PRE-CRUISE NARRATIVE

Sale Name:	Steelhead Junction	**Region:**	Pacific Cascade
Agree. #:	30-079385	**District:**	Lewis
Contact forester:	Rick Arcano	**Alternate contact:**	Dean Adams

Please check the type of sale:

☒ **Lump Sum Sale.]** ☐ **Scale Sale.]** ☐ **Tonnage Weight Scale.]** ☐ **Ton Local Unit Cruise.]** ☐ **Pole Sale.**

UNIT ACREAGES AND METHOD OF DETERMINATION:

Unit #	**Legal Descr. Sec/Twp/Rng**	**Grant**	**Gross acres**	**Net Harvest Acres Less Existing Roads and Leave Tree Clumps**	**Method of acreage determination (compass chain traverse, photo, declination used, etc)**	**Error of closure**
1	14/12N/8W	01	11.8	11.6	Compass and laser traverse	1:161
2	14,15/12N/8W	01, 03	48.6	44.4	Trimble Recon GPS	N/A
D-1000 Quarry Harvest	15/12N/8W	03	3.1	3.1	Trimble Recon GPS (3.0 contiguous acres were traversed. There is an additional subunit approximately 0.1 acres in area.)	N/A
D-Line Daylighting	15/12N/8W	03	3.6	3.6	No Traverse (1 mile of road, approximately 15' of daylighting on each side of the road)	N/A
	Total		67.1	62.7 = 63		

HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	**Harvest prescription: (mark leave, take, etc)**	**Special management areas:**	**Other conditions (# leave trees, etc.)**
1	**Leave trees marked in blue paint or "Leave Tree Area" Boundary tags**	**None**	Total of 94 leave trees, scattered and clumped. Clumps total 0.2 acres.
2	**Leave trees marked in blue paint or "Leave Tree Area" Boundary tags**	**None**	Total of 389 leave trees, scattered and clumped. Clumps (2.4 ac.) and existing roads (1.8 ac.) were deducted from unit.
D-1000 Quarry Harvest	**No leave trees.**	**None**	This is a harvest to facilitate rock pit exploration and expansion. There are two subunits. We anticipate a 100% cruise of the smaller subunit.
D-Line Daylighting	**No leave trees.**	**None**	This is a harvest to daylight a portion of the D-Line, the D-1000 and the D-1020 to the D-Line Quarry. We anticipate a 100% cruise.

OTHER PRE-CRUISE INFORMATION:

Unit #	**Estimated Volume**	**Access information (Gates, locks, etc.)**	**Photos, traverse maps required**
1	**371 MBF**	**None**	Yes.
2	**2082 MBF**	**None**	
D-1000 Quarry	**60 MBF**	**None**	
D-Line Daylighting	**109 MBF**	**None**	

REMARKS:

U-1 is bounded by "Timber Sale Boundary" Tags, reprod, road, and pink flagging.

Traverse points 29.1 and 30.1 from the Traverse PC printout are not marked on the ground. Points were adjusted due to thick hemlock regeneration along the unit boundary. Horizontal distance and compass bearings were taken from actual traverse points (28, 29, and 30) to trees along the unit boundary.

U-2 is bounded by "Timber Sale Boundary" Tags, reprod, road, and pink flagging.

The following points are flagged on the ground with pink flagging: BX, BP, N, AM, and AW.

The D-1000 Quarry harvest is bounded by pink and orange flagging. There are two sub-units, one of which is traversed, and the other is not due to its small size (approximately 0.1 acres). We anticipate a 100% cruise of the smaller sub-unit.

The D-Line Daylighting harvest is marked with orange "Right of Way" Tags and orange flagging. We anticipate a 100% cruise of daylighting.

U-1: Acreage for leave tree clumps (0.2 ac.) was deducted from unit traverse to arrive at "Net" acres.

U-2: Acreage for leave tree clumps (2.4 ac.) and existing roads (1.8 ac.) were deducted from unit traverse to arrive at "Net" acres.

