

TIMBER SALE REPORT
And
APPRAISAL SUMMARY

Stars# 24399

Sale # 003

BOOTLEG SALVAGE REOFFER 2 TIMBER SALE

Hahns Peak/Bears Ears Ranger District

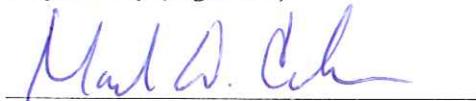
Medicine Bow-Routt National Forests



Prepared By (Signature)

9-16-14

Date



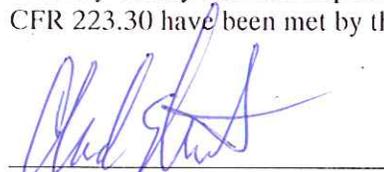
Reviewed By (Signature)

9-16-14

Date

Certification

I hereby certify that the requirements of the Secretary's Regulation 36 CFR 223.30 have been met by this timber sale.



District Ranger

9/17/14

Date

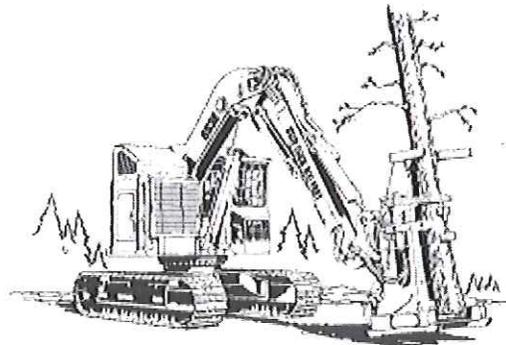
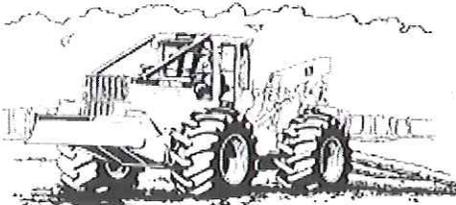


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Environmental Coordination and Certification

1. Environmental Assessment(EA): Little Snake North Timber Sale and Fuels Reduction Project authorizes the harvest and removal of timber products in the Bootleg Salvage Reoffer 2 Timber Sale. The Decision Notice(DN) was approved on: 12/16/2009 : by Jamie Kingbury in accordance with the management requirements and constraints identified in the Environmental Assessment and specifically that: (Ref. FSM 2432.04b)

- a. Silvicultural treatments were prescribed or reviewed by a certified Silviculturist and are appropriate to the management objective of the area.
- b. The designation of individual trees and cutting units represents proper application of the silvicultural prescriptions.
- c. The selected logging system provides the most economical method of harvesting timber that will accomplish the desired result and produce a quality land management job.
- d. Measures prescribed for coordination with other resources and the protection of the area have been incorporated in the layout and in the contract where appropriate. Documentation of how the mitigation measures for this sale were incorporated to the field design and contract, as specified in the environmental documentation, are attached to this appraisal.
- e. The timber for this sale has been cruised by the procedures and standards in the National Forest Cruising Handbook (FSH 2409.12) and that the cruising meets the sampling error standards of FSH 2409.12, Chapter 41.1. Records of the cruise and check-cruise are on file at the District Office.

2. Silvicultural Prescriptions:

Prepared and Approved By:

<u>Andrew Orlemann</u>	<u>Forester</u>	Date: <u>12/03/2012</u>
<u>David Keefe</u>	<u>R4 Certified Silviculturist</u>	Date: <u>12/03/2012</u>
<u>Jack Lewis</u>	<u>District Ranger</u>	Date: <u>1/29/2013</u>

DESCRIPTION OF SALE:

All referenced documentation, plans, spreadsheets, information and data processed can be found in the corporate database at:

O:\NFS\MBRTB\Program\2400TimberMgmt\2430CommercialTimberSales\HPBE\Bootleg Salvage Reoffer 2 TS

The Bootleg Salvage Reoffer 2 Timber Sale, STARS# 24399 is located on the Hahns Peak/Bears Ears Ranger District of the Medicine Bow-Routt National Forests in Routt County, Colorado. The sale is approximately 40 miles north of Steamboat Spring, CO near the Wyoming/Colorado state line.

