

Mineral resources and mineral reserves cont.

Location of Harmony assets in South Africa and Papua New Guinea



Summary tables: Harmony's mineral resources and mineral reserves South Africa underground operations

Increasing level of geoscientific knowledge and confidence	Mineral resources (total)				Mineral reserves (total)			
	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)
	784.1	5.45	4 275	137 452	127.9	6.16	788	25 322
	<i>Reported as in situ mineralisation estimates</i>				<i>Reported as mineable production estimates</i>			
	Inferred							
	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)				
	452.4	4.53	2 049	65 887				
	Indicated				Probable			
	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)
	193.7	6.39	1 238	39 796	76.9	6.24	480	15 421
Measured				Proved				
Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	
137.9	7.16	988	31 769	51.0	6.04	308	9 901	
<i>Consideration of mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors (the modifying factors)</i>								

South Africa projects (below infrastructure)

Increasing level of geoscientific knowledge and confidence	Mineral resources (total)				Mineral reserves (total)			
	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)
	115.5	6.73	777	24 985	42.3	7.28	308	9 895
	<i>Reported as in situ mineralisation estimates</i>				<i>Reported as mineable production estimates</i>			
	Inferred							
	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)				
	45.4	3.36	153	4 908				
	Indicated				Probable			
	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)
	70.1	8.90	624	20 077	42.3	7.28	308	9 895
Measured				Proved				
Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	
-	-	-	-	-	-	-	-	
<i>Consideration of mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors (the modifying factors)</i>								

Mineral resources and mineral reserves cont.

Summary tables: Harmony's mineral resources and mineral reserves cont. South Africa surface (including Kalgold)

Increasing level of geoscientific knowledge and confidence	Mineral resources (total)				Mineral reserves (total)			
	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)
	1 638.0	0.30	495	15 928	1 198.2	0.27	322	10 355
	<i>Reported as in situ mineralisation estimates</i>				<i>Reported as mineable production estimates</i>			
	Inferred							
	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)				
	234.1	0.32	74	2 392				
	Indicated				Probable			
	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)
	1 248.0	0.29	357	11 471	1 145.7	0.26	295	9 494
Measured				Proved				
Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	
155.9	0.41	64	2 065	52.5	0.51	27	861	
<i>Consideration of mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors (the modifying factors)</i>								

Papua New Guinea*

Increasing level of geoscientific knowledge and confidence	Mineral resources (total)				Mineral reserves (total)			
	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)
	373.4	0.90	336	10 809	66.4	1.19	79	2 532
	<i>Reported as in situ mineralisation estimates</i>				<i>Reported as mineable production estimates</i>			
	Inferred							
	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)				
	256.4	0.67	172	5 530				
	Indicated				Probable			
	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)
	112.8	1.38	155	4 992	62.6	1.13	71	2 272
Measured				Proved				
Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	
4.3	2.07	9	287	3.8	2.14	8	260	
<i>Consideration of mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors (the modifying factors)</i>								

* Represents Harmony's equity portion of 50%

Harmony – total underground and surface (including below infrastructure)

Increasing level of geoscientific knowledge and confidence	Mineral resources (total)				Mineral reserves (total)			
	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)
	2 911.1	2.02	5 884	189 174	1 434.7	1.04	1 496	48 104
	<i>Reported as in situ mineralisation estimates</i>				<i>Reported as mineable production estimates</i>			
	Inferred							
	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)				
	988.3	2.48	2 448	78 717				
	Indicated				Probable			
	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)
	1624.6	1.46	2 374	76 336	1 327.4	0.87	1 153	37 082
Measured				Proved				
Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	Tonnes (Mt)	Grade g/t	Gold (000kg)	Gold (000oz)	
298.2	3.56	1 061	34 121	107.3	3.20	343	11 022	
<i>Consideration of mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors (the modifying factors)</i>								



Hidden Valley, PNG

Mineral resources and mineral reserves cont.

