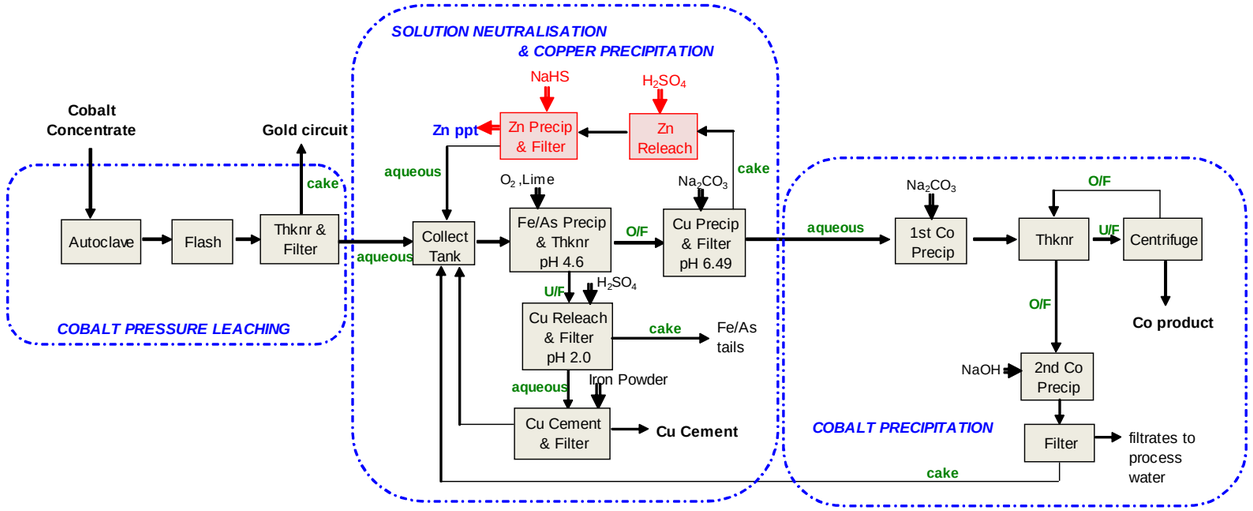
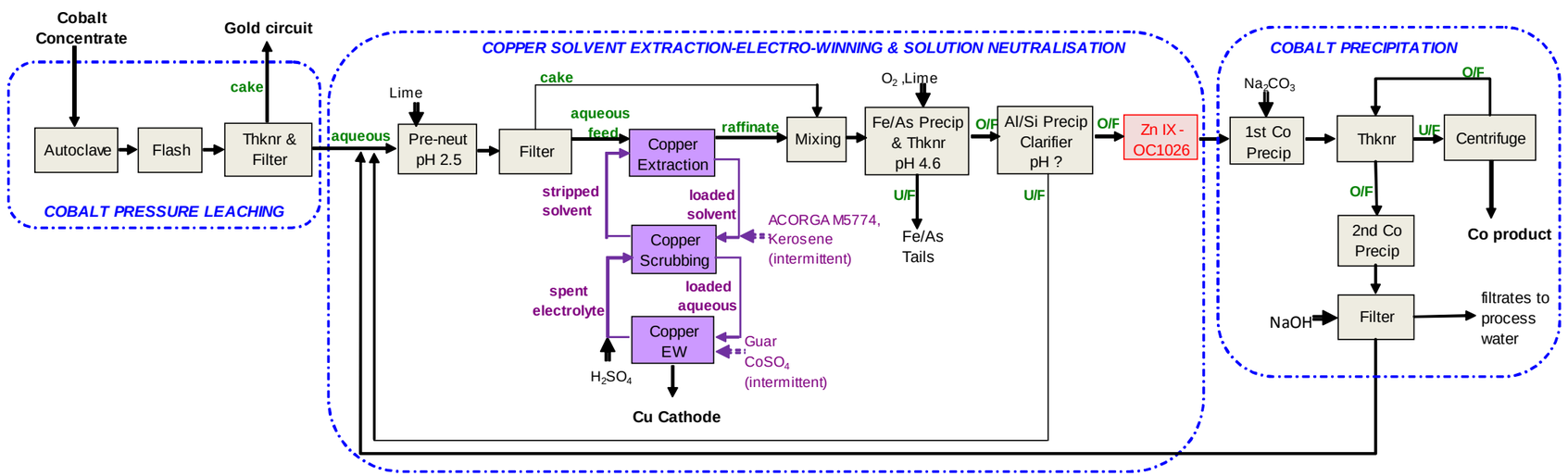


Base Case Flow Diagram
Copper Precipitation – Cementation Option

Table of Definitions for Acronyms	
ACORGA(R) M5774	Extractant, registered trademark of Cytec Industries Inc.
Al	Aluminum
As	Arsenic, contaminant
Cement	Cementation
Co	Cobalt, product
$CoSO_4$	Cobalt sulphate monohydrate, reagent
Collect	Collection and reaction tanks
Con	Concentrate, flotation product
Cu	Copper, by-product
EW	Electro-winning
Fe	Iron, contaminant
Flash	Flash Tank
Guar	Guartec(R) EW, dispersant
H_2SO_4	Sulphuric Acid, reagent
IX	Ionic Exchange
Na_2CO_3	Sodium Carbonate, reagent
NaHS	Sodium Hydrosulphide, reagent
NaOH	Sodium Hydroxide, reagent
neut	neutralisation
O/F	Overflow, generally solution
O_2	Oxygen (gas), reagent
pH	log [H+]
Ppt	Precipites, precipitation product
Precip	Precipitation
Si	Silica, contaminant
Thknr	Thickener
U/F	Underflow, solids or thickened solids
Zn	Zinc, contaminant or by-product



Tradeoff Flow Diagram
Copper Solvent Extraction – Electro-winning Option

THIS DRAWING IS NOT VALID UNLESS THE LATEST REVISION INITIALS ARE HANDWRITTEN

NO	DESCRIPTION	BY	CHK'D	APPROVED	DATE
C					
B	REISSUED FOR MINING INDUSTRY QUESTIONNAIRE	E.N.	D.M.		03/11/08
A	ISSUED FOR MINING INDUSTRY QUESTIONNAIRE	E.N.	D.M.		31/10/08

	BY	DATE
PREPARATION	MS./E.N./D.M	31/10/08
DESIGN	A.Y.	31/10/08
DRAWN		
CHECKED		
ACCEPTED		

	BY	DATE
APPROVALS		
PROCESS		
ENGINEERING		
PROJECTS		
CLIENT		

ISSUE RECORD

CURRENT ISSUE FOR:		
ISSUE	REV.	DATE
CLIENT APP'L		
QUOTATION		
CONSTRUCTION		

CLIENT/PROJECT
FORTUNE MINERALS
NICO PROJECT

TITLE
COPPER RECOVERY FLOWSHEET COMPARISON:
PRECIPITATION-CEMENTATION VS.
SOLVENT EXTRACTION-ELECTRO-WINNING
DWG-000-F-005D

AkerSolutions

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DRAWING NO. FIGURE 5D

DRAWING NO. 000-F-0050

REFERENCE FILES:

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