

TIMBER SALE REPORT AND APPRAISAL

MINNIE BEETLE SALVAGE – 2015

Prepared by: Rachael Sanchez Date: 11-10-15
Rachael Sanchez, Sales Prep Forester
Divide Ranger District

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

Approved by: Martha Williamson Date: 11.6.15
Martha Williamson
District Ranger, Divide RD

I. SUMMARY OF RECOMMENDATIONS

Advertised as Scaled Sale

INCLUDED VOLUME		
Engelmann Spruce	All conifer species	5540 CCF
	Total (included volume only)	5540 CCF

REQUIRED DEPOSITS		
	Road Maintenance	\$0.00/CCF
	Surface Rock Replacement	\$0.00/CCF
	Slash Deposit	\$0.92/CCF

TOTAL SALE VALUE	\$5.00/CCF X 5540	\$27,700
ADVERTISED VALUE	By Species and Product	
SAWTIMBER	ES	\$5.00/CCF

APPRAISAL BULLETIN NO	BU231015	
Support Information		
	Normal Operating Season	07/01 – 10/31
	Fire Liability	\$2,000.00
	Termination Date	11/30/2019
	Method of Bidding	Sealed Bid
	Escalated	Yes
	Bid Guarantee	\$2,800.00
	Minimum Performance Bond	\$9,800.00

This sale complies with Section 6(g), 3(e) - (f) of the National Forest Management Act of 1976, (36 CFR 233.3), the (revised) Rio Grande National Forest Land and Resource Plan (approved 11/7/96), and the Black Mesa Vegetation Management Project Environmental Impact Statement and Record of Decision (approved 03/27/2013).

II. DESCRIPTION OF SALE AREA

A. Location

The sale is found within FS Veg Units RH0305- 154, 117, 121, 141, 130, 106, 126, 115, 112, 105 and 216 and RH0203- 216, 224, 230, 205, 223, 229, 218, 222, 213, 191, 194, 200, 178, 190, 180 and 188 on the Divide Ranger District of the Rio Grande National Forest. The legal description is: T41N, R3W, all or portions of sections 10, 11, 14, 15, 16, 17, 20, 21, 22 and 23, all in the NMPM and all in Hinsdale County, Colorado. Access from Del Norte, Colorado is: travel west on US Highway 160 to South Fork for approximately 16 miles, turn north onto US Highway 149 and proceed towards Creede for approximately 21 miles, travel through Creede on Highway 149 for approximately 23 miles to NFSR 490 (Minnie Mountain Road). Take NFSR 490 for approximately 3 miles to the beginning of the sale area. There is a gate at the beginning of NFSR 490 that will need to stay closed at all times.

B. Acreage, Volume Data, and General Sale Information

This sale is comprised of 5 cutting units totaling approximately 945.3 harvest acres, on National Forest land. This sale is not leave tree marked, instead the required 6 leave trees per acre will be left during harvest using the Designation by Species and Diameter (C2.3521#) provision in the contract. This provision is intended to retain the minimum of 6 Engelmann spruce leave trees per acre, 11 inches or more in DBH with a minimum height of 25 feet. A stump diameter of 13 inches will be used for this sale to ensure the larger trees are being left. The included volume was cruised using the point count measure method.

Using the cruise data, average volume per tree will be calculated for trees DBH \geq 12 inches using the local volume table generated from the cruise. Total leave tree count per unit will be based on unit acreage and six leave trees per acre. Total leave tree count per unit will be multiplied by the average leave tree volume; net volume to be left in each unit will be deleted from the cruise volume in terms of percent volume reduction in TIM. The cruise was designed to scaling standards to stay below a combined sampling error of + or - 30% with an estimated sale value of \$54,196.22 based on the average of salvage sales most recently sold on the forest. The actual cruise error was 23.20% for all included volume. This meets Regional and WO handbook standards in WO amendments 2409.12 –2000-2. This sale will be sold as a Load Count Scale at 11.9 lbs/CCF (data from Kurt Stagner, R2 Certified Scaler).

