

RECORD KEEPING  
A COMPANY PERSPECTIVE

**G Manners**  
**Tasman Forestry Ltd**

INTRODUCTION

Record keeping in a Forestry company is done for the same reason that any company large or small keep records. The key issue is to make sure that the information retained is easily understandable, and to the point. You must resist the temptation to keep too much information. Too much is just as bad as not enough.

There are essentially two types of records :

a) Planning Records

These records consist of information that allows you to prepare future action plans and consist of accident reports, inventory data, contractor costs, production standards and the like.

b) Action Records

In order to monitor your performance against your action plan, you need action records. They can be considered as the control mechanism. Historical action records often form part of your planning record base. Some examples of action records are, accident frequency rates, reject rates, contractor payments, yield reconciliations and production performance data.

The number and type of records kept depends on the company, its objectives, and the size of the company. In general they should be simple, brief and graphical if possible. I classify my records according to four main areas of activity and will deal with each in turn.

I SAFETY

Of all the information held by a company, Safety records have a direct impact on the lives and well-being of individuals and their families working in the forest.

a) Planning Records

The main record type is our Company Safety Report, these reports contain most of the relevant information on previous accidents (see Appendix I). As such they provide a useful basis to plan and implement the Company's training program. A useful example of this is that three years ago the majority of the Company's accidents were in our felling operations. As a result of this the Company has carried out intensive felling training throughout its operations. The result of this is a large reduction in the number and severity of felling accidents.

The previous year's accident frequency rate is also kept in order to provide a measure of the affect of your safety record and your improvement. It also allows you to set your goals for continual improvement in this area.

Finally part of our planning records consist of a register of contractor's employees and the competence level. Previously this information was kept in manual form by the trainers. We are currently working with LIRA in implementing the surveys which will provide a base for planning our training action plan.

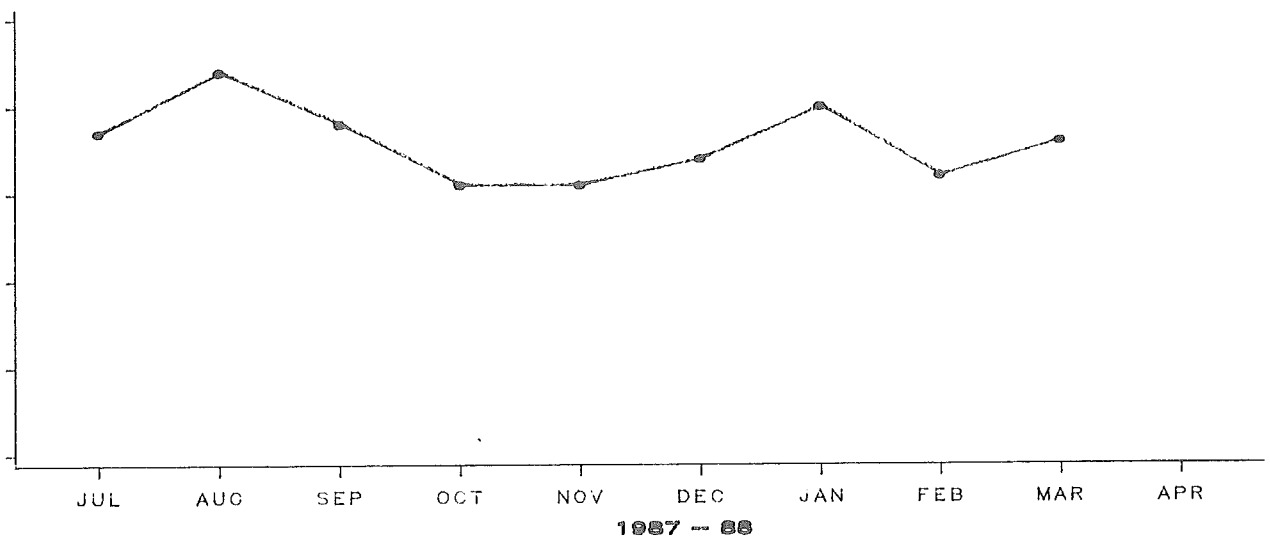
b) Action Records

The company Safety Reports can be used throughout the year to help

check the effectiveness of your Safety Program. If you keep having the same type of accident over and over again then your program cannot be having the desired effect.

As part of our Company's service to our contractors, we can provide an assessment by someone registered as an assessor with the LFITB and an evaluation of a new employee as well as an ongoing assessment of individuals within a crew. This is done for two reasons: firstly as a safety net for new employees and to identify any potential problems before it is too late: and secondly, as a check to ensure that our training methods work and the ideas and techniques taught become work habits. (See Appendix II).

**TASMAN FORESTRY LIMITED**  
**LOGGING OPERATIONS DIVISION**  
**LOST TIME INJURY FREQUENCY RATINGS**  
**1987 - 88 (9 MONTHS)**



$$LTIFR = \frac{\text{No. lost time injuries} \times 100,000}{\text{Hours Worked}}$$

As an ongoing measure of our performance we calculate and graph our LTIFR monthly. If the trend in this graph is upwards then we know there is something fundamentally wrong with our operations. If it is stable or shows a downwards trend then we can assume we are on the right track. Although we have not done so yet, I feel that we should also modify this measure with a severity index to give a truer

measure of our performance.

