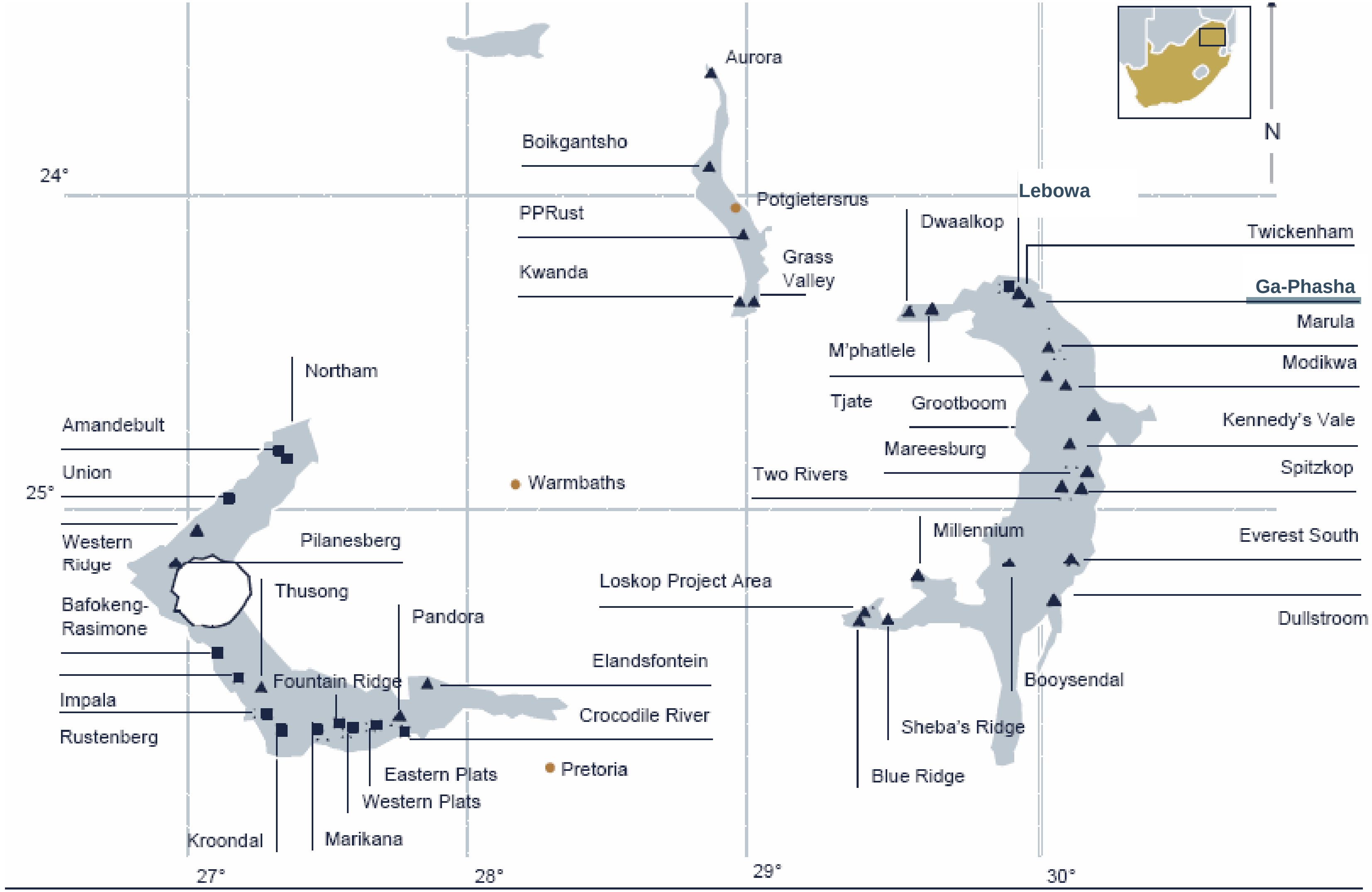
Platinum Demand-Supply Outlook

Production Problems in South Africa's Mines

René Hochreiter

October 2007

Platinum Mines and Projects of South Africa



- **78% World Production**
- **+95% Global Resources to 3 000m depth**

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Platinum Market

- **Supply is the *key* to the platinum market**
  - SA Miners production problems
  - Longer term, new production will likely limit price gains
- **Demand extremely firm**
  - New announcements (Daihatsu, Mazda) *"nothing new"*
  - Strong economic growth in developing countries
  - Steady diesel vehicle demand – Europe, US increasing
  - Miners shielded from production losses due to prices & currency

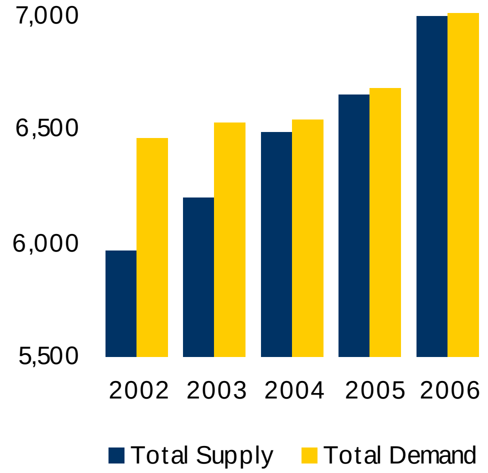
SA Producer Problems

Pt (million ounces)	Likely 2007 production	Previous
Anglo Platinum	2.60	2.90
Lonmin	0.82	1.00
Impala	1.00	1.10
Northam	0.20	0.225
Difference Total	**0.575m ounces**	

- New Producers are behind schedule, new entrants not coming on, only Elands, 2 Rivers and Everest South have delivered on time
- 2008 will not be up either, only PPRust besides Elands