Prepared by: Rick Arcano

Title: State Lands Forester

CC: Dean Adams, Unit Forester

Cruise Narrative

Sale Name:	Steelhead Junction	**Region:**	Pacific Cascade
App. #:	79385	**District:**	Lewis
Lead Cruiser:	M. Kirner	**Completion date:**	07/20/06
Other Cruisers on sale:	C. Backman		

acreage specifications:

Unit #	Cruised acres	Cruised acres agree with sale acres? Yes/No	If acres do not agree explain why.
01	11.6	Yes	
02	44.4	Yes	
R.P.	3.1	Yes	
D.L.	3.6	Yes	
Total	62.70	Yes	Rounded.

cruise specifications:

Unit #	Sample type (VP, FP, ITS,100%)	Expansion factor (BAF, full/ half)	Sighting height (4.5 ft, 16 ft.)	Grid size (Plot spacing or % of area)	Plot ratio (cruise:count)	Total number of plots
01	V.P.	62.50 F	4.5'	330' x 165'	1 to 1	09 Plots
02	V.P.	54.45 F	4.5'	400' x 165'	1 to 1	30 Plots
R.P.	V.P. / 100%	54.45 / I.T.S.	4.5'	V.P.=4 / 100%	N.A.	04 + 100%
D.L.	I.T.S.	I.T.S.	4.5'	Ratio.	N.A.	N.A.

/Cruise Description:

Minor species cruise intensity:	Cruised on appropriate Plots.					
Minimum cruise spec:	40% 0f Form- Factor at 16 feet D.O.B or 5 inch Top, and merchantable top.					
Avg ring count by sp:	**DF** =	05 R.P.I.	**WH** =	07 R.P.I.	**SS** =	04 R.P.I.
Leave/take tree description:	Scattered blue banded trees and leave Islands.					
Other conditions	None.					

d observations:

This sale is of mostly Western Hemlock, with a mixture of Douglas Fir. High quality Two and Three saw material in U#1 W / a small amount of Mini Peel of Two and Three Saw material , tight grain good form. U#2 has a mixture of both, of a younger stand, which has little defect. Roads already exist. Easy yarding access. Good field work.

Grants: **01** **03**

Prepared by: M. Kirner

Title: Timber Cruiser

CC: Files

TC PSPCSTGR

Species, Sort Grade - Board Foot Volumes (Project)

T12N R08W S14 Ty00U1
THRU
T12N R08W S15 TyDL

Project: **STHDJCT**

Acres **62.70**

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Date **7/27/2006**
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Spp	S T	So rt	Gr 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	Bd Ft	CF/ Lf	Logs Per /Acre
DF	D	2S		52	3.1	8,287	8,033	504		7	36	57			100		32	316	1.91	25.4
DF	D	3S		32	3.6	5,076	4,896	307	3	84	8	5	3	6	92		30	78	0.64	63.2
DF	D	4S		13	1.4	2,092	2,062	129	44	56			16	28	56		18	23	0.29	88.9
DF	M	2S		3		346	346	22			39	61			100		32	355	1.74	1.0
DF Totals				37	2.9	15,801	15,336	962	7	38	22	33	3	6	91		24	86	0.76	178.5
WH	D	2S		26	3.2	7,023	6,800	426		5	91	5			100		32	194	1.41	35.1
WH	D	3S		60	2.8	15,452	15,025	942	6	87	6	1	1	3	96		30	76	0.63	197.7
WH	D	4S		14	3.4	3,516	3,397	213	68	27	1	3	28	34	38		16	20	0.28	173.9
WH Totals				61	3.0	25,990	25,222	1,581	13	57	28	2	4	7	89		24	62	0.62	406.8
RC	D	3S		54	6.5	344	322	20	0	70	29			0	100		32	77	1.07	4.2
RC	D	4S		46	.1	264	264	17	62	38			32	31	38		17	20	0.46	13.1
RC Totals				1	3.7	609	586	37	28	56	16		14	14	72		21	34	0.69	17.3
SF	D	2S		19		15	15	1			60	40			100		32	230	1.61	.1
SF	D	3S		70	1.2	55	54	3	4	80	6	11		4	96		32	94	0.76	.6
SF	D	4S		11		8	8	1	75	25			27	45	27		14	16	0.32	.5
SF Totals				0	.8	77	77	5	10	59	15	15	3	7	90		24	68	0.72	1.1
SS	D	2S		61		165	165	10			100				100		32	280	1.70	.6
SS	D	3S		39		101	101	6		100				17	83		29	85	0.72	1.2
SS	D	4S																	0.00	.0
SS Totals				1	.0	266	266	17		38	62			7	93		29	148	1.07	1.8
RA	D	4S		100	1.2	14	14	1	74	26			2	54	44		17	20	0.38	.7
RA Totals				0	1.2	14	14	1	74	26			2	54	44		17	20	0.38	.7
Totals					2.9	42,758	41,501	2,602	11	50	26	14	4	6	90		24	68	0.66	606.2

