EXAMPLES OF APPLICATION

FINDING PRESENT RATE OF FORMATION

1. Start with a new session and open the "SHEET FORMATION" calculator window by either selecting "SHEET FORMATION" in the "FORMATION" menu or by clicking the green "FORMATION" button on the application tool bar.
2. Check the "OTHER" checkbox below the Cylinder Size and Board Type selection in the FORMATION CONSTANT frame. Then click the "CALC" button next to it.
3. When the "FORMATION CONSTANT" calculation box appears, enter:
TONS PER DAY - < 138 >
NUMBER OF VATS - < 7 >
SHEET WIDTH (in) - < 98 >
MACHINE EFFICIENCY(%) - <100>
4. The RATE OF FORMATION of < 0.201166 > will automatically be calculated. Remember, this number is the Formation Constant in inches of forming width per cylinder times the number of vats. In other words, the number of tons per inch of cylinder (NOT per inch of machine).
5. Click "APPLY". This will automatically move this number to the "SHEET FORMATION" window. Also note that you can now manually change the "FORMATION CONSTANT" at will (while the "other" box is checked).
6. Now enter:
CALIPER(points) - < 30 >
SHEET DENSITY(lbs/point) - < 3.5 >
SHEET TRIM(in) - < 98 >
NUMBER OF VATS - < 7 >
7. Under "MACHINE SPEED" we see < 223.518 Ft/Min > automatically calculated
8. Now enter < 0.6 > for the delivered vat consistency in "CONSISTENCY(%)".
9. The total machine "white water" demand of < 3,833.33 GPM > and a per vat demand of <547.619 GPM> will be automatically calculated at this consistency of 0.6% and at 100% machine efficiency.

To change the annual % efficiency (or "MACHINE EFFICIENCY"):
1. Click the "PRODUCTION CALC" button and enter, for example, < 92 > for "MACHINE EFFICIENCY(%)".
2. Then, Click "APPLY". Note that the new "TONS PER DAY" is now < 126.96 > or 92% of the original "TONS PER DAY". Note that since you changed only the MACHINE EFFICIENCY, the MACHINE SPEED remains the same.

Now let's see what happens if we add a vat to the machine without changing the TONS PER DAY:
1. Note carefully the small checkbox (the TONS PER DAY auto-calculate checkbox) in the middle of the logic flow arrow located between the FORMATION CONSTANT frame and the TONS PER DAY frame. When this checkbox is off, the FORMATION CONSTANT has no effect on calculating the TONS PER DAY, GALLONS PER MINUTE, or MACHINE SPEED, allowing you to manually enter TONS PER DAY and calculate the corresponding GALLONS PER MINUTE and MACHINE SPEED.
2. Uncheck the aforementioned checkbox so that the TONS PER DAY doesn't automatically get recalculated.
3. Select the < 7 > under "NUMBER OF VATS" and change it to < 8 >.
4. Note that only the "GALLONS PER MINUTE PER VAT" changed, indicating the amount of "white

water" needed per vat for the same production.

3. Now, check the TONS PER DAY auto-calculate checkbox (the checkbox described in number 1 above). This will automatically calculate of TONS PER DAY of < 145.097 > based on the previously derived < 0.201166 > FORMATION CONSTANT for the < 8 > vats, and the previously set MACHINE EFFICIENCY(%) of < 92 >.

Note that if you change MACHINE SPEED, GRADE INFORMATION, or SHEET TRIM on the PRODUCTION CALC window, (without having it recalculate the FORMATION CONSTANT when it prompts), it will automatically uncheck the TONS PER DAY auto-calculate checkbox and disable the automatic calculation of TONS PER DAY and MACHINE SPEED. This is done so that the TONS PER DAY and MACHINE SPEED from the PRODUCTION CALC window get "forced in". If you then re-enable the TONS PER DAY auto-calculate checkbox, it will recalculate the TONS PER DAY and MACHINE SPEED based on the set FORMATION CONSTANT, undoing the TONS PER DAY from the PRODUCTION CALC window.

To compare your numbers to the internal FORMATION CONSTANT values, uncheck the "OTHER" checkbox (in the FORMATION CONSTANT frame) and select the appropriate Cylinder Size and/or Board Type.