Access is available from County Road 129 to National Forest System Road (NFSR) 550.1. The legal description is as follows: T12N, R84W, Sections 18 and 19; T12N, R85W, Sections 13, 14, 22, 23, 24, 25, 26, 27, 28, 33 and 34: 6th P.M., surveyed, Routt County, Colorado. Gross sale

area boundary is 3000 acres harvest acres is 518.27. Unit of measure for the sale is hundred cubic feet (CCF). Total Net live and dead sawtimber is 17808.06 CCF.

There are a total of 17 harvest units to be treated. For all units the cutting designation is C2.3251# designation by species and diameter. Silvicultural prescriptions for all units are located in the sale folder, and include treatments of clearcut with reserve, two aged clearcut with reserve and intermediate salvage and/or sanitation within a two-aged shelterwood system with reserve.

The sale has a large road construction package included in the contract. A required 8.91 miles of reconstruction are needed to access units. The sale is reoffered as flat rate.

LAYOUT & DESIGNATION

See marking guides for specifics of all marking within the sale.

All units are marked with tracer paint.

All boundaries, exclusions and reserve trees were marked with Orange paint batches AO898, WO240 & XO191.

Individual tree marking (ITM) with Blue paint batch XO159.

ITM Cruise trees were marked with Green paint batch XO469.

Plot Cruise trees were marked with Green paint batch XO469.

Corrections were made with Black paint batch BO672.

Unit layout was started in 2009 and marking was completed in the summer of 2013.

Designation	Acres	Units	Volume	Volume / Acre
DxLP 10" min. (C2.3521#)	150.90	13, 15, 18, 19, 30	5305.80	35.16
DxLP 10" min. ITM (C2.3521#)	367.37	6, 8, 11, 12, 17, 20, 21, 22, 24, 40, 41, 42	12502.26	34.03

CRUISE

Cruise designed and implementation has been completed pursuant with FSH 2409.12 Timber Cruising Handbook.

Cruise specifics can be found in the cruise plan and output files. In general, the sale volume was determined from variable plot and sample tree cruise methodologies.

The weighted standard error for net volume cruised is: +/-14.34%

Cruise designed by: Craig Kasten Date: 07/25/2013 Addendum: 12/09/2013, 03/03/2014

Cruise completed date: 08/29/2013

Successful check cruise by: Cary Green Date check cruise: 11/20/2013

Members of Cruising Crew	Type of Certification	Expiration Date
Jeff Hartling	Qualified	Indefinite
Craig Kasten	Advanced	Indefinite

VOLUMES

Average Quadratic Mean Diameter for the sale is 14.0 inches and average height is 76.2 feet. For a further breakdown of tree defect, please see the cruise reports which display defect by strata, live or dead, and species.

Cruised Volume by Species, Live and Dead, Sawtimber only			
Species	Live	Fading	Dead
Lodgepole Pine	492.64		16123.19
Engelmann Spruce	26.48		1164.75
Subalpine Fir	0		0

A2 - Volume Estimate and Utilization Standards							
Contract Species	Product	Volume	DBH	# pieces	Length	DIB	Merch Factor
Lodgepole Pine and Other Conifer	Sawtimber	16615.83	9.0	1	8	7	10.67
Engelmann Spruce	Sawtimber	1192.23	7.0	1	8	6	10.67
Timber Subject to Agreement C2.11#							
Lodgepole Pine and Other Conifer	Misc-Conv	unestimated	5.0	1	8	4	NA

Cutting Unit Table				
Unit #	RX's	Acres	Volume CCF	Designation
6	Salvage/Sanitation	74.66	2360.88	DxLP10"min, ITM
8	Salvage/Sanitation	55.93	1906.03	DxLP10"min, ITM
11	Salvage/Sanitation	90.79	3394.86	DxLP10"min, ITM
12	Clearcut W Reserves	5.26	213.02	DxLP10"min, ITM
13	Salvage/Sanitation	55.32	1945.11	DxLP10"min
15	Salvage/Sanitation	48.26	1696.87	DxLP10"min
17	Salvage/Sanitation	13.16	449.39	DxLP10"min, ITM
18	Clearcut W Reserves	11.51	404.70	DxLP10"min
19	Salvage/Sanitation	28.99	1019.32	DxLP10"min
20	Salvage/Sanitation	17.39	591.47	DxLP10"min, ITM
21	Salvage/Sanitation	48.55	1520.22	DxLP10"min, ITM
22	Clearcut W Reserves	24.57	825.75	DxLP10"min, ITM
24	Salvage/Sanitation	15.95	526.16	DxLP10"min, ITM
30	Salvage/Sanitation	6.82	239.80	DxLP10"min
40	Salvage/Sanitation	9.24	284.47	DxLP10"min, ITM
41	Salvage/Sanitation	5.99	235.97	DxLP10"min, ITM
42	Salvage/Sanitation	5.88	194.03	DxLP10"min, ITM
Total		518.27	17808.06	