TC PSTATS

PROJECT STATISTICS

PROJECT STHDJCT

DATE 7/27/2006

TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
12N	08	14	STEELHEAD JC	00U1	THR	62.70	46	404	S	W
12N	08W	15	STEELHEAD JC	DL						

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	46	404	8.8		
CRUISE	34	341	10.0	15,574	2.2
DBH COUNT					
REFOREST COUNT	12	60	5.0		
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
WHEMLOCK	153	165.8	14.1	68	36	179.5	25,990	25,222	6,089	6,087
DOUG FIR	101	69.5	15.4	70	23	89.6	15,801	15,336	3,262	3,263
WR CEDAR	26	11.5	13.0	44		10.6	609	586	247	247
PS FIR	32	.5	15.5	59	0	.7	77	77	19	19
R ALDER	27	.4	10.3	36		.3	14	14	5	5
S SPRUCE	2	.6	19.9	91		1.3	266	266	57	57
TOTAL	*341*	*248.4*	*14.4*	*67*		*281.8*	*42,758*	*41,501*	*9,678*	*9,678*

CONFIDENCE LIMITS OF THE SAMPLE

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

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	SAMPLE TREES - BF LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
WHEMLOCK	75.1	6.1	176	187	199			
DOUG FIR	140.7	14.1	336	391	446			
WR CEDAR	81.3	16.6	42	51	59			
PS FIR	76.6	13.5	130	150	171			
R ALDER			40	40	40			
S SPRUCE	103.3	96.9	8	260	512			
TOTAL	*150.0*	*8.2*	*207*	*226*	*244*	*900*	*225*	*100*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	SAMPLE TREES - CF LOW	AVG	HIGH	# OF TREES REQ. 5	10	INF. POP. 15
WHEMLOCK	67.7	5.5	44	47	49			
DOUG FIR	124.5	12.4	71	81	91			
WR CEDAR	72.8	14.9	19	22	25			
PS FIR	68.7	12.1	33	38	43			
R ALDER			13	13	13			
S SPRUCE	72.4	67.9	20	63	106			
TOTAL	*120.9*	*6.6*	*49*	*52*	*56*	*585*	*146*	*65*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	TREES/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
WHEMLOCK	89.6	13.2	144	166	188			
DOUG FIR	145.5	21.5	55	70	84			
WR CEDAR	293.6	43.3	7	12	16			
PS FIR	656.9	96.9	0	1	1			
R ALDER	678.2	100.0	0	0	1			
S SPRUCE	660.2	97.3	0	1	1			
TOTAL	*62.0*	*9.1*	*226*	*248*	*271*	*154*	*38*	*17*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	BASAL AREA/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
WHEMLOCK	87.9	13.0	156	179	203			
DOUG FIR	109.3	16.1	75	90	104			
WR CEDAR	271.1	40.0	6	11	15			
PS FIR	663.1	97.8	0	1	1			
R ALDER	678.2	100.0	0	0	1			
S SPRUCE	665.1	98.1	0	1	3			
TOTAL	*57.6*	*8.5*	*258*	*282*	*306*	*133*	*33*	*15*

CL 68.1 SD: 1.0	COEFF VAR.%	S.E.%	NET BF/ACRE LOW	AVG	HIGH	# OF PLOTS REQ. 5	10	INF. POP. 15
WHEMLOCK	82.2	12.1	22,164	25,222	28,280			
DOUG FIR	130.0	19.2	12,396	15,336	18,277			
WR CEDAR	294.5	43.4	332	586	840			
PS FIR	665.4	98.1	1	77	152			
R ALDER	678.2	100.0	0	14	27			
S SPRUCE	675.3	99.6	1	266	531			
TOTAL	*65.0*	*9.6*	*37,526*	*41,501*	*45,476*	*169*	*42*	*19*

