658 and their tributaries.

Road Use Restrictions: The use of the old railroad grade, designated as road 758E on the sale area map, is strictly prohibited. Haul on a portion of Road 1498 is restricted to dry road surface only.

Helicopter Safety: The Purchaser shall follow protection measures set forth in "C6.331 - SAFETY (HELICOPTER OPERATIONS)" during all helicopter operations and specifically "C6.338 – SAFETY (POWER LINE)" when working near to the BPA powerline corridor located adjacent to unit 134 and 114.

B. Threatened, Endangered and Sensitive Species: Timber shall be felled away from a small leave tree group which protects a sensitive plant population located within unit 134. This area is identified on the sale area map.

C. Wetlands/Streamside Habitats: *N/A*

D. Special Uses, Mining Claims, Range Allotments: *N/A*

E. Noxious Weeds: In order to prevent the spread of noxious weeds into the sale area, purchaser shall be required to clean all off-road equipment prior to entry on to the sale area.

F. Cultural Resources: The use of the old railroad grade designated as road 758E on the sale area map is strictly prohibited. Any cultural resource discovered during Purchaser operations shall be reported to the Forest Service and will be protected as described within the timber sale contract.

G. Other: In-channel activity, and culvert installation and removal will occur during base flows (July 15th through September 1st) for fish habitat protection. To protect soils, on slopes of 45 percent or less, mechanical felling shall be approved in advance and shall only be allowed off of approved skid trails when there is sufficient snow, frozen ground, or slash mat to prevent ground disturbance or compaction.

III. Timber Volumes

Cruise design and implementation procedures adhered to the standards prescribed in the Forest Service Cruising Handbook 2409.12 and all R1 and IPNF Supplements.

A copy of the Cruise Design and cruising specifications for Forest Service Personnel can be found in the Sale Prep folder located in the St. Maries Office of the St. Joe District.

Error Volume and Confidence levels :

- A. AGGREGATED BY UNIT OF MEASURE: **17%** Error for Primary & Secondary Products Aggregated by Unit of Measurement. Maximum allowable for a scaled sale is 20%.
- B. The cruise identification number: **08403**
- C. Strata Error: Maximum Allowable: 50%.
- D. Confidence Interval: 95%

Estimated Volumes are in NET CCF (included timber in A2)

Unit Number	Acres	AF	C	DF	GF	L	LP	S	Totals	Non-Sawlog Volume	Logging System	Percent Volume Sawlog 1/	Volume Tractor (Sawlog)	Volume Skyline (Sawlog)
110A	4	2	5	1	81	0	13	6	108	7	GB	1.59%	108	
110B	13	5	17	3	262	2	42	21	352	22	Sky	5.16%		352
114	40	0	59	26	1490	42	0	91	1708	35	GB	25.06%	1708	
170	49	20	63	12	989	6	157	78	1325	82	TLM	19.44%		1325
143A	8	0	12	5	298	8	0	18	341	7	GB	5.01%	341	
143B	13	0	19	8	484	14	0	30	555	11	Sky	8.15%		555
148B	20	9	47	4	671	71	24	0	826	50	Sky	12.13%		826
70A	11	5	14	3	222	1	35	18	298	18	GB	4.36%	298	
70B	9	4	12	2	182	1	29	14	244	15	Sky	3.57%		244
84	23	11	55	4	771	82	28	0	951	57	GB	13.95%	951	
99B	4	2	5	1	81	0	13	6	108	7	Sky	1.59%		108
TOTALS	194	58	308	69	5531	227	341	282	6816	311		100% 2/	3406 CCF	3410 CCF
TOTAL TONS		147	735	207	16649	727	1230	778	20473	826				

1/ Percent comparison for tractor and skyline logging systems only.

2/ Excluding Timber Subject to Agreement.

The Conventional Logging Systems encompass 45% of all sale volume if timber subject to agreement included.

Non-Sawtimber: Units 70A, 70B, 84, 99B, 110A, 110B, 114, 143A, 143B, 148B and 170

C2.2# - UTILIZATION AND REMOVAL OF INCLUDED PRODUCTS (4/03) Unless otherwise agreed in writing, Purchaser is required to pay non-sawtimber shown in A2

Estimated Volume, Timber Subject to Agreement (C2.11#)

Unit Number	Acres	AF	C	DF	GF	L	LP	S	Total Volume Sawlog	Logging System	Percent volume 1/
104H	19	8	24	4	383	2	61	30	512	HeC	6.17%
110H	16	7	21	4	323	2	51	26	434	HeC	5.19%
134H	58	27	137	11	1945	207	71	0	2398	HeC	28.77%
156H	31	13	40	7	625	4	99	50	838	HeC	10.06%
41H	53	24	126	10	1777	189	65	0	2191	HeC	26.29%
148h	18	8	43	3	604	64	22	0	744	HeC	8.93%
99H	45	18	58	11	908	6	144	72	1217	HeC	14.60%
TOTALS	240	105	449	50	6565	474	513	178	8334		100.00%
TOTALS TONS		274	975	150	19673	1528	1873	498	24971		

1/ Percent based on helicopter unit comparison only.

