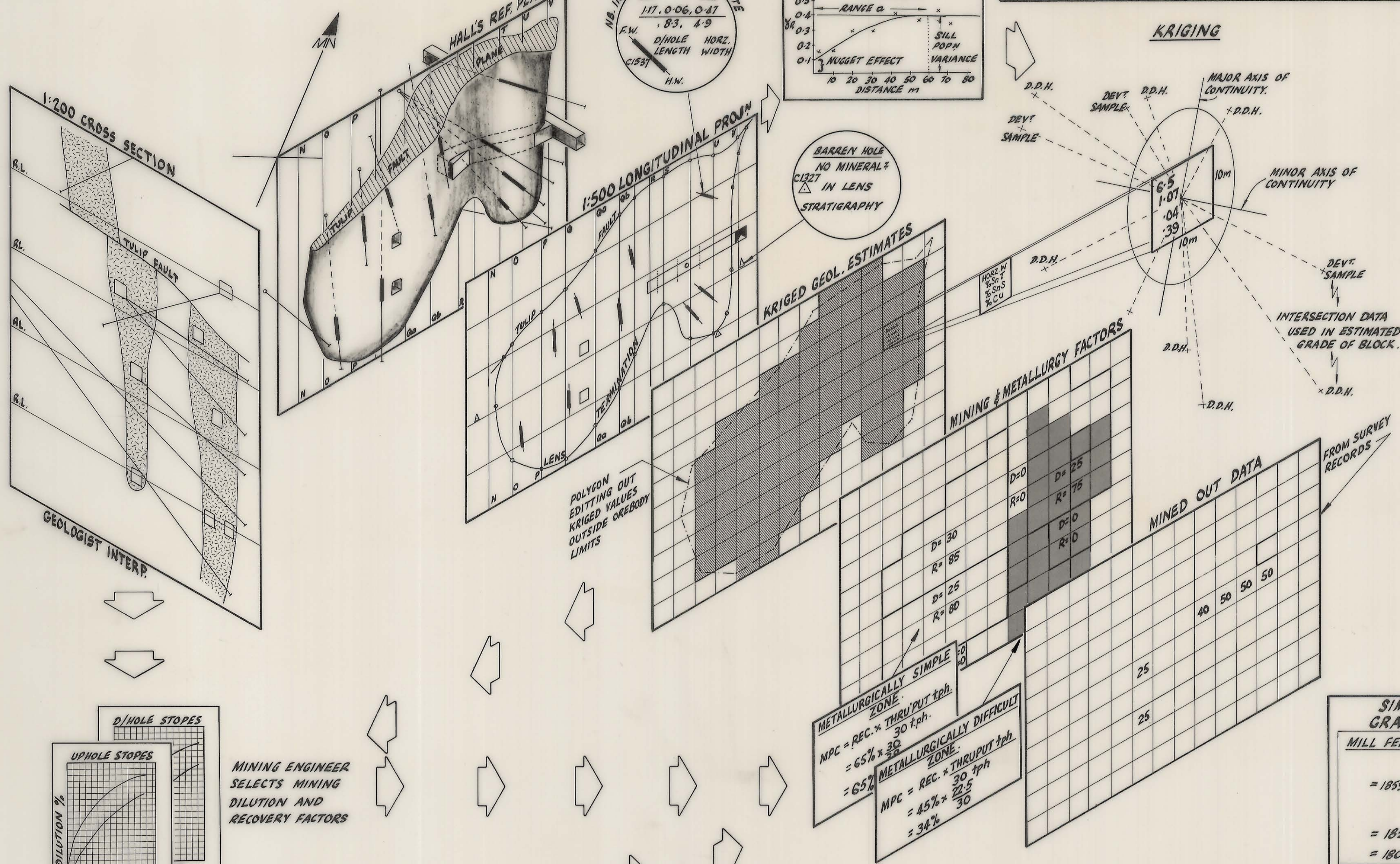
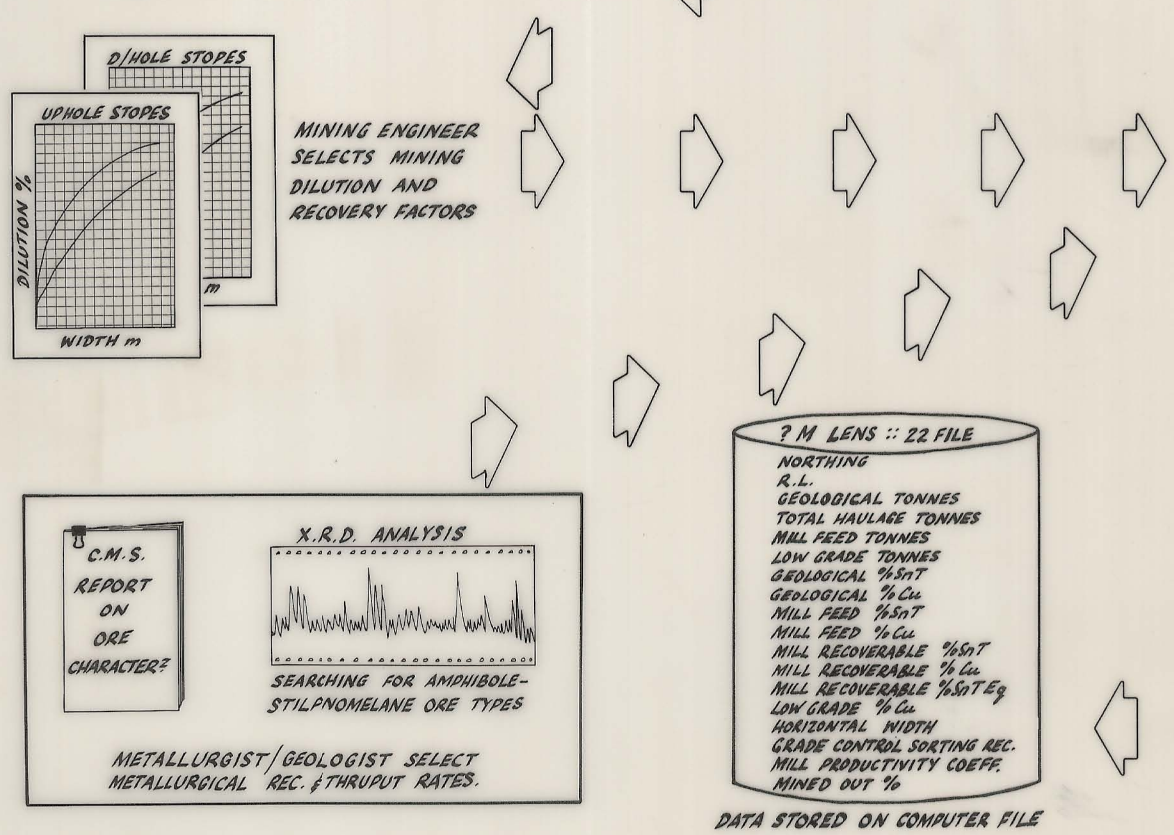
'ROCKS TO RESERVES'