CONTRACT PREPARATION INFORMATION

- A. Escalation: **No Reoffered at flat rate**
- B. Scaled or Tree Measurement: **Scaled**
- C. Specified Roads Present: **Yes**
- D. Value of Sale: **\$309,228.57**
- E. Contract Type: **2400-6**
- F. Advertised: **TBD** Bid Opening: **TBD** Termination: **09/30/2019**
- G. Bid Method: **Sealed Bid** Bid Form: **Weighted Average Bid**
- H. Periodic Payment Initial: **TBD** Additional: **TBD**
- I. Performance Bond: **\$31,000**
- J. Downpayment: **\$31,000**
- K. Appraisal Method: **Transaction Evidence**
- L. Normal Operating Season: **June 15 to October 15**
- M. Fire Precautionary Period: **May 1 to November 15**
- N. Required Deposits
 - 1. Slash Treatment Deposit (BD Plan): **\$0.80**
 - 2. Surface Rock Replacement Deposit: **\$5.78**
 - 3. Blade Maintenance Deposit: **\$0.00**
 - 4. Engineering Services Deposit: **\$18,375.00**
- O. Total Road Cost input for 2400-17 includes Specified Roads, Deposit for Engineering Services and C5.41 Road Closure estimate rounded: **\$98,011.00**

ROAD PACKAGE

See road package for full details of road construction and reconstruction.

Specified Roads										
Road	Termini	Work Class	TSL	ML	Design Class	Survey	Design	Stake	Cost	Completion Date
412.1D	0.00-0.23	Reconstruction	C	1	S5	FS	FS	FS-BC	\$7115.88	10/15/2016
412.1E	0.00-0.22	Reconstruction	C	1	S5	FS	FS	FS-BC	\$1505.92	10/15/2016

412.1H	0.00-1.63	Reconstruction	C	1	S5	FS	FS	FS-BC	\$9195.13	10/15/2016
507.1	0.00-0.05	Reconstruction	C	2	D15	FS	FS	FS-BC	\$1056.40	10/15/2016
507.1	1.52-3.40	Reconstruction	C	2	S5	FS	FS	FS-BC	\$13486.92	10/15/2016
507.1A	0.00-1.22	Reconstruction	C	1	S5	FS	FS	FS-BC	\$10905.21	10/15/2016
507.1C	0.00-0.95	Reconstruction	C	1	S5	FS	FS	FS-BC	\$6535.09	10/15/2016
507.1E	0.00-0.71	Reconstruction	C	1	S5	FS	FS	FS-BC	\$5542.95	10/15/2016
507.1I	0.00-0.96	Reconstruction	C	1	S5	FS	FS	FS-BC	\$6268.23	10/15/2016
507.1J	0.00-0.11	Reconstruction	C	1	S5	FS	FS	FS-BC	\$900.03	10/15/2016
507.1K	0.00-0.27	Reconstruction	C	1	S5	FS	FS	FS-BC	\$1682.25	10/15/2016
507.1M	0.00-0.28	Reconstruction	C	1	S5	FS	FS	FS-BC	\$1087.65	10/15/2016
507.1N	0.00-0.38	Reconstruction	C	1	S5	FS	FS	FS-BC	\$2854.40	10/15/2016
Total									\$68136.06	

Reconstruction Engineering Deposit: \$18,375.00

ROAD MAINTENANCE AND HAUL COST

The Road Maintenance Spreadsheet shows what roads the Purchaser will maintain and the roads he will pay a deposit to the Forest Service to maintain.