Included timber to be harvested: Dead Engelmann spruce.

C. Land Status
National Forest land.

D. Basis for Selecting the Area
This area was identified for harvest to salvage beetle infested trees as a result of favorable spruce beetle conditions and to promote regeneration in old group selection areas. The area lies within Forest Products Management area prescription (5.13) of the revised Rio Grande National Forest Land and Resource Management Plan. For further information, please refer to the Black Mesa Vegetation Management Project Environmental Impact Statement and Record of Decision.

E. Relationship to Other Uses
See the Black Mesa Vegetation Management Project Environmental Impact Statement.

F. Project Design Criteria
Project Design Criteria and monitoring measures identified in the Black Mesa Vegetation Management Project Environmental Impact Statement and the specialist reports and amendments to specialist reports specific for this sale are highlighted and how each one is addressed is listed here.

Timing of Operations
No hauling during weekends from Memorial Day weekend to Labor Day weekend, and no hauling the 3 rd through the 5 th of July; Friday – Monday of Labor Day Weekend; and Friday starting at noon, Saturday, Sunday of the first big game rifle hunting seasons. <i>C5.12# "Use of Roads by Purchaser" is included in this contract. This provision restricts hauling during the specified timeframes above.</i>
No hauling will occur along FSR 520 prior to 7 am or after 7 pm from Memorial Day through Labor Day, unless otherwise approved by the Forest Service. <i>Not applicable to this sale.</i>
Winter logging is encouraged to reduce ground disturbance and impact to potentially undocumented heritage resources. <i>Winter logging is permitted in this sale.</i>
Winter logging is encouraged to limit direct disturbance to the fewest number of wildlife species as possible but will cease by May 1 at which time lynx kittens are being born. <i>Winter logging is permitted in this sale. C6.312# "Sale Operation Restrictions" is included in this contract and will prohibit logging activities during the specified timeframe.</i>
Harvest activities will generally not occur between May 1 to July 1 to minimize disturbance to lynx kittens and during elk calving and deer fawning periods, unless otherwise approved by the District Ranger and District Biologist. <i>C6.312# is included in this contract and will restrict felling and skidding during the specified timeframe, unless otherwise agreed to.</i>
Wildlife/TES/MIS
The project has been surveyed for TES and MIS species. Surveys will continue during project implementation. If a species is discovered, they will be protected as indicated in the Forest Plan with consultation with the U.S. Fish and Wildlife Service, as necessary. <i>B6.24 "Protection Measures Needed for Plants, Animals, Cultural Resources, and Cave Resources is included in this contract.</i>
Gated roads utilized during logging activities and following logging will remain closed to the general public to minimize wildlife disturbance (and for public safety). An exception may be temporarily opening roads for public firewood collection following harvest. <i>C5.41# "Closure to Use by Others" will be included in this contract to ensure the gate on NFSR 490 stays shut during timber harvest operations.</i>