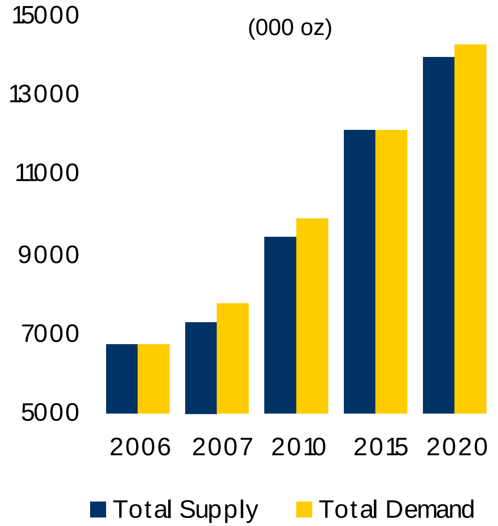
Platinum Supply and Demand (JM 2007 Report)

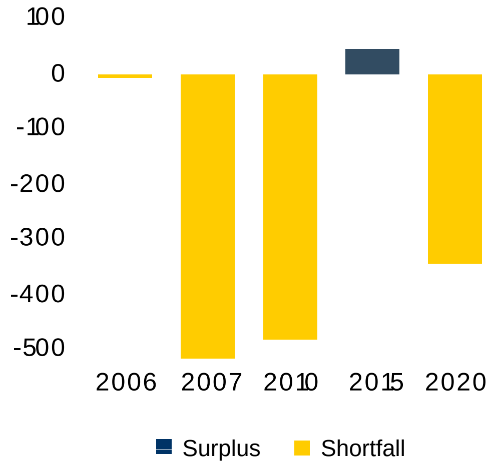
'000 oz		2002	2003	2004	2005	2006
Total Supply		**5,970**	**6,200**	**6,490**	**6,650**	**6,785**
of which:	South Africa	4,450	4,630	5,010	5,115	5,290
	Russia	980	1,050	845	890	880
	North America	390	295	385	365	345
	Others	150	225	250	280	270
Total Demand		**6,470**	**6,530**	**6,540**	**6,690**	**6,775**
of which:	Autocatalyst:					
	gross	2,590	3,270	3,490	3,820	4,195
	recovery	(565)	(645)	(690)	(770)	(855)
	Jewellery	2,820	2,510	2,160	1,965	1,605
Movement in Stocks		**(500)**	**(330)**	**(50)**	**(40)**	**10**



Platinum Demand/Supply Outlook (Allan Hochreiter)

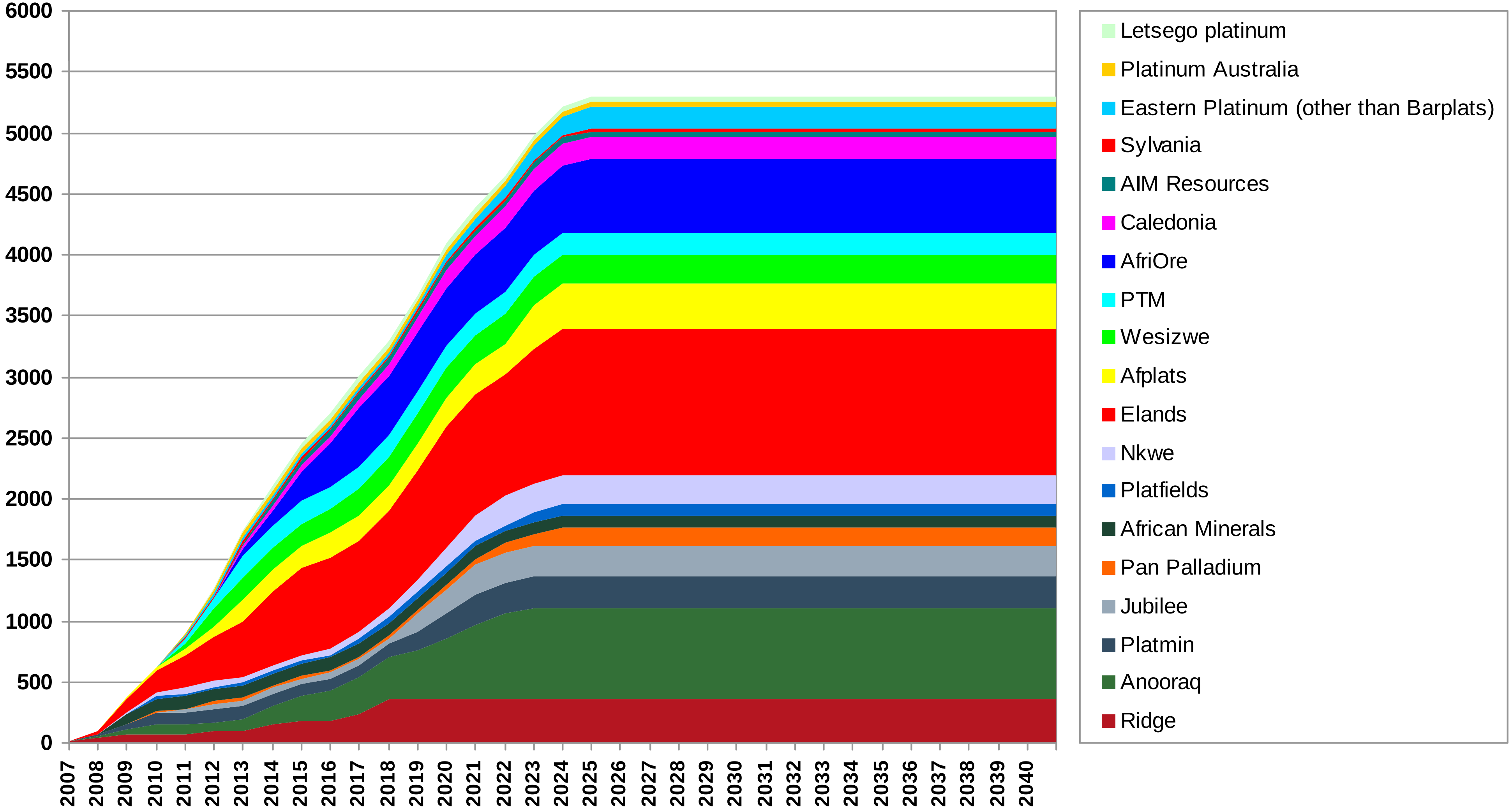
(000 oz)		2006	2007	2010	2015	2020
Demand Total		**6,775**	**7,795**	**9,921**	**12,126**	**14,280**
of which:	Autocats	4,195	4,684	5,757	7,114	8,349
	Jewellery	1,605	1,950	2,500	3,039	3,523
Supply Total		**6,785**	**7,278**	**9,439**	**12,170**	**13,936**
of which:	AngloPlat	2,800	2,600	3,457	4,209	4,099
	Implats	1,662	1,939	2,153	2,127	2,240
Supply shortfall/surplus		**-10**	**-517**	**-482**	**43***	**-344**