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
WHEMLOCK	84.0	12.4	5,333	6,087	6,841			
DOUG FIR	120.5	17.8	2,684	3,263	3,843			
WR CEDAR	285.0	42.0	143	247	351			

TC PSTATS

PROJECT STATISTICS

PROJECT **STHDJCT**

DATE 7/27/2006

TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
12N	08	14	STEELHEAD JC	00U1	THR	62.70	46	404	S	W
12N	08W	15	STEELHEAD JC	DL						

CL 68.1	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.
SD: .00	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
PS FIR	664.5	98.0	0	19	38			
R ALDER	678.2	100.0	0	5	9			
S SPRUCE	672.3	99.1	1	57	113			
TOTAL	*60.7*	*9.0*	*8,812*	*9,678*	*10,545*	*147*	*37*	*16*

TC PSPCTLTCM

Species Summary - Trees, Logs, Tons, CCF, MBF

T12N R08W S14 Ty00U	11.6
T12N R08W S14 Ty00U	44.4
T12N R08W S15 TyDL	3.6

Project STHDJCT
Acres 62.70

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Date: 7/27/2006
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Species	S T	Total Trees	Total Logs	Total Tons	Net Cubic Ft/ Tree	Net Cubic Ft/ Log	CF/ LF	Total CCF Gross	Total CCF Net	Total MBF Gross	Total MBF Net
WHEMLOCK		10,396	25,506	12,216	36.71	14.96	0.61	3,818	3,817	1,630	1,581
DOUG FIR		4,360	11,189	5,828	46.93	18.29	0.76	2,045	2,046	991	962
WR CEDAR		722	1,084	364	21.47	14.29	0.69	155	155	38	37
S SPRUCE		38	113	92	93.74	31.52	1.06	36	36	17	17
PS FIR		32	71	35	37.94	17.10	0.68	12	12	5	5
R ALDER		27	43	8	10.49	6.59	0.39	3	3	1	1
Totals		15,574	38,006	18,543	38.96	15.97	0.66	6,068	6,068	2,681	2,602

Wood Type Species	Total Trees	Total Logs	Total Tons	Net Cubic Ft/ Tree	Net Cubic Ft/ Log	CF/ LF	Total CCF Gross	Total CCF Net	Total MBF Gross	Total MBF Net
C	15,547	37,963	18,536	39.01	15.98	0.66	6,065	6,065	2,680	2,601
H	27	43	8	10.49	6.59	0.39	3	3	1	1
Totals	15,574	38,006	18,543	38.96	15.97	0.66	6,068	6,068	2,681	2,602

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: STHDJCT

Date 7/27/2006

Time 9:55:01AM

T12N R08W S14 T00U1

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
12N	08W	14	STEELHEAD JC	00U1	11.60	9	47	S	W

T12N R08W S14 T00U1

Spp	ST	Sort	Grade	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent 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	Bd Ft	CF/ Lf	Logs Per /Acre
DF		DM	2S	78	4.0	34,546	33,175	385			29	71			100		32	405	2.32	81.9
DF		DM	3S	17	3.4	7,754	7,487	87		67	17	16	7	11	82		27	98	0.83	76.8
DF		DM	4S																0.00	4.4
DF		M	2S	5		1,868	1,868	22			39	61			100		32	355	1.74	5.3
DF		**Totals**		58	3.7	44,168	42,530	493		12	27	61	1	2	97		29	253	1.66	168.4
WH		DM	2S	34	2.5	10,643	10,372	120			84	16			100		32	222	1.50	46.7
WH		DM	3S	52	3.3	15,856	15,332	178	5	71	19	5	1	3	95		31	85	0.63	180.8
WH		DM	4S	14	3.2	4,145	4,013	47	43	43		14	10	31	58		19	28	0.33	142.4
WH		**Totals**		41	3.0	30,644	29,717	345	8	43	39	10	2	6	92		26	80	0.68	369.9
RC		DM	3S	61	18.8	629	511	6			100				100		32	130	1.37	3.9
RC		DM	4S	39		314	314	4	13	88			13		88		23	40	0.47	7.9
RC		**Totals**		1	12.5	943	825	10	5	33	62		5		95		26	70	0.84	11.8
Type Totals					3.5	75,755	73,072	848	3	25	32	40	2	4	95		27	133	1.01	550.1

