Timber Sale Appraisal
Likely Storey
Sale FG-341-2019-W00543-02

District: Forest Grove **Date: August 28, 2018**

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	$1,546,409.96	$0.00	$1,546,409.96
		Project Work:	$0.00
		Advertised Value:	$1,546,409.96

Timber Sale Appraisal
Likely Storey
Sale FG-341-2019-W00543-02

District: Forest Grove **Date: August 28, 2018**

Timber Description

Location: Portions of Section 14, T2N, R6W, W.M., Washington County, Oregon

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	17	0	98
Western Hemlock / Fir	23	0	98

Volume by Grade	2S	3S & 4S 6"-11"	Total
Douglas - Fir	1,421	1,139	2,560
Western Hemlock / Fir	273	78	351
Total	1,694	1,217	2,911

Comments: Pond Values Used: Local Pond Values, May 2018.

Western redcedar and Other Cedars Stumpage Price = Pond Value minus Logging Cost:
$1,046.02/MBF = $1,333/MBF - $286.98/MBF

Red Alder and Other Hardwoods Stumpage Price = Pond Value minus Logging Cost:
$380.02/MBF = $667/MBF - $286.98/MBF

BRANDING AND PAINTING COST ALLOWANCE =$2.00/MBF

FUEL COST ALLOWANCE = $3.00/Gallon

HAULING COST ALLOWANCE
Hauling costs equivalent to $950 daily truck cost.

Other Costs (with Profit & Risk to be added):
Rocked Non-Project road construction: 5.5 Stations @ $636/Station = $3500
Reopen spur to landing 4: $500
TOTAL Other Costs (with Profit & Risk to be added) = $4000

Other Costs (No Profit & Risk added):
Machine Time to Block/Waterbar Roads,and Skid Trails:
10 hours x $150/hour = $1,500
Machine Time to Pile Landing Slash and Sort Firewood:
20 hours x $150/hour = $3,000
Equipment Cleaning: 3 pieces x $1,000/Piece = $3,000
Slash Disposal: 28 acres x $200/acre = $5,600
TOTAL Other Costs (No Profit & Risk added) = $13,100

ROAD MAINTENANCE
Move-in: $4,000
General Road Maintenance: 5.4 miles x $1,200/mile = $6,480
TOTAL Road Maintenance: $10,480/2,911 MBF = $3.60/MBF

Timber Sale Appraisal
Likely Storey

Sale FG-341-2019-W00543-02

District: Forest Grove **Date: August 28, 2018**

Logging Conditions

Combination#: 1

Douglas - Fir	61.00%
Western Hemlock / Fir	61.00%

Logging System: Cable: Large Tower >=70 **Process:** Stroke Delimber

yarding distance: Long (1,500 ft) **downhill yarding:** No

tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF

loads / day: 7 **bd. ft / load:** 4600

cost / mbf: $192.55

machines: Log Loader (A)
Stroke Delimber (A)
Tower Yarder (Large)

Combination#: 2

Douglas - Fir	39.00%
Western Hemlock / Fir	39.00%

Logging System: Shovel **Process:** Manual Delimbing

yarding distance: Medium (800 ft) **downhill yarding:** No

tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF

loads / day: 11 **bd. ft / load:** 4600

cost / mbf: $65.76

machines: Shovel Logger

Timber Sale Appraisal
Likely Storey
Sale FG-341-2019-W00543-02

District: Forest Grove **Date: August 28, 2018**

Logging Costs

Operating Seasons:	1.00	**Profit Risk:**	10%
Project Costs:	$0.00	**Other Costs (P/R):**	$4,000.00
Slash Disposal:	$0.00	**Other Costs:**	$13,100.00

Miles of Road

Road Maintenance: $3.60

Dirt	Rock (Contractor)	Rock (State)	Paved
0.0	0.0	0.0	0.0

Hauling Costs

Species	$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	$0.00	2.0	4.6
Western Hemlock / Fir	$0.00	2.0	4.0

Timber Sale Appraisal
Likely Storey
Sale FG-341-2019-W00543-02

District: Forest Grove **Date: August 28, 2018**

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
$143.10	$3.67	$1.51	$105.33	$1.37	$25.50	$0.00	$2.00	$4.50	$286.98
Western Hemlock / Fir									
$143.10	$3.67	$1.51	$121.12	$1.37	$27.08	$0.00	$2.00	$4.50	$304.35

