TIMBER SALE APPRAISAL

Siuslaw National Forest

Hebo Ranger District

Farmer Thin DxP
(Sale Name)

16104
(SALE Number)

North Nestucca Restortion Project EA
(EA/EIS/CE)

Farmer Thin DxP Appraisal

Attached Documents:

Sale Narrative

2400-17

TIM Sale Unit Volume Summary & Log Size Table

Appraisal Cost Sheet

Log Cost Summary

Haul Cost Summary

Engineering Specified Road Costs & Schedule

Engineering Notes

Road Maintenance Worksheet

Temporary Road & Landing Cost Worksheet

Spot Rock Replacement Cost Worksheet

Erosion Control Plan & Appraisal

Brush Disposal Activities List

Product Quality Adjustment

Farmer Thin DxP NARRATIVE

Description of Sale Area
This sale consists of six (6) commercial thinning subdivisions totaling 324 acres and will be sold as a ton sale and scaled 100% weight. There is an estimated 27,295 tons (8,702 ccf or 4,569 mbf) in this sale.

General Location
This sale is approximately 6 miles northwest of Hebo, Oregon along Forest Service Road 1034, and 1023117. It is located in the Farmer Creek – Nestucca River watershed.

Routes of Access
Sale is appraised to Willamina, Oregon via Highways 101, 22 and 18, TL-880 and National Forest System roads 1034, 1023117 and their tributaries.

Relation to Other Sales
Horn Thin, which is currently under contract, is nearby and has shared haul routes (Tillamook County road TL-880).

Marking
Subdivision boundaries are flagged with blue ribbon and tagged with blue boundary tags, except along system roads. Boundary trees are marked with orange tracer paint. Subdivision(s) 31, 35, 36, 40, 42, and 49 are Designation by Prescription (DxP). Subdivision(s) 31, 35, 36, 40, and 49 have ½ acre and/or 1 acre gaps. 1 acre gap centers are marked with blue tracer paint. ½ acre gap centers are marked with orange tracer paint. See Prescription Pursuant to C2.355# (Option 1) - Designation by Prescription, Prescription Criteria.

Logging
This sale is appraised for 63% skyline yarding and 37% ground-based yarding. Ground-based yarding will not be allowed on slopes greater than 30%. Elevated tailholds and intermediate supports will be needed to meet yarding objectives. Directional felling is required. Full suspension is required when yarding across streamcourses.

Roads and Other Developments
Approximately 3.35 miles of temporary roads and 39 landings are planned. Rock will be needed for temporary roads at the approach to all season system roads. 1,740 cubic yards of rock was appraised for temporary roads and 220 cubic yards of rock was appraised for landings.

Road Maintenance
Purchaser will be responsible for prehaul, routine, seasonal, and post haul maintenance on system roads. 540 cubic yards of spot rock will be needed on system roads. Specific requirements to prevent the spread of invasive species are included in the road maintenance specifications.

Specified Road Reconstruction
There is 6.10 miles of specified road reconstruction on Forest Service Road 1034. See the Farmer Thin Timber Sale Roads – Specified Road Reconstruction Plans package.

Erosion Control
Purchaser will be required to block temporary roads, install waterbars on landings, skid trails, and temporary roads, and seed landings, skid trails and temporary roads. Seed will be provided by the Forest Service for use on this sale. A co-op deposit of $0.07/ton will be required for the collection and propagation of seed for use on future contracts. All temporary roads, landings and skid trails shall be scarified as per C6.6#.

Slash Disposal
Purchaser will be required to machine pile and cover landing slash at all landings. Forest Service will burn piles. See Brush Disposal Narrative for details.

Scaling
This sale will be scaled 100% weight and paid for by the ton. Purchaser shall request an alternate scaling site and enter into a "Weighing Service Agreement". Any load for which no weight ticket is furnished shall be considered a lost sample load with a weight equal to the weight of the heaviest load presented during the billing period, as established by the Forest Service, C6.851.

Others
- Seasonal restrictions apply. See contract for details.
- Equipment cleaning is required before entering the sale area.
- To minimize the risk of attracting predators to activity areas, all garbage (especially food products) shall be contained or removed daily from the vicinity of any activity.
- Designate and use staging areas at least 150 feet from any natural water body or wetland for storing hazardous materials, fuel, and equipment servicing.

USDA - FOREST SERVICE
Stewardship: N

REPORT OF TIMBER SALE
APPRAISAL SUMMARY CCF

R6-FS-2400-17 (04/10)
Version 1631 (TEA 07-16)

Region: 06
Forest: 12 Siuslaw
District: 01 Hebo
Salvage: N

Sale Name: Farmer Thin (DxP)
Sale Number: 16104
Appraise to: Willamina, OR
Appraiser: A. Wickham

Appraisal Date: 08/25/16
Base Period Ending: 06/30/16
Competition Factor: 10%
Essential KV Cost: 0

SELLING PRICES	1	2	3	4	5	6	7	Average	Total
1. Species	D-fir								
2. Species Code	205								
3. Product/Unit	01-03								
4. Volume	8,702								8,702
5. Base Period Price	87.08*							87.08	
6. Base Period Index	193.96							193.96	
7. Current Index	191.12							191.12	
8. Rapid Market Adj	7.80							7.80	
9. Market Adj BP Price	92.04							92.04	
10. Unusual Adjustment	-16.00							-16.00	
11. GBCv-Nonsaw Adj									
12. Product Quality Adj	4.32							4.32	
13. Adj Base Period Price	80.36							80.36	699,292.72

COSTS	Zone Avg Cost/UM	Est Sale Cost/UM	Adj to BP Cost
14. Stump to Truck	107.02	92.68	14.34
15. Haul/Scale	37.58	45.76	-8.18
16. Road Maintenance	11.73	7.73	4.00
17. Contract	21.06	3.62	17.44
18. Development & Other	4.24	13.86	-9.62
19. Road Const & Recon		18.48	-18.48
20. Total (lines 14-19)	181.63	182.13	-.50

ROADS	Km	Miles	Cost
Specified Road Con			
Specified Road Rec	9.82	6.10	160,821
Temporary Road Con			
Haul Miles		39	