## II QUALITY

As a Company our objective is to produce logs that best suit the customer that enables him to maximise his revenue from those logs. To this end together with the end users of our material, we have developed a series of log specifications which fit their requirements.

Export Logs		Saw Logs				Pulpwood				Roundwood Posts & Poles	
L E N G T H S	Longs	Longs	Optional	Preferred	Optional	Pulp (Fresh Radial)	Kraft	Billets	Oversize Kraft	Random longs 8m-12m	
	Shorts	Preferred	Optional	Optional	S.E.D.: 8cm minimum L.E.D.: 22.5cm maximum Knots: 7.5cm maximum						
G R A D I N G	12.1m 8.1m	12.2m 11.3m 10.4m	11.9m 11.8m 11.0m	9.1m 5.5m 4.9m	5.8m 6.2m 4.8m 4.3m 4.0m 3.7m	Tauman Pulp & Paper	3.7-12m 10-40cm	3.7-6.1m 9.2-12.0m 10-89cm	3.7-5.0m Over 90cm	S.E.D.: 8cm minimum L.E.D.: 22.5cm maximum Knots: 7.5cm maximum	
	Tolerance: Nil	Tolerance: 5cm	S.E.D.: 20cm minimum - 75cm maximum Knots: 15cm maximum (including collar)		S.E.D.: 20cm minimum Thinnings Grade 25cm minimum L.E.D.: Per customer requirement	Fletcher Wood Panels	Lengths Diameters	3.7-12m 10-40cm	1.2-1.0m 10-40cm	Trimming: Branches trimmed flush, ends cut square	
M A R K I N G	Painted green Large end only	Capital "F"	Knots: A Grade i) Knots under 7cm if S.E.D. under 35cm ii) Knots under 12.5cm if S.E.D. over 35cm iii) Max. of 2 knots at max. knot size limit per sawlog B-Grade i) Knots under 12.5cm if S.E.D. under 35cm ii) Knots under 25cm if S.E.D. over 35cm iii) Max. of 2 knots at max. knot size limit per sawlog		Trimming: Branches trimmed flush, ends cut square Sweep: Short-1/4 of S.E.D. over any log length Long-1/2 of S.E.D. over any log length Wobble: 2 or more bends-5cm Not Acceptable: Fork, kink, rot, split/drawn wood, sap stain, insect damage	Winstonea	Lengths Diameters	3.7-8.0m 10-65cm		Form: Must be straight Not Acceptable: Fork, wobble, sweep, kink, nodal swelling, sap stain, insect damage, split/drawn wood	
	Painted red One end only	Capital "F.S."	Painted green A-Grade 1 stripe all logs B-Grade 2 stripes all logs	Trimming: Branches trimmed flush, ends cut square Sweep: Short-1/4 of S.E.D. over any log length Long-1/2 of S.E.D. over any log length Wobble: 2 or more bends-5cm Not Acceptable: Fork, kink, rot, split/drawn wood, sap stain, insect damage		Not Acceptable: Fork, kink, rot, split/drawn wood, sap stain, insect damage	N.Z. Forest Products	Lengths Diameters	3.7-12m 10-120cm		Painted red Gang number Felling date 1 in 10 logs
						Tolerance: N.A.				Knot size: No limit	
										Trimming: Branches trimmed flush, ends cut square, chamfer cut crutches Sap stain Fork, rot, split/drawn wood, insect damage	
										Gang number all logs Felling date 1 in 10 logs	
										All logs both ends Capital "F.S." Gang number	
										Clear/fell air logs Winstonea Red dpt all logs under 40cm Capital "W" all Winstonea logs	

In order to protect our main asset, our growing forests, we have developed a set of specifications and standards for these operations. These then can be considered our planning records.

Our action records are a measure of our performance against those standards.

When producing logs we try to achieve a zero reject rate. In practice we would achieve a reject rate of between 0 and 1/2% by volume for any individual customer. Our Customer Liason Manager's will send me a periodic report showing the amount of rejects by log type and by defect.

## KAWERAU REJECTS

Period 9            11 May 1988

Sawlogs            48.54 m<sup>3</sup>            (94 pieces) were rejected

<u>Gang No.</u>	<u>Shatter</u>	<u>Wobble</u>	<u>Sweep</u>	<u>Oversize</u> <u>Knots</u>	<u>Kink</u>	<u>Rotten</u> <u>Dead</u>	<u>Split</u>	<u>Undersize</u>
1	1	2		1				
2	2	9	2	4		1	1	
3		4	4	2	2			1
8		4	1			1		2
15		1			1		1	
22		8	2			1		
30		1	1	1			1	
35		6	1					
38	1		1					
No Number		12	4		3	2		2
TOTAL	4	47	16	8	6	6	3	5

Pulpwood

11 oversize Kraft over part 3-4 days

Gangs 71, 30, 38, 96, 43  
TFL

This information is useful to see where you are going wrong and allow you to correct the situation.

In order to monitor our performance when carrying our production thinning

operations we carry out a number of sample plots and compare the results to our standards. If the results show that we are out of line then we work to correct the situation.