If the Purchaser agrees to Timber Subject to Agreement, 55 percent of the sale volume will be accessed via a helicopter yarding system.

MBF to CCF Conversion: .5461

CCF to Ton Conversion Factor 2.72

I certify that this sale was cruised by competent cruisers as determined by adequate testing. In my opinion, the cruise estimates of the volume to be cut are within acceptable limits (FSH 2409.12) as required for Scaled sales. The Check Cruise Report #18 is on file at the St. Joe Ranger District, St. Maries, ID.

By: Edwin R. Odegaard /s Date:

Title: Zone Check Cruiser

Area Determination: GPS was used for all units in the sale.

GPS: Trimble GeoExplorer 3 or Trimble GeoXT.

Standards: PDOP 6, SNR: 6 (Factory Recommendation), Elev Mask: 15. All files were differentially corrected as required within FSH 2409.12 Timber Cruising Handbook 52.21 – Global Positioning System Traverse Standards.

IV. Marking Plan

Method for Marking:

Cutting Unit Boundary: The cutting unit boundaries are marked with three vertical orange stripes with the central stripe facing into the cutting unit and two additional opposing strips facing in the directions of the previous and next boundary tree along the unit boundary. These boundary marks are located approximately eye level or higher. In addition, there is a stump mark painted on the downhill side of the tree. Corner boundary trees are marked, when possible with a "window" and Unit number.

Leave Trees Marking (LTM): The leave trees are marked with an Orange Paint Band visible from all directions around the tree stem located at DBH or higher. In addition, there is a stump mark painted horizontally on the downhill side of the tree.

Wildlife Trees: Wildlife trees are live trees, which show signs of wildlife use and or have broken tops, damage or issues that make the tree attractive to wildlife use. Wildlife trees are marked using orange painted X on the uphill and downhill sides of the tree near DBH and a stump mark on the downhill side of the tree.

Species Designation Units: In units governed by Species Designation. **No timber has been marked as cut.** The sawyer will apply a unit specific prescription during felling (see C2.38# - SPECIES DESIGNATION). Timber designated for cutting must meet the combination of species and the maximum stump diameter stated in C3.38#.

Reserve Trees, Units 114 and 170: These are tree considered higher in value then average leave trees such as large white pine not infected with Blister Rust with good crown and form. Reserve trees are marked with a **Orange “R” visible from all directions** on the uphill and downhill side of the tree located near DBH or higher. In addition, there is a **stump mark** painted on the downhill side of the tree.

Silvicultural Prescriptions:

Unit	Prescription
143A&B	GroupShelterwood
114	Shelterwood

All other units	Commercial Thin
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V. Logging Plan

All skyline analyses was completed using Logger PC. Profiles analysis has been completed in units 148A, 148B and 110B. The Bussel Peak Timber Sale has been designed to utilize a Link-belt size yarder and/or a tracked line machine in the case of unit 170. Logging system analysis has shown that intermediate supports may be needed in unit 110B. Intermediate supports may be needed on some sets in all "Skyline" units.

Loggins System	Average Defect	Net Volume Sawlog	Percent Volume	Number of Trees	Percent of Total Trees	Net Sawlog CCF / Acre	TPA	Average DBH	MEAN HT	NET CF / Tree	Gross 16' Logs / CCF	Avg Slope	Acres	Percent of Total Acres
Tractor	10	3406	22%	10869	17%	44	126	12	87	31	11	23	86	20%
Skyline	9	3410	23%	14907	23%	32	138	11	87	23	14	40	108	25%
Helicopter	9	8334	55%	38091	60%	35	159	11	84	22	15	34	240	55%
Totals	9	15150	100%	63867	100%	36	148	11	85	24	14	33	434	100%

Unit	Logging System	External Yard	Average External Yard	Acres
41H	HeC	3245	2751	53
70B	Sky	696	493	9
70A	GB	496	236	11
84	GB	826	453	23
99B	Sky	263	236	4
99H	HeC	1633	1881	45
104H	HeC	1618	1418	19
110A	GB	459	316	4
110B	Sky	935	579	13
110H	HeC	1083	702	16
114	GB	682	552	40
134H	HeC	2327	1840	58
143A	GB	240	288	8
143B	Sky	351	175	13
148B	Sky	1194	798	20
148H	HeC	2323	1976	18
156H	HeC	2484	2000	31

