Two scoops, each with a different curvature, had been fabricated at the F.S.M.D. to fit the shanks of a standard parallelogram ripper mounted on a D8 Cat.

Trials with these attachments commenced on Aug. 12th at a site near the junction of the Yellowhead Highway and the Bowron Access Road. Since there was no V plow available to attach to the D8 Cat, trials were done on the area previously prepared by the D7 Cat with V plow.

In first trial was done to determine the action which could be obtained utilizing the lift and tilt action of the basic ripper unit. Apart from the fact that the mechanics of the machine were not designed for these two operations to take place simultaneously, it was found that both the tilt and the lift actions were too slow. After entering the ground and gathering soil the scoops could not be turned and lifted quickly enough to leave the soil as an overturned mound.

To speed up the tilt action, a separate hydraulic cylinder was attached to one of the scoops. This cylinder was operated using the cat blade's tilt hydraulics. The scoop was pivoted through one of the holes near the bottom of the ripper tooth.

This mechanism was partially successful in giving a tilt action to the scoop, however the total rotation was less than what is required. At the same time the slow lift action of the ripper assembly precluded any chance of obtaining the desired results.
Discussion:

This combination achieved very good penetration, however the number of suitable overturns was minimal.

The rotation action of the scoop can be accomplished satisfactorily by use of the "tilt" hydraulics.

The problem that remains is to achieve a fast vertical action and combine it with the scoop rotation action.

Continuing project.

Dr. W. Brown  8/1/82