BARK DAMAGE QUALITY CONTROL SUMMARY

TIME PERIOD:

CONTRACTOR	SUPERVISOR	MACHINE	FOREST CPT/STD	CURRENT TIME PERIOD			STAND TO DATE			YEAR TO DATE		
				NUMBER OF PLOTS	RESIDUAL STOCKING PER HA.	%BARK DAMAGE	HA.	RESIDUAL STOCKING PER HA.	%BARK DAMAGE	HA.	%BARK DAMAGE	HA.
666	521	101	1	2	259	10.0	6	259	10.0	6	4.7	78
666	521	6	6	1	234	8.0	3	234	8.0	3	4.7	78
518	523	427	1	4	196	2.0	12	225	1.1	42	1.1	42
666	523	428	1	2	250	3.0	6	224	2.2	24	1.2	45
666	524	253	1	1	234	2.0	3	217	4.0	18	4.1	60
664	521	428	1	2	167	2.0	6	167	2.0	6	3.7	93
664	523	427	1	3	184	0.0	9	184	0.0	9	3.7	93
666	523	427	1	2	226	5.0	6	184	3.2	15	3.6	33
TJK	524	253	1	3	239	6.7	7	232	4.5	24	5.4	90
664	523	428	1	5	220	4.0	15	217	3.2	24	3.4	156
666	521	6	10	1	300	2.0	3	300	2.0	3	3.5	36
664	523	427	1	3	178	1.3	7	214	2.8	15	3.1	132
664	523	428	1	4	217	2.0	12	191	2.4	27	3.1	132
CDN	521	101	1	2	234	3.0	6	234	3.0	6	8.8	45

III REVENUE MAXIMISATION

The objective of our Harvesting operations is to maximise the revenue earned from each hectare logged. Therefore we must first determine the products contained in the stand and their revenue so that we can set out to maximise the volume of those log types that generate the most revenue. In practice these turn out to be sawlogs,

pruned and unpruned as well as export logs.

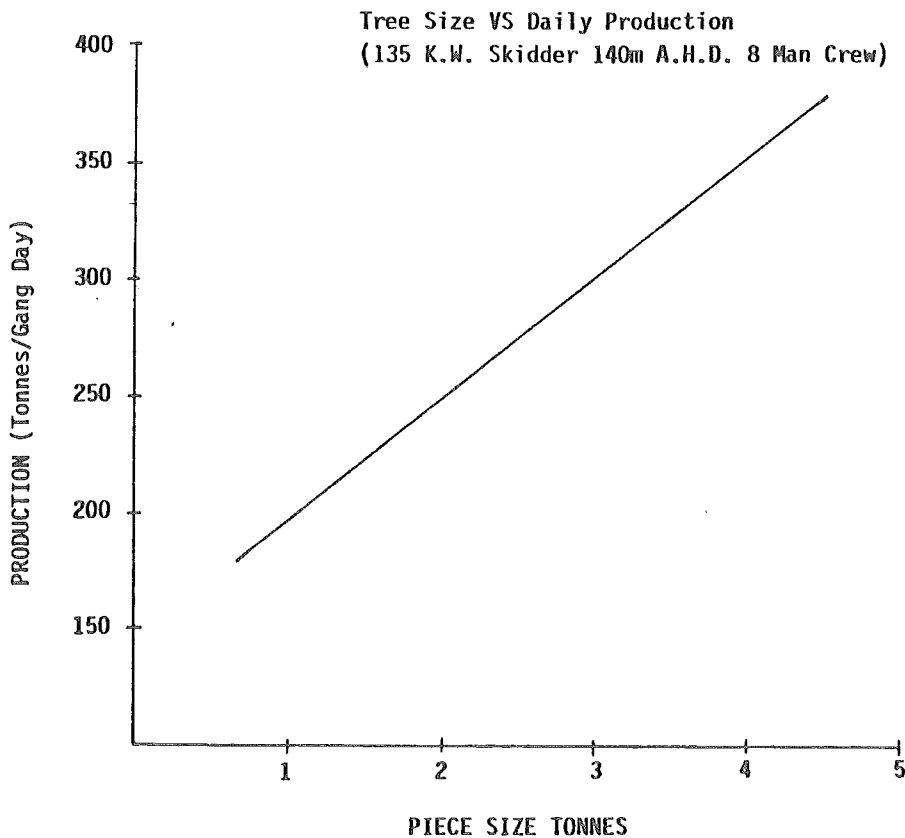
a) Planning Records

Our primary record type is the pre-harvesting inventory which provides a picture of the forest in product terms especially as it can be related to the log types that can be sold at the time of harvest.

This information is used to schedule logging crews to provide the right log mix. It sets a yield recovery standard for the logging operation.

Production standards form our next record type. They serve two functions.

One in the planning process to prepare the crew schedules and a second one in preparing the contract rate for a particular setting or compartment. This information is most useful in a graphical form as it is easy to use and interpret.



These two sources of information combine together with our market requirements into a Production Schedule, an example of which is contained in Appendix III. This schedule is effectively our action plan for the next few weeks.

Log stocks are audited once a week on Monday morning. These Stock Sheets by gang form the basis for our Transport plan for the week. These stocks are updated by the logging gangs three times a day during the week. (See Appendix IV).

b) Action Records

Action records are our control mechanism for our action plan, and allow us to compare what is actually happening with what was anticipated.