*Assuming all Explorers start producing

Explorers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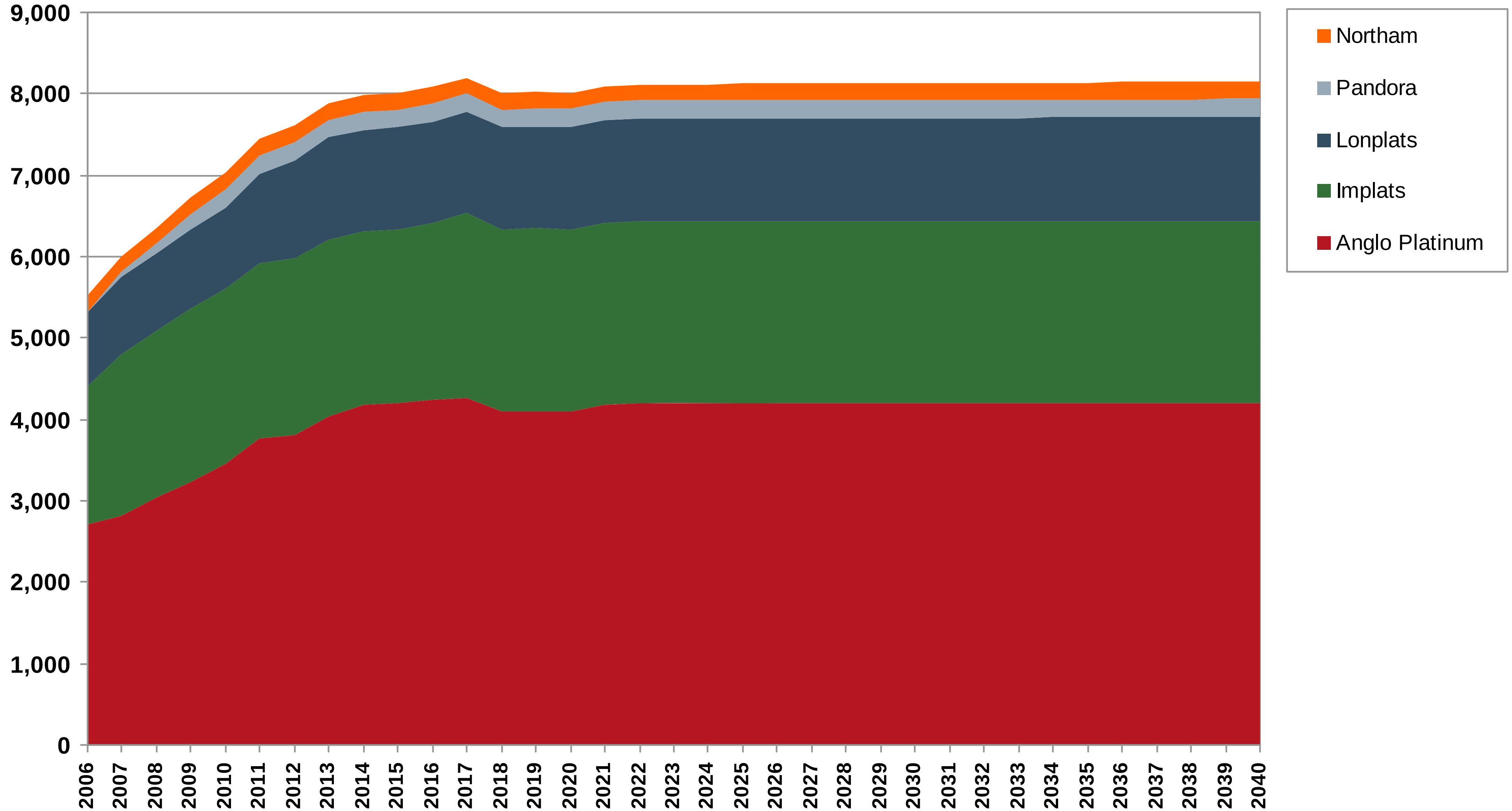
Platinum Australia
Eastern Platinum (other than Barplats)
Sylvania
AIM Resources
Caledonia
AfriOre
PTM
Wesizwe
Afplats
Elands
Nkwe
Platfields
African Minerals
Pan Palladium
Jubilee
Platmin
Anooraq
Ridge

Producers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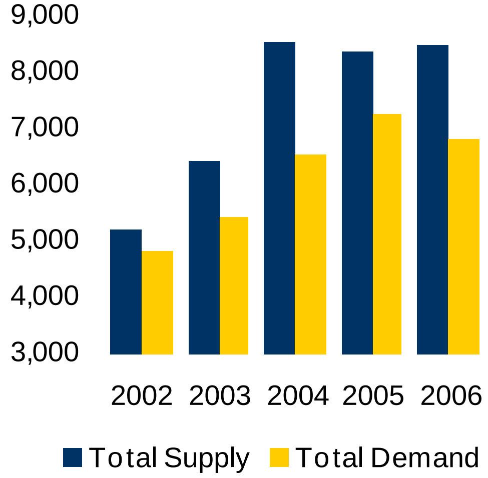
Pandora
Lonplats
Implats
Anglo Platinum

Palladium Market

- **Supply**
  - Significant above ground stocks remain
  - Expanding primary and secondary supply
- **Demand**
  - Rising autocat demand
  - Big price differences may encourage substitution (but Pd is not as “good” as Pt or Rh)