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	$0.00	$835.55	$548.57	$0.00
Western Hemlock / Fir	$0.00	$709.11	$404.76	$0.00

Timber Sale Appraisal
Likely Storey
Sale FG-341-2019-W00543-02

District: Forest Grove **Date: August 28, 2018**

Summary

Amortized

Specie	MBF	Value	Total
Douglas - Fir	0	$0.00	$0.00
Western Hemlock / Fir	0	$0.00	$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	2,560	$548.57	$1,404,339.20
Western Hemlock / Fir	351	$404.76	$142,070.76

Gross Timber Sale Value

Recovery: $1,546,409.96

Prepared By: Kenton Burns **Phone:** 503-359-7473

CRUISE REPORT
Likely Storey
FG-341-2019-W00543-02

1. LOCATION: Portions of sections 14, T2N, R6W, W.M. Washington County, Oregon.

2. CRUISE DESIGN:
Pre-cruise evaluation indicated that the stand's average DBH is approximately 17 inches with a Coefficient of Variation of about 55%. For sales of this size and approximate value, ODF cruise standards require a Sampling Error of 9% at a 68% confidence level, and a minimum sample size of 100 graded trees. Statistical analysis indicated that 37 variable radius plots utilizing a 40 BAF prism would produce an adequate sample size.

3. SAMPLING METHOD:
The Timber Sale Area was cruised in June of 2019. The Timber Sale Area was sampled with 38 variable radius grade plots laid out on a 3 chain x 7 chain grid. Plots falling on or near existing roads or no-harvest areas were offset 1 chain.

4. CRUISE RESULTS
215 trees were measured and graded producing a cumulative Sampling Error of 5.5% on the Basal Area and 5.3% on the Board Foot Volume.

5. TREE MEASUREMENT AND GRADING:
All sample trees were measured and graded following Columbia River Log Scale grade rules and favored 40 foot segments.

a) **Height Standards:**
Total tree heights were measured to the nearest foot. Bole heights were calculated to a six inch top.

b) **Diameter Standards:** Diameters were measured outside bark at breast height to the nearest inch.

c) **Form Factors** were measured for each grade tree using a form point of 16 feet.

6. DATA PROCESSING

a) **Volumes and Statistics**, Cruise estimates and sampling statistics, were derived from Super Ace 2008 cruise software.

b) **Deductions:** Two percent of the volume was subtracted from the computed volumes to account for hidden defect and breakage.

7. Cruisers: The sale was cruised by ODF cruisers Kenton Burns, Adrian Torres, and Mark Savage.

Prepared by: _____ 7-23-18
Kenton Burns Date

Reviewed by: Erik Marcy 7-20-18
Erik Marcy Date

TC PSTATS

PROJECT STATISTICS

PROJECT LKYSTRY

DATE 7/2/2018

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
02N	06	14	00A1	00MC	78.00	38	215	S	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	38	215	5.7		
CRUISE	38	215	5.7	10,525	2.0
DBH COUNT					
REFOREST					
COUNT					
BLANKS					
100 %					

STAND SUMMARY

	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR	189	125.6	17.0	105	48.2	198.9	33,688	33,475	7,802	7,802
NOB FIR	18	5.7	24.7	124	3.8	18.9	3,616	3,392	820	820
WHEMLOCK	7	3.0	21.0	107	1.6	7.4	1,217	1,191	301	301
WR CEDAR	1	.5	19.0	86	0.2	1.1	112	96	36	36
TOTAL	*215*	*134.9*	*17.5*	*106*	*54.0*	*226.3*	*38,633*	*38,154*	*8,959*	*8,959*

CONFIDENCE LIMITS OF THE SAMPLE

68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR

SAMPLE TREES - BF

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
DOUG FIR	60.4	4.4	380	397	415			
NOB FIR	57.0	13.8	614	712	811			
WHEMLOCK	55.9	22.8	374	484	594			
WR CEDAR								
TOTAL	*63.8*	*4.3*	*407*	*426*	*444*	*163*	*41*	*18*