Road	Termini		Miles	Applicable Prehaul Road Maintenance Specifications								
	From	To		800	801	802	803	804	805	807	808	
412.1	0.00	3.22	3.22			P	P		P	P		
507.1	0.05	1.52	1.47			P	P		P	P		

P = Purchaser Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Party

Road	Termini		Miles	Applicable During Haul Road Maintenance Specifications								
	From	To		800	801	802	803	804	805	807	808	
412.1	0.00	3.22	3.22		P	P	P	P	P	P	P	
412.1D	0.00	0.23	0.23		P	P	P	P	P	P	P	
412.1E	0.00	0.22	0.22		P	P	P	P	P	P	P	
412.1H	0.00	1.63	1.63		P	P	P	P	P	P	P	
507.1	0.00	3.41	3.41		P	P	P	P	P	P	P	
507.1A	0.00	1.22	1.22		P	P	P	P	P	P	P	
507.1E	0.00	0.71	0.71		P	P	P	P	P	P	P	
507.1C	0.00	0.95	0.95		P	P	P	P	P	P	P	
507.1I	0.00	0.96	0.96		P	P	P	P	P	P	P	
507.1J	0.00	0.11	0.11		P	P	P	P	P	P	P	

507.1K	0.00	0.28	0.28		P	P	P	P	P	P	P		
507.1 M	0.00	0.28	0.28		P	P	P	P	P	P	P		
507.1N	0.00	0.38	0.38		P	P	P	P	P	P	P		
550.1	13.74	40.09	26.35		P	P	P	P	P		P		

P = Purchaser Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Party

Road	Termini		Miles	Applicable Post Haul Road Maintenance Specifications									
	From	To		800	801	802	803	804	805	807	808		
412.1	0.00	3.22	3.22		P	P	P	P	P	P	P		
412.1D	0.00	0.23	0.23		P	P	P	P	P	P	P		
412.1E	0.00	0.22	0.22		P	P	P	P	P	P	P		
412.1H	0.00	1.63	1.63		P	P	P	P	P	P	P		
507.1	0.00	3.41	3.41		P	P	P	P	P	P	P		
507.1A	0.00	1.22	1.22		P	P	P	P	P	P	P		
507.1E	0.00	0.71	0.71		P	P	P	P	P	P	P		
507.1C	0.00	0.95	0.95		P	P	P	P	P	P	P		
507.1I	0.00	0.96	0.96		P	P	P	P	P	P	P		
507.1J	0.00	0.11	0.11		P	P	P	P	P	P	P		
507.1K	0.00	0.28	0.28		P	P	P	P	P	P	P		
507.1 M	0.00	0.28	0.28		P	P	P	P	P	P	P		
507.1N	0.00	0.38	0.38		P	P	P	P	P	P	P		
550.1	13.74	40.09	26.35		P	P	P	P	P		P		

P = Purchaser Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Party

Pre-haul Maintenance cost: \$6,022.49 **\$0.34/CCF**

During and Post-Haul Maintenance Cost: **\$10.92** (\$5.78 SRR & \$5.12 PBM)

Log Haul Cost: **\$26.49**

The cost estimate for the quantity of 10 cubic yards for T-801, and T-804 is \$336.00. This dollar amount equates to \$0.02/ CCF, and will be added to road maintenance costs. A separate haul spreadsheet located on the corporate database is used to calculate the log haul cost and during and post haul maintenance.

TEMP ROAD COST

An estimated 3.9 miles of new temporary road is needed to access this sale. The Purchaser will close all miles of temporary road by re-contouring to natural topography. In places where the natural topography is flat or level and no cut or fill slopes exist the roadway will be ripped, slashed and seeded. Costs for this work are calculated using the temp road cost calculation spreadsheet that will be attached at the end of this report. Temporary road costs are calculated from the Cost Estimating Guide for Road Construction, March 2013.

Unless otherwise agreed to by both the Forest Service and the Purchaser, R.O.W. slash from temporary roads will be treated as follows: R.O.W. timber not meeting utilization standards, stumps, limbs and tops shall be scattered outside the clearing limits and lopped and scattered to

lie within 24 inches of the ground. Windrowing is acceptable, so it can be pulled back onto the roadway as part of closure.

Temporary Road Cost Calculation Spreadsheet Narrative

The top portion of the sheet lists all temporary road segments. These segments are broken down into the length in feet by cross slope. The upper right portion of the sheet depicts the dollar amount for each work item by road. Clearing and grubbing cost are calculated in the boxes with the blue heading. Excavation cost are calculated in boxes with the orange heading, closure in red seeding in green and temporary gates in yellow.