External Yarding Distances	
EYD Helicopter	2281
AYD Helicopter	1970
EYD Skyline	641
AYD Skyline	402
EYD Ground Based	411
AYD Ground Based	690

170	TLM	435	250	49
Totals				434

VI. Transportation System

Appraisal Point: St. Maries Idaho

Access:

The Bussel Peak sale can be accessed from St. Maries, Idaho by taking state highway three north an estimated .5 miles to the junction of FH 50. From the Junction of FH50 proceed east up the St. Joe river approximately 33.6 miles to the junction with road 321 (Marble Creek). Proceed approximately 8.6 miles up the Marble Creek road until it connects with Forest Road 758 (Eagle Creek). The sale area and associated sale units can be accessed from the Eagle Creek road via roads 1498, 3660, 3658 and their tributaries.

Paved Haul

Road Number	Termini	Miles
FH 50	Jct. Highway 3 - Jct. 321	33.6
Highway 3	St. Maries Idaho - Jct FH50	0.5
Total		34.1

Unpaved Haul

Road Number	Termini	Miles
758	Jct Marble Creek - MP 9.5	9.5
321	FH50 - Eagle Creek	8.6
Total		18.1

Total Haul Miles (Paved and Unpaved) = 52.2

RECONDITIONING OF EXISTING ROADS

The roads listed within the table below are to be reconditioned under provision C5.312# - Reconditioning of Existing Roads of the timber sale contract.

Reconditioning of Existing Roads C5.312#		
Light Shaping (LS)	\$650.00	/mile
Moderate Shaping (MS)	\$925.00	/mile
Brushing (B)	\$550.00	/mile
Clearing (C)	\$1,285.00	/mile

Road Number	Approximate Length	Termini	Type of work	Cost/Mile	Allowance
3658	1.0	Jct 758 - MP 1.0	LS,B	\$1,200.00	\$1,200.00
3658	2.8	MP 1.0 - MP 3.8	MS,B	\$1,475.00	\$4,130.00
1498C	1.1	Jct 1498 - MP 1.1	MS,C	\$2,210.00	\$2,431.00
1498	2.2	Jct Eagle Creek - MP 2.2	LS,B	\$1,200.00	\$2,640.00
1498	0.4	MP 2.2 - Jct 1498C	MS,B	\$1,475.00	\$590.00
3660	0.3	Jct 758 - MP 0.3	MS,B	\$1,475.00	\$442.50
Totals	7.8				\$11,411.18
Cost per CCF: Calculated using Conventional logging Systems Volume Only		Conventional Sawlog Volume 6816 CCF			\$1.67 /CCF

Upon the completion of logging activities, the Purchaser will be responsible for the Stabilization of the System roads listed below in accordance with C5.419#.

Road Stabilization Allowance, C5.419#

Road Number	Cost/mile	Miles	Totals
1498C	\$5,500.00	1.1	\$6,050.00
3658	\$9,000.00	3.8	\$34,200.00
3660	\$5,500.00	0.3	\$1,650.00
Total			\$41,900.00 or \$6.15/CCF

See Limited Operating Period - C6.316#

Estimated Number of Helicopter Landing Construction and Seeding, Optional (C2.11#).

Landing	Acres	Clearing Cost / Acre 1/	Cost per Landing
H1	0.5	\$886.00	\$443.00
H2	0.5	\$886.00	\$443.00
H3	0.5	\$886.00	\$443.00
H4	0.5	\$886.00	\$443.00
Service	0.5	\$886.00	\$443.00
Total Clearing Cost			\$2,215.00
Seeding Cost / Acre	2.5	\$684.86	\$1,712.15
Total Clearing and Seeding Cost	2.5		\$3,927.15
Road Reconditioning	.1 mile	\$2,210.00	\$221.00
SRS	.1 mile	\$7,500.00	\$750.00
Cost / CCF	8334	CCF (Helicopter Only)	\$4,898.15 \$0.59

1/ excavation and clearing may not be needed for all potential landing locations.

VII. Erosion Control

Application shall be during the period June 1st to June 30th and October 1st to October 31st. Seed shall be applied evenly at the rate of 23 pounds per acre and 200 pounds of fertilizer per acre.

