

The Outlook for Sulphur

Mike Kitto
British Sulphur Consultants

British Sulphur Consultants Division



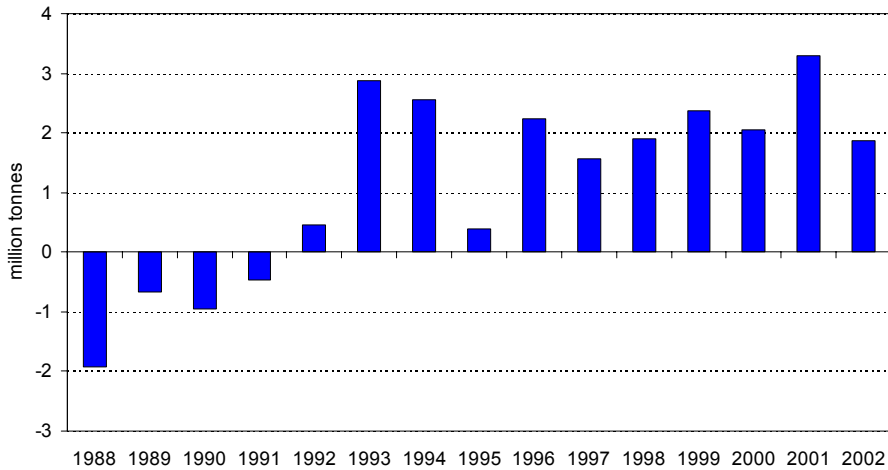
The Past

- Persistent supply surpluses
- Weak prices

British Sulphur Consultants Division



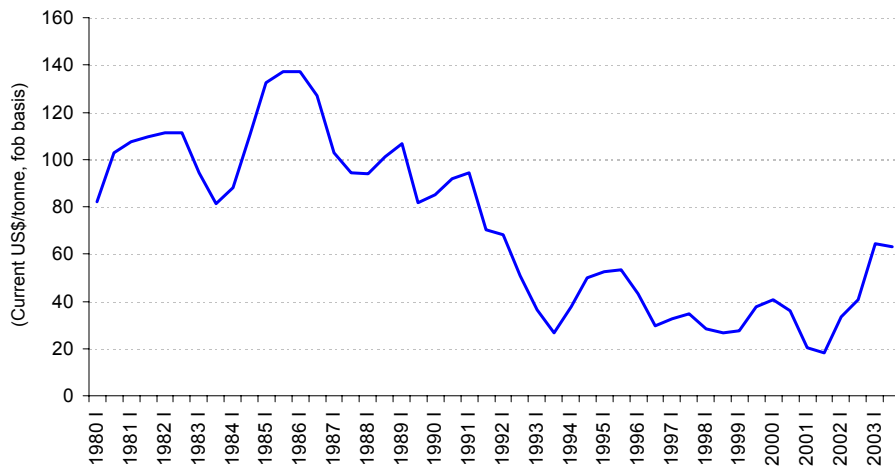
World Brimstone Balance 1988-2002



British Sulphur Consultants Division

CRU
Group

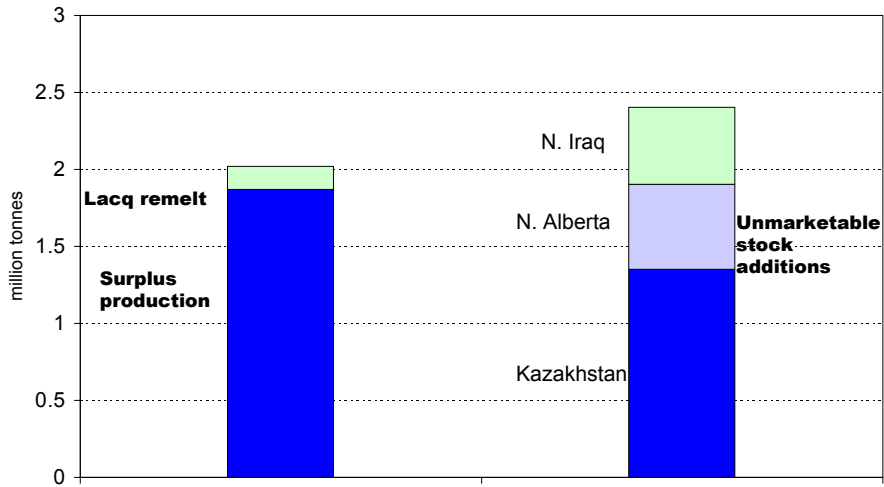
Vancouver Sulphur Price Trends, 1980-2003