(pruned, unpruned and export) against our target yield. This is recorded weekly and summarised monthly as part of our production reporting system (Appendix V)

Firstly our actual yields and revenues are compared with our plan. There are three areas of control :

i) The Logging Crew  
This is the primary level. In the most simplistic form we track the yield of sawlogs

ii) Customer Level  
The deliveries to each customer from each source are brought together with the production costs and sales price to determine the contribution each customer makes.

CUSTOMER: A. Sawmill						Period:	
Source (Cpt)	Volume	Log and Load	Transport	Overheads	Delivered Costs	Sale Price	Revenue
Total							

iii) Compartment Level  
This ties our product yields per hectare with what was expected

and allows us to monitor any variations.

COMPARTMENT/STAND:			Period:	
Product	Expected Yield	Expected REvenue	Actual Yield	Actual Revenue
Export				
A. Grade				
B. Grade				
Groundwood				
Kraft				
Roundwood				
TOTAL				

This then could be considered as our yield control system and tests the effectiveness of our assessments, harvesting ability and sales and marketing effort.

Our weekly and monthly production sheets allow us to track our production performance. In a stable system the performance of logging crews against target remains reasonably constant, if there is any significant change in performance either overall or by an individual crew then the circumstances are investigated and if appropriate an adjustment made.

Our control mechanism for our production plans are our weekly woodflow meetings. Here our overall plan is broken down into actual supply and demand figures for the coming week. What actually happened the previous week is also reviewed. If the woodflow control process starts to depart from the production schedule for whatever reason, a new production schedule is developed. An example of our woodflow records can be found in Appendix VI.

#### IV COST CONTROL RECORDS

As a Company our costs fall into two areas:

##### a) Direct Costs

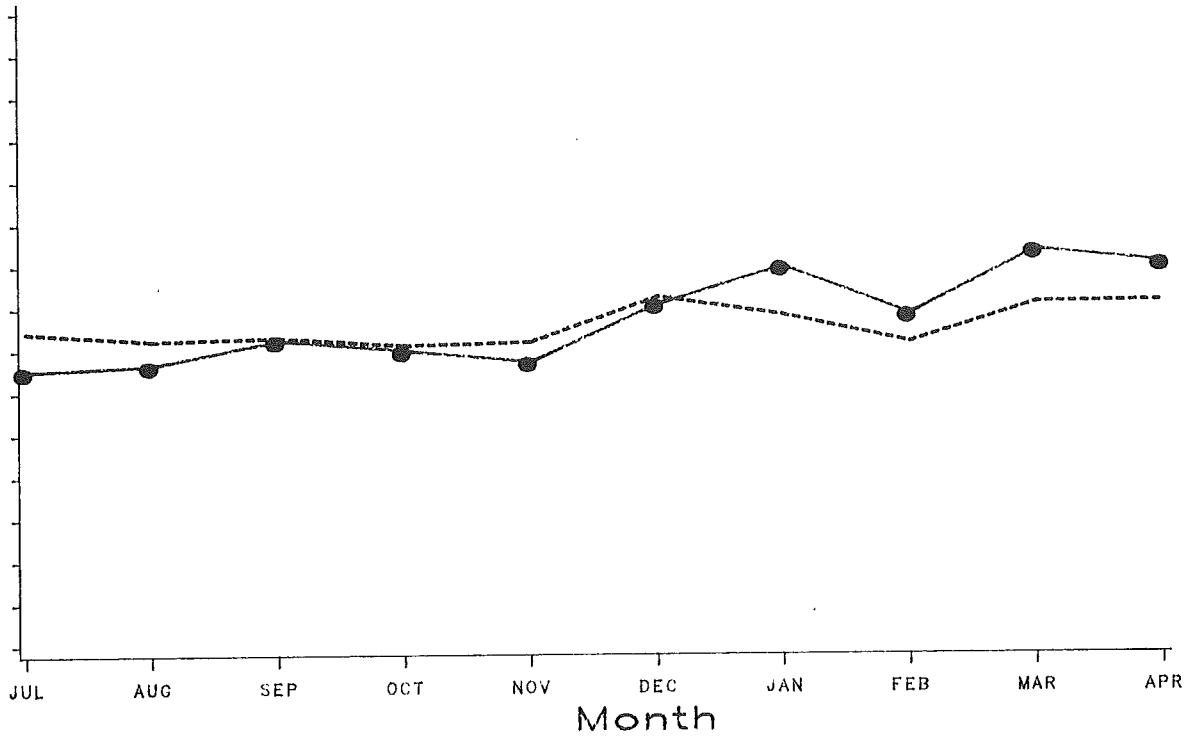
These consist of our direct operational costs and include payments to contractors for logging, loading, road construction and maintenance as well as cartage. Our planning records are our contractor's daily cost schedule, our contract price agreement for a particular setting, our road construction costs prepared when preparing the logging plan, as well as our logging production standards.

Our Action Records consist of our Average Logging Cost reports which are done weekly and summarised monthly.

A graph showing monthly logging costs on truck is overleaf.



