Method

2. Size of grind: Foreach particular scout test, a size of grind was chosen as shown below

designation	size of grind
A	95% passing 600µm
B	95% passing 150µm
C	95% passing 38µm

3. Heavy liquid separation: Asample of -12.7mm +1mm ore was subjected to heavy liquid separation at a density of 2.96 t/m^3

4. Magnetic separation: 1 kg lots of ore, ground to a size of grind of A, B or C were magnetically separated on a crockett wet magnetic separator with primary magnetics being subjected to one stage of cleaner magnetic separation.

5. Gravity concentration: 3 kg lots of ore, ground to a size of grind of A, B or C, were sized, classified, and then gravity concentrated on either a Diester sand or slime table.

6. Flotation: 1 kg lots of ore, ground to a size of grind of B or C, were subjected to bulk sulphide flotation followed by fluorite flotation using one of the following reagents in each test.

(a) Oleic acid
(b) Sulphonated castor oil
(c) Tannic acid

7. Fluorine analysis. The fluorine determinations used in this report are for the fluorine present as fluorite. However the method has not yielded consistent results hence fluorine figures in this report should be taken as indicative only.

Results Obtained

1. H/L Separation of -12.7mm ore at 2.95 t/m^3

Fraction	Per Cent					Per Cent Distribution			
	Mass	Davis Tube M/S M/A	S.F	Sn	WO_3	Davis Tube M/S M/A	S.F	Sn	WO_3
H/L S/K	82.5	27.0	7.8	0.27	0.13	87.3	82	83.0	73.5
H/L F/T	6.0	6.0	8.6	0.24	0.26	1.4	7	5.4	10.7
-12.8m+1mm head	88.5	(25.6)	(7.9)	(0.27)	(0.14)	88.7	89	88.4	84.2
-1mm untreated	11.5	25.0	7.6	0.27	0.20	11.3	11	11.6	15.8
Head -12.8mm	100	(25.5)	(7.8)	(0.27)	(0.15)	100	100	100	100
Head Analysis		26.0	7.8	0.24	0.14				

S.F = Fluorite fluorine

From the above, it can be seen that heavy liquid separation at 2.95 t/m^3 of -12.7mm +1mm ore gives neither significant concentration of fluorite in sink nor float. A decrease in concentration of magnetite in the 6 percent mass of float does however occur.