Mineral resources statement (Metric)

Gold

Operations	Measured			Indicated			Inferred			Total		
	Tonnes (Mt)	Grade (g/t)	Gold kg (000)	Tonnes (Mt)	Grade (g/t)	Gold kg (000)	Tonnes (Mt)	Grade (g/t)	Gold kg (000)	Tonnes (Mt)	Grade (g/t)	Gold kg (000)
Free State												
Underground	78.8	8.75	690	90.8	8.76	795	229.5	6.01	1 380	399.1	7.18	2 865
Surface	–	–	–	971.9	0.24	234	206.9	0.24	49	1 178.8	0.24	283
Total	78.8	8.75	690	1 062.7	0.97	1 029	436.4	3.27	1 429	1 577.8	1.99	3 148
West Rand												
Underground	45.8	4.38	201	77.2	4.26	329	199.3	2.52	502	322.3	3.20	1 032
Evander												
Underground	3.8	14.01	53	3.7	15.48	57	13.1	11.15	146	20.6	12.46	256
Evander (below infrastructure)	–	–	–	70.1	8.90	624	45.4	3.36	153	115.5	6.73	777
Surface	–	–	–	202.9	0.29	59	–	–	–	202.9	0.29	59
Total	3.8	14.01	53	276.7	2.68	740	58.5	5.11	299	339.0	3.22	1 092
Rand Uranium¹												
Underground	9.5	4.68	45	22.1	2.56	56	10.6	2.07	22	42.2	2.92	123
Surface	121.9	0.29	35	9.4	0.45	4	–	–	–	131.3	0.30	39
Total	131.4	0.60	80	31.5	1.93	60	10.6	2.07	22	173.5	0.93	162
Kalgold												
Underground	34.0	0.86	29	63.8	0.94	60	27.2	0.93	25	125.0	0.92	114
SA												
Underground	137.9	7.16	989	263.9	7.06	1 861	497.9	4.42	2 203	899.7	5.62	5 053
Surface	155.9	0.41	64	1 248.0	0.29	357	234.1	0.32	74	1 638.0	0.30	495
Total	293.8	–	1 053	1 511.9	–	2 218	732	–	2 277	2 537.7	–	5 548
Papua												
New Guinea ²	4.3	2.07	9	112.8	1.38	155	256.4	0.67	172	373.4	0.90	336
Grand total	298.1	–	1 062	1 624.7	–	2 373	988.4	–	2 449	2 911.1	–	5 884

Silver

Operations	Measured			Indicated			Inferred			Total		
	Tonnes (Mt)	Grade (g/t)	Silver kg (000)	Tonnes (Mt)	Grade (g/t)	Silver kg (000)	Tonnes (Mt)	Grade (g/t)	Silver kg (000)	Tonnes (Mt)	Grade (g/t)	Silver kg (000)
Papua New Guinea²												
Hidden Valley	4.2	35.00	147	33.1	33.40	1 105	10.9	31.10	340	48.2	33.02	1 592

Copper

Operations	Measured			Indicated			Inferred			Total		
	Tonnes (Mt)	Grade (%)	Cu (Mkg)	Tonnes (Mt)	Grade (%)	Cu (Mkg)	Tonnes (Mt)	Grade (%)	Cu (Mkg)	Tonnes (Mt)	Grade (%)	Cu (Mkg)
Papua New Guinea ²												
Golpu	–	–	–	44.9	1.38	621	205.4	0.86	1 763	250.3	0.95	2 384
Nambonga	–	–	–	–	–	–	19.9	0.22	44	19.9	0.22	44
Total	–	–	–	44.9	1.38	621	225.3	0.80	1 807	270.2	0.90	2 428

Molybdenum

Operations	Measured			Indicated			Inferred			Total		
	Tonnes (Mt)	Grade (ppm)	Mo (Mkg)	Tonnes (Mt)	Grade (ppm)	Mo (Mkg)	Tonnes (Mt)	Grade (ppm)	Mo (Mkg)	Tonnes (Mt)	Grade (ppm)	Mo (Mkg)
Papua New Guinea ²												
Golpu	–	–	–	44.9	107.72	5	205.4	111.33	23	250.3	110.68	28