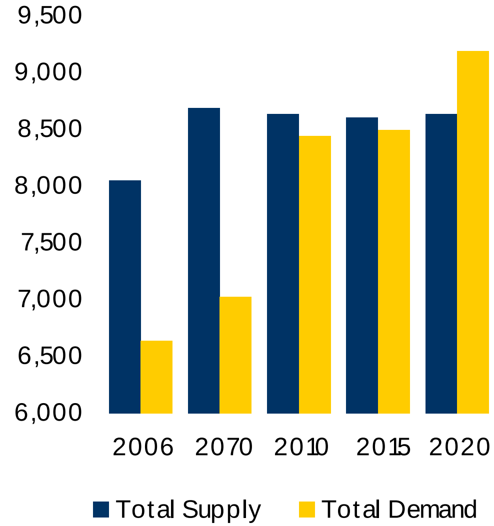
Palladium Supply and Demand (JM 2007 Report)

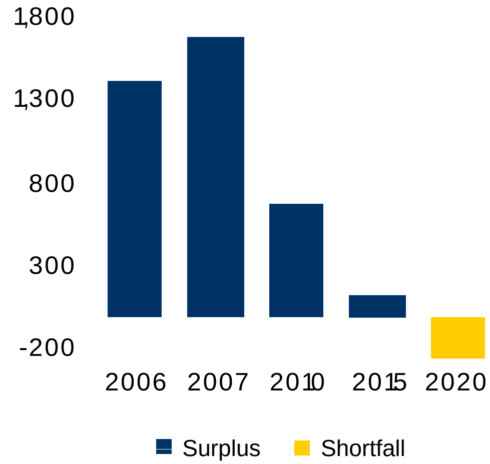
'000 oz		2002	2003	2004	2005	2006
Total Supply		**5,250**	**6,450**	**8,580**	**8,410**	**8,060**
of which:	South Africa	2,160	2,320	2,480	2,605	2,905
	Russia	1,930	2,950	4,800	4,620	3,900
	North America	990	935	1,035	905	985
Total Demand		**4,840**	**5,430**	**6,560**	**7,260**	**6,635**
of which:	Autocatalyst:					
	gross	3,050	3,450	3,790	3,870	4,015
	recovery	(370)	(410)	(530)	(630)	(800)
	Dental	785	825	850	815	800
	Electronics	760	900	920	965	1,065
	Jewellery	270	260	930	1,430	995
Movement in Stocks		**410**	**1,020**	**2,020**	**1,150**	**1,425**



Palladium Demand/Supply Outlook (Allan Hochreiter)

(000 oz)		2006	2007	2010	2015	2020
Demand Total		**6,635**	**7,018**	**8,438**	**8,498**	**9,185**
of which:	Autocats	4,015	4,250	5,500	6,000	7,000
	Jewellery	995	1,200	1,200	1,400	1,500
Secondary Recovery		-800	-882	-1,220	-1,430	-1,815
Supply Total		**8,060**	**8,700**	**8,651**	**8,620**	**8,633**
of which: South Africa		2,905	2,810	3,601	4,070	4,083
	Russia	3,900	4,640	3,800	3,300	3,300
Supply shortfall/surplus		**1,425**	**1,682**	**671**	**122**	**-553**



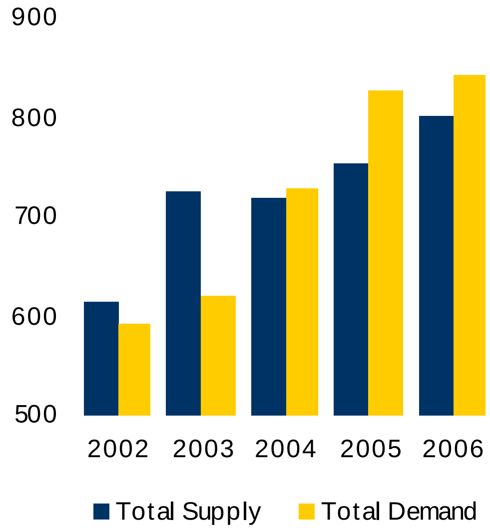


Rhodium Market

- **Demand**
  - Autocat offtake will likely increase with legislation stringency
- **Supply**
  - Insufficient as a by-product
- **Autocat demand is greater than Total Demand!**
  - A very sensitive market for the Rh price

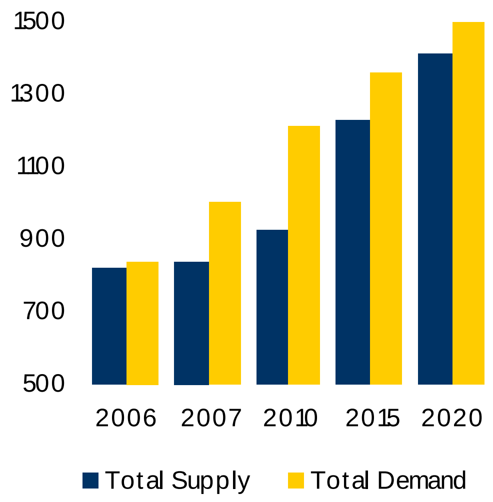
Rhodium Supply and Demand (JM 2007 Report)

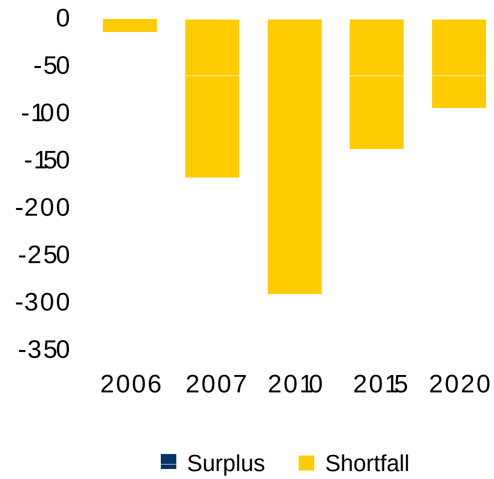
'000 oz		2002	2003	2004	2005	2006
Total Supply		**615**	**724**	**720**	**755**	**824**
of which:	South Africa	490	544	587	628	690
	Russia	90	140	100	90	95
	North America	25	26	17	20	20
Total Demand		**592**	**620**	**729**	**828**	**837**
of which:	Autocatalyst:					
	gross	599	660	758	830	868
	recovery	(99)	(124)	(140)	(137)	(170)
Movement in Stocks		**23**	**104**	**(9)**	**(73)**	**(13)**