Noxious Weed Management
All organic material used for rehabilitation: seed, straw, erosion control material, or other, will be certified weed free. C6.602# "Protection of Disturbed Areas from Establishment of Noxious Weeds is included in this contract and specifies the seed mixture required for rehabilitation.
The timber purchaser or other contractors will be required to clean all logging and construction equipment that operates off roads prior to entry to the project area. B6.35 "Equipment Cleaning" is in this contract requiring all off road equipment be cleaned and inspected before moving to sale area.
Haul routes and highly disturbed areas, such as landings, will be treated for noxious weed infestations as needed for five years following harvest. Noxious weed spraying along roads, landings and skidtrails has been indentified in the KV plan or will be funded with appropriated dollars.
Road fill and road base material brought in off site will come from a borrow source free of State Listed Noxious Weeds. The Forest Service will inspect and approve the borrow source location prior to materials being hauled to the project area. Not applicable to this sale.
Livestock Management
As needed in individual Sale Areas, temporary fences would be constructed to restrict livestock access to the project areas during harvest and the early stages of planting and regeneration of the harvest area. Where possible, any new fences would utilize existing barriers and openings or openings created by harvest activities to reduce the need to clear brush or trees. When the temporary fence is no longer needed, it would be removed. Sale Administration Team will notify Range Team if problems exist with livestock during harvest operations and determine the best course of action at that time. Fencing for regeneration purposes will be determined after harvest, if needed. This may be added to the KV plan if funds exist before sale closure or it may be funded with appropriated money, if needed.
If current natural barriers are made ineffective with the development of skid trails or tree removal, new fence locations would be identified on a sale area basis. Fences would be constructed as necessary to ensure allotment rotations are in compliance with individual Allotment Management Plans and Annual Operating Instructions. To be determined after harvest operations are complete by the Range and Timber Teams. Natural barriers are expected to exist after harvest.
Protect Improvements
Identify, avoid, and protect overhead and underground utility lines during road improvement, maintenance, and closure work, as well as during material haul and equipment transport. B6.22 "Protect Improvements" is included in this contract.
Any protected improvements such as fences and water developments, identified on sale area maps or in fuel treatment areas, will be protected during harvest or treatment activities. Damaged improvements will be repaired or replaced, depending upon the amount of damage. B6.22 "Protect Improvements" is included in the contract. Any protected improvements that exist within the sale area have been identified on the Sale Area/Vicinity Map.
Hazard Trees
Hand felling of hazard trees is permitted in the WIZ. Trees shall be directionally felled and may be left in place to maintain or improve stream and riparian health. If necessary, felled trees may be stabilized to prevent movement. The Forest timber sale or contract administrator shall consult the Forest hydrologist or wildlife/fish biologist prior to granting approval to remove hazard trees from WIZ areas. Not applicable to this sale.
Any hazard tree, and associated slash, cut and lying within 100 feet upstream of a perennial or intermittent culvert/bridge crossing and within 25 feet from the stream edge that has the potential to obstruct the crossing shall be stabilized, removed, or moved at least 50 feet upslope away from the stream. Not applicable to this sale.
Felled hazard trees and slash shall be removed from roadside ditches and culverts, including removing from cross drains and sediment traps. C5.31# "Road Maintenance Requirements" is included in this contract.
Felled hazard trees may be removed from stream corridors or riparian areas with Forest Service approval when they create unacceptable fuel loading; fail to meet visual objectives; or create unacceptable limits to human, livestock, or wildlife movement. Not applicable to this sale.
Hazard trees shall not be skidded across perennial or intermittent stream channels. Not applicable to this sale.
If hazard trees need to be removed from WIZ areas, use at least one-end suspension and felled in a way that protects vegetation from damage. Not applicable to this sale.
Avoid creating open linear corridors when removing hazard trees along roads, powerlines or other linear infrastructure; vary corridor width considering natural vegetation patterns and topography to blend treatments into local landscape. Addressed during unit layout; linear corridors were avoided.

