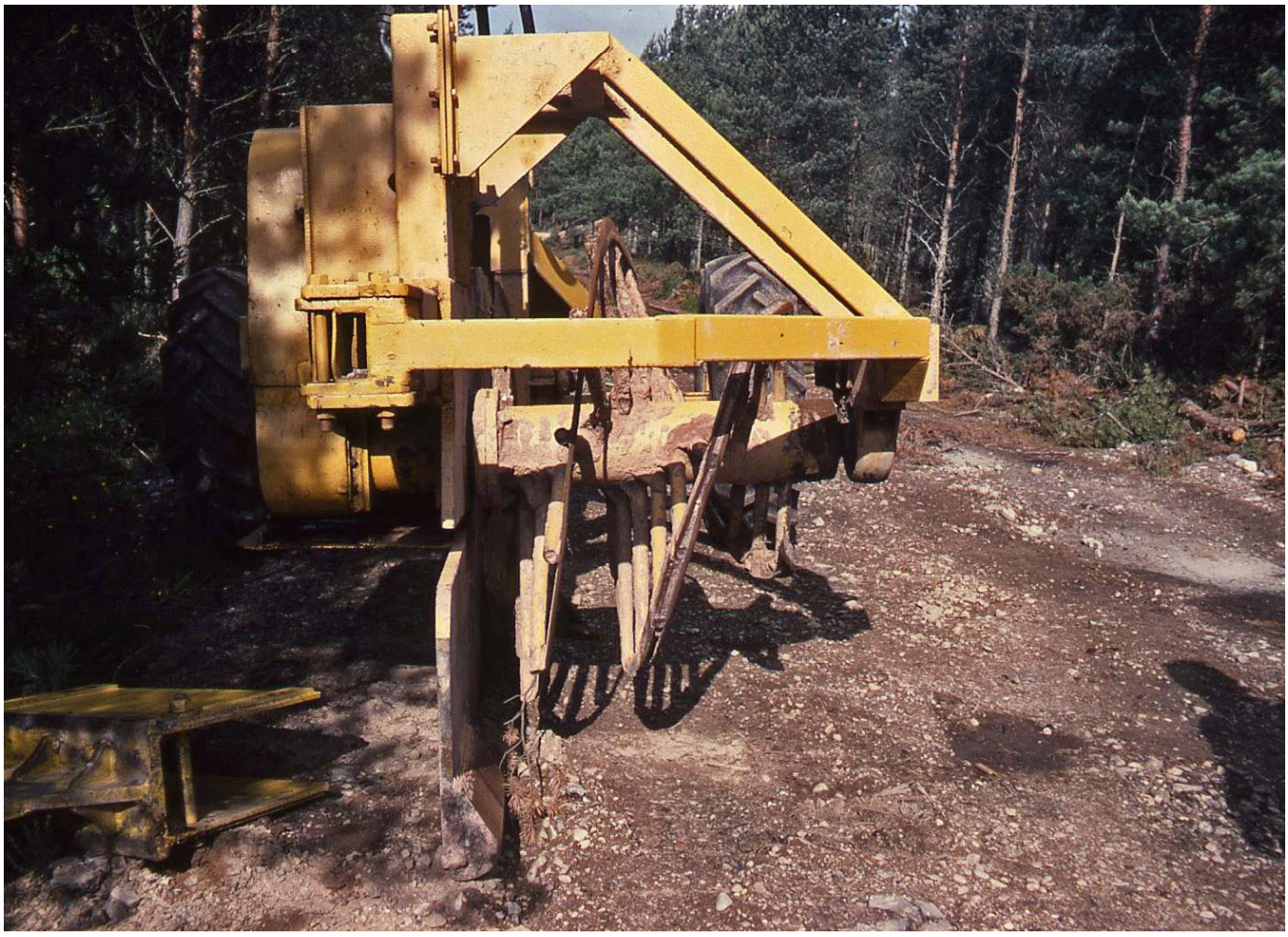

MGN 581L

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SUMMARY EXPERIMENTAL RECORD

Section SILV.(N)

Form 11A

Compt No: 108 Forest/Expt: (SPEYMOUTH) THINDLAND 111 P.80

Grid ref: NJ 282536 1st Series and Sheet No: 28

1 : 50000

Ploughing appendix.

1. Description of actual ploughing treatments.

(Ripping. A winged ripper pulled by D.7 tractor, at 2 m and 3 m spacing along planting lines, before ploughing).

(i) RS RS 60/T90/t/I 1.0(+D6) Rotary mouldboard complete, over ripping. Actual spacing of rotary furrows approx. 80 cm, mean depth of ripping 81 cm. Mean depth of plough tine - 63.1 cm.

(ii) CD S60/T90/m/I 1.0(+D7) Deep tine complete ploughing at approx. 1 m spacing. Mean depth of tine 76.9 cm.

(iii) CS S30/T90/t/I 1.0(+D6) Shallow tine complete ploughing at 0.5 - 0.6 m spacing over ripping. Mean depth of plough tine - 55.4 cm. Mean depth of ripping - 81.8 cm.

(iv) SD S60/T90/m/I 2.0 and 3.0 (+D7). Deep tine ploughing spaced at 2 and 3 m. Mean depth of tine 74.2 cm.

(v) SC CS30/T90/m/I 2.0 and 3.0 (+Fiat 80) over ripping. Shallow tine plough, left hand throw mouldboard, offset disc. Mouldboard tine running along rip channel, disc running approx. 30 cm to left, to cut hinge. Inverted turf and soil replaced by hand in furrow, still in inverted position. Mean depth of plough furrow - not tine - 50.5 cm. Mean depth of ripping - 80.5 cm.

2. Notes on Ploughing Treatments.

(i) Tractors. The Caterpillar D7 was a Conservancy tractor, ex Research, driven very ably by Cons. driver. The tracks were nearly worn out so traction was generally poor, so the deep treatments generally did not reach design or treatment specifications. The operator considered the flat tracks a positive advantage in the wettest plots. The Research D6 had 'Kamatsu' tracks which offered excellent traction and surface pressure capabilities. The Fiat 80 was Cons. supplied and driven, and perfectly adequate for the task.

(ii) Ploughs.

Rotary mouldboard (RS). In the trial area this plough was tested first with the tractor running on the land, even with the Drawbar offset, this gave a furrow spacing of 1.1 m, and in the completed job the furrows were clearly distinguishable, so it was tried with one track running in the furrow, giving a spacing of 0.8 m and giving a good result. This was the method adopted for all plots. The tilth and soil mixing obtained with this plough was most impressive. The effect of the plough was to cut and invert the vegetation - but not to pass it through the helix - then cover it with mixed and broken soil thrown up and deposited by the helix. See photo RS (4). I would anticipate fairly rapid re invasion by heather, and rapid nitrogen loss.

There were several mechanical problems - first the main bearing failed, part way through Plot 16, the first RS plot to be done. Subsequently also found the weld which held the flange on to the rotor shaft, to which the rotor was bolted, had failed. Plough was stripped and rebuilt and worked well after the second attempt to repair the weld. Plot 16 was finished and no further problems encountered. The trial area was ploughed overall with the RS to finish with.

CHB/11/80.