	Br Disp/UM	Rd Mtc/UM	C(T)5.213#
DEPOSITS:	.52		

ADVERTISED RATES	1	2	3	4	5	6	7	Average	Total
21. Predicted Bid Rate	79.86							79.86	694,941.72
22. Competition Adjustment	7.99							7.99	69,528.98
23. Property Value									
24. Indicated Adv Rate	71.87							71.87	625,412.74
25. Base Rate	3.00							3.00	26,106.00
26. Adjustment									
27. Advertised Rate	71.87							71.87	625,412.74

CCF to MBF Rate Factors:	1.9046	1.9046	
CCF to MBF Volume Factors:	.5251	.5251	
MBF to CCF Index Factors:	.52		
CCF Base Index for A(T)5a:			
CCF Wtd Avg Del Log Price:	345.31		
MBF Volume:	4,569		4,569
Total Tons Removed:	27,295		27,295

Net CCF to Tons Conversion Factor for C8.3#(Option 1) or K-I.3.1#: 3.1366 DEPOSITS/Ton BD: .17 RM:

SALE VOLUME SUMMARY

Volume Summaries By Unit

Sale Name: Farmer Thin DxP

TIM Conversion			0.3188	0.1674		
Unit No.	**Acres**	**TONS**	**CCF**	**MBF**	**% Sale Volume**	**TON Vol/Ac**
31	54	5207	1667	898	19	96
35	90	8639	2769	1481	32	96
36	63	5692	1793	922	21	90
40	77	4964	1584	808	18	64
42	8	742	233	125	3	93
49	32	2049	658	337	8	64
TOTAL	**324**	**27295**	**8702**	**4569**	**100**	**84**

8,702	CCF				
Unit No	Sitka Spruce	Douglas Fir	Western Hemlock	Red Alder	Western Red Cedar
31		1,211	456		
35		2,749	20		
36		1,793			
40		1,550	35		
42		144	89		
49		658			
TOTAL	0	8,103	599	0	0
% of Sale	0%	93%	7%	0%	0%

Piece Size Net Cubic Board Feet For Logcost

Use Cruise Report B1

(Reference A1 report for unit #) Strata #	Mean Total Height	Est. # of Trees	Net Cubic Feet	Cubic Volume/ one foot	Piece Size		
					32' log	40' log	Whole Tree
1	93.7	5111	166696	0.35	11.14	13.92	32.62
2	93.7	9287	276861	0.32	10.18	12.73	29.81
3	81	9621	179349	0.23	7.36	9.21	18.64
4	76.2	8298	158424	0.25	8.02	10.02	19.09
5	82.5	910	23253	0.31	9.91	12.39	25.55
6	78.6	3774	65791	0.22	7.10	8.87	17.43

Farmer Thin DxP
#16104

Date: 8/16/2016 * ALL/CCF*

Sale Tons: 27295 Sale CCF: 8702

Adjuster Initials: AW

	Total
Stump to Truck	$ 92.68
Haul/Scale	$ 45.76
Road Maintenance	$ 7.73
Contract	$ 3.62
Dev & Other	$ 13.86
	$ 163.65

Log/Haul	Rd Maintenance		Contract				Dev & Other	
Analysis	Purchaser (road mtnce)	Deposit (road mtnce)	Purchaser (BD)	Deposit (BD)	Erosion	Co-op Deposit	Temp. Road Cost	Temp. Landing Cost
$ 92.68								
$ 45.76								
	$ 7.73	$ -						
			$ 1.05	$ 1.62	$ 0.74	$ 0.21		
							$ 12.70	$ 1.16

Stump to Truck-$ (from LogCost summary, sale as a whole)

Haul/Scale-$ (from Haul Cost appraisal, total haul cost)

Road Maintenance-$ (($ from engineering rdm document. Co-op deposits. (Forest Service) +$ same sheet, purchaser maintenance +spot rock (Purchaser))

Contract- $ ($ total cost of funded work on BD plan/ccf volume Deposit)+($ subtotal for fund code PPP /ccf volume) Purchaser) +($ cost per CCF from bottom of erosion control Erosion)+ ($ cost per CCF from Coop seed deposit tab co-op deposit)

Dev and Other-$ ($ Temporary Road Cost)+ ($ Temp Landing Cost)

Tons: from cruise

Logging Cost Summary - Estimated Stump To Truck Cost Results

Summary By Logging System and Sale

Logging System	Vol Type	Total Volume	Stump-truck $/vol	Estimated Seasons
Skyline	*ccf*	5,374	100.46	3
Mechanized	*ccf-saw*	3,328	80.12	3
Mech biomass				
Tractor				
Shovel				
Helicopter				
Sale-as-a-whole		8,702	92.68	← *sawtimber basis*

ovhd=6.18/ccf or 11.89/mbf, p&r=2% of costs included (except helicopter)

Bio stump-truck $		Estimated total number *operating* days for sale	110
Include bio stump-truck in mech sys? →		Variable shutdown cost (all systems, if any) $/vol	
		Include variable shutdown in system costs?	
Biomass haul cost			

Include Chipper?

Hours Used

Haul-$'s

Select helicopter alternative →

Sale: Farmer Thin DxP

Date: 8/16/16

LogCost ver 15.0

2/4/2015

Report summary table above in tons?

SKYLINE Logging System - Cost Results by Unit

LogCost ver 15.0

Sale: **Farmer Thin DxP**
Date: **8/16/2016**

Number of units: 6
Average total cost per 8-hr day (equipment & labor): 3,952.30

Unit Number	Net ccf Volume	Equip Dep $/ccf	Operating $/ccf	Tot Cost $/ccf
31	556	16.33	65.03	81.36
35	1,753	17.17	67.36	84.53
36	1,167	18.97	70.75	89.72
40	1,234	24.05	82.81	106.86
42	233	16.81	65.85	82.66
49	432	25.73	86.14	111.87
Tot or Avg	5,374	19.73	72.85	100.46

MECHANIZED Logging System - Cost Results by Unit

LogCost ver 15.0

Sale: **Farmer Thin DxP**
Date: **8/16/2016**

Total tons of biomass: 0
Estimated cost for biomass haul: 0

Number of units: 5
Avg total cost per 8-hr day (equip & labor): 4,109.59

Unit Number	Net CCF Saw Volume	Net CCF Biomass Volume	Cost $/ccf Sawtimber Only	Biomass Removal Total Cost	Biomass Cost $/ccf of Bio Vol	Biomass Cost $/ccf of Saw Vol	Tot Cost $/ccf of Saw Vol w/bio
31	1,111		76.90				76.90
35	1,015		66.56				66.56
36	626		82.51				82.51
40	350		78.40				78.40
49	226		84.81				84.81
tot or avg	3,328	0	80.12	0	0.00	0.00	80.12

FALLING & BUCKING APPRAISAL - APPRAISAL SUMMARY

LogCost ver 15.0

Sale name: **Farmer Thin DxP**

Geographic area: **OR**
Volume type: **CCF**

Date: **16-Aug-16**

Production estimates...