GIVEN THE SPATIAL DISTRIBUTION OF SAMPLES ABOUT THE BLOCK CENTRE; AND THE EXPERIMENTALLY MEASURED CONTINUITY PARAMETERS (VARIOGRAM); A PROCESS OF MATHEMATICAL OPTIMIZATION LEADS TO A UNIQUE SOLUTION OF WEIGHTS WHICH WHEN APPLIED TO THE SAMPLES PROVIDES A NON-BIASSED ESTIMATE OF MINIMUM ESTIMATION ERROR.





CALCULATION OF GEOLOGICAL RESOURCE

TONNEAGE

VOLUME = AREA IN LONG. PROJN x HORZ. WIDTH
= 10 x 10 x 6.5
= 650 m^3

TONNEAGE = VOLUME x S.G. x $\left(\frac{100 - \text{MINED OUT \%}}{100}\right)$
= 650 x 3.05 x 1
= 1983 t (ROUNDED)

GRADE

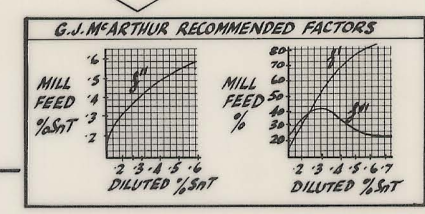
% SnT, % SnS, % Cu } as estimated by kriging process.