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: STHDJCT

Date 7/27/2006

Time 9:55:01AM

T12N R08W S14 T00U2

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
12N	08W	14	STEELHEAD JC	00U2	44.40	30	87	S	W

T12N R08W S14 T00U2

Spp	ST	Sort	Grad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent 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	Bd Ft	CF/ Lf	Logs Per /Acre
WH		DM	2S	24	3.3	6,071	5,873	261		6	94				100		32	181	1.35	32.4
WH		DM	3S	61	2.7	14,994	14,583	647	6	92	2		1	3	96		30	74	0.61	197.7
WH		DM	4S	15	3.1	3,481	3,374	150	78	22			34	36	31		16	18	0.25	188.1
WH		**Totals**		68	2.9	24,546	23,830	1,058	15	61	24		5	7	88		24	57	0.58	418.2
DF		DM	2S	25		2,640	2,640	117		30	58	13			100		32	184	1.31	14.3
DF		DM	3S	46	3.6	4,880	4,705	209	4	92	4		1	3	95		31	71	0.58	65.9
DF		DM	4S	29	1.5	2,925	2,883	128	44	56			16	28	57		18	24	0.29	121.8
DF		**Totals**		29	2.1	10,445	10,227	454	14	66	17	3	5	9	86		23	51	0.52	202.0
RC		DM	3S	52	.0	313	313	14		100					100		32	67	1.01	4.7
RC		DM	4S	48		283	283	13	76	24			37	39	24		16	18	0.46	16.1
RC		**Totals**		2		596	596	26	36	64			18	19	64		20	29	0.66	20.8
SS		DM	2S	62		233	233	10			100				100		32	280	1.70	.8
SS		DM	3S	38		141	141	6		100				18	82		29	85	0.72	1.7
SS		**Totals**		1		374	374	17		38	62			7	93		30	150	1.07	2.5
Type Totals					2.6	35,962	35,028	1,555	15	62	22	1	5	8	87		23	54	0.57	643.5

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: STHDJCT

Date 7/27/2006

Time 9:55:01AM

T12N R08W S15 T00RP

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
12N	08W	15	STEELHEAD JC	00RP	3.10	6	55	S	W

T12N R08W S15 T00RP

Spp	ST	Sort	Grade	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent 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	Bd Ft	CF/ Lf	Logs Per /Acre
WH		DM	2S	24	6.6	5,325	4,972	15		31	69				100		32	186	1.51	26.7
WH		DM	3S	73	.9	15,382	15,239	47	11	89			2	4	95		29	71	0.63	214.4
WH		DM	4S	3		509	509	2	100				6	90	4		7	6	0.28	83.5
WH		**Totals**		89	2.3	21,216	20,719	64	11	73	17		1	5	94		24	64	0.71	324.6
DF		DM	3S	95	3.7	2,412	2,324	7	11	89					100		32	72	0.58	32.2
DF		DM	4S	5		106	106	0	67	33			42	24	33		4	5	0.28	19.8
DF		**Totals**		10	3.5	2,518	2,430	8	14	86			2	1	97		22	47	0.56	52.1
SF		DM	3S	77		23	23	0		100					100		32	70	0.64	.3
SF		DM	4S	23		6	6	0	100				100				16	20	0.24	.3
SF		**Totals**		0		29	29	0	22	78			22		78		24	45	0.50	.6
Type Totals					2.5	23,763	23,178	72	11	74	15		1	5	94		23	61	0.69	377.3

T TSPCSTGR

Species, Sort Grade - Board Foot Volumes (Type)

Project: STHDJCT

Date 7/27/2006

Time 9:55:01AM

T12N R08W S15 TDL

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt
12N	08W	15	STEELHEAD JC	DL	3.60	1	152	S	W