Rhodium Demand/Supply Outlook (Allan Hochreiter)

(000 oz)		2006	2007	2010	2015	2020
Demand Total		**837**	**1,009**	**1,218**	**1,364**	**1,507**
of which:	Autocats	868	1,053	1,294	1,599	1,876
	Re cycling	-170	-178	-210	-368	-503
Supply Total		**824**	**844**	**927**	**1,229**	**1,415**
of which:	South Africa	690	730	808	1,096	1,282
Supply shortfall/surplus		**-13**	**-165**	**-291**	**-135**	**-93**





Conclusion

- The Platinum Market will likely remain in undersupply until 2013 to 2017
- The Rhodium market will add strong support – perpetual undersupply (recycling essential!)
- Share valuations at spot prices look attractive
- Institutions looking for a home for platinum (Elands) money

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Questions?

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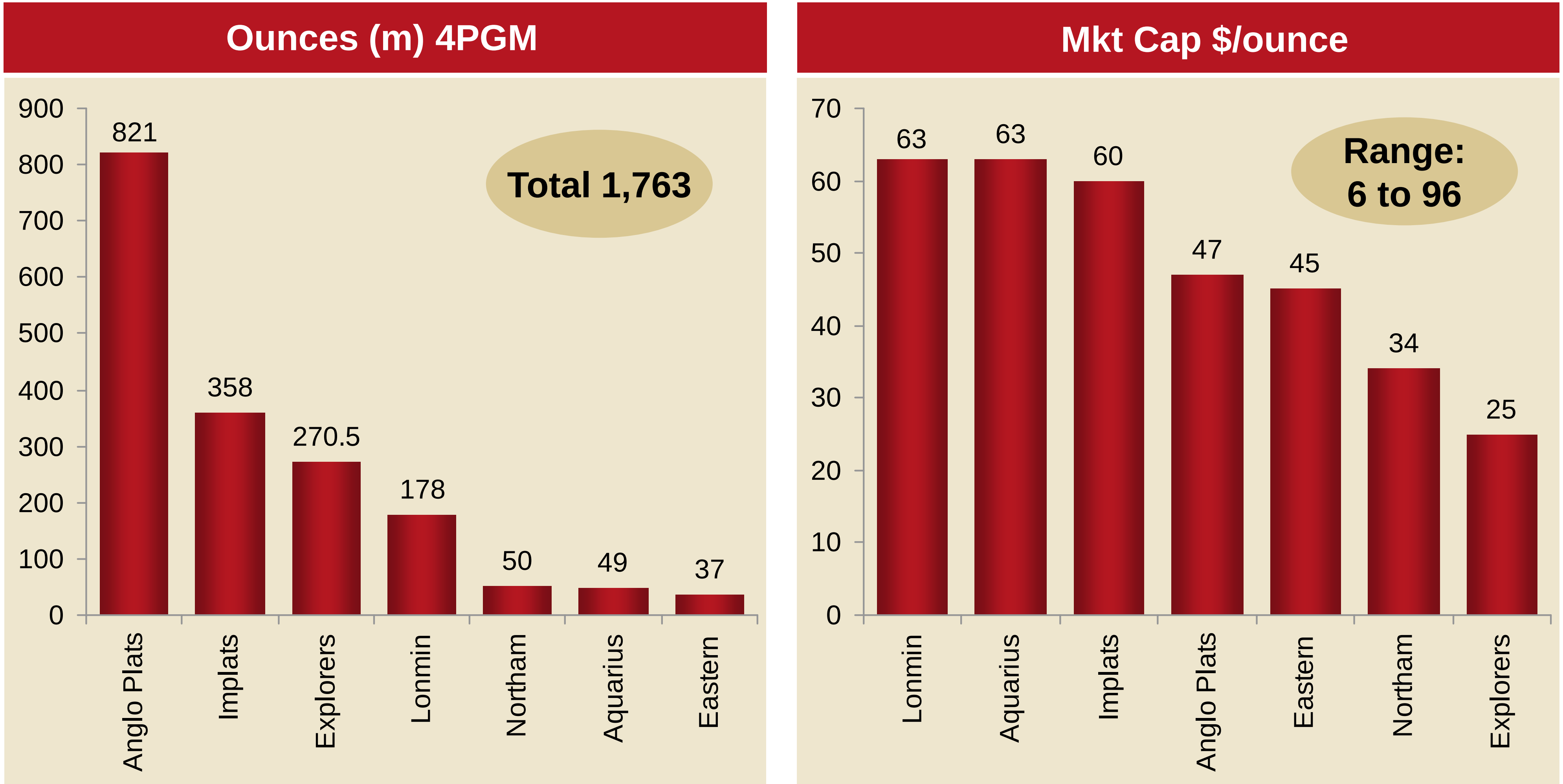
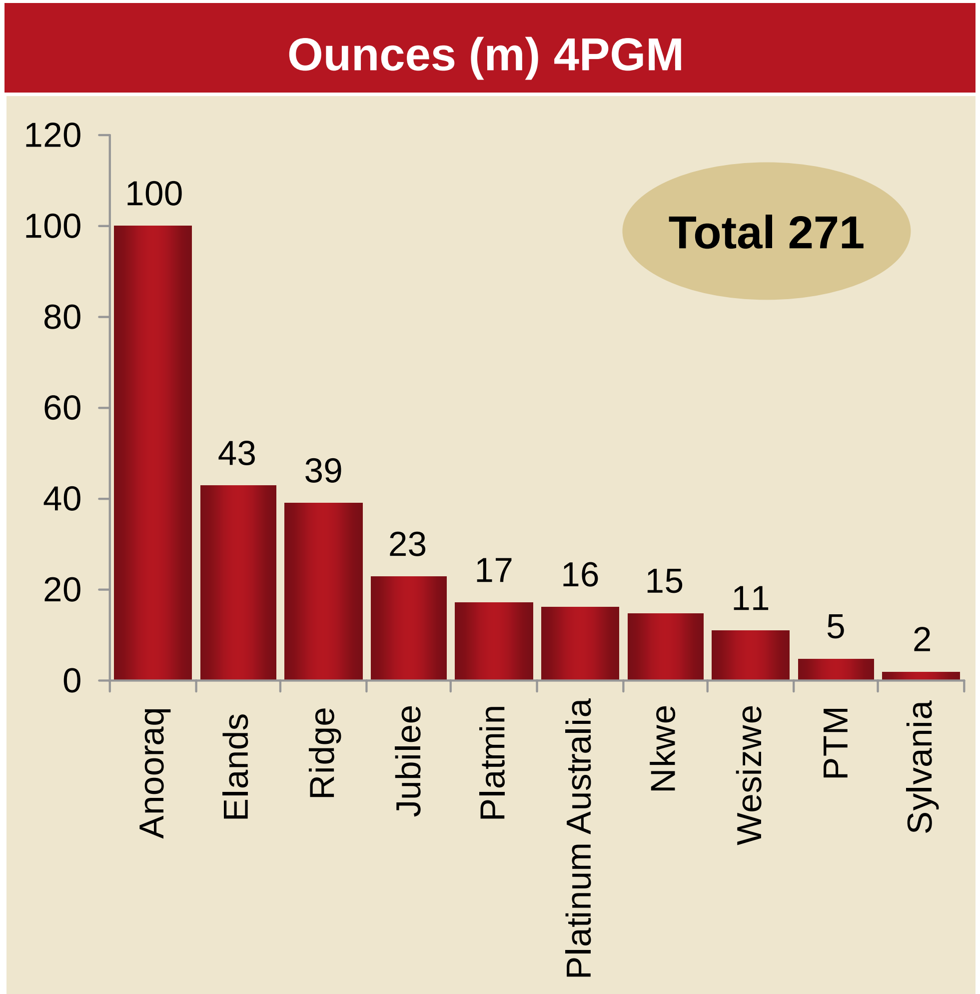
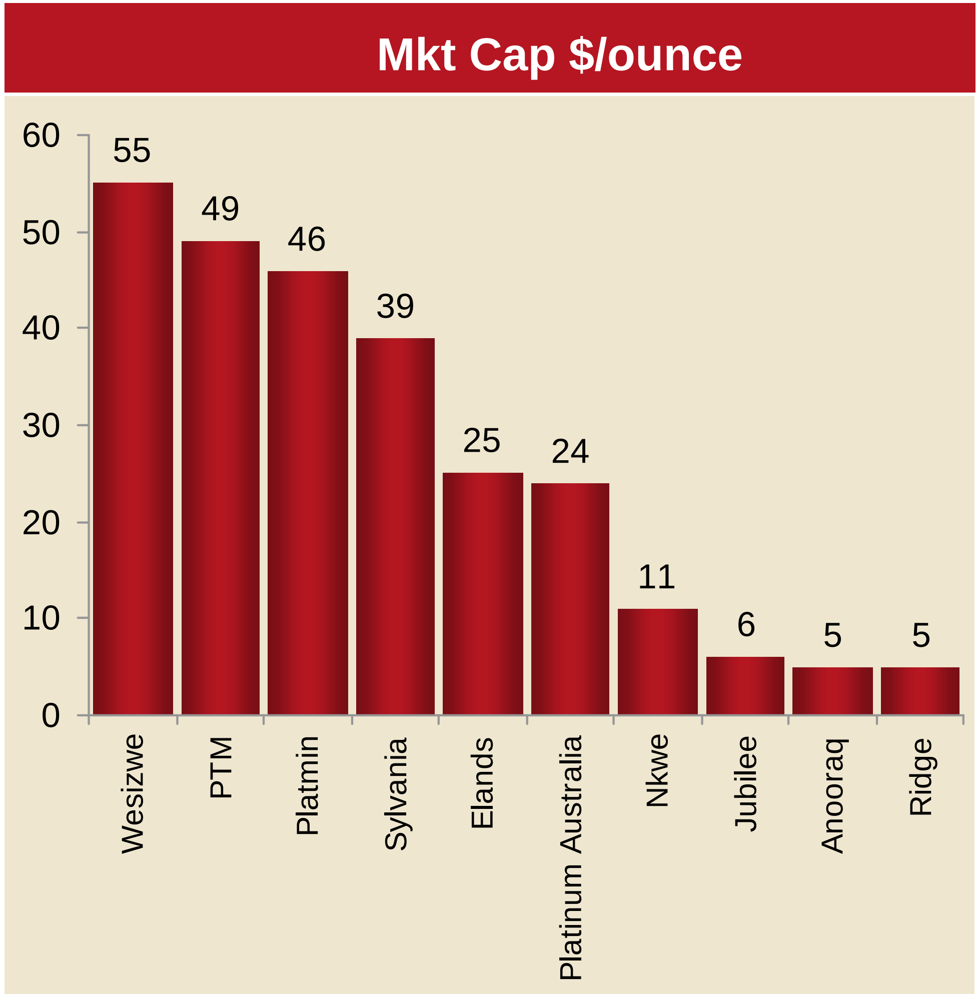
Appendix

