

3.4. The USA

3.4.1. Mines and Prospects

Since the cessation of placer mining at Goodnews Bay in 1976, US hopes for a primary PGM producer have centred on the Stillwater Mining Company (SMC), which is held jointly by Chevron Resources and the Johns Manville Corporation. Since April 1990, the latter has tried unsuccessfully to sell its share in SMC but, with no suitable buyers, the offer was withdrawn. In 1992 Chevron passed the control of its share to its subsidiary, Pittsburg & Midway Coal Mining Co. SMC's ore production in 1988 was about 140 000 t/y but this rapidly increased to about 283 000 t/y, and PGM output has risen steadily as efficiency increased, from 1555 kg (50 000 oz) platinum and 5443 kg (175 000 oz) palladium in 1990, to 1711 kg (55 000 oz) platinum and 5816 kg (187 000 oz) palladium in 1991, to an estimated 2022 kg (65 000 oz) platinum and 7076 kg (227 500 oz) palladium in 1992. The 1992 estimate may be overstated, as the mine output fell to 310 000 t of ore compared to 334 000 t in 1991. Although staff were reduced by 25 per cent in 1991, the shortfall in output was boosted by re-treating slag and dust. Staff were due to be re-employed in 1993. This demonstrated that SMC is par-

ticularly sensitive to falling platinum and palladium prices, as happened in 1991. Plans to triple output by 1995 have been put on hold and the so-called East Bolder Prospect (originally Jack Pine) situated some 25 km north-west of Stillwater, which was to have augmented that target, is also mothballed at present. The smelter to treat SMC concentrates was completed in July 1990 at the nearby town of Columbus.

The Australian company Boulder Gold (initially in partnership with Phelps Dodge) has been investigating the chromitite layers at Stillwater, which are similar to the chromites in South Africa. The chromitites are reported to be enriched in palladium and, as expected, in ruthenium, but no further details are available. The PGM-bearing Dinka deposit in Minnesota is being investigated by Fleck Resources and Nerco Minerals of Vancouver. One USBM publication has reported possible PGM output of 1,3 Mt/y by dredging of the Salmon river by R. A. Hanson Mining Co.

3.4.2. USA Production

The USA is one of the few countries of the world that still discloses some official details of the PGM produced by its industry and involved in its economy and trade. Tables 3.5 and 3.6 summarize this mass of data.

Table 3.5

Historical data on the winning of the PGM in the USA, 1981–1992 (kg)

Annual data on the winning of the PGM in the USA, 1981–1992 (kg)									
Period		Individual annual data for the six-year period						Annual growth/decline, %	
		1	2	3	4	5	6		Average
Primary metal (non-toll refined PGM recovered by refiners)									
1981–86	Pt	31	29	27	44	16	19	28	–10,14
	Pd	143	191	156	404	108	116	186	– 5,05
	PGM	174	220	183	449	124	135	214	– 5,80
1987–92	Pt	32	46	47	2	7	2*	23	–51,34
	Pd	158	248	289	62	73	64*	149	–23,92
	PGM	190	297	340	64	80	66*	173	–26,74
Secondary metal (non-toll refined from scrap and other discard material)									
1981–86	Pt	5 844	5 917	3 688	2 790	2 224	2 226*	3 782	–20,53
	Pd	5 778	4 332	5 531	7 569	6 263	8 627*	6 360	+10,28
	PGM	12 181	10 705	9 429	10 560	8 043	11 015*	10 332	– 3,50
1987–92	Pt	1 180	1 133	1 134	1 913	2 446	2 221*	1 671	+18,68
	Pd	3 743	3 545	2 664	3 656	2 374	2 920*	3 149	– 5,90
	PGM	5 118	4 788	3 933	5 819	4 907	5 350*	4 986	– 1,98
Secondary metal (toll refined from scrap and other discard material)									
1981–86	Pt	16 197	12 250	13 490	16 303	15 259	20 977	15 746	+ 6,31
	Pd	18 892	13 392	14 206	17 682	15 270	12 388	33 204	– 4,19
	PGM	37 049	27 010	30 948	35 999	32 293	35 924	33 204	+ 1,53
1987–92	Pt	22 580	22 884	24 058	38 475	39 517	36 968*	30 747	+13,93
	Pd	19 169	20 923	20 037	23 297	26 245	29 808*	23 247	+ 9,07
	PGM	44 935	46 403	46 253	65 429	69 936	70 972*	57 321	+11,67

* Estimate

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Shaft sinking at Western Platinum
(courtesy Lonrho SA Ltd)