Avg one-way walk-in, hrs	Net ccf per acre	Production net ccf/hr	Production net ccf/day	Avg trees F&B/hour
0.10	26.7	1.40	10.92	5.7

Calculated costs estimates in $/CCF...

Deprec $/CCF	Operating Cost Components - $/CCF					Moving $/CCF	Other cost $/CCF	Total F & B $/CCF
	m & r	fuel	lube	labor	total opr			
$0.32	$0.32	$1.32	$0.88	$20.10	$22.62	$3.30		**$26.24**

$3.50 fuel price used for non-ethanol gasoline for saws and partial bar oil / mix costs

f&b time = 9 minutes

FALLING & BUCKING APPRAISAL - DATA INPUT TABLE

LogCost ver 15.0

Sale name	Vol type *select*	Geographic area - *select*	Date
Farmer Thin DxP	CCF	OR	16-Aug-16

Average one-way walk-in time, hrs	Net ccf per acre	Avg gross cf per tree	Percent net recovery	Avg time per tree	Fuel cost $/gallon
0.10	26.7	26.0	95.0%	9	$3.50

COST DEFAULTS TABLE

Labor rate Fall-buck	Delay time Min/hr	Avg. hours Per day	Move cost In/out	Production Net ccf/hr	Production Net ccf/day	Total Cost/day
$27.43	9.0	8.0	$36.00	1.40	10.92	$286.32

Defaults used in above table

labor rate (region = OR)	$27.43	$/hr
delay time minute/hr	9.0	min/hr
hours worked/day	8.0	hrs/day
move in/out	$36.00	$/day

Equipment Use Summary - Skyline System

Estimated total cost per hour does not include labor

Sale: Farmer Thin DxP

Date: 08/16/16

unit #	yarder	carriage	landing tractor	log loader	limber-bucker	feller-buncher	harvester	total $/hr
31	Madili-171 - USED	Acme-23	D6 (used)	Avg medium loader	Medium Processor			$311.52
35	Madili-171 - USED	Acme-23	D6 (used)	Avg medium loader	Medium Processor			$311.52
36	Madili-171 - USED	Acme-23	D6 (used)	Avg medium loader	Medium Processor			$311.52
40	Madili-171 - USED	Acme-23	D6 (used)	Avg medium loader	Medium Processor			$311.52
42	Madili-171 - USED	Acme-23	D6 (used)	Avg medium loader	Medium Processor			$311.52
49	Madili-171 - USED	Acme-23	D6 (used)	Avg medium loader	Medium Processor			$311.52

Equipment Use Summary - Mechanized System

Estimated total cost per hour does not include labor

Sale: Farmer Thin DxP

Date: 08/16/16

unit #	harvester	forwarder	feller-buncher	skidder	log loader	limber-bucker		total $/hr
31			John D 953K Track	Cat-525C-cable or grpl	Avg medium loader	Medium Processor		$409.03
35			John D 953K Track	Cat-525C-cable or grpl	Avg medium loader	Medium Processor		$409.03
36			John D 953K Track	Cat-525C-cable or grpl	Avg medium loader	Medium Processor		$409.03
40			John D 953K Track	Cat-525C-cable or grpl	Avg medium loader	Medium Processor		$409.03
49			John D 953K Track	Cat-525C-cable or grpl	Avg medium loader	Medium Processor		$409.03

Labor Use Summary - Skyline System

Amount of each labor type shown in parenthesis

Sale: Farmer Thin DxP Date: 08/16/16

unit #	Labor A	Labor B	Labor C	Labor D	Labor E	Labor F	Labor G	Labor H	total $/hr
31	Choker setter (3)	Chaser (1)	Rigging slinger (1)	Hook tender (1)	Loader opr (1)	Delimb/process opr (1)	Yarder engineer (1)		$182.52
35	Choker setter (3)	Chaser (1)	Rigging slinger (1)	Hook tender (1)	Loader opr (1)	Delimb/process opr (1)	Yarder engineer (1)		$182.52
36	Choker setter (3)	Chaser (1)	Rigging slinger (1)	Hook tender (1)	Loader opr (1)	Delimb/process opr (1)	Yarder engineer (1)		$182.52
40	Choker setter (3)	Chaser (1)	Rigging slinger (1)	Hook tender (1)	Loader opr (1)	Delimb/process opr (1)	Yarder engineer (1)		$182.52
42	Choker setter (3)	Chaser (1)	Rigging slinger (1)	Hook tender (1)	Loader opr (1)	Delimb/process opr (1)	Yarder engineer (1)		$182.52
49	Choker setter (3)	Chaser (1)	Rigging slinger (1)	Hook tender (1)	Loader opr (1)	Delimb/process opr (1)	Yarder engineer (1)		$182.52

Labor Use Summary - Mechanized System

Amount of each labor type shown in parenthesis

Sale: Farmer Thin DxP Date: 08/16/16

unit #	Labor A	Labor B	Labor C	Labor D	Labor E	Labor F	Labor G	Labor H	total $/hr
31	Feller-buncher opr (1)	Skidder opr (1)	Loader opr (1)	Delimb/process opr (1)	Chaser (1)				$107.02
35	Feller-buncher opr (1)	Skidder opr (1)	Loader opr (1)	Delimb/process opr (1)	Chaser (1)				$107.02
36	Feller-buncher opr (1)	Skidder opr (1)	Loader opr (1)	Delimb/process opr (1)	Chaser (1)				$107.02
40	Feller-buncher opr (1)	Skidder opr (1)	Loader opr (1)	Delimb/process opr (1)	Chaser (1)				$84.68
49	Feller-buncher opr (1)	Skidder opr (1)	Loader opr (1)	Delimb/process opr (1)	Chaser (1)				$107.02