Declared Resources of Producers



Declared Resources of Explorers





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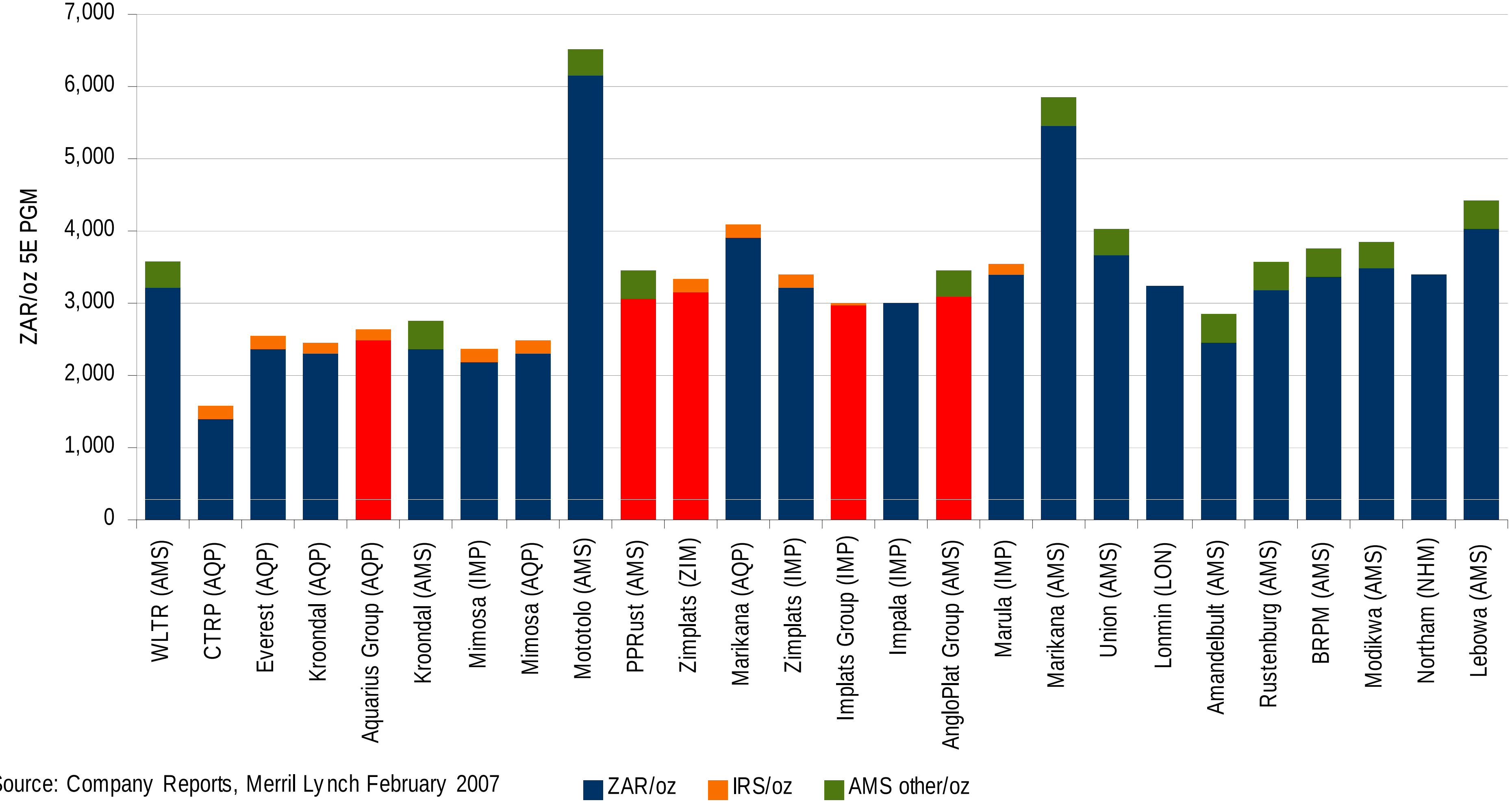
Resources Summary - Producers

Producers	Resources Mt	Grade 4 Element g/t	Ounces millions 4E pgm	Market Capitalisation per Ounce - US$ (ZAR/$ 7.75)
Anglo Platinum	6,288	4.9	821	47
Implats	3,392	4.8	358	60
Aquarius	98	4.2	49	63
Northam	98	6.1	50	34
Lonmin	1,227	4.5	178	63
Easterm Platinum	448	4.3	37	45
Others (Explorers)	1,243	3.5	270.5	25
TOTAL Bushveld Complex	**12,902**		**1,763.5**	**Average 49**

Resources Summary - Explorers

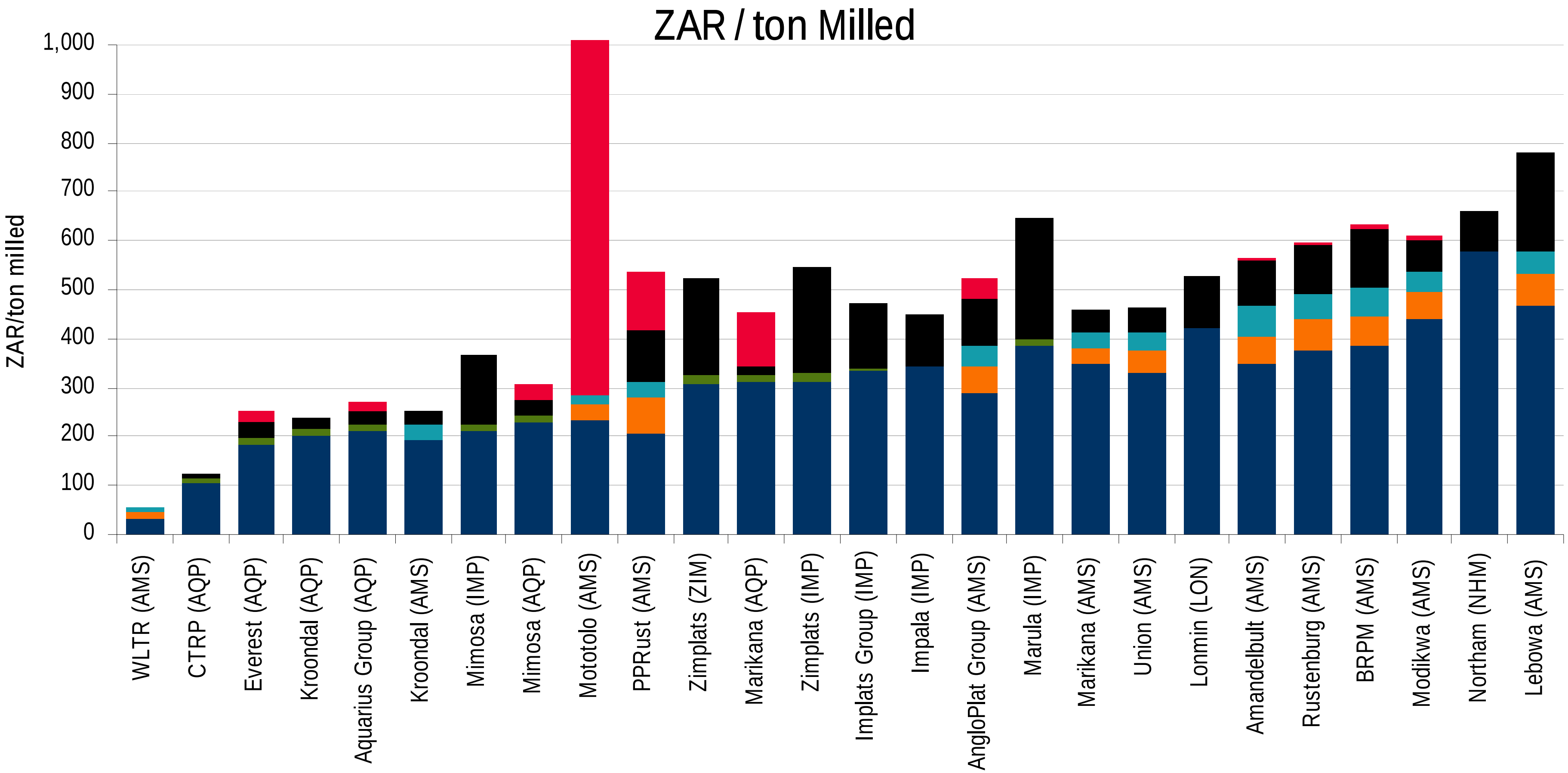
Producers	Grade 4 Element g/t	Ounces millions 4E pgm	Market Capitalisation per Ounce - US$ (ZAR/$ 7.00)
Ridge	2.5	39	5
Anooraq	3.8	100	5
Elands	4.5	43	25
Jubilee	3.8	23	6
Platmin	4.2	17	46
Platinum Australia	3.6	16	24
Nkwe	3.8	15	11
Wesizwe	5.5	11	55
PTM Platinum Group Metals	5.5	5	49
Sylvania		1.5	39
TOTAL Bushveld Complex		**270.5**	**27**