## MONTHLY LOGGING COSTS ON TRUCK



### b) Indirect Costs

The larger the company, the more difficult it is to track these costs. It is in these areas that a company can make the most significant cost savings. It is important to detail

our these costs as specifically as possible and avoid large slush funds. Our budget indirects forms our Planning record and our actual expenditure each month forms our Action record.



# TASMAN FORESTRY LIMITED SUPERVISOR'S REPORT OF ACCIDENT

Name of Employee	_____	Date of Accident	_____
Occupation	_____	Date of Report	_____
Age	_____	Time of Accident	_____ am/pm
Service	_____	Time Reported	_____ am/pm
Supervisor	_____	Commenced Work	_____ am/pm
Exact Location of Accident	_____	Department	_____
	_____	Employer	_____

### Injury Details

- |                                   |                                    |  |   |
|-----------------------------------|------------------------------------|--|---|
| <input type="checkbox"/> Head     | <input type="checkbox"/> Hands     | <input type="checkbox"/> Wound         | <input type="checkbox"/> First Aid Only       |
| <input type="checkbox"/> Eyes     | <input type="checkbox"/> Toes      | <input type="checkbox"/> Sprain/Strain | <input type="checkbox"/> Doctor's Care        |
| <input type="checkbox"/> Trunk    | <input type="checkbox"/> Legs      | <input type="checkbox"/> Bruises       | <input type="checkbox"/> Lost Time            |
| <input type="checkbox"/> Arms     | <input type="checkbox"/> Internal  | <input type="checkbox"/> Fracture      | <input type="checkbox"/> Personal Injury      |
| <input type="checkbox"/> Leftside | <input type="checkbox"/> Rightside | <input type="checkbox"/> Burns         | <input type="checkbox"/> Damage to Equipment  |
|                                   |                                    | <input type="checkbox"/> Foreign Body  | <input type="checkbox"/> Motor Vehicle Damage |

Remarks: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Remarks: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### Operation Details

- |  |   |
|--|---|
| <input type="checkbox"/> Felling Prep      | <input type="checkbox"/> Skidwork             |
| <input type="checkbox"/> Felling           | <input type="checkbox"/> Loading              |
| <input type="checkbox"/> Limbing, trimming | <input type="checkbox"/> Moving plant/rigging |
| <input type="checkbox"/> B/O, hauling      | <input type="checkbox"/> Other                |
| <input type="checkbox"/> Crosscutting      | <input type="checkbox"/> Unknown              |

### Damage Details

Equipment Involved \_\_\_\_\_  
 \_\_\_\_\_  
 Extent of Damage \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Name of Witnesses (if any) \_\_\_\_\_

Were Safety Rules Breached  Yes  No

Direct Cause \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Contributing Causes \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

TASMAN FORESTRY LIMITED AND LOGGING CONTRACTORS

EVALUATION FOR NEW CONTRACTOR EMPLOYEES

NAME: \_\_\_\_\_ AGE: \_\_\_\_\_ DATE OF JOINING \_\_\_\_\_ GANG: \_\_\_\_\_

PREVIOUS EXPERIENCE: \_\_\_\_\_

CERTIFICATION: \_\_\_\_\_

SPECIAL SKILLS: \_\_\_\_\_

Safety & Gear	POOR	SATISFACTORY	GOOD	VERY GOOD	OUTSTANDING
Chainsaw & Use	POOR	SATISFACTORY	GOOD	VERY GOOD	OUTSTANDING
Trimming	POOR	SATISFACTORY	GOOD	VERY GOOD	OUTSTANDING
Skid-Work	POOR	SATISFACTORY	GOOD	VERY GOOD	OUTSTANDING
Breaking Out	POOR	SATISFACTORY	GOOD	VERY GOOD	OUTSTANDING
Falling	POOR	SATISFACTORY	GOOD	VERY GOOD	OUTSTANDING

Machines

Skidder	POOR	SATISFACTORY	GOOD	VERY GOOD	OUTSTANDING
TRACTOR	POOR	SATISFACTORY	GOOD	VERY GOOD	OUTSTANDING
LOADER	POOR	SATISFACTORY	GOOD	VERY GOOD	OUTSTANDING
HAULER	POOR	SATISFACTORY	GOOD	VERY GOOD	OUTSTANDING

Remarks

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Training Officer: \_\_\_\_\_

DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_

CONTRACTOR'S EMPLOYEE TRAINING REPORT

NAME: \_\_\_\_\_ AGE: \_\_\_\_\_ DATE OF JOINING \_\_\_\_\_

GANG: \_\_\_\_\_ JOB: \_\_\_\_\_ CURRENT CERT. \_\_\_\_\_

Reason for Training

Below standard                      Refresher                      Post-accident                      Revalidation

Certification                      New Employee

Other \_\_\_\_\_

\_\_\_\_\_

Safety & Gear      POOR      SATISFACTORY      GOOD      VERY GOOD      OUTSTANDING

Chainsaw & Use      POOR      SATISFACTORY      GOOD      VERY GOOD      OUTSTANDING

Remarks

\_\_\_\_\_  
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Training Officer \_\_\_\_\_

DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_

NAME: DATE:	1 VERY POOR	2 NOT ACCEPTABLE	3 NOT QUITE ACCEPTABLE	4 ACCEPTABLE	5 GOOD	6 VERY GOOD
<p style="text-align: center;"><b><u>SKID</u></b></p> <p>Safety Equipment Chainsaw Operating Work Methods Chain Care Basic Maintenance Communication</p> <p style="text-align: center;"><b><u>BREAK-OUT</u></b></p> <p>Safety Selection Planning</p> <p style="text-align: center;"><b><u>FELLING</u></b></p> <p>Safety Equipment Chainsaw Use Chainsaw Maintenance Area Assessment Tree Assessment Felling Cuts Awareness of Hazards Tree Driving Difficult Situations Responsibilities Work Methods</p> <p style="text-align: center;"><b><u>MACHINE OPERATION</u></b></p> <p>Safety Oils and Lubricants Start Up Procedures While Operating Maintenance after Shift Ropes and Rigging</p>						
<p>Training Requirement Scale</p>	<p>Extensive Training Needed</p>	<p>Considerable Training Necessary</p>	<p>Training Necessary</p>	<p>Training Desirable</p>	<p>Minimal Training Required</p>	<p>No Training Required</p>

FOREST PRODUCTION SCHEDULE

APPENDIX III

GANG.NAME.... LOADER.... SUPER. LOCATION. T/DAY.. DAYS. L/WEEK. JX12... JX9.... K11.1. K7.4.. C6.2.. K3.7.. SLOG.. 6WOOD.. KRAFT.. POLES..

T65	BIDDLE	BASIL	PO	17/511
T81	OLDRIDGE	TAWERA	PO	58/
T23	BAKER	GILLESPIE	JM	5/
T74	REVETI	READ	JM	6/181
T85	MURRAY	MARINO	MP	30/900
M15	SORENSEN	PAREKURA	JM	6/132
K57	RUDDELL	RUDDELL	SR	5/150
K44	GRIFFITHS	VDB	SR	5/151
K22	WARREN	VDB	SR	5/152
K10	ORUPE	VDB	SR	5/153
M24	RORE	KEEFE	AW	51/1530
K60	HOLMES	HOLMES	AW	58/1769
T83	P. TUKAKI	KAPUA	PO	58/1751
T82	ELMIGER	SCOTT	PO	17/512
T43	WERAHIKO	WERAHIKO	JM	101/3030
T36	COOPER	BASIL	MP	15/450
T73	W. TUKAKI	HEMOPO	PO	86/2581
T79	NEWMAN	HEMOPO	PO	86/2580
T86	KEREMETE	MARINO	MP	58/1743
T77	PALMER	HOUFAPA	AK	61/
K45	ROBERTSON	SELF	CR	11/330
K56	STANAWAY	SELF	CR	6/180
T67	MARTIN	SELF	MS	253/
M25	WINITANA	KEEFE	AW	52/1560
K46	HALE	VDB	CR	4/121
K59	STUCKI	KEEFE	AW	54/1620
M70	MASSEY	KEEFE	AW	80/2400
K64	C. WILLERS	VDB	CR	4/122
K50	DUFFY	VDB	CR	4/123
M58	CHRISTENSON		PS	81/2430
M09	COLLINS		PS	96/2880
M87	ANDREWS	SUNNEX	PS	23/690
M76	SUNNEX	SUNNEX	PS	18/540
M98	NEEMS	NEEMS	PS	97/2910
M17	DONALDSON	DONALDSON	PS	51/1534
M18	TURANGA	SELF	CR	131/
M09	RANSFIELD	SELF	MS	253/90
M34	HIGNETT	HIGNETT	JM	73/
K62	FEAST	HOUFAPA	AK	61/
K69	A. WILLERS	COFFEY	AK	58/
K55	BRAKE	COFFEY	AK	58/
T66	MARTINZ	SELF	MS	253/91
K51	SOUTAR	MAROA	AK	86/
K91	COYNE	SELF	CR	59/
T97	WRIGHT	MAROA	AK	86/
K48	WALTERS	MAROA	AK	86/
M39	RASMUSSEN	RASMUSSEN	SR	2/60
M30	BOLSTAD	BOLSTAD	JM	5/
M99	TE PAPA	TE PAPA	BT	80/2404
M100	CAULFIELD	CAULFIELD	BT	80/
F54	TRAVERS	TRAVERS	MS	4/
F102	SAYWELL	ELMIGER	MP	63/
F103	MANSSELL	ELMIGER	MP	63/
F104	RUDDELL	ELMIGER	MP	63/
F105	HARRIS	MARSHALL	TR	130/
F106	FLAVELL	MARSHALL	TR	130/
F107	MCEERMOTT	MARSHALL	TR	130/
F108	CROSBIE	ARANGA	TR	130/
F109	MARIV	ARANGA	TR	130/
F110	SQUIRES	ARANGA	TR	130/
F34	MARSHALL (FP)	MARSHALL	PM	KURI
M39	HAIH	DONALDSON	BT	51/
M14	CASHELL	CAULFIELD	BT	80/
	LALICH	LALICH	BT	84/
M30	H. T. MARSHALL	MARSHALL	MY	WARATAH
O115	A. STANAWAY	STANAWAY	TR	130/
O116	WEBB	WEBB	JM	4/

TOTAL LOADS/REP;