SAMPLE TREES - CF

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
DOUG FIR	56.1	4.1	88	92	96			
NOB FIR	48.6	11.8	151	172	192			
WHEMLOCK	52.3	21.3	96	122	148			
WR CEDAR								
TOTAL	*59.6*	*4.1*	*96*	*100*	*104*	*142*	*35*	*16*

TREES/ACRE

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DOUG FIR	85.4	13.8	108	126	143			
NOB FIR	209.9	34.0	4	6	8			
WHEMLOCK	409.3	66.3	1	3	5			
WR CEDAR	616.4	99.9	0	1	1			
TOTAL	*76.6*	*12.4*	*118*	*135*	*152*	*234*	*59*	*26*

BASAL AREA/ACRE

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DOUG FIR	45.9	7.4	184	199	214			
NOB FIR	200.8	32.5	13	19	25			
WHEMLOCK	375.6	60.9	3	7	12			
WR CEDAR	616.4	99.9	0	1	2			
TOTAL	*33.7*	*5.5*	*214*	*226*	*239*	*45*	*11*	*5*

NET BF/ACRE

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DOUG FIR	43.9	7.1	31,091	33,475	35,858			
NOB FIR	204.5	33.1	2,268	3,392	4,516			
WHEMLOCK	374.8	60.8	468	1,191	1,915			
WR CEDAR	616.4	99.9	0	96	192			

TC PSTATS

PROJECT STATISTICS

PROJECT LKYSTRY

DATE 7/2/2018

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
02N	06	14	00A1	00MC	78.00	38	215	S	W

CL 68.1 SD: 1.00	COEFF VAR.	S.E.%	NET BF/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
TOTAL	*32.8*	*5.3*	*36,122*	*38,154*	*40,185*	*43*	*11*	*5*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	NET CUFT FT/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
DOUG FIR	42.8	6.9	7,260	7,802	8,344			
NOB FIR	202.8	32.9	551	820	1,090			
WHEMLOCK	373.5	60.5	119	301	483			
WR CEDAR	616.4	99.9	0	36	72			
TOTAL	*31.0*	*5.0*	*8,509*	*8,959*	*9,410*	*38*	*10*	*4*

TC PSPCSTGR

Species, Sort Grade - Board Foot Volumes (Project)

T02N R06W S14 Ty00MC 78.00

Project: LKYSTRY
Acres 78.00

Page 1
Date 7/2/2018
Time 11:00:42AM

Spp	S So Gr T rt ad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent of Net Board Foot Volume: Log Scale Dia. 4-5	6-11	12-16	17+	Log Length 12-20	21-30	31-35	36-99	Average Log Ln Ft	Dia In	Bd Ft	CF/ Lf	Logs Per /Acre
DF	CU														8	9		0.00	7.6
DF	2M	55	.5	18,671	18,584	1,450			76	24		1		99	40	14	318	1.73	58.4
DF	3M	40	.9	13,432	13,316	1,039		99	1				7	93	39	8	98	0.64	135.9
DF	4M	5	.6	1,585	1,575	123		100			35	65			20	6	24	0.32	66.3
DF Totals		88	.6	33,688	33,475	2,611		44	42	13	2	3	3	92	33	9	125	0.87	268.3
NF	2M	79	7.7	2,933	2,708	211			51	49				100	40	16	386	2.22	7.0
NF	3M	18		592	592	46		100				3		97	39	9	119	0.85	5.0
NF	4M	3		91	91	7		100			54	46			18	6	20	0.40	4.6
NF Totals		9	6.2	3,616	3,392	265		20	40	39	1	2		97	34	11	204	1.47	16.6
WH	2M	72	2.9	884	859	67			66	34				100	40	15	343	1.98	2.5
WH	3M	24		292	292	23		100						100	40	8	107	0.80	2.7
WH	4M	4		40	40	3		100			13	87			23	6	24	0.38	1.7
WH Totals		3	2.1	1,217	1,191	93		28	48	24	0	3		97	36	10	172	1.21	6.9
RC	3M	83	16.7	96	80	6		100						100	40	11	150	1.42	.5
RC	4M	17		16	16	1		100				100			24	6	30	0.43	.5
RC Totals		0	14.3	112	96	8		100				17		83	32	9	90	1.05	1.1
Totals			1.2	38,633	38,154	2,976		42	42	16	2	3	3	93	33	9	130	0.91	292.9