Uranium

	Measured			Indicated			Inferred			Total		
	Tonnes (Mt)	Grade (kg/t)	U ₃ O ₈ (Mkg)	Tonnes (Mt)	Grade (kg/t)	U ₃ O ₈ (Mkg)	Tonnes (Mt)	Grade (kg/t)	U ₃ O ₈ (Mkg)	Tonnes (Mt)	Grade (kg/t)	U ₃ O ₈ (Mkg)
South Africa Underground												
Free State												
Masimong	9.7	0.284	3	10.7	0.278	3	76.7	0.238	18	97.1	0.247	24
Phakisa	0.5	0.160	0	22.2	0.196	4	12.7	0.196	2	35.4	0.196	6
Tshepong	0.3	0.209	0	3.5	0.198	1	33.3	0.160	5	37.1	0.164	6
Total	10.5	0.276	3	36.4	0.220	8	122.7	0.212	25	169.6	0.218	36
Rand Uranium ¹												
Cooke 2	3.5	0.243	1	6.8	0.228	2	1.1	0.224	0	11.4	0.232	3
Cooke 3	4.0	0.389	2	11.7	0.286	3	6.9	0.280	2	22.6	0.303	7
Total	7.5	0.321	3	18.5	0.265	5	8.0	0.273	2	34.0	0.279	10
Total SA Underground	18.0	0.295	6	54.9	0.235	13	130.7	0.216	27	203.6	0.228	46
South Africa Surface												
Free State Region												
Free State Region	–	–	–	159.9	0.107	17	13.5	0.336	5	173.4	0.125	22
Rand Uranium ¹	24.5	0.206	5	31.2	0.097	3	–	–	–	55.7	0.145	8
Total SA Surface	24.5	0.206	5	191.1	0.105	20	13.5	0.336	5	229.1	0.130	30
Grand total	42.5	–	11	246	–	33	144.2	–	32	432.7	–	76

¹ Represents Harmony's equity portion of 40%

² Represents Harmony's equity portion of 50%

NB Rounding of numbers may result in slight computational discrepancies

Note: 1 tonne = 1 000 kg = 2 204 lbs

Mineral resources and mineral reserves cont.

Mineral resources statement (Imperial)

Gold

Operations	Measured			Indicated			Inferred			Total		
	Tons (Mt)	Grade (oz/ ton)	Gold oz (000)	Tons (Mt)	Grade (oz/ ton)	Gold oz (000)	Tons (Mt)	Grade (oz/ ton)	Gold oz (000)	Tons (Mt)	Grade (oz/ ton)	Gold oz (000)
Free State												
Underground	86.8	0.255	22 170	100.1	0.256	25 571	253.0	0.175	44 358	439.9	0.209	92 099
Surface	–	–	–	1 071.3	0.007	7 515	228.0	0.007	1 574	1 299.3	0.007	9 089
Total	86.8	0.255	22 170	1 171.4	0.028	33 086	481.0	0.095	45 932	1 739.2	0.058	101 188
West Rand												
Underground	50.5	0.128	6 455	85.0	0.124	10 573	219.7	0.073	16 141	355.2	0.093	33 169
Evander												
Underground	4.2	0.409	1 709	4.1	0.451	1 836	14.4	0.325	4 686	22.7	0.363	8 231
Evander (below infrastructure)	–	–	–	77.3	0.260	20 077	50.0	0.098	4 908	127.3	0.196	24 985
Surface	–	–	–	223.7	0.008	1 897	–	–	–	223.7	0.008	1 897
Total	4.2	0.409	1 709	305.1	0.078	23 810	64.4	0.149	9 594	373.7	0.094	35 113
Rand Uranium¹												
Underground	10.5	0.137	1435	24.3	0.075	1816	11.6	0.060	702	46.4	0.085	3 953
Surface	134.4	0.008	1121	10.4	0.013	137	–	–	–	144.8	0.009	1 258
Total	144.9	0.018	2556	34.7	0.056	1953	11.6	0.060	702	191.2	0.027	5211
Kalgold	37.5	0.025	944	70.3	0.027	1922	30.0	0.027	818	137.8	0.027	3 684
SA												
Underground	152	0.209	31 769	290.8	0.206	59 873	548.7	0.129	70 795	991.5	0.164	162 437
Surface	171.9	0.012	2 065	1 375.7	0.008	11 471	258.0	0.009	2 392	1 805.6	0.009	15 928
Total	323.9	–	33 834	1 666.5	–	71 344	806.7	–	73 187	2 797.1	–	178 365
Papua												
New Guinea ²	4.8	0.060	287	124.3	0.040	4 992	282.6	0.020	5 530	411.7	0.026	10 809
Grand total	328.7	–	34 121	1 790.8	–	76 336	1 089.3	–	78 717	3 208.8	–	189 174