T12N R08W S15 TDL

Spp	ST	Sort	Grad	% Net BdFt	Bd. Ft. per Acre Def%	Gross	Net	Total Net MBF	Percent 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	Bd Ft	CF/ Lf	Logs Per /Acre
WH		DM	2S	26	3.2	8,568	8,297	30			100				100		32	217	1.67	38.2
WH		DM	3S	60	2.7	19,850	19,308	70	7	73	20		1	6	93		30	81	0.73	238.6
WH		DM	4S	14	7.2	4,501	4,176	15	47	34	19		25	27	48		15	23	0.48	179.0
WH		**Totals**		90	3.5	32,919	31,782	114	10	49	41		4	7	89		24	70	0.78	455.8
DF		DM	2S	24	1.9	462	453	2		14	86				100		32	204	1.59	2.2
DF		DM	3S	61	4.6	1,168	1,114	4	2	64	34		1	4	95		31	91	0.82	12.3
DF		DM	4S	15		271	271	1	77	23			30	46	25		15	18	0.31	14.9
DF		**Totals**		5	3.3	1,901	1,838	7	13	45	42		5	9	86		23	62	0.73	29.4
SF		DM	2S	19		256	256	1			60	40			100		32	230	1.61	1.1
SF		DM	3S	70	1.2	931	919	3	4	79	6	11		4	96		32	95	0.77	9.7
SF		DM	4S	11		136	136	0	73	27			24	47	29		14	16	0.32	8.3
SF		**Totals**		4	.8	1,322	1,311	5	10	58	16	16	3	8	90		24	68	0.72	19.2
RC		DM	3S	50	10.0	111	100	0	17	83				8	92		32	51	0.88	1.9
RC		DM	4S	50	5.4	103	97	0	86	14			37	49	14		20	23	0.42	4.2
RC		**Totals**		1	7.8	214	197	1	51	49			18	28	54		24	32	0.62	6.1
RA		DM	4S	100	1.2	239	236	1	74	26			2	54	44		17	20	0.38	11.9
RA		**Totals**		1	1.2	239	236	1	74	26			2	54	44		17	20	0.38	11.9
SS		DM	3S	100		19	19	0		100					100		32	70	0.96	.3
SS		DM	4S																0.00	.3
SS		**Totals**		0		19	19	0		100					100		16	35	0.96	.6
Type Totals					3.4	36,614	35,384	127	11	49	40	1	4	8	88		24	68	0.76	523.1

TC TSTATS

STATISTICS

PROJECT **STHDJCT**

DATE 7/27/2006

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
12N	08W	14	STEELHEAD JC	00U1	11.60	9	47	S	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	9	47	5.2		
CRUISE	9	47	5.2	2,009	2.3
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
WHEMLOCK	23	126.9	15.2	85	31	159.7	30,644	29,717	6,641	6,641
DOUG FIR	23	42.4	26.3	120	33	159.7	44,168	42,530	8,109	8,111
WR CEDAR	1	3.9	18.0	81		6.9	943	825	258	258
TOTAL	*47*	*173.2*	*18.6*	*93*		*326.4*	*75,755*	*73,072*	*15,008*	*15,009*

CONFIDENCE LIMITS OF THE SAMPLE

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

CL: 68.1 %	COEFF		**SAMPLE TREES - BF**			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	69.1	14.7	291	342	392			
DOUG FIR	45.0	9.6	1,129	1,249	1,369			
WR CEDAR								
TOTAL	*79.8*	*11.6*	*692*	*783*	*874*	*255*	*64*	*28*

CL: 68.1 %	COEFF		**SAMPLE TREES - CF**			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	68.0	14.5	65	76	87			
DOUG FIR	42.5	9.1	214	236	257			
WR CEDAR								
TOTAL	*72.9*	*10.6*	*138*	*154*	*170*	*213*	*53*	*24*

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	83.5	29.5	89	127	164			
DOUG FIR	105.1	37.1	27	42	58			
WR CEDAR	300.0	106.0		4	8			
TOTAL	*65.4*	*23.1*	*133*	*173*	*213*	*192*	*48*	*21*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	59.1	20.9	126	160	193			
DOUG FIR	65.2	23.0	123	160	197			
WR CEDAR	300.0	106.0		7	14			
TOTAL	*41.5*	*14.7*	*279*	*326*	*374*	*77*	*19*	*9*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	56.8	20.1	23,755	29,717	35,680			
DOUG FIR	67.7	23.9	32,355	42,530	52,704			
WR CEDAR	300.0	106.0		825	1,700			
TOTAL	*43.4*	*15.3*	*61,859*	*73,072*	*84,286*	*85*	*21*	*9*