TC PLOGSTVB

Log Stock Table - MBF

T02N R06W S14 Ty00MC 78.00

Project: LKYSTRY
Acres 78.00

Date 7/2/2018
Time 11:00:41AM

Spp	S T	So Grade	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF		2M	30	8		8	.3							8					
DF		2M	40	1,448		1,442	55.2						453	328	597	64			
DF		3M	32	29		29	1.1			29									
DF		3M	34	48		48	1.8			48									
DF		3M	36	70	2.7	68	2.6			62	6								
DF		3M	38	28		28	1.1			8	20								
DF		3M	40	873		866	33.1			157	235	469	5						
DF		4M	12	11		11	.4			11									
DF		4M	14	7		7	.3			7									
DF		4M	16	6		6	.2			6									
DF		4M	18	10		10	.4			9	0								
DF		4M	20	10		10	.4			10									
DF		4M	22	28		28	1.1			28									
DF		4M	24	11		11	.4			11									
DF		4M	26	12		12	.5			12									
DF		4M	28	7		7	.3			7									
DF		4M	30	24	3.3	23	.9			23									
DF		Totals		2,628		2,611	87.7			426	261	469	458	336	597	64			
NF		2M	40	229	7.7	211	79.9						32	32	114	11	22		
NF		3M	24	1		1	.2				1								
NF		3M	26	1		1	.2				1								
NF		3M	38	3		3	1.3				3								
NF		3M	40	42		42	15.7			4	13	24							
NF		4M	12	1		1	.6			1									
NF		4M	14	0		0	.1			0									
NF		4M	16	1		1	.4			1									
NF		4M	20	1		1	.4			1									
NF		4M	24	1		1	.5			1									
NF		4M	26	1		1	.3			1									
NF		4M	28	1		1	.4			1									
NF		Totals		282	6.2	265	8.9			11	18	24	32	32	114	11	22		
WH		2M	40	69	2.9	67	72.1						5	30	20	12			
WH		3M	40	23		23	24.5			5	6	12							
WH		4M	12	0		0	.4			0									

TC PLOGSTVB

Log Stock Table - MBF

T02N R06W S14 Ty00MC 78.00

Project: LKYSTRY
Acres 78.00

Date 7/2/2018
Time 11:00:41AM

Spp	ST	So	Grade	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3 4-5	6-7 8-9	10-11 12-13	14-15 16-19	20-23 24-29	30-39 40+
WH			4M	28	3		3	2.9		3				
WH			Totals		95	2.1	93	3.1		8 6	12 5	30 20	12	
RC			3M	40	8	16.7	6	83.3			6			
RC			4M	24	1		1	16.7		1				
RC			Totals		9	14.3	8	.3		1	6			
Total			All Species		3,013	1.2	2,976	100.0		447 286	511 495	398 731	87 22	

TC PSTNDSUM

Stand Table Summary

Page 1
Date: 7/2/2018

T02N R06W S14 Ty00MC 78.00

Project LKYSTRY
Acres 78.00

Time: 11:00:44AM
Grown Year:

Spc	S T	DBH	Sample Trees	FF 16'	Tot Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		8	1	88	82	3.016	1.05	3.02	5.1	30.0	.44	15	90	34	12	7
DF		9	5	88	81	11.913	5.26	11.91	8.9	50.0	3.04	107	596	237	83	46
DF		10	9	86	79	17.370	9.47	19.30	10.6	49.0	5.85	205	946	456	160	74
DF		12	5	86	94	6.701	5.26	12.06	12.6	50.0	4.34	152	603	338	119	47
DF		13	5	87	95	5.710	5.26	11.42	13.9	55.0	4.53	159	628	353	124	49
DF		14	4	87	98	3.939	4.21	7.88	17.3	71.3	3.88	136	561	302	106	44
DF		15	9	87	103	7.720	9.47	15.44	21.6	91.7	9.52	334	1,415	742	260	110
DF		16	8	87	111	6.031	8.42	12.06	26.1	111.2	8.97	315	1,342	699	245	105
DF		17	13	86	110	8.681	13.68	18.03	27.8	113.7	14.28	501	2,050	1,114	391	160
DF		18	18	88	116	10.722	18.95	24.42	30.5	122.0	21.24	745	2,978	1,657	581	232
DF		19	17	87	121	9.088	17.89	25.13	29.8	120.4	21.37	750	3,026	1,667	585	236
DF		20	14	88	120	6.755	14.74	17.37	33.8	138.9	16.73	587	2,412	1,305	458	188
DF		21	8	87	124	3.501	8.42	10.50	34.9	152.9	10.43	366	1,606	814	286	125
DF		22	18	87	125	7.178	18.95	20.74	40.4	179.0	23.85	837	3,712	1,861	653	290
DF		23	17	88	124	6.202	17.89	18.61	42.3	187.3	22.43	787	3,484	1,749	614	272
DF		24	17	87	129	5.696	17.89	16.75	48.9	218.0	23.35	819	3,652	1,821	639	285
DF		25	3	87	131	.926	3.16	2.78	52.2	232.2	4.13	145	645	322	113	50
DF		26	6	86	130	1.713	6.32	5.14	55.6	243.9	8.14	286	1,253	635	223	98
DF		27	3	85	132	.794	3.16	2.38	60.7	266.7	4.12	145	635	321	113	50
DF		28	2	89	133	.492	2.11	1.48	68.3	330.0	2.87	101	487	224	79	38
DF		29	3	87	119	.688	3.16	1.84	74.0	318.8	3.87	136	585	302	106	46
DF		30	2	79	144	.429	2.11	1.29	77.2	323.3	2.83	99	416	221	78	32
DF		31	1	86	134	.201	1.05	.60	73.3	343.3	1.26	44	207	98	34	16
DF		33	1	80	121	.177	1.05	.53	59.0	266.7	.89	31	142	70	24	11
DF		Totals	189	87	105	125.645	198.95	260.67	29.9	128.4	222.36	7,802	33,475	17,344	6,086	2,611
NF		18	1	88	124	.596	1.05	1.79	24.4	100.0	1.05	44	179	82	34	14
NF		19	1	84	116	.535	1.05	1.07	38.1	135.0	.98	41	144	76	32	11
NF		20	1	89	140	.482	1.05	1.45	34.5	156.7	1.20	50	227	93	39	18
NF		22	1	91	113	.399	1.05	1.20	36.1	120.0	1.04	43	144	81	34	11
NF		23	3	90	124	1.094	3.16	3.28	42.4	190.0	3.34	139	624	260	108	49
NF		24	1	82	121	.335	1.05	1.01	42.0	166.7	1.01	42	168	79	33	13
NF		25	1	89	150	.309	1.05	.93	58.1	276.7	1.29	54	256	101	42	20
NF		26	2	85	121	.571	2.11	1.71	51.4	215.0	2.11	88	368	165	69	29
NF		27	2	90	118	.529	2.11	1.59	58.0	241.7	2.21	92	384	172	72	30
NF		31	2	76	118	.402	2.11	1.20	69.9	211.7	2.02	84	255	158	66	20
NF		32	1	88	122	.188	1.05	.57	81.7	360.0	1.11	46	204	86	36	16
NF		38	2	91	128	.267	2.11	.80	121.1	548.3	2.33	97	440	182	76	34
NF		Totals	18	87	124	5.708	18.95	16.59	49.4	204.4	19.68	820	3,392	1,535	640	265
WH		15	1	89	93	.858	1.05	1.72	21.3	90.0	1.17	37	154	91	29	12
WH		19	1	93	116	.535	1.05	1.60	29.5	130.0	1.51	47	209	118	37	16
WH		21	1	85	107	.438	1.05	.88	48.1	180.0	1.35	42	158	105	33	12
WH		22	1	83	108	.399	1.05	.80	50.5	165.0	1.29	40	132	100	31	10
WH		24	1	85	108	.335	1.05	.67	62.8	225.0	1.35	42	151	105	33	12
WH		25	1	85	130	.309	1.05	.93	53.6	230.0	1.59	50	213	124	39	17
WH		33	1	85	101	.177	1.05	.35	121.3	495.0	1.38	43	175	107	34	14
WH		Totals	7	87	107	3.050	7.37	6.94	43.3	171.6	9.63	301	1,191	751	235	93
RC		19	1	80	86	.535	1.05	1.07	33.6	90.0	.84	36	96	66	28	8
RC		Totals	1	80	86	.535	1.05	1.07	33.6	90.0	.84	36	96	66	28	8
Totals			215	87	106	134.937	226.32	285.27	31.4	133.7	252.52	8,959	38,154	19,697	6,988	2,976