<p>To the extent practicable, hazard trees cut to remain on site within the visible immediate foreground (0-300 feet) of FSRs 515, 516, 520 or Highway 149, will be arranged at random as found in nature to maintain high scenic integrity. <i>Not applicable to this sale; there are not any units within 300 feet of the roads mentioned.</i></p>
<p>Soil and Water Protection</p>
<p>If whole tree yarding is used, limbs and/or tops shall be returned to the unit if 15% or more of the unit has exposed mineral soil; this material shall be distributed in areas primarily comprised of bare mineral soils. <i>This criteria is met by keeping skid trail spacing 100 feet apart. If a unit approaches the 15% exposed mineral soil criteria, limbs and/or tops will be returned to the unit. C6.42# "Skidding and Yarding" is included in this contract.</i></p>
<p>Operate heavy equipment for land treatments only when soils are dry, soil moisture is below the plastic limit, or protected by at least 1 foot of packed snow or 2 inches of frozen soil. <i>C6.42# "Skidding and Yarding" is included in this contract and soil moisture guidelines are attached to the Logging Plan.</i></p>
<p>Re-use existing skid trails and landings whenever practical. <i>C6.42# "Skidding and Yarding" is included in this contract stating skid trails will be located and approved in advance of felling. Notes to Sale Administration team will be identified in the logging plan to re-use existing skid trails where applicable.</i></p>
<p>Skid trail locations will be agreed to by the Forest Service in advance of construction; spacing will be approximately 100 feet apart, allowing for topographic variation and skid trail convergence; skid trails will be waterbarred at least every 100 feet on gradients greater than 20 percent, otherwise where needed depending on slope and ground conditions as per BMPs; slash will be placed on main skid trails as needed to control erosion. <i>C6.42# "Skidding and Yarding" is include in this contract. These specifications will be met.</i></p>
<p>Skidding equipment will generally be restricted to slopes <35%. Addressed during unit layout and in the logging plan; <i>cutting units contain slopes of >35%.</i></p>
<p>During project implementation, temporary roads will be outsloped, covered with slash (when needed), and blocked to vehicle access after the harvest season and before onset of the wet season. <i>Temporary roads will be monitored by the Sale Administration team. B6.63 "Temporary Roads" and C5.35# "Closure of Temporary Roads" is included in this contract.</i></p>
<p>Units with an existing detrimental soil disturbance level $\geq 12\%$ will be treated as necessary to ensure post-treatment forest plan compliance, as determined by Forest Soil Scientist.</p> <p><i>Detrimental disturbance levels will be brought within the 15% standard through post-harvest subsoiling/ripping of primary skid trails, landings, and/or temporary roads to a depth of 12-24 inches and seeded or covered with slash after harvest (and before unit acceptance), as needed. If harvested, these treatments will occur on units 1, 2, 3, 4, 7, 8, 17, 18, 22, 24, 25. It will also include any other units which are determined to exceed 15% detrimental disturbance after harvest. Soil disturbance will be monitored throughout harvest activities, however none of the units mentioned above fall within the Sale Area Boundary.</i></p>
<p>Temporary stream crossing structures (i.e. culverts, bridges, etc.) will be designed to provide for passage of flows and sediment, withstand expected flood flows, and allow free movement of resident aquatic life. <i>B6.5 "Protected Streamcourses and C6.6# "Erosion Control and Prevention" are included in this contract.</i> Upon project completion, remove all temporary crossings, restore the channel morphology, and revegetate channel banks. <i>B6.63 "Temporary Roads" and C5.35# "Closure of Temporary Roads" is included in this contract.</i></p>
<p>Slash piles shall be located at least 50 feet (hand piles) or 200 feet (machine piles) from perennial streams, lakes, ponds, wetlands, or riparian areas. <i>C6.7# "Slash Treatment" is included in this contract.</i></p>
<p>A no harvest buffer has been established along all intermittent and perennial stream channels for 100 feet on both sides of the channel. No heavy equipment will operate within this buffer except at designated crossings, unless authorized by the Forest Service where site-specific conditions would minimize stream and riparian impacts. <i>C6.50# "Streamside Management Zones" is included in this contract. This provision pertains to one SMZ within the sale area; all other streams were excluded during layout.</i></p>
<p>A no-harvest buffer of 50 foot would be implemented on ephemeral channels to ensure watersheds protection from sediment generated from harvested areas. <i>Not applicable to this sale.</i></p>
<p>Hydrology, soils specialists, or their designees will inspect harvest units for seepages or riparian areas. Where found, these features will be protected through sale marking and layout; a 100 ft. no-harvest or skidding buffer will be maintained from the edge of all wetlands. <i>The harvest buffer for riparian areas was implemented during unit layout.</i></p>
<p>All roads (existing, new temporary, or old non-system) used for project will be evaluated to identify and correct erosion or sediment problems. Additional cross drains or other standard measures will be used as appropriate to divert any road drainage into buffer strips and minimize road drainage into stream channels. <i>Existing roads have been evaluated and reconstruction is planned to fix erosion/sediment problems and cross drains where needed.</i></p>