## COMPANY PRODUCTION SCHEDULE

## APPENDIX III

## PULP-WOOD SUPPLY/DEMAND PROJECTION AS AT 22/02/88

A) GROUNDWOOD											
PRODUCTION	29/02	07/03	14/03	21/03	28/03	04/04	11/04	18/04	25/04	02/05	09/05
TFL-Kawerau Thin	140	140	140	140	140	112	112	140	112	140	140
TFL-Kawerau Aris.	40	0	0	0	0	0	0	0	0	0	0
TFL-Taupo Thin	185	185	185	185	185	148	148	185	148	185	185
T'lands-Kaingaroa Thin	200	200	200	200	200	160	160	200	160	200	200
T'lands-Whaka'ehu Thin	20	20	25	25	25	20	20	25	20	25	25
Omataroa Thin	15	15	15	15	15	15	15	15	15	15	15
Matahina	5	5	5	5	5	5	5	5	5	5	5
Woodlots	15	15	15	15	15	15	15	15	15	15	15
<b>TOTAL PROD.</b>	<b>620</b>	<b>580</b>	<b>585</b>	<b>585</b>	<b>585</b>	<b>475</b>	<b>475</b>	<b>585</b>	<b>475</b>	<b>585</b>	<b>585</b>
Opening Stocks	642	712	742	777	812	847	772	697	732	657	692
TFP Demand	465	465	465	465	465	465	465	465	465	465	465
Jinestone	50	50	50	50	50	50	50	50	50	50	50
FWP	35	35	35	35	35	35	35	35	35	35	35
<b>TOTAL DEMAND</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>550</b>
Closing Stocks	712	742	777	812	847	772	697	732	657	692	727
B) KRAFT PULP											
PRODUCTION	29/02	07/03	14/03	21/03	28/03	04/04	11/04	18/04	25/04	02/05	09/05
RADIATA											
TFL-Murupara Aris.	120	120	120	120	120	96	96	120	96	120	120
TFL-Kawerau Aris.	0	40	40	40	40	32	32	40	32	40	40
TFL-Taupo Aris.	5	5	5	5	5	4	4	5	4	5	5
T'lands Kaingaroa Aris.	100	100	100	100	100	80	80	100	80	100	100
T'lands Whaka'ehu Aris.	20	20	20	20	20	16	16	20	16	20	20
T'lands Tairua Aris.	10	10	10	10	10	10	10	10	10	10	10
Matahina	30	20	15	10	5	5	5	5	5	5	5
Woodlots	15	15	15	15	15	15	15	15	15	15	15
<b>TOTAL RADIATA</b>	<b>300</b>	<b>330</b>	<b>325</b>	<b>320</b>	<b>315</b>	<b>258</b>	<b>258</b>	<b>315</b>	<b>258</b>	<b>315</b>	<b>315</b>
OTHER SPECIES											
TFL-Murupara C'fell	120	127	127	127	127	102	102	127	102	127	127
TFL-Tarawera C'fell	5	5	0	0	0	0	0	0	0	0	0
TFL-Whaka'ehu C'fell	25	25	25	25	25	20	20	25	20	25	25
T'lands-Kaingaroa Aris.	80	80	80	80	80	64	64	80	64	80	80
T'lands Tairua	10	10	10	10	10	10	10	10	10	10	10
Woodlots	15	15	15	15	15	15	15	15	15	15	15
<b>TOTAL OTHER SPECIES</b>	<b>255</b>	<b>262</b>	<b>257</b>	<b>257</b>	<b>257</b>	<b>211</b>	<b>211</b>	<b>257</b>	<b>211</b>	<b>257</b>	<b>257</b>
<b>TOTAL KRAFT PROD.</b>	<b>555</b>	<b>592</b>	<b>582</b>	<b>577</b>	<b>572</b>	<b>469</b>	<b>469</b>	<b>572</b>	<b>469</b>	<b>572</b>	<b>572</b>
Opening Stocks	1316	1241	1203	1155	1102	1044	883	722	664	503	445
TFP Demand	630	630	630	630	630	630	630	630	630	630	630
Closing Stocks	1241	1203	1155	1102	1044	883	722	664	503	445	387
<b>Total Pulp Stocks</b>	<b>1953</b>	<b>1945</b>	<b>1932</b>	<b>1914</b>	<b>1891</b>	<b>1655</b>	<b>1419</b>	<b>1396</b>	<b>1160</b>	<b>1137</b>	<b>1114</b>

2/8/87

EW	CPT	TARGET	DAYS	EXPORT		SAWLOGS			GROUNDWOOD		KRAFT		
				12.2M	8.1m	LONG	SHORT	O.S.	SPECIAL	LONGS	SHORT	LONG	SHORT
			WORKED										
Anderson			5			3	3	-	-	-	6 1/2	4	
<del>COX</del>			5			9	6	5	-	-	8	12	
Delaware			5 1/2			5	3	-	-	-	2	3	
Hohrecht			5			3	2	-	-	-	6 1/2	1	
Tearle			5			3 1/2	1 1/2	-	-	-	3	3	
						23 1/2	14 1/2	5			7 1/2	26	23



