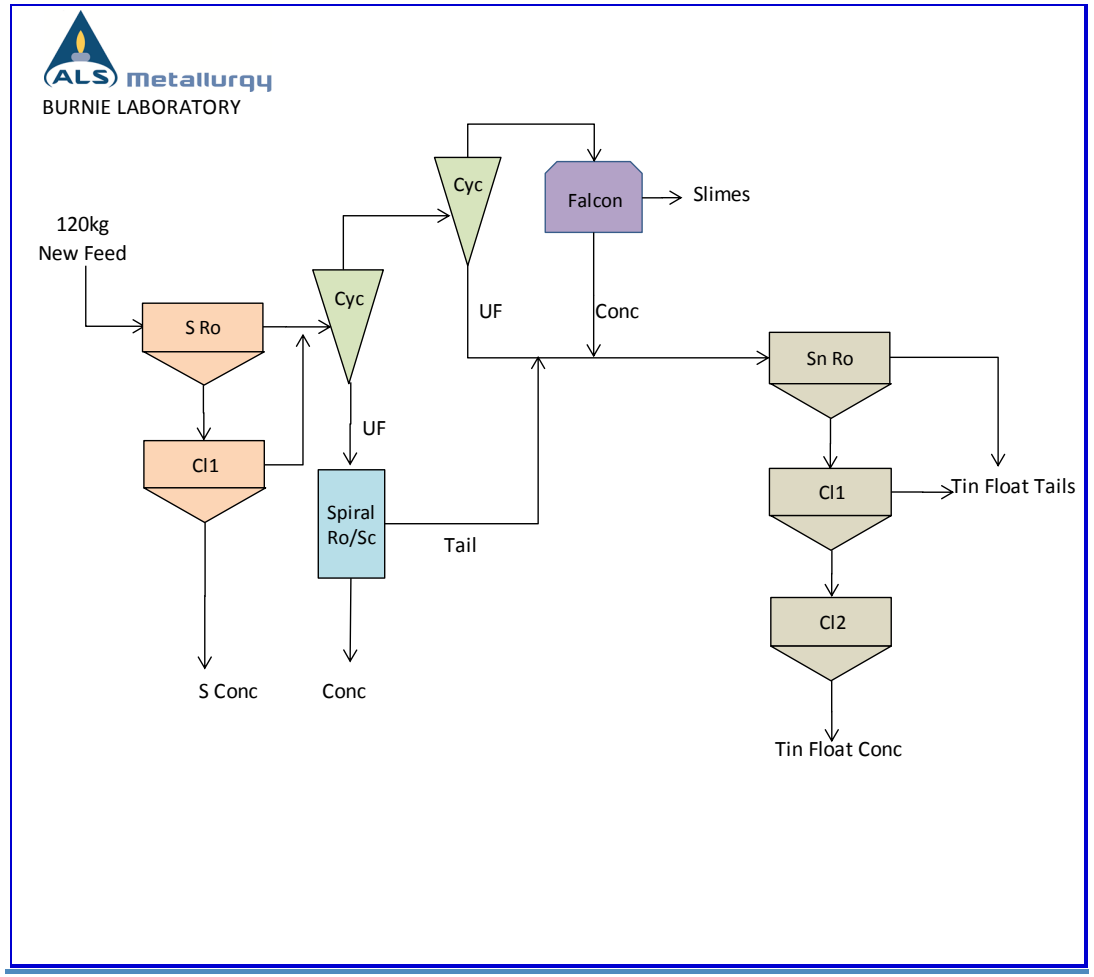
Preliminary Cleveland concentrate summary

ALS Project 1017

3/11/2016

Inputs



- Program focused on producing Sn concentrate at ~10% Sn grade and to maximise recovery.
- Input mass of 120kg but one bucket rejected.
  - Testwork undertaken on 96kg

Description	Weight
ELT - TD1 #1	27.8
ELT - TD2 #1	28.5
ELT - TD2 #2	24.8
ELT - TD2 #3	32.7

ALS T1017 Results summary

	Mass		Grade			Total yield		
	Testwork	Balanced*	Sn	Cu	S	Sn	Cu	S
	g	g	%	%	%	%	%	%
Feed	96,000	113,800	0.43%	0.13%	5.88%			
Sulphide concentrate	10,763	12,759	0.29%	1.12%	38.53%		76%	70%
Gravity feed	19,501	57,148	0.54%	0.03%	2.92%			
Gravity concentrate	313	941	10.80%	0	5.23%	21%		1%
Flotation feed	40,337	67,923	0.44%	0.03%	0.37%			
Flotation concentrate	1,414	2,381	9.63%	0.11%	1.87%	51%	2%	1%
Combined Sn concentrate	**1,727**	**3,322**	**9.97%**	**0.11%**	**3.58%**	**72%**		
Combined S concentrate	11,841	14,419	0.28%	1.02%	38.61%	9%	83%	97%

* Balanced mass values based on mass distribution in each unit. Calculated to allow for mass losses in testwork

- 1.72kg of Sn concentrate at 9.97% Sn was generated.
- Overall process yield for Sn was 72%, with 5% more held in locked cycle test recycle.
- 10.76kg of combined sulphide concentrate was generated at 38.53% S and 1.12% Cu (0.29% Sn).
- Overall process yield for Cu was 83% and S was 97%.
- Yields calculated based on unit recoveries to balance for mass discrepancies through the test process. Calculated Sn concentrate mass recovery if no losses had occurred was 3.3kg.
- Potential for additional recovery of Sn from:
  - Sulphide concentrates: +9% Sn available.
  - Gravity tail: +8% Sn available
- Combined Sn tail of 0.29% Sn. Mainly from losses to gravity tail, which can potentially be recycled.