General Sale or Unit Input - *Skyline System*

LogCost ver 15.0

Sale Name: **Farmer Thin DxP**

Date: **8/16/2016** Fuel-$/gal: **$2.00**

Geo area: **OR** Vol type: **CCF**

Months in opr season: **8.0**

Sale or Unit #	Net unit CCF vol	Unit Acres	Total $'s Misc cost	Ave %slope To Inding	AYD Feet	Piece size net cf ft	Wood wt lbs/cf ft	Misc total $'s Explanation (text)	Include in summary
31	556	18.0	150	40.0%	420	32.6	60.9	Landings	yes
35	1,753	57.0	1,200	45.0%	287	29.8	60.9	Landings	yes
36	1,167	41.0		50.0%	261	18.6	60.9		yes
40	1,234	60.0	600	50.0%	300	19.1	60.9	Landings	yes
42	233	8.0		50.0%	383	25.6	60.9		yes
49	432	21.0		45.0%	282	17.4	60.9		yes
Tot or avg	5,374	205.0	1,950	46.9%	302	24.0	60.9		

>$500/ea - new landing construction
>$250/ea - reconstruction of existing landing, rock resurface
>Some landings fall on existing roadways for skidding and yoader logging. These landing areas may require some tree removal for equipment swing around the site but generally require less construction and rocking. >Landing costs are pulled from the Engineering Road Mnt. document. Cost may vary depending on estimated amount of construction required to make useable.
>***whole tree logging***

Production Estimate - Skyline System

Sale: Farmer Thin DxP

Date: 08/16/16

Optional prebunching input - harvester or feller-buncher input (select the bunching machine on "Equipment Selection" screen)

unit number	net ccf volume	# sky corridors	corridor change time-min	net-lbs payload	corridor spacing feet	outhaul feet/min	lateral feet/min	effect min/hr	Piece size length (ft)	yarder net - ccf/day	machine selected	# bunching machines	avg cut trees per acre	avg cut tree total height	merch cl per cut tree	merch top dia inches	process min/tree	search min/tree	waste factor %	avg cut tree dbh	additional time/tree	avg log length feet	harv-fb pieces/day	harv-fb net ccf/day	harv-fb net Tons
31	556	15	70.0	4,500	120.0	800	100	45.0	94.0	88.52	none														
35	1,753	76	65.0	5,000	120.0	800	100	45.0	94.0	83.49	none														
36	1,167	47	60.0	6,000	120.0	800	100	45.0	81.0	74.41	none														
40	1,234	90	60.0	5,000	120.0	800	100	45.0	76.0	56.92	none														
42	233	7	70.0	5,000	120.0	800	100	45.0	83.0	85.56	none														
49	432	34	60.0	5,000	120.0	800	100	45.0	79.0	52.82	none														
Tot or avg	5,374	60.3	63.1	5,165.5	120.0	800.0	100.0	45.0	85.4	73.56															

Moving - Skyline System

Date: 08/16/16

Sale: Farmer Thin DxP

net ccf vol	seasons to remove	seasons to use	first landing			additional lnds		last landing		
			move in (one way)		rig up	unrig, move, rig up		rig dwn	move out (one way)	
			tot miles	hours	hours	hrs/lnding	# lndings	hours	tot miles	hours
5,374	1	3	39.1	6.0	6.0	6.0	34.0	4.0	39.1	6.0

Days of variable shutdown/season

Miscellaneous Input - Skyline System

Sale: Farmer Thin DxP

Date: 08/16/16

=data not needed

Current f&b
26.24

sale or unit #	net ccf vol	choker selection	choker life ccf	tail hold anchor (stump or tail, not both)		tag SL length-ft	tag HB length-ft	tag guy line length-ft	$/ccf fall-buck
				stump anchor selection	tail tree selection				
31	556	1/2" X 20'	500		1" - 1 IS				26.24
35	1,753	1/2" X 20'	500		1" - 1 IS				26.24
36	1,167	1/2" X 20'	500		1" - 1 IS				26.24
40	1,234	1/2" X 20'	500		1" - 1 IS				26.24
42	233	1/2" X 20'	500		1" - 1 IS				26.24
49	432	1/2" X 20'	500		1" - 1 IS				26.24
Totals	5,374		500			0	0	0	26.24

General Sale or Unit Input - *Mechanized System*

LogCost ver 15.0

Sale Name: **Farmer Thin DxP**

Date: **08/16/16** Fuel-$/gal: **$2.00**

Geo-area: **OR** Vol type: **CCF**

Months in opr season: **8.0**

Sale or Unit #	Net unit CCF vol	Unit Acres	Total $'s Misc cost	Ave %slope To Inding	ASD Feet	Piece size net cf ft	Wood wt lbs/cf ft	Misc total $'s Explanation (text)	Include in summary
31	1,111	36.0		25.0%	333	32.6	60.9		yes
35	1,015	33.0		20.0%	226	29.8	60.9		yes
36	626	22.0		-25.0%	269	18.6	60.9		yes
40	350	17.0		15.0%	234	19.1	60.9		yes
49	226	11.0		20.0%	222	17.4	60.9		yes
Tot or avg	3,328	119.0	0	12.7%	270	26.7	60.9		

>***whole tree skidding***

Production Estimate - Mechanized System

Sale: Farmer Thin DxP

Date: 08/16/16

unit number	net ccf volume	log trans machine	# log trans machines	# of felling machines	pieces per turn skidder (c)	% delay per hour	add time per turn-minutes	grapple on skidder?	log transport ccf/day	machine selected	avg cut trees per acre	avg cut tree total height	merch cf per cut tree	merch top dib-inches	process min/tree	search min/tree	weave factor - %	avg cut tree dbh	additional time/hour	avg log length feet	silviculture type	harv-fb pieces/day	harv-fb net ccf/day	harv-fb net $/ccf
										Harvester or feller-buncher input														
31	1,111	skidder	1	1	2.0	15.0%	0.0	yes	79.46	fell-bunch	95.0	94.0	33.0		0.70	0.1	8.0%	13.2	0.0			469	154.78	8.32
35	1,015	skidder	1	1	3.0	15.0%	0.0	yes	118.18	fell-bunch	103.0	94.0	30.0		0.70	0.1	8.0%	12.7	0.0			474	142.16	9.06
36	626	skidder	1	1	4.0	15.0%	0.0	yes	81.07	fell-bunch	153.0	81.0	19.0		0.70	0.1	8.0%	11.4	0.0			494	93.79	13.74
40	350	skidder	1	1	4.0	15.0%	0.0	yes	88.07	fell-bunch	108.0	76.0	19.0		0.70	0.1	8.0%	11.8	0.0			477	90.55	14.23
49	226	skidder	1	1	4.0	15.0%	0.0	yes	81.15	fell-bunch	118.0	79.0	17.0		0.70	0.1	8.0%	11.0	0.0			481	81.83	15.74
Tot or avg	3,328		1.0	1.0		15.0%	0.0		92.59		111.3	88.6	26.9		0.70	0.10	8.0%	12.4	0.00			477	127.76	10.70