TIMBER SALE SUMMARY
Likely Storey
Contract No. FG-341-2019-W00543-02

1. **Location:** Portions of Section 14, T2N, R6W, W.M., Washington County, Oregon.

2. **Type of Sale:** This timber sale is 78 net acres of Modified Clearcut. The timber will be sold on a recovery basis at a sealed bid auction.

3. **Revenue Distribution:** 100% BOF, Washington County.

4. **Sale Acreage:** Acres are net of green tree retention areas, stream buffers and road prisms. Acreage was determined using ESRI ArcMap GIS software.

5. **Cruise**: The Timber Sale was cruised by ODF Cruisers in June of 2018. For more information see Cruise Report.

6. **Timber Description:** The Timber Sale Area consists of an over-stocked 68 year old Douglas-fir stand with minor amounts of western hemlock, western redcedar, true firs, and hardwoods. The stand has an average of 226 ft^2 of basal area of all species, an average Douglas-fir DBH of 17 inches, as well as an estimated average net Douglas-fir volume of approximately 32.8 MBF per acre and 4.5 MBF per acre of white wood, most of which is Noble fir.

7. **Volume Summary** (Shown in MBF)

SPECIES	2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	1,421	1,018	121	2,560
Noble Fir	207	45	7	259
Western Hemlock	66	23	3	92
Total	1,694	1,086	131	2,911

8. **Topography and Logging Method:** Slopes within the sale areas range from 5% to 80%, and variable in aspect. The timber sale is 39% ground-based yarding and 61% cable yarding. The average cable corridor length is 700 feet and the average horizontal skid trail length is approximately 200 feet and the maximum is approximately 800 feet.

9. **Access:** All access to the Timber Sale Area is on surfaced all-weather roads. From Forest Grove travel north seven miles on Highway 8 to its junction with Highway 6 and turn left. Continue west on Highway 6 for 9.5 miles to Storey Burn Road. Proceed north on Storey Burn for approximately 4.5 miles to the Timber Sale Area.