Existing vegetation on cut and fill slopes would be retained as much as possible to limit sediment movement away from road. C5.31# "Road Maintenance Requirements" is included in this contract.
Where existing roads will be reconstructed within 100 feet of intermittent or perennial streams, hydrology, soil specialists, or their designees will be consulted to ensure sediment sources are disconnected from stream channels. If necessary, hardening, filter fence, straw wattles, timber slash windrows, or other measures will be used as appropriate to prevent sediment from entering a stream course. Roads being reconstructed within these areas will be evaluated during reconstruction. Preventative measures for sedimentation have been identified in the road package. C5.31# "Road Maintenance Requirements" is included in this contract.
Following timber and reforestation operations, all temporary roads used for this project will be closed and obliterated. C5.35# "Closure of Temporary Roads" is included in this contract.
Scenic Resources
No single spaced trees will be left along ridgelines or openings. Addressed during sale layout.
Locate openings of units seen from FSRs 515, 516, 520 and Highway 149 (units 6, 7, 12) adjacent/joining natural openings, so that treated areas look like natural extensions of meadows. Not applicable to this sale.
Visible stumps within the immediate foreground (0-300 feet) of FSRs 515, 516, 520 and Highway 149 (units 6, 7, 12) should be cut as close to the ground as practicable, a maximum stump height of 6 inches is recommended. There are not any units within 300 feet of the specified roads. Not applicable to this sale.
Seen portions of Unit 6 and Unit 12 would have form and shape that simulates natural patterns (i.e., avoiding straight lines and sharp corners). Edges would be tied into existing meadows and openings where possible; feather edges to allow gradual transition into the untreated adjacent forest area (as opposed to a harsh line); Include Landscape Architect in final layout for these units. These units are not within the Sale Area Boundary; not applicable to this sale.
Patterns from fuels treatments will resemble characteristic landscape patterns for aspen with irregular edges. Not applicable to this sale.
Vegetation Protection/Biodiversity/Regeneration
In all salvage stands that exceed 50 percent removal of overstory spruce, reforestation surveys will be conducted, and if the survey indicates that Forest Plan stocking Standards will not be met, these stands will be artificially reforested to meet or exceed Forest Plan Standards. Reforestation and timber evaluation are planned for in the KV plan after harvest to determine reforestation needs.
To protect soil, leave trees, and advanced regeneration, tractor skid trails will be located and approved in advance of falling and logs will be skidded with the leading end free of the ground to reduce ground disturbance. C6.42# "Skidding and Yarding" and C6.411 "Felling and Bucking" are included in this contract designating skidtrail spacing, directional falling and skidding with leading end free of the ground.
Retain a minimum of 6 snags/acre in various stages of decay and distribution. Select snags with a larger-than-average diameter for the stand, where available. Minimum snag requirements, as well as, size requirements are met with C2.3521# "Designation by Species and Diameter". The purchaser is required to leave required number of snags during harvest, with a 13" stump diameter; equating to 11" DBH, which is larger than the average sale merchantable diameter. The Sale Administration team will monitor and ensure that the snag requirements are met during harvest.
Trees with known active bird nests/cavities will be designated for retention. C2.3521# "Designation by Species and Diameter" is included in this contract. The purchaser and Sale Administration team will work to ensure this requirement is met during harvest. Notes to the sale administrator can be found in the logging plan.
Retain all live/uninfested trees in salvage units, except for trees that need to be removed for operational/safety purposes. All live/uninfested trees will be left during harvest except if need to be removed for operational/safety purposes. It is unlikely that any live/uninfested spruce trees exist within harvest units. C2.3521 "Designation by Species and Diameter" is included in this contract. Live aspen and fir are not designated to be cut and will be left in the salvage units.
Effects to understory vegetation and dense horizontal cover will be minimized to benefit snowshoe hare and lynx by identifying skid trail locations away from dense understory and spacing skid trails at least 100 feet apart, allowing for topographic variation and skid trail convergence. C6.42# Skidding and Yarding is included in this contract designating skidtrail spacing. Notes to the Sale Administration team in logging plan specifies the importance of protecting existing regeneration.
Place landings in open areas if available, to protect understory. Landings will be placed in open areas, as much as possible. Notes to Sale Administration team in logging plan specifies the importance of landing placement.
Retain patches of overstory trees with dense understory. This requirement will be met during harvest. The purchaser and Sale Administration team will work to meet this requirement. C2.3251# "Designation by Species and Diameter" is included in this contract. Two units were dropped from the sale area to protect regeneration and other resources.