CL: 68.1 %	COEFF		**NET CUFT FT/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	56.4	19.9	5,318	6,641	7,964			
DOUG FIR	68.0	24.0	6,162	8,111	10,059			
WR CEDAR	300.0	106.0		258	531			
TOTAL	*41.9*	*14.8*	*12,788*	*15,009*	*17,230*	*79*	*20*	*9*

TC TSTATS

STATISTICS

PROJECT STHDJCT

DATE 7/27/2006

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
12N	08W	14	STEELHEAD JC	00U2	44.40	30	150	S	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	30	150	5.0		
CRUISE	18	87	4.8	12,247	.7
DBH COUNT					
REFOREST COUNT	12	60	5.0		
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
WHEMLOCK	51	175.6	13.6	65	36	176.1	24,546	23,830	5,784	5,783
DOUG FIR	29	84.6	13.3	64	22	81.7	10,445	10,227	2,404	2,406
WR CEDAR	6	14.8	12.5	41		12.7	596	596	274	274
S SPRUCE	1	.8	20.0	92		1.8	374	374	79	79
TOTAL	*87*	*275.8*	*13.5*	*64*		*272.3*	*35,962*	*35,028*	*8,542*	*8,542*

CONFIDENCE LIMITS OF THE SAMPLE

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

CL: 68.1 %	COEFF		**SAMPLE TREES - BF**			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	48.4	6.8	170	183	195			
DOUG FIR	73.3	13.8	149	173	197			
WR CEDAR	63.6	28.3	42	58	75			
S SPRUCE								
TOTAL	*62.2*	*6.7*	*162*	*174*	*186*	*155*	*39*	*17*

CL: 68.1 %	COEFF		**SAMPLE TREES - CF**			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	49.5	6.9	42	45	48			
DOUG FIR	70.6	13.3	36	41	47			
WR CEDAR	60.0	26.8	20	28	35			
S SPRUCE								
TOTAL	*58.3*	*6.3*	*41*	*43*	*46*	*136*	*34*	*15*

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	78.0	14.5	150	176	201			
DOUG FIR	127.8	23.7	64	85	105			
WR CEDAR	254.3	47.3	8	15	22			
S SPRUCE	547.7	101.8		1	2			
TOTAL	*41.4*	*7.7*	*255*	*276*	*297*	*71*	*18*	*8*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	75.2	14.0	151	176	201			
DOUG FIR	110.4	20.5	65	82	98			
WR CEDAR	243.6	45.3	7	13	18			
S SPRUCE	547.7	101.8		2	4			
TOTAL	*40.0*	*7.4*	*252*	*272*	*292*	*66*	*17*	*7*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	78.0	14.5	20,376	23,830	27,284			
DOUG FIR	112.1	20.8	8,097	10,227	12,358			
WR CEDAR	268.6	49.9	298	596	893			
S SPRUCE	547.7	101.8		374	755			
TOTAL	*46.3*	*8.6*	*32,017*	*35,028*	*38,038*	*89*	*22*	*10*

CL: 68.1 %	COEFF		**NET CUFT FT/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	77.6	14.4	4,949	5,783	6,616			
DOUG FIR	108.2	20.1	1,922	2,406	2,889			
WR CEDAR	261.5	48.6	141	274	408			
S SPRUCE	547.7	101.8		79	160			
TOTAL	*44.6*	*8.3*	*7,835*	*8,542*	*9,249*	*82*	*21*	*9*

TC TSTATS

STATISTICS

PROJECT STHDJCT

DATE 7/27/2006

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
12N	08W	15	STEELHEAD JC	00RP	3.10	6	55	S	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	6	55	9.2		
CRUISE	6	55	9.2	442	12.4
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
WHEMLOCK	40	123.5	15.9	68	32	169.9	21,216	20,719	5,425	5,425
DOUG FIR	14	18.9	14.4	68	6	21.2	2,518	2,430	622	624
PS FIR	1	.3	13.0	55	0	.3	29	29	8	8
TOTAL	*55*	*142.6*	*15.7*	*68*		*191.4*	*23,763*	*23,178*	*6,054*	*6,056*