1 Clearing and Grubbing: The costs per unit are calculated using an excavator, 2 sawyers, and one crew rig. The amount of clearing was broken three CCF per acre ranges. The estimated CCF per acre of clearing was determined to be approximately 7 CCF. At 7 CCF per acre the clearing work would take about 7 hours to complete. The cost of \$1244.19 per acre will be expanded by acreage determined by cross slope. A portion of the clearing is determined to be merchantable and the cost to yard this material was removed from the total cost of clearing. The total cost of clearing and grubbing is **\$3401.61**.

2 Excavation: The cost per unit is calculated using a D6 dozer capable of moving 80 cubic yards per hour. The cost per cubic yard is \$1.80. This amount is expanded by an average cubic yard per cross slope. The total cost of excavation is **\$12694.32**.

3 Closure: Closure cost were determined using a D6 and excavator working together to re-contour a road back to natural topography. The cost per hour remains static, but the production rate changes by cross slope. The calculated hourly rate is \$249.37. The total cost of closure is **\$18418.82**.

4 Seeding: Seeding cost were determined using 25 pounds of seed per acre, one laborer, and a pickup, at a production rate of one acre per 1.5 hours. The seed cost were determined to average \$8 per pound. The calculated cost per acre for seeding is \$265.74. This cost is expanded by acres per cross slope. The total cost of seeding is **\$1955.40**.

5 Temporary Gates: The cost per gate was determined using \$500 for materials and 8 hours of labor for two people to install. The materials used to build the gate are assumed to be reused when the gate is moved therefore 50% of the material cost will be applied to each gate. The total cost for temporary gate is **\$1206.14**.

Subtotal:

1.	\$3401.61
2.	\$12694.32
3.	\$18418.82
4.	\$1955.40
5.	\$1206.14
Subtotal	\$37676.29

6 Mobilization: Mobilization is 9% of total work.

Total after mobilization: $\$37676.29 \times 1.09 = \mathbf{\$41067.16}$

$\$41067.16 / 17808.06 = \mathbf{\$2.31/CCF}$

SPECIFIED ROAD CLOSURE C5.41#

Specified road closure will follow plans attached to C5.41# in the timber sale contract. Costs for specified road closures were determined by the engineering department.

Road	Cost
412.1D	1154.79
412.1E	78.50
412.1H	2394.79
507.1	652.37
507.1A	1617.86
507.1C	521.83
507.1E	244.41
507.1I	1886.43
507.1J	1332.45
507.1K	94.34
507.1M	1390.02
507.1N	132.15
TOTAL	\$11,499.95

EQUIPMENT WASHING

No equipment washing between units will be required. Washing will only be needed before moving into the sale area unless equipment is coming from an area known to be free of noxious weeds or has same weeds as the sale area.

Cost of washing equipment: $\$300.00 / 17808.06 = \$0.02/CCF$

KV PLAN

Specifics of the sale area improvement plan are detailed in the KV Plan.

Essential KV: **\$52,183**

Planned KV collection: **\$101,552**

SSF PLAN

The amount of available funds for the SSF Plan is determined from total sale value minus minimum to NFF and planned KV collection.

Available Funds: **\$203,224**

Funded: **\$125,215**

$\$125,215 \times 1.623 \text{ (OH)} = \$203,224$

SLASH TREATMENT

Maximum slash depth with cutting units will not exceed 24 inches in depth, slash greater than 24 inches in depth will be scattered, trampled or piled. Slash created at the landing will be piled. This is considered normal industry practice and is included in skid yard costs. Logging slash piles created by the purchaser will be burnt by the Forest Service. The cost to burn piles by Forest Service is detailed in the BD Plan.

$$\text{BD Plan deposit: } \$14,318.00 / 17808.06 = \quad \mathbf{\$0.80/CCF}$$

SALE SKID YARD

A spread sheet was developed to determine average skid distance for the sale. The skid yard spreadsheet uses average skid distance and volume per unit to determine a weighted average skid distance. The sale skid yard cost was determined using the regional average regression equations in the TEA program.

$$\begin{aligned} \text{Average Skid Distance} &= \mathbf{636 \text{ Feet}} \\ \text{The sale skid/yard cost} &= \mathbf{\$89.25} \end{aligned}$$