British Sulphur Consultants Division

CRU
Group

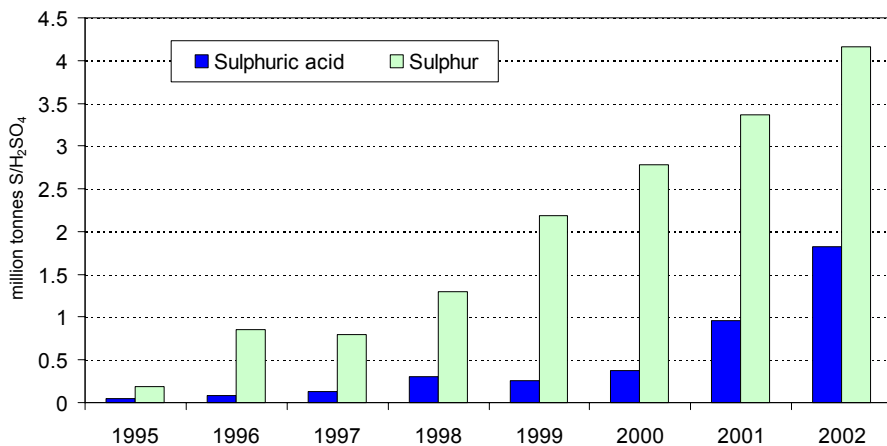
Sulphur Market Balance 2002



British Sulphur Consultants Division

CRU
Group

China: Sulphur and Sulphuric Acid Imports, 1995-2002



British Sulphur Consultants Division

CRU
Group

Smelter Closures, 1999-2003

Region	No of plants closed	Acid loss (‘000 t/y)
North America	6	2,650
Europe	7	690
Asia/Oceania	3	500
Total	16	3,840

British Sulphur Consultants Division

CRU
Group

The Future: 1987

The supply crisis and impending exhaustion of Canadian stocks which seemed likely only two years ago are no longer indicated.

British Sulphur Consultants Division

CRU
Group

The Future: 2003

Key factors –

- Gas re-injection
- China
- Nickel

British Sulphur Consultants Division

CRU
Group

Gas Re-injection

Kashagan oil and gas field,
Kazakhstan
Sulphur production

No re-injection: Up to 7 MMt/y

Re-injection: 2-3 MMt/y

British Sulphur Consultants Division

CRU
Group

Sulphur Recovery from Gas Historical and Forecast Growth

	1992- 1997	1997- 2002	2002- 2007	2007- 2012
Increment (MMt)	3.59	3.60	3.98	2.19
Compound growth	4.1% pa	3.4% pa	3.2% pa	1.6% pa

British Sulphur Consultants Division

CRU
Group

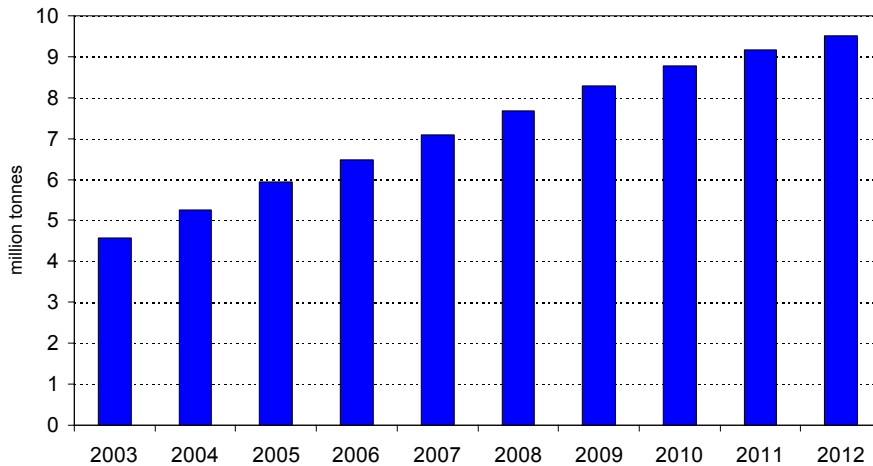
Chinese Brimstone Demand

- Huge further growth potential
- Historical acid production growth 7.8% p.a.

British Sulphur Consultants Division

CRU
Group

China: Apparent Sulphur Import Requirement, 2003-2012



British Sulphur Consultants Division

CRU
Group

Nickel-Cobalt Leaching

- Huge reserves of laterites, scarce reserves of sulphides
- Very strong nickel demand growth
- Impending supply shortfall
- 10 tonnes S per 1 tonne Ni

British Sulphur Consultants Division

CRU
Group

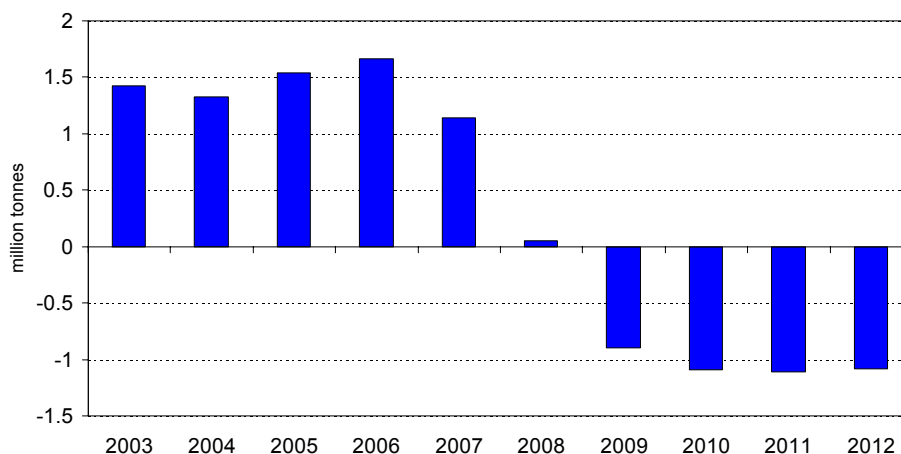
Identified Unexploited Nickel-Cobalt Deposits

Type of deposit	No of deposits	Contained Ni (MMt)
Sulphide	4	3.3
Laterite	28	43.1

British Sulphur Consultants Division

CRU
Group

World Brimstone Balance 2003-2012



British Sulphur Consultants Division

CRU
Group

Price

A key determinant of supply and demand