CONFIDENCE LIMITS OF THE SAMPLE

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

CL: 68.1 %	COEFF		**SAMPLE TREES - BF**			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	71.1	11.2	117	132	147			
DOUG FIR	65.0	18.0	65	79	94			
PS FIR								
TOTAL	*73.8*	*9.9*	*106*	*118*	*130*	*218*	*54*	*24*

CL: 68.1 %	COEFF		**SAMPLE TREES - CF**			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	65.1	10.3	32	36	39			
DOUG FIR	66.4	18.4	18	22	26			
PS FIR								
TOTAL	*68.6*	*9.3*	*29*	*32*	*35*	*189*	*47*	*21*

CL: 68.1 %	COEFF		**TREES/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	69.3	30.9	85	123	162			
DOUG FIR	113.2	50.5	9	19	28			
PS FIR	244.9	109.2		0	1			
TOTAL	*66.8*	*29.8*	*100*	*143*	*185*	*213*	*53*	*24*

CL: 68.1 %	COEFF		**BASAL AREA/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	70.0	31.2	117	170	223			
DOUG FIR	123.2	54.9	10	21	33			
PS FIR	244.9	109.2		0	1			
TOTAL	*67.9*	*30.3*	*133*	*191*	*249*	*220*	*55*	*24*

CL: 68.1 %	COEFF		**NET BF/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	71.7	32.0	14,094	20,719	27,344			
DOUG FIR	132.9	59.2	991	2,430	3,869			
PS FIR	244.9	109.2		29	61			
TOTAL	*70.1*	*31.2*	*15,936*	*23,178*	*30,420*	*234*	*59*	*26*

CL: 68.1 %	COEFF		**NET CUFT FT/ACRE**			# OF PLOTS REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	71.2	31.7	3,704	5,425	7,146			
DOUG FIR	128.8	57.4	266	624	982			
PS FIR	244.9	109.2		8	16			
TOTAL	*69.3*	*30.9*	*4,187*	*6,056*	*7,926*	*229*	*57*	*25*

TC TSTATS

STATISTICS

PROJECT STHDJCT

DATE 7/27/2006

TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
12N	08W	15	STEELHEAD JC	DL	3.60	1	152	S	W

	PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES
TOTAL	1	152	152.0		
CRUISE	1	152	152.0	875	17.4
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
WHEMLOCK	39	206.1	16.2	59	56	293.6	32,919	31,782	8,631	8,628
DOUG FIR	35	15.4	15.3	51	5	19.6	1,901	1,838	496	497
PS FIR	31	8.6	15.5	59	2	11.3	1,322	1,311	331	331
WR CEDAR	19	5.3	13.3	32		5.1	214	197	89	89
R ALDER	27	7.5	10.3	36		4.4	239	236	79	79
S SPRUCE	1	.3	17.0	40		.4	19	19	9	9
TOTAL	*152*	*243.2*	*15.9*	*57*		*334.5*	*36,614*	*35,384*	*9,634*	*9,631*

CONFIDENCE LIMITS OF THE SAMPLE

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

CL: 68.1 %	COEFF		**SAMPLE TREES - BF**			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	59.5	9.5	144	159	174			
DOUG FIR	89.0	15.3	105	124	142			
PS FIR	76.5	13.7	131	152	173			
WR CEDAR	48.0	11.6	35	39	44			
R ALDER			40	40	40			
S SPRUCE								
TOTAL	*87.7*	*7.3*	*108*	*116*	*125*	*308*	*77*	*34*

CL: 68.1 %	COEFF		**SAMPLE TREES - CF**			# OF TREES REQ.		INF. POP.
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
WHEMLOCK	56.0	9.0	39	43	47			
DOUG FIR	85.6	14.7	28	33	38			
PS FIR	68.7	12.3	34	38	43			
WR CEDAR	67.1	16.3	15	18	21			
R ALDER			13	13	13			
S SPRUCE								
TOTAL	*77.4*	*6.5*	*30*	*32*	*34*	*240*	*60*	*27*