Silver

Operations	Measured			Indicated			Inferred			Total		
	Tons (Mt)	Grade (oz/ ton)	Silver oz (000)	Tons (Mt)	Grade (oz/ ton)	Silver oz (000)	Tons (Mt)	Grade (oz/ ton)	Silver oz (000)	Tons (Mt)	Grade (oz/ ton)	Silver oz (000)
Papua New Guinea²												
Hidden Valley	4.6	1.021	4 739	36.5	0.974	35 537	12.0	0.907	10 920	53.1	0.963	51 196

Copper

Operations	Measured			Indicated			Inferred			Total		
	Tons (Mt)	Grade (%)	Cu (Mlb)	Tons (Mt)	Grade (%)	Cu (Mlb)	Tons (Mt)	Grade (%)	Cu (Mlb)	Tons (Mt)	Grade (%)	Cu (Mlb)
Papua New Guinea ²												
Golpu	–	–	–	49.5	1.256	1 369	226.4	0.778	3 886	275.9	0.864	5 255
Nambonga	–	–	–	–	–	–	21.9	0.200	97	21.9	0.200	97
Total	–	–	–	49.5	1.256	1 369	248.3	0.727	3 983	297.8	0.815	5 352

Molybdenum

Operations	Measured			Indicated			Inferred			Total		
	Tons (Mt)	Grade (lb/ton)	Mo (Mlb)	Tons (Mt)	Grade (lb/ton)	Mo (Mlb)	Tons (Mt)	Grade (lb/ton)	Mo (Mlb)	Tons (Mt)	Grade (lb/ton)	Mo (Mlb)
Papua New Guinea ²												
Golpu	–	–	–	49.5	0.215	11	226.4	0.223	50	275.9	0.221	61

Uranium

	Measured			Indicated			Inferred			Total		
	Tons (Mt)	Grade (lb/ton)	U ₃ O ₈ (Mlb)	Tons (Mt)	Grade (lb/ton)	U ₃ O ₈ (Mlb)	Tons (Mt)	Grade (lb/ton)	U ₃ O ₈ (Mlb)	Tons (Mt)	Grade (lb/ton)	U ₃ O ₈ (Mlb)
South Africa Underground												
Free State												
Masimong	10.7	0.567	6	11.8	0.556	7	84.6	0.475	40	107.1	0.493	53
Phakisa	0.5	0.320	0	24.4	0.393	10	14.0	0.393	5	38.9	0.392	15
Tshepong	0.3	0.417	0	3.8	0.396	2	36.7	0.320	12	40.8	0.328	14
Total	11.5	0.551	6	40.0	0.441	19	135.3	0.425	57	186.8	0.436	82
Rand Uranium ¹												
Cooke 2	3.9	0.486	2	7.5	0.455	3	1.2	0.447	1	12.6	0.464	6
Cooke 3	4.4	0.778	3	12.9	0.572	7	7.6	0.561	4	24.9	0.605	14
Total	8.3	0.642	5	20.4	0.529	11	8.8	0.546	5	37.5	0.558	20
Total SA Underground	19.8	0.589	11	60.4	0.471	30	144.1	0.432	62	224.3	0.456	102
South Africa Surface												
Free State Region												
Free State Region	0.0	0.000	0	176.2	0.214	38	14.9	0.672	10	191.1	0.250	48
Rand Uranium ¹	27.0	0.412	11	34.4	0.194	7	0.0	0.000	0	61.4	0.290	18
Total SA Surface	27.0	0.412	11	210.6	0.211	45	14.9	0.672	10	252.5	0.259	66
Grand total	46.8	–	22	271	