EROSION CONTROL

Approximately 3000 feet of excavated skid trail will need to be returned to natural contour and seeded after use. There are an estimated 53 landings needed to log this sale and these landings will need to be seeded with grass after use. There are an estimated 5 percent of the harvest acres in skid trails that will need to be grass seeded. Landings are estimated to be approximately 0.25 acres. The estimated cost per foot to re-contour a skid trail is \$1.18. Estimated cost of grass seeding w/o fertilizer per acre, labor included. = \$265.74 The cost for this work will be added to temporary roads, as this is part of the temporary transportation system.

$$3000 \text{ feet of trail} \times \$1.18 = \$3540.00 = \mathbf{\$0.20/CCF}$$

$$53 \text{ landings} \times .25 \text{ acres} = 13.25 \text{ acres}$$

$$\text{Harvest acres } 518.27 \times 0.05 = 25.91 \text{ acres}$$

$$\text{Landing acres } 13.25 + \text{Skid trail acres } 25.91 = 39.16 \text{ acres}$$

$$39.16 \times \$265.74 = \$10406.38$$

$$\$13946.38 \text{ divided by } 17808.06 \text{ CCF} = \mathbf{\$0.78/CCF}$$

PURCHASER OBLIGATION PER OPERATION FIRE

1. The normal amount of men required for operation of the sale = 3 men.
2. Maximum amount of purchaser obligation per operations fire = number of men x semiskilled firefighter wage rate x 12 hrs. x 3 days.
3. 3 men x 12 hr. shift x \$11.32/hr. (AD-2 firefighter, Interagency Incident Business Management Handbook) x 3 days = \$1,222.56 rounded to nearest \$100 = \$1,200.00
4. Use **\$1,200.00**

APPRAISAL BULLETIN# BU210714a

The most advantageous appraisal point was determined to be the mill facility in Saratoga, Wyoming. As per FSH 2409.22-06.3 one appraisal point was chosen because of the single product being appraised (sawlogs), the facility being capable of processing the product, capability of the facility to handle material in the quantities being offered. The Saratoga facility was chosen over mills in Encampment, Wyoming, and Montrose, Colorado because the large size of this sale and Saratoga has the capability and the shortest haul distance. As per FSH 2409.18-45.11 & FSH 2409.22-06.3 the appraisal point chosen is the most advantageous from a transportation standpoint and also meets consideration of other described factors as compared to alternative locations.

Information for input to TEA234				
STARS #	State	County	Gross Acres	Harvest Acres
24399	CO	Routt	3000	518
Legal Description		Construction Miles	Reconstruction Miles	
T12N R85W Sec; 14, 15, 22, 23		0.00 rounded to 0.00	8.90	
Specified Road Cost		Contributing Funds		Sale QMD
\$98,011.01		\$0.00		14.0
Appraisal Base Period		Planned KV		Essential KV
6-13		\$101552		\$52183
Appraisal Point		Haul Miles		Round Trip
Saratoga, WY		53.8		183.53
Haul Cost	Road Maintenance	Sale Slash	Sale Temp Road	
\$26.49	\$11.26	\$0.80	\$3.09	
Ground Based Volume CCF	Ground Based Vol/acre CCF	Ground Based Vol/tree CF	Ground Based Skid Dist Feet	
17808.06	34.36	23	636	
Unit of Measure (UOM)	Product		Timber Property	
03 (CCF)	01 (Sawtimber)		\$0.00	

Road maintenance is a sum of pre-haul (\$0.34), surface rock deposit (\$5.78), blade maintenance (\$5.12), and the cost for T801, T804 (\$0.02).

Sale slash is a sum of BD Plan (\$0.80) and Slash costs (\$0.00).

Specified road cost is a sum of construction and reconstruction (\$68,136.06), reconstruction engineering deposits (\$18,375.00) and closure (\$11,499.95).

Reasons and calculations follow:

All volumes are to be rounded to whole numbers because TEA will not accept a decimal point.