ZAR/oz PGM Cost – Current Revenue R9330/oz



Source: Company Reports, Merril Lynch February 2007

ZAR/ton Cost – Average revenue currently R990/ton



Source: Company Reports, Merril Lynch February 2007

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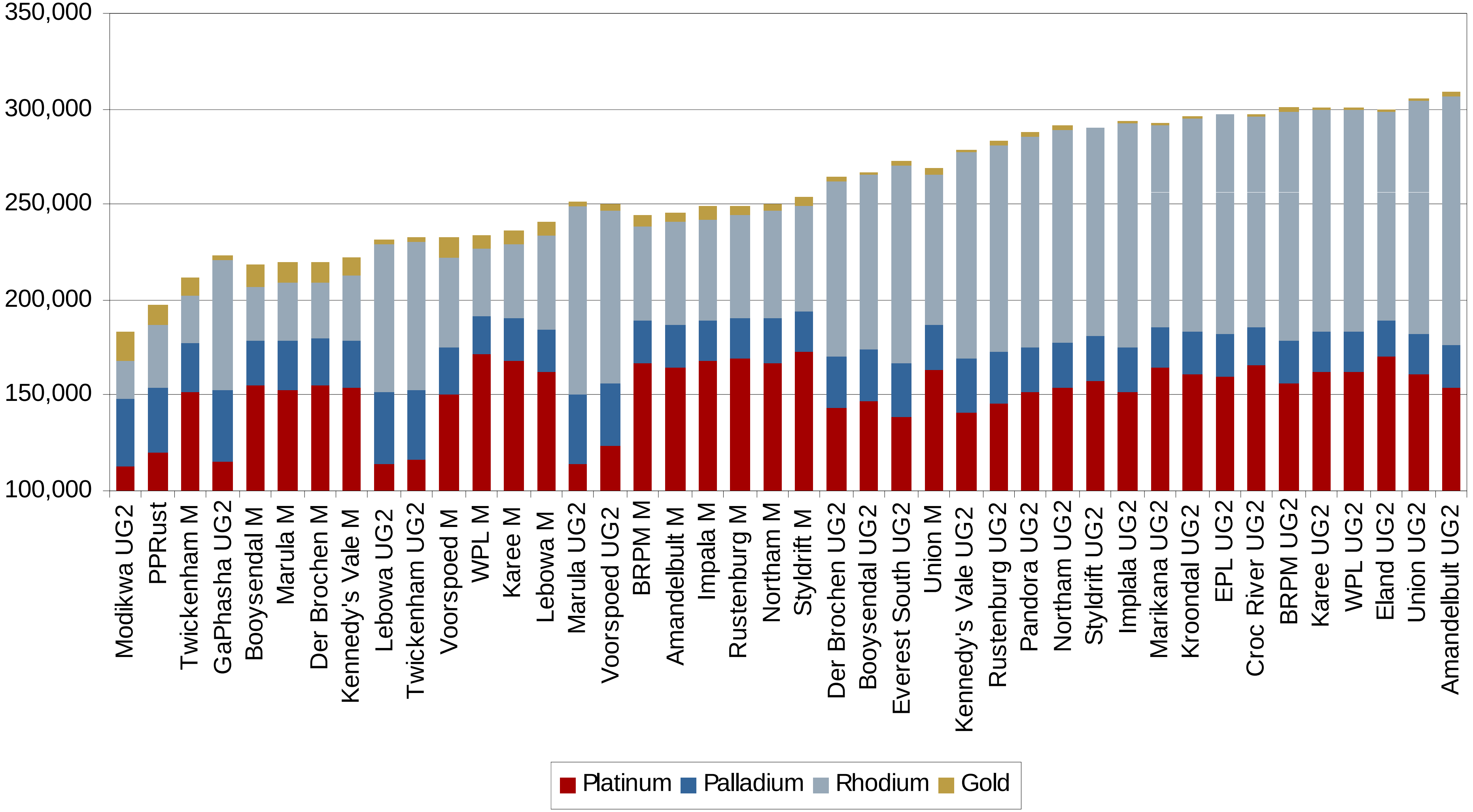
Prill Split (4PGE R/kg revenue) – Current Average Revenue R30,000/kg



Thank you

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