Moving - Mechanized System

Date: 08/16/16

Sale: Farmer Thin DxP

net ccf vol	seasons to remove	seasons to use	first landing: move in (one way) tot miles	first landing: move in (one way) hours	additional landings: move to hrs/lnding	additional landings: move to # lndings	last landing: move out (one way) tot miles	last landing: move out (one way) hours
3,328	1	3	39.1	6.0	3.0	5	39.1	6.0

Days of variable shutdown/season

Miscellaneous Input - Mechanized System

Sale: Farmer Thin DxP
Date: 08/16/16

sale or unit #	net ccf vol	$/ccf fall/buck	$/ccf additional	explanation of additional $/ccf
31	1,111	**26.24**		
35	1,015	**26.24**		
36	626	**26.24**		
40	350	**26.24**		
49	226	**26.24**		
Tot/avg	3,328	26.24	0.00	

TRUCKING APPRAISAL - APPRAISAL SUMMARY

HaulCost ver 15.0

Sale name: **Farmer Thin DxP** Geo. area: ***OR*** Date: **16-Aug-16**

Cost type	Average trip rtm's	CCF per load	Tot rtm's per day	Total OT rtm's	CCF vol per day	Gross cost per day	Net cost per day	Net cost per ccf	Net $/ccf w/inflation
w/o scale									
with scale	215.4	9.0	600.0	120.0	25.07	895.75	942.90	37.61	45.76

<<Scaling cost is included in the total haul cost below>>

years inflation = 5.0

130 minutes

Include scale cost in final haul cost

Yes

Total haul cost, $/ccf = **$45.76**

Volume Type...
CCF

Sale or Haul Narrative

Gravel single lane>2 lane paved Cnty rd>Hwy101>Hwy22>Hwy18

Scale total cost: **$247.19**

HaulCost 15.0 - TRUCKING APPRAISAL - DATA INPUT

February 5, 2015 - Microsoft Excel 2007 & 2010

Sale name	Volume type	Geographic area	Date
Farmer Thin DxP	CCF	OR	16-Aug-16

Sale RTM's <traveling> <only>	Avg volume per load	Is scaling done?	Inflate costs?	Fuel cost per gallon	One-way trip mileage
130.4	9.00	Yes	Yes	$2.44	39.1

Select truck or Truck-trailer combo	Select trailer	Select attached loader
Truck-trailer (standard stinger-steer, west US)	<None>	

<<Do not make trailer selection>> <<Do not make loader selection>>

Farmer Thin Timber Sale Roads Cost Summary

Road	TS Cost	PW Cost
1034	$ 139,867.00	$ 149,176.50
DRES	$ 20,954.44	
Totals	**$ 160,821.44**	**$ 149,176.50**

SCHEDULE OF ITEMS

Farmer Thin Timber Sale Roads

Road Number 1034

Mile post 0.00 to Mile post 6.10

TS COSTS

Pay Item	Item Description	Pay Unit	Estimated Quantity	Unit Price	Total
15101	Mobilization	Lump Sum	All	$ 14,986.00	$ 14,986.00
15713	Soil Erosion & Pollution Control	Lump Sum	All	$ 1,613.00	$ 1,613.00
20301	Removal of culvert	Each	6	$ 185.00	$ 1,110.00
20457	Roadway excavation, compaction method E	Cubic Yard*	80	$ 9.00	$ 720.00
25101	Keyed riprap, class 3	Cubic Yard*	30	$ 82.00	$ 2,460.00
30359	Roadway reconditioning, compaction method E	Mile	6.10	$ 1,720.00	$ 10,492.00
32232	Aggregate base grading C, compaction method B	Cubic Yard*	2572	$ 36.00	$ 92,592.00
6027824	24 Inch corrugated polyethylene pipe, type S, method B	Foot	188	$ 63.00	$ 11,844.00
6027836	36 Inch corrugated polyethylene pipe, type S, method B	Foot	45	$ 64.00	$ 2,880.00
6065424	24-inch full circle polyethylene outlet pipe, type C	Foot	30	$ 39.00	$ 1,170.00
					$ 139,867.00

Engineering Notes for
Farmer Thin 8/25/2016

A. Haul route roads:

The haul routes for this sale are on National Forest System (NFS) roads. Log haul will travel on NFS roads listed in Table 1.1 to Hwy 101 then east on Hwy 22 to Hwy 18 to the appraisal point of Willamina, Oregon.

Roads used in this sale are non-key roads except for 1034 and all temporary roads used in this sale are non-system. Maintenance on this sale is purchaser responsibility. Brushing, spot rock and blading is included for TIL-880 (Farmer Creek Road) under a Schedule A maintenance agreement with Tillamook County.

NFS road beginning and ending termini are detailed in table 1.1

Table 1.1

Road No.	Miles	Beginning Milepost	Ending Termini/Milepost
1023000	0.47	1034	1023117 Jct
1023117	0.21	1024	Unit 42 Spur
1034	6.0	1034/1024 Jct.	Unit 35 Spur
1034115	0.2	1034	Unit 49 Spur

The remaining portions of roads listed in Table 1.1 are not planned for use under this contract. Spot rock for NFS roads is included and appraised for.

B. System and temporary roads –season of haul, road protection and truck assist.

See logging feasibility report (LFR) for details.

In general, all system roads are appraised for rock re-surfacing or spot rocking.

Truck assist is appraised for in unit 36.