<p>Leave sufficient trees or retain existing large woody debris (a minimum of 10-15 tons per acre in spruce fir) on harvested sites to retain moisture, trap soil movement, provide microsites for establishment of forbs, grasses, shrubs and trees, and to provide habitat for wildlife. <i>C6.7# is included in this contract stating 10-15 tons per acre of course woody debris is required for spruce/fir forests. CWD guidelines are included in the Logging Plan.</i></p>
<p>If chipping/grinding or other mastication method is used to treat understory fuels, slash shall not cover more than 50% of ground surface and depth shall not exceed 4 inches to minimize impacts to understory vegetation. <i>Not applicable to this sale.</i></p>
<p>Seeding of disturbed sites would utilize a native subalpine grass mix and application prescriptions. <i>C6.601# "Erosion control seeding" and C6.602# "Protection of Disturbed Areas from Establishment of Noxious Weeds" are included in this contract specifying seed mix requirements.</i></p>
<p>Public Safety/Air Quality</p>
<p>Roads used for vegetation treatment and log hauling would be maintained in accordance with the contract requirements, including dust abatement during dry seasons. <i>C5.31# "Road Maintenance Requirements" is included in this contract. Dust abatement is not applicable to this sale.</i></p>
<p>Temporary traffic control in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) would be utilized for roads open to public motor vehicle use. <i>B6.33 "Safety" is included in this contract and specifies the MUTCD signs to be used.</i></p>
<p>Notify the public of logging and/or burning activities through media such as local newspapers, radio, and the Forest website. <i>The Sale Administration team will coordinate with Public Affairs on purchaser's plan of operations.</i></p>
<p>Caution signs notifying public of logging activities will be prominently displayed at start of all open roads and all junctions. <i>B6.33 "Safety" is included in this contract and shows where log hauling signs should be posted. Sign locations are also shown on the Supplemental Road Map.</i></p>
<p>All gated roads will remain closed during harvest activities. <i>The gate on NFSR 490 will remain closed during harvest activities. C5.41# "Closure to Use by Others" is included in this contract.</i></p>
<p>If log hauling occurs during the summer, dust abatement will be required on the haul route portion of FSR 520 adjacent to recreation sites and private homes. <i>Not applicable to this sale.</i></p>
<p>Any system roads utilized for winter logging activities will provide for two way traffic, either through width of plowing or frequent pull-outs. <i>C5.36# "Snow Removal" is included in this contract.</i></p>
<p>Sale Administration Personnel will emphasize road safety and the need for reduced speeds to Logging Operators due to the high level of motorized recreation activities, especially on FSR 520. <i>The Sale Administration team will inform purchasers of the high level of use and the need for reduced speed.</i></p>
<p>Prior to pile burning, a burn permit will be obtained from the State of Colorado to ensure operations meet air quality standards and smoke impacts are minimized. <i>Fire personnel will obtain burn permits prior to pile burning.</i></p>
<p>Heritage</p>
<p>Site 5HN1300.1 is the unevaluated site representing an historic telephone line. All remnants of this line will be avoided within Unit 16 until further research and documentation can occur. <i>Unit 16 is not within this sale; not applicable to this contract.</i> The following eligible and unevaluated sites will also be avoided: 5HN9, 5HN10, 5HN11, 5HN53, 5HN56, 5HN57, 5HN58, 5HN59, 5HN60, 5HN61, 5HN62, 5HN63, 5HN70, 5HN76, 5HN222, 5HN1203, 5HN1204, 5HN1205, 5HN1294 and 5HN1300.1. Location data will be provided to the timber program so that they can easily avoid these sites. <i>None of the sites referenced above are within the Sale Area Boundary; not applicable to this sale.</i></p>
<p>The Discovery and Education stipulation below will be emphasized in areas with large aspen with regard to avoidance and protection of potential undocumented arboglyphs, especially in the area of Stage Station Flats. <i>B6.24 "Protection Measures Needed for Plants, Animals, Cultural Resources, and Cave Resources in included in this contract.</i></p>
<p>Any new road construction or improvements not previously analyzed within this environmental analysis will require a review and potential inventory by Forest Service archaeologists. <i>Forest archaeologists will be notified of any new road construction or improvements not analyzed in this analysis.</i></p>