Seed quantity

Species of Seed	PLS Pounds per Acre
Slender Wheat Grass "Highlander or Pryor"	3
Mt. Brome "Bromar"	4
Streambank Wheatgrass "Sodar"	4
Sheep fescue "Durar" (Festuca ovina)	5
White Dutch Clover or Aliske Clover (Tirfolium hybridum)	3
Annual Rye (Lolimu multiflorum)	4
TOTAL	23

Type of Fertilizer	Pounds Per Acre
16-16-16	200

Material Costs

Seed and Fertilizer Cost/Acre			\$625.00
3 Laborer (ADC rate)	\$13.24	/ hour x 3	\$39.72/per acre/hr
Subtotal Hand seeding			\$664.72/acre

Total Acres To be Hand Seeded

Logging System	Acres to be Seeded	Total Cost
Tractor	4	\$2,658.88
Skyline	2	\$1,329.44
Total Cost		\$3,988.32
Total Sawlog, Conventional Logging System Only		6816 CCF
Cost/CCF		\$0.59

VIII. Sale Area Improvement - Reforestation

- Full Plant without concurrent site preparation
- Burning Site Preparation for Planting
- Stocking Surveys
- Animal Damage Control for Reforestation

IX. Hazard Reduction

The sequence of activities and activity costs are attached. Costs are generated through the FACTS Program..

Purchaser requirements:

- Piling of Activity Fuels (Landings)
- Lop and Scatter of Activity Fuels
- Removal of Activity Fuels (Yard Tops)
- Fireline Construction in Activity Fuels
- Piling of Activity Fuels (Units)

Forest Service requirements:

- Activity Fuels Jackpot Burn
- Burn of Activity Piles
- Slashing - Activity Fuels
- Activity Fuels Broadcast Burn
- Fireline Construction in Activity Fuels

X. Other Provisions

A. Period of contract:

1. Normal operating season: June 15th thru October 31th
2. Termination date: October 31, 2013
3. Limited Operating period: July 15 thru September 1.

B. Purchaser Fire Liability:

1. Personnel and Equipment

Item	Personnel
Sawyer	3
Yarder	1
Skidder	2
Truck drivers	2
Loader	2
Woods Boss	1

2. Cost Calculations

Total number of personnel	11
Number of hours per day	8
Total hours per crew day	88
Hourly rate for ADC firefighter	\$13.24
Average daily cost	\$1,165.12
Average fire length (Days)	5
Purchaser obligation for operation fire	\$5,825.60
Rounded up to nearest \$100	5,900.00

3. Other unique requirements and notes to administration:

- Note: Units designated with H on the sale area map are marked with the letter C on the ground, example 110H was originally designated 110C on the ground. Corner tree are marked 110C.
- Mechanical felling will be allowed on slope equal to or less than 45 percent in all units. See Provision C6.41# - SPECIAL FELLING REQUIREMENTS.
- Logging equipment shall be cleaned in accordance with provision C6.351 # – WASHING EQUIPMENT of the timber sale contract.
- Mechanical Felling: Mechanical Felling will be allowed on slopes equal or less than 45 percent. Where possible in unit 134, the fell may be used to pull timber away from the power line corridor and pre-bunch for helicopter yarding operations. Pre-bunching may also be advantageous in other units where mechanical felling is used. See C6.41# - SPECIAL FELLING REQUIREMENTS for further information on use and restrictions.
- Unit 148B: A strip of timber has been left above 148B as directed in the NEPA documentation. Yarding through and the removal of corridor timber is allowed within this area. The sale administrator should consulting with our NEPA coordinator in the event that the contract is modified to include this strip of timber.
- In addition to the above site conditions, the sale administrator should be aware that the stand directly above the road 1498C and surrounding road 1498CA has been classified as old growth by the district Silviculturist. The district silviculturalist should be consulted before the cutting and removal of guy trees in this area.

XI. Notification of Forest Practices

(Check appropriate box)

X	Harvest of forest tree species.
	Road construction associated with harvesting of trees.
X	Reforestation.
	Use of chemicals or fertilizers for the purpose of growing or managing forest tree species..
X	Slashing or use of fire resulting from harvest or other management activities.
X	Site specific BMP's
	Lake Present?
X	Class I stream present?
X	Steep Slopes?
	Unstable or erodible soils present?
	Sream crossings anticipated?

XII. Sale Objective Code

PURPOSE	ACTIVITY	PERCENTAGE
TC	Timber Harvest	100

VALID PURPOSE CODES:

- TC -- Timber Commodity Purpose
- FS -- Forest Stewardship Purpose
- PP -- Personal Use

VALID ACTIVITY CODES:

- TC** 01 -- Timber Purpose
- FS** 10 -- Forest and Ecosystem Health
- FS 20 -- Recreation/Visual/Cultural Resource Enhancements
- FS 30 -- Wildlife Habitat Management
- FS 40 -- Fisheries Habitat Management and Watershed Improvement
- FS 50 -- T&E Species Habitat Management
- FS 60 -- Range Resource Enhancements
- FS 70 -- Non-Timber Products
- FS 90 -- Other
- PP** 80 -- Personal Use Products