B. Unit Notes:
All spurs into units are native surface or have minimal rock.

Unit 31: Spurs new construction. 31-2 appraised for all season

Unit 35: Spur 35-4 has sidecast cracking, cutbank ravel and 20% adverse for 200' to 1034. 35-6 crosses the outlet of a swampy depression and will require a corduroy crossing. 35-3 & 9 are new construction. 35-1 has waste on entrance to spur. Additional work to cross swampy area included and appraised for under miscellaneous maintenance.

Unit 36: Spur 36-1 is new construction and jumps to ridge in ground based area. Spur in west half of unit has a short pitch of 25-30% with fair runout to landing 35-N along 1034

Unit 40: Spur 40-1 has minor slumping, adverse grades of 20% from spur 40-2 to 1034 and waste material on entrance

Unit 42: Roadside off of 1023-117

Unit 49: Dry season only on 1034-115. Waste on spur 49-1

Engineering Notes for
Farmer Thin 8/25/2016

Table 1.2 Temporary Road Season of Haul

Temp Spur # into Unit	All Season Option*	Dry Season	All Season
31		1	2
35	3	4,5,6,7	1,2,8,9,10
36		All	
40	1,2,3,6		4,5,7
42			
49		All	

*Contractor/Purchaser option to upgrade to all season

D. Pre and post sale operational status for the system roads:

Road #	Presale status	Post sale planned status	Waterbars/berms
1023000	Non-Key, Open	Non-Key, Open	Type 2/ None
1023117	Non-Key, Open	Non-Key, Open	Type 2 / None
1034000	Key, Open	Key, Open	None / None
1034115	Non-Key, Open	Non-Key, Closed	Type 1/ Berm

E. Log Haul Operating season and Haul routes.

Unit Number	Planned Haul Route	Engineering Log Haul Operating season *
31	1034 to TIL-880 to Hwy 101 to Hwy 22 to Hwy 18 to Willamina	All season system roads and select temp spurs
35	1034 to TIL-880 to Hwy 101 to Hwy 22 to Hwy 18 to Willamina	All season system roads and select temp spurs
36	1034 to TIL-880 to Hwy 101 to Hwy 22 to Hwy 18 to Willamina	All season system roads
40	1034 to TIL-880 to Hwy 101 to Hwy 22 to Hwy 18 to Willamina	All season system roads and select temp spurs
42	1023-117 to 1034 to TIL-880 to Hwy 101 to Hwy 22 to Hwy 18 to Willamina	All season system roads. Dry season temp spurs
49	1034115 to 1034 to TIL-880 to Hwy 101 to Hwy 22 to Hwy 18 to Willamina	Dry season.

* Dry season is June 15 – October 15

Rob Sanders
Transportation Planner
Siuslaw National Forest

ROAD MAINTENANCE WORKSHEET

Sale Name:	**Farmer Thin**		8,702	CCF Volume		1.27	% OH
			27,295	Tons			
					Purchaser	Co-op	
	Termini			CCF	Work	Deposits	
Road	From	To	Miles	Volume	0.91	0.87	Remarks
1034	Unit 31	Til-880/1034 Jct	5.75	1,666	0.91		31
1034	Unit 40	Til-880/1034 Jct	4.80	1,584	0.91		40
1034-115	Unit 49	1034/1034-115 Jct	0.15	658	0.91		49
1034	1034/1034-115 Jct	Til-880/1034 Jct	4.31	658	0.91		49
1034	Unit 36 East half	Til-880/1034 Jct	2.25	897	0.91		1/2 unit
1034	Unit 36 West half	Til-880/1034 Jct	1.83	897	0.91		1/2 unit
1034	Unit 35 North half	Til-880/1034 Jct	1.83	1,384	0.91		1/2 unit
1034	Unit 35 South half	Til-880/1034 Jct	1.58	1,384	0.91		1/2 unit
1023117	Unit 42	1023117/1023 Jct	0.15	233	0.91		
1023	1023117/1023 Jct	1023/1034 Jct	0.46	233	0.91		
1034	1023/1034 Jct	Til-880/1034 Jct	1.23	233	0.91		
TIL-880	Jct 1034/TIL-880	Hwy 101	2.30	8,702	0.51		All
	Hwy 101	Hwy 22	2.00	8,702			
	Hwy 22	Hwy 18	24.90	8,702			
	Hwy 18	Hampton, Willamina	6.60	8,702			
			60.14				
		Total $	$/CCF	$/Ton		39.12	Weighted Miles
	Purchaser Maint	46,391.34	5.33	1.70			
	Misc Maint. (see Eng. Notes)	851.17	0.10	0.03			
	Spot Rock (see worksheet)	19,980.00	2.30	0.73			
	Co-op Deposits	0.00	0.00	0.00			
	Totals	67,222.51	7.73	2.46			

Temporary Road and Landing Cost Worksheet

Sale Name: **Farmer Thin**

8,702 CCF volume

	Temporary Roads					Landings			
Unit No. or temp road identifer	Length (Feet)	Cost for Re-open or New	Rock (cuyd)	Rock Cost $/cuyd	Total Road Cost	Landing Costs	Rock (cuyd)	Rock Cost $/cuyd	Total Landing Cost
31	1,430	$4,290.00	100	$37.00	$7,990.00	$150.00	20	$37.00	$890.00
35	4,880	$12,223	840	$37.00	$43,302.50	$1,200.00	120	$37.00	$5,640.00
36	5,320	$15,960		$37.00	$15,960.00			$37.00	$0.00
40	4,574	$10,240	800	$37.00	$39,840.00	$600	80	$37.00	$3,560.00
42				$37.00	$0.00			$37.00	$0.00
49	1,505	$3,386		$37.00	$3,386.25			$37.00	$0.00
				$37.00	$0.00			$37.00	$0.00
	17,709	$46,099	1740		$110,478.75	$1,950	220		$10,090
3.35	miles			Costs per CCF:	$12.70			Costs per CCF:	$1.16

Sale Name: Farmer Thin

Spot Rock Replacement Cost Worksheet

Road No.	Miles	cuyd of rock/mi	waterbars	Total cuyd rock/road	$/cuyd	Total
1023	0.46	100		50	$37.00	$1,850.00
1023117	0.20	100		20	$37.00	$740.00
1034	6.00	50		300	$37.00	$11,100.00
1034115	0.20	100		20	$37.00	$740.00
TIL-880	1.00	100		100	$37.00	$3,700.00
Waterbars***						
		3 cy/waterbar	15	50	$37.00	$1,850.00
Totals	7.86			540		$19,980.00

*** Waterbar rock for filling in or over bladed out waterbars, grading Q

EROSION CONTROL PLAN AND APPRAISAL

Forest: **Siuslaw** District: Hebo Sale Name: Farmer Thin (DxP)

CCF Volume: 8,702 miles of temp.road: 3.35

Work will be done by purchaser.