All persons associated with operations under this authorization must be informed that any objects or sites of cultural, paleontological, or scientific value such as historic or prehistoric resources, graves or grave markers, human remains, ruins, cabins, rock art, fossils, or artifacts shall not be damaged, destroyed, removed, moved, or disturbed. If in connection with operations under this authorization any of the above resources are encountered, the proponent shall immediately suspend all activities in the immediate vicinity of the discovery that might further disturb such materials and notify the Rio Grande National Forest authorized officer of the findings. The discovery must be protected until notified in writing to proceed by the authorized officer (36 CFR 800.110 & 112, 43 CFR 10.4). ***B6.24 "Protection Measures Needed for Plants, Animals, Cultural Resources, and Cave Resources is included in this contract."***

III. CONDITION OF SALE

A. Planned Cutting Methods

The harvest system for this sale is ground-based – tractor/mechanical harvester on included timber.

B. Regeneration and Sale Area Betterment

Planting in high mortality areas is expected. Areas will be surveyed after harvest to determine regeneration needs. The KV plan includes regeneration surveys to ensure that this occurs.

C. Slash Treatment

C6.7#, states how slash will be treated in this sale.

D. Erosion Control

Provisions C6.601# and C6.602# are included in the contract.

E. Specified New Road Construction & Road Reconstruction

Specified Road Reconstruction is planned and identified in the road package.

F. Check Cruise Information

A check cruise was done and passed on this sale. Contact Kevin Duda, forest check cruiser, for more information.

IV. APPRAISAL PREMISE

A. Volume Compilation

A summary of the volume determination is attached.

B. Plan of Operation

Over three operating seasons is assumed adequate to complete this sale.

C. Appraisal Point

Regional direction recently stated that all sawlog sales will be appraised to Montrose Forest Products in Montrose, Colorado given the current sawlog market condition. They also manufacture the end product.

D. Load Count Factor Derivation

The load count factor for this contract is from Kurt Stagner, R2 Certified Scaler.

V. APPRAISAL SUMMARIES

See the attached 2400-17 Appraisal Summary. Appraisal Bulletin used for this appraisal = BU231015

VII. VOLUME & COST CALCULATIONS

2400-17

Sale Volume Calculation

Sale Unit Volume Summary & Live and Dead Volume Calculation

Haul Cost

Road Maintenance Cost

Temporary Road Calculation

Logging Plan and Map

Performance Bond Calculation & Bid Guarantee

Unusual Adjustment Calculation & Fire Liability (AT15)

Weight Calculation

Silvicultural Prescription

Marking Guides and Supplements

Cruise Design, Cruise Addendums, Cruise Design Appendices

Cruise Printout
Slash Plan & Costs
K-V Plan & Costs
Salvage Sale Fund & Costs