CALCULATION OF DILUTED TONNEAGE & GRADE

DILUTED TONNEAGE = GEO. RES. TONNEG x $\frac{100+DIL}{100}$ x $\frac{\text{MING REC.}}{100}$
= 1983 x $\frac{100+25}{100}$ x $\frac{75}{100}$ = 1859 t (ROUNDED)

DILUTED % SnT = $\frac{(\text{GEO. RES. \% SnT} \times 100) + (\text{WASTE \% SnT} \times \text{DILUTION})}{100 + \text{DILUTION}}$
= $\frac{(1.07 \times 100) + (0.05 \times 25)}{100+25}$ = 0.87 % SnT (ROUNDD)

DILUTED % Cu = $\frac{(\text{GEO. RES. \% Cu} \times 100) + (\text{WASTE \% Cu} \times \text{DILUTION})}{100 + \text{DILUTION}}$
= $\frac{(0.39 \times 100) + \left(\frac{0.39}{1.07} \times 0.05 \times 25\right)}{100+25}$ = 0.32 % Cu (ROUNDD)



SIMULATION OF GRADE CONTROL

MILL FEED TONNEAGE = DILUTED TONNEAGE x MILL FEED PROPORTION FACTOR
= 1859 x $\left(f'(\text{DILUTED \% SnT})\right)$
= 1859 x $\left(\frac{-0.09 + 51.16x + 961.88x^2 - 3300.09x^3 + 5045.25x^4 - 3747.76x^5 + 1083.71x^6}{100}\right)$
where $x = 0.87$
= 1859 x 0.969
= 1802 t (ROUNDED) (ORE RESERVE)

MILL FEED % SnT = $f''(\text{DILUTED \% SnT})$
= $\left(\frac{0.05 + 1.38x - 2.52x^2 + 11.72x^3 - 25.32x^4 + 24.01x^5 - 8.32x^6}{100}\right)$
where $x = 0.87$
= 0.91 % SnT (ROUNDED)

MILL FEED % Cu = MILL FEED % SnT x $\frac{\text{GEOL. RES. \% Cu}}{\text{GEOL. RES \% SnT}}$
= 0.91 x $\frac{0.39}{1.07}$
= 0.33 % Cu.

LOW GRADE TONNEAGE = DILUTED TONNEAGE x LOW GRADE PROPORTION FACTOR
= 1859 x $\left(f'''(\text{DILUTED \% SnT})\right)$
= 1859 x $\left(\frac{0.06 + 160.31x - 223.51x^2 - 606.60x^3 + 1746.41x^4 - 1574.58x^5 + 498.15x^6}{100}\right)$
= 1859 x 0.025 where $x = 0.87$
= 46 t (ROUNDED)

WASTE TONNEAGE = 1859 − 1802 − 46 = 11 t

CALCULATION OF RECOVERABLE GRADE

MILL FEED RECOVERABLE Sn GRADE = MILL FEED % SnT x MILL PRODUCTIVITY COEFF. (M.P.C.)
= 0.91 x $\frac{34}{100}$ = 0.31 % SnT RECOVERABLE (ROUNDED).

MILL FEED RECOVERABLE Cu GRADE = MILL FEED % Cu x MILL Cu RECOVERY
= 0.33 x $\frac{62}{100}$ = 0.21 % Cu RECOVERABLE (ROUNDED)

MILL FEED RECOVERABLE Sn EQUIVALENT = MILL FEED REC. Sn GRADE + $ EQUIV. for Cu
= 0.31 + $\left(\frac{\$14}{\$119} \times 0.21\right)$ = 0.33 % SnT eq.

CLEVELAND TIN LTD	DRAWING No
SCHEMATIC 1983 ORE RESERVE PROCEDURE	APPENDIX 1A.
31 May 1983. DRAWN G.J. McA TRACED Paul SCALE N.T.S.	SHEET