WORK ITEM		Unit of Measure	Number of Units	Cost per Unit ($)	Total ($)
(1)	PERMANENT ROAD STABILIZATION				
	a. Seed				
(2)	TEMP. ROADS (put to bed)				
	a. Remove culverts/bridges				
	b. Outsloping				
	c. Cross ditching	each	177	$10.00	$1,770.00
	d. Scarifying				
	e. Barriers	each	5	$150.00	$750.00
	f. Seed	acres	3.3	$425.60	$1,404.49
(3)	SKIDROADS & TRAILS				
	a. Remove culverts/bridges				
	b. Waterbars & cross drains	each	9	$10.00	$90.00
	c. Brush dams				
	d. Seed	acres	3	$425.60	$1,276.81
(4)	FIRELINE STABILZATION				
	a. waterbars & cross drains	each	0		
	b. Seed	acres	0		
(5)	LANDING				
	a. Drainage ditches	each	78	$10.00	$780.00
	b. Scarifying				
	c. Cut & fill stabilization				
	d. Seed	acres	0.8	$425.60	$340.48
(6)	DISTURBED MEADOWS				
	a. Land treatment				
	b. Seed				
(7)	CHANNEL CLEARING				
	a. By hand				
	b. By machine				
(8)	MAINTAIN EROSION STRUCTURES				
(9)	OTHER (specify)				
	a.				
	b.				
	c.				
(10)	TOTAL COSTS				$6,411.78
(11)	Cost per CCF for Appraisal				$0.74

rev. 6/2009

EROSION CONTROL WORKSHEET

Sale Name: **Farmer Thin (DxP)**

Seeding

Acres that will need treating are as follows:

A. Temporary Roads in the sale will be treated, total is about 17,709 feet in length,
or about 6.5 acres of Temporary Roads of which about half will be seeded
or about 3.3 acres. Road width is based on 16 feet.

B. Ground-based area in the sale totals 119 acres, ground-based area covered by skid roads is
about 10% or 11.9 acres of which a quarter will be seeded or about 3.0 acres.

C. Fireline stabilization - about 0 feet of fireline with an average width of
0 feet or about 0.0 acres will be seeded.

D. Landings - total number of landings - average of 0.1 acres each 39 for a total of
about 3.9 acres of which 20% will be seeded or about 0.8 acres.

Erosion Control Structures

Cost is $10.00 per cross drain x 264 crossdrains = $2,640.00

Landings:	78	Appraised one crossdrain per 100 feet of distrubance.
Firelines:	0	Appraised two crossdrains per native surface landing.
Skid Roads & Trails:	9	Estimated approximately 300 feet of skid trails per acre.
Temporary Roads:	177	
Total:	264	

Temporary Road Barriers

5 Barriers X $150.00 /barrier = $750.00
(one barrier per road)

* Estimated ~300' of skid trails per acre.
Use one crossdrain per 100'
Use two crossdrains per landing on native surface.

SEED COST WORKSHEET

Sale Name: **Farmer Thin (DxP)**

Volume: 8,702 CCF
27,295 Tons

Oprerator Costs

Labor	$122.67 /ac	($23/hr x 8 hr / 1.5 ac/day)
Vehicle	$16.00 /ac	(1/2 T PU @$8/hr x 3 hr / 1.5 ac/day)
Total	$138.67 /acre	

	$138.67	/ac
x	1.213	OH
subtotal	$168.20	/ac

FS (Co-op) Costs

Seed	$9.00	/lb.
Application Rate	22	lb/ac
Total	$198.00	/acre

	$198.00	/ac
x	1.3	OH
subtotal	$257.40	/ac
x	7.1	acres
total coop	$1,827.54	

CO-OP Costs: **$0.21 /CCF**
$0.07 /Tons

	$168.20	/ac
+	$257.40	/ac
Total per acre cost:	**$425.60**	**/ac**

Detailed listing of Brush Disposal Activities (Working Copy)	(1) Proclaimed Forest Siuslaw	(2) District/Unit Hebo
(3) Sale Name FARMER THIN(16104)	(4) Award Date	(5) Compartment Or GIS Reference
(6) Type of Plan [X] Original [ ] Final [ ] Revision #	(7)Purchaser	(8) Contract Number

(9) List of Activity Fuels Treatment Projects		Local Qualifier	(10) Work Activity	(11) Unit of Work	(12) Cost Per Unit	(13) Projects by Fund Code			(14) BD Funded Pojects	
a) Subunit	b) Activity					a) Fund Code	b) No. of Units	c) Total Cost	a) No. of Units	b) Total Cost
061201BD16104000000	Fuel Inventory	N/A	HF	Acres	$9.18	BDBD	324.0	$2,974	324.0	$2,974
061201BD16104000000	Burning of Piled Material	N/A	HF	Acres	$21.60	BDBD	324.0	$6,998	324.0	$6,998
Subtotal for Fund Code BDBD								**$9,973**		
061201BD16104000000	Rearrangement of Fuels	N/A	HF	Acres	$600.00	PPPP	12.6	$7,560		
061201BD16104000000	Piling of Fuels, Hand or Machine	N/A	HF	Acres	$4.95	PPPP	324.0	$1,604		
Subtotal for Fund Code PPPP								**$9,164**		
15. Total BD work funded										**$9,973**
16. National Program Support										**$4,139**
17. Total Cost of Funded Work (Sum of line 15 and 16)(Required Bid Deposit Amount)										**$14,111**

18. Remarks:

Combined Total Cost of BD Funded Work: $14,111

Forest Collection Rate: Assessment included in unit cost

National Collection Rate for Program Support: 41.5%

Inflation Rate: 2%

Rate Remarks:

PPPP does not include the Forest Collection Rate or National Collection Rate for Program Support.

PRODUCT QUALITY ADJUSTMENT
Combining Species into Appraisal Groups
Determining Weighted Average Delivered Log Price for the Sale
Use with Appraisal Update #7-16

Sale Name: **Farmer Thin (DxP)** Date: **24-Aug-16**

Combining Species into Appraisal Groups (for entry into the TEA input screen)

	Type a "1" into desired cells to combine species into an appraisal group							
Geographic Area	Species Group #1	Species Group #2	Species Group #3	Species Group #4	Species Group #5	Species Group #6	Combined Prod Qual Adj	Combined Del Log Price
Ore West	1						4.32	345.31
Ore East								
Wash West								
Wash East								

Determining Weighted Average Delivered Log Price for the Sale (for use in analyzing advertised rates)

	Type a "1" into all cells with volume						
Geographic Area	Species Group #1	Species Group #2	Species Group #3	Species Group #4	Species Group #5	Species Group #6	Wt Avg Delivered Log Price for the Sale
Ore West	1						345.31
Ore East							
Wash West							
Wash East							

Enter the Combined Product Quality Adjustment on the TEA input screen under PQA/CCF for the main species in the appraisal group. Enter the Del Log Price under Log Pr/CCF on the TEA input screen for the main species in the appraisal group. Use the weighted average delivered log price for the sales to analyze advertised rates, per R6 FSH 2409.22 Appraisal Handbook. **Refer to the PQA User Guide for more information on the calculation and use of delivered log prices.**

***** Click the "Erase" button above to delete all species combination data *****
***** Press the "Delete" key in appropriate cell to erase individual cell input *****

Appraisal Reminder - When combining species, a weighted average Base Period Price needs to be calculated. Use the table below to calculate a weighted average BPP for the appraisal group.

The Erase Data button erases Forest number, Salvage, and Species Code and Species Volume (CCF) in the table.

Forest number = 12
Salvage?? = 1 (1=no, 2=yes)
Appraisal zone = 5

Appraisal Update #7-16

teacost.dat file (TEA 07-16)

The Appraisal Update # and teacost.dat file date **MUST BE THE SAME** in calculating a weighted average BPP!

Species BPP Weighting Table

Species Code	Species Vol (CCF)	BPP from TEACOST.DAT
205	8,702.00	87.08
Total or Avg	8,702.00	87.08

MBF Volume Table

Species Code	Species Vol (MBF)
205	4,569.00
Total	4,569.00

Enter MBF volume from Species Group Tables for entry of Total into TEA Main Screen.

PRODUCT QUALITY ADJUSTMENT - OREGON WESTSIDE

Use with Appraisal Update #7-16

Sale Name: Farmer Thin (DxP) Date: 24-Aug-16 (mm/dd/yy)

Species Group #1	Minimum Dia - dib	Representative Grade*	Log price $/mbf avg**	Volume MBF	Volume CCF	Log price $/ccf avg	Adjustment Dollars
205	5.0" - 7.99"	#4 sawmill	615.00	929	1,950	292.99	-48.00
	8.0"-11.99"	#3 sawmill	663.00	2,335	4,540	340.99	0.00
	12.0"-17.99"	#2 sawmill	676.00	1,233	2,104	396.15	55.16
	18.0" - 30.0"	special mill	721.00	73	110	478.48	137.49

Chip Values, $/ccf

$/ton Avg	Avg lb per cf	Volume CCF
29.00		

BPP for chips = 0.00 /ccf
(insert as override on TEA input screen under BPP/CCF for products 08 and 20)

Weighted average Product Quality Adjustment (PQA) for Species Group #1 = 4.32 /ccf

Weighted average delivered log price for Species Group #1 = 345.31 /ccf (enter on TEA input screen as Log Pr/CCF)

Species Group #2	Minimum Dia - dib	Representative Grade*	Log price $/mbf avg**	Volume MBF	Volume CCF	Log price $/ccf avg	Adjustment Dollars
263,264,108	5.0" - 7.99"	#4 sawmill	444.00				
true firs	8.0"-11.99"	#3 sawmill	492.00			255.84	0.00
spruces	12.0"-17.99"	#2 sawmill	482.00				
	18.0" - 24.0"	special mill	482.00				

Weighted average Product Quality Adjustment (PQA) for Species Group #2 = 0.00 /ccf

Weighted average delivered log price for Species Group #2 = 0.00 /ccf (enter on TEA input screen as Log Pr/CCF)

Species Group #3	Minimum Dia - dib	Representative Grade*	Log price $/mbf avg**	Volume MBF	Volume CCF	Log price $/ccf avg	Adjustment Dollars
242	< 12.0"	#4 sawmill	camprun				
	12.0"-23.99"	#3 sawmill	945.00			491.40	0.00
	24.0"+	#2 sawmill	0.00				

Weighted average Product Quality Adjustment (PQA) for Species Group #3 = 0.00 /ccf

Weighted average delivered log price for Species Group #3 = 0.00 /ccf (enter on TEA input screen as Log Pr/CCF)

Species Group #4	Minimum Dia - dib		Log price $/mbf avg	Volume MBF	Volume CCF	Log price $/ccf avg	Adjustment Dollars
		If this table is used, → entry needed here				0.00	

Weighted average Product Quality Adjustment (PQA) for Species Group #4 = 0.00 /ccf

Weighted average delivered log price for Species Group #4 = 0.00 /ccf (enter on TEA input screen as Log Pr/CCF)

Species Group #5	Minimum Dia - dib		Log price $/mbf avg	Volume MBF	Volume CCF	Log price $/ccf avg	Adjustment Dollars
		If this table is used, → entry needed here				0.00	

Weighted average Product Quality Adjustment (PQA) for Species Group #5 = 0.00 /ccf

Weighted average delivered log price for Species Group #5 = 0.00 /ccf (enter on TEA input screen as Log Pr/CCF)

Species Group #6	Minimum Dia - dib		Log price $/mbf avg	Volume MBF	Volume CCF	Log price $/ccf avg	Adjustment Dollars
		If this table is used, → entry needed here				0.00	

Weighted average Product Quality Adjustment (PQA) for Species Group #6 = 0.00 /ccf

Weighted average delivered log price for Species Group #6 = 0.00 /ccf (enter on TEA input screen as Log Pr/CCF)

* Industry grade used to associate minimum dib and delivered log price. Volume comprises mostly the representative grade, but also may include material of other grades.