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TASMAN FORESTRY LIMITED  
CONTRACTORS PRODUCTION SUMMARY

APPENDIX V

GANG No	COMPT	SPECIES	WORK DAYS	TARGET	%	SAWLOG %	
						TARGET	ACTUAL
'							
'	590	PONDY	10	133	%		
'							
'	319	CONTOR	5	112	%		
'							
'	319	CONTOR	5	127	%		
'							
'	590	PONDY	4	217	%		
'							
'	621	PONDY	1	16	%		
'							
'	862	RAD O/C	3	70	%	70	69
'							
'	855	RAD O/C	7	120	%	75	71
'							
'	1255	RAD T/C	10	129	%	65	79
'							
'	810	RAD O/C	10	113	%	50	50
'							
'	ALL	RAD O/C	10	71	%		
'							
'	854	RAD O/C	5	99	%	75	68
'							
'	854	RAD O/C	5	108	%	75	82
'							
'	364	RAD O/C	5	133	%	81	76
'							
'	119	RAD O/C	5	125	%	85	82
'							
'	1268	RAD T/C	10	114	%	70	73
'							
'	1268	RAD T/C	10	134	%	70	81
'							
'	854	RAD O/C	9	131	%	70	73
'							
'	854	RAD O/C	10	130	%	70	70
'							
'	1252	RAD O/C	6	75	%	80	52
'							
'	862	RAD O/C	4	105	%	70	70
'							
'	364	RAD O/C	5	135	%	80	61
'							
'	1245	RAD O/C	6	86	%	85	88
'							
'	319	RAD O/C	10	113	%	80	83
'							
'	1198	RAD O/C	10	116	%	70	61

RADIATA O/C	TARGET	%	OTHER SPECIES PRODUCTION 6108	TARGET %	CONTRACTORS 118%
TOTAL PRODUCTION	39139				
SAWLOG	28284	0.72 %	ALL SPECIES PRODUCTION	MHP (RAD)	5.47
GROUNDWOOD	0	0.00 %	45247	MHP (M/S)	5.09
KRAFT	10855	0.28 %		MHP (ALL)	5.41

WOODFLOW CONTROL RECORD

APPENDIX VI

PULP WOOD FLOW BOARD - PERFORMANCE FOR WEEK ENDING 16/05/88

	KAWERAU								MURUPARA				TAUPO		WOODLOTS		OTHER		BUSH		MILL/YARD		TOTAL			
	Dmataroa		Matahina		Whakahehu		Tarawera		TFL		Timblands		TFL													
	Plan	Act	Plan	Act	Plan	Act	Plan	Act	Plan	Act	Plan	Act	Plan	Act	Plan	Act	Plan	Act	Plan	Act	Plan	Act	Plan	Act		
<b>GROUNDWOOD</b>																										
Open Stock	0	0	0	0	0	0	37	37	0	0	151	151	289	289	0	0	0	0	477	477	226	226	703	703		
Production	15	1	15	13	0	2	7	-4	0	0	90	158	400	469	0	0	0	0	527	639	455	416				
Transport	15	1	15	13	0	2	33	24	0	0	93	99	399	433	0	0	0	0	555	572	555	572				
Close Stock	0	0	0	0	0	0	11	9	0	0	148	210	290	325	0	0	0	0	449	544	326	382	775	926		
<b>RAD KRAFT</b>																										
Open Stock	0	0	0	0	3	3	21	21	89	89	133	133	360	360	0	0	0	0	606	606	471	471	1077	1077		
Production	0	0	20	37	3	6	18	12	140	123	115	99	351	245	15	13	25	11	687	546	599	523				
Transport	0	0	20	37	5	5	20	12	100	99	120	111	351	338	15	13	25	11	656	626	656	626				
Close Stock	0	0	0	0	1	4	19	21	129	113	128	121	360	267	0	0	0	0	637	526	528	574	1165	1100		
<b>OTHER SPP</b>																										
Open Stock	0	0	0	0	0	0	14	14	0	0	90	90	0	0	0	0	0	0	104	104	127	127	231	231		
Production	0	0	0	0	0	0	0	-1	0	0	60	66	0	0	0	0	25	34	85	99	100	106				
Transport	0	0	0	0	0	0	14	9	0	0	93	91	0	0	0	0	25	34	132	134	132	134				
Close Stock	0	0	0	0	0	0	0	4	0	0	57	65	0	0	0	0	0	0	57	69	159	155	216	224		
<b>Kraft Open</b>																								1308	1308	
<b>Kraft Close</b>																									1381	1324
<b>RAMSEYS</b>																										
Open Stock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Production	0	0	0	0	0	0	0	0	0	0	10	9	2	0	0	0	0	0	12	9	0	0				
Transport	0	0	0	0	0	0	0	0	0	0	10	9	2	0	0	0	0	0	12	9	0	0				
Close Stock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>FWP</b>																										
Open Stock	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	5	5	30	30	35	35		
Production	0	0	0	0	0	0	0	0	0	0	4	1	100	86	0	0	30	30	134	117	140	136				
Transport	0	0	0	0	0	0	0	0	0	0	0	0	100	86	0	0	30	30	130	116	130	116				
Close	0	0	0	0	0	0	0	0	0	0	9	6	0	0	0	0	0	0	9	6	20	10	29	16		