Cruised Volume (Present)		Summed Volume		Volume at Midpoint (Estimated)	
LP	493	LP	493	LP	493 - 99 = 394
LPD	16123	LPD	16123	LPD	16123 + 99 = 16222
ES	26	ES	26	ES	26 - 5 = 21
ESD	1166	ESD	1166	ESD	1166 + 5 = 1171
TF	0	TF	0	TF	0

QUALITY ADJUSTMENT

1. Per new Bulletin BU210714a, Zone 1 haul distance adjustment entered as a quality adjustment; (Base Haul Cost \$59.75 – Sale Haul Cost \$26.49) x 0.5 = haul adjustment.

$$(59.07 - 26.49) \times 0.5 = \text{-\$16.29/CCF.}$$

UNUSUAL ADJUSTMENT

1. The appraiser developed an adjustment for “live deteriorating” timber moving to dead. The appraiser will estimate the amount of recent dead that is moving into the older dead category by contract midpoint, and develop an adjustment to selling value. Use current directive FSH 2409.22 section 51.6-Deteriorating live and dead timber. This Region 2 supplement is effective as of 6/18/2014, and directs a change in determining unusual adjustments.

- A. Appraiser estimates that 20% of the live LP and ES will be dead by mid-point of the contract.

$$(20\% \text{ estimated}) \times 493\text{LP CCF} = 99 \text{ CCF changing to dead.}$$

$$(20\% \text{ estimated}) \times 26\text{ES CCF} = 5 \text{ CCF changing to dead.}$$

- B. 99LP CCF is subtracted from live volume and added to dead volume.
5ES CCF is subtracted from live volume and added to dead volume.

- C. Apply a 9 % reduction of lumber selling value based on current WWPA index in the bulletin for deteriorating Lodgepole Pine sawtimber.
 $398.30 \text{ (WWPA index)} \times .09 \text{ (reduction factor)} \times .54132 \text{ (MBF/CCF from cruise)}$
conversion = $-\$19.40 / \text{CCF}$
This adjustment is to 16222 CCF of deteriorating LP volume.

Apply a 9 % reduction of lumber selling value based on current WWPA index in the bulletin for deteriorating Engelmann Spruce sawtimber.
 $398.30 \text{ (WWPA index)} \times .09 \text{ (reduction factor)} \times .45000 \text{ (MBF/CCF from cruise)}$
conversion = $-\$16.13 / \text{CCF}$
This adjustment is to 1171 CCF of deteriorating ES volume.

- D. Develop total weighted average unusual adjustment for sawtimber.

Lodgepole Pine

$$\frac{(\$0 / \text{CCF} \times 394 \text{ Live CCF}) + (\$19.40 / \text{CCF} \times 16222 \text{ Deteriorating CCF})}{16616 \text{ CCF Total}}$$

$$\$0 + \$314706.80 = \$314706.80 / 16616 \text{ CCF}$$

$$= \text{-\$18.94/CCF (Adjustment for LP Sawtimber)}$$

Engelmann Spruce

$$\frac{(\$0 / \text{CCF} \times 21 \text{ Live CCF}) + (\$16.13 / \text{CCF} \times 1171 \text{ Deteriorating CCF})}{1192 \text{ CCF Total}}$$

$$\$0 + \$18888.23 = \$18888.23 / 1192 \text{ CCF}$$

$$= \text{-\$15.85/CCF (Adjustment for ES Sawtimber)}$$

2. Logging Fuel Cost Adjustment. Per BU210714a no fuel adjustment.
3. Hauling Fuel Cost Adjustment. Per BU210714a no fuel adjustment.
4. Total Unusual Adjustment is the sum of items 1-3 above:

A. Lodgepole Pine: $-\$18.94 + \$0.00 + \$0.00 = -\18.94

B. Engelmann Spruce: $-\$15.85 + \$0.00 + \$0.00 = -\15.85

SUMMARY OF RECOMMENDATIONS:

	LIVE TF SAWTIMBER (025)	LIVE & DEAD ES SAWTIMBER (093)	LIVE & DEAD LP & other SAWTIMBER (108)	TOTAL/ AVERAGE
Estimated Volume CCF	0	1192	16616	17808
Advertised Rate (Per CCF)		67.60	13.76	17.36
Base Rates (Per CCF)		6.91	2.91	3.18
Required Deposits:				
Slash Disposal (BD) (18 U.S.C. 490)		0.80	0.80	0.80
Surface Replacement (SRR) (16 U.S.C. 537)		5.78	5.78	5.78
Blade Maint.		0.00	0.00	0.00
Engineering Services				18,375.00
Purchaser Road Costs				
Blade Maint.		5.12	5.12	5.12
Road Construction & Reconstruction				68,136.06
Road Closure				11,499.95
Pre-Haul Maint				6,022.49
Temp Roads		3.09	3.09	3.09
WWPA Base Index				
QMD		19.2	13.8	14.0