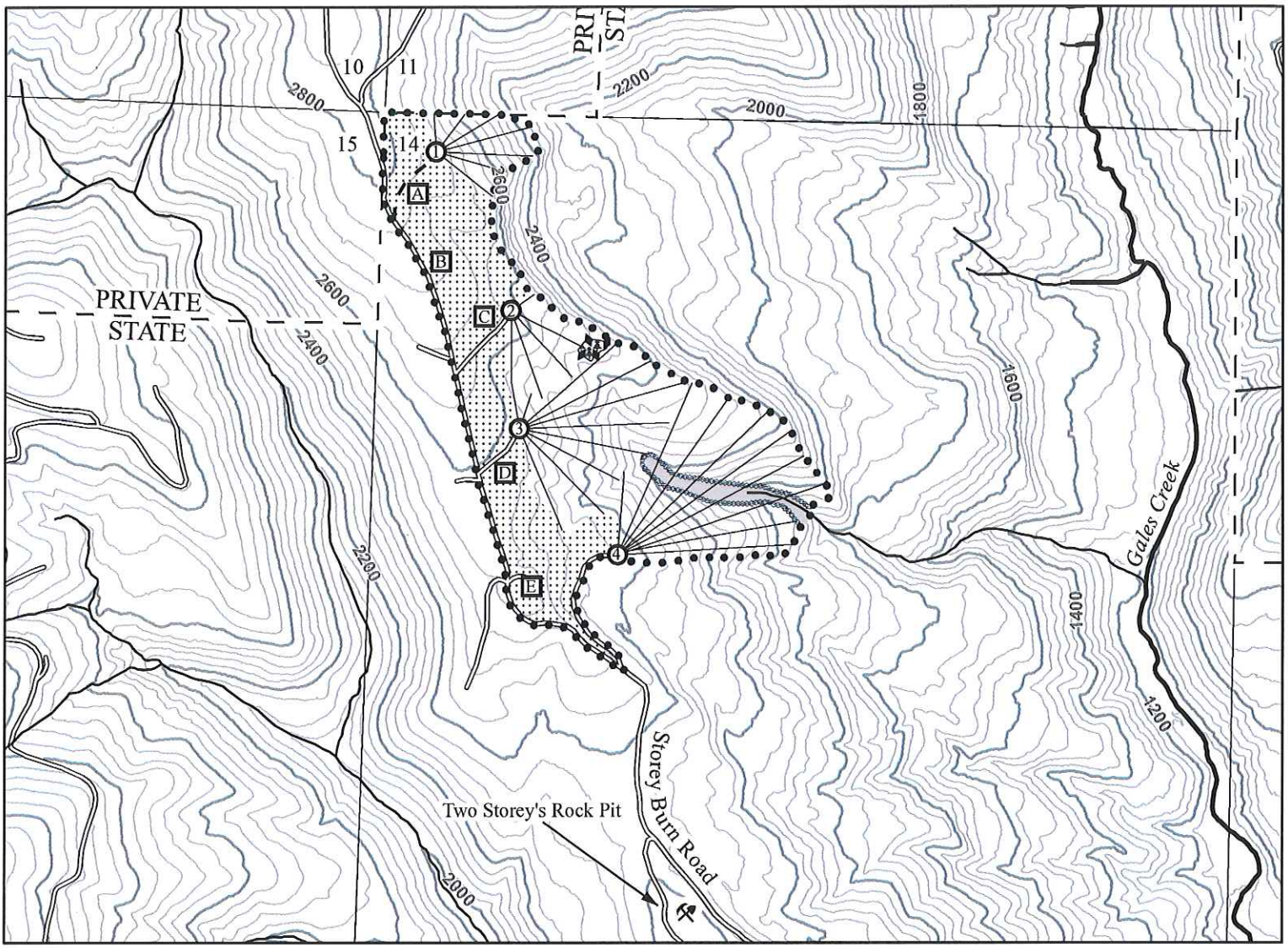
VOLUME SUMMARY
(Shown in MBF)
Likely Storey
FG-341-2019-W00543-02
July 2019

Timber Sale Area: MC (78 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	Cruise Volume	1,450	1,039	123	2,612
	Hidden D&B (2%)	(29)	(21)	(2)	(52)
	NET TOTAL	1,421	1,018	121	2,560
	% of Total	56	40	5	
Noble Fir	Cruise Volume	211	46	7	264
	Hidden D&B (2%)	(4)	(1)	()	(5)
	NET TOTAL	207	45	7	259
	% of Total	80	17	3	
Western Hemlock	Cruise Volume	67	23	3	93
	Hidden D&B (2%)	(1)	()	()	(2)
	NET TOTAL	66	23	3	92
	% of Total	72	25	3	

SALE TOTAL

SPECIES	2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	1,421	1,018	121	2,560
Noble Fir	207	45	7	259
Western Hemlock	66	23	3	92
Total	1,694	1,086	131	2,911



Legend

- Timber Sale Boundary
- Green Tree Retention Boundary
- Stream Buffer Boundary
- Green Tree Retention
- Stream Buffer
- Cable Landing
- Tractor Landing
- Cable Yarding Area
- Tractor Yarding Area
- Non-Project Road
- Surfaced Roads
- Fish Stream
- Non-Fish Stream
- ODF Ownership Boundary
- Sections
- 40 ft contours
- 200 ft contours

LOGGING PLAN

FOR TIMBER SALE CONTRACT FG-341-2019-W00543-02
LIKELY STOREY
PORTIONS OF SECTION 14, T2N, R6W, W.M.
WASHINTON COUNTY, OREGON

Forest Grove District GIS
June, 2018
This product is for informational use and may not be suitable for legal, engineering, or surveying purposes.

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APPROXIMATE NET ACRES

	TRACTOR	CABLE
TOTAL	30	48

1:12,000
1 inch = 1,000 feet

0 375 750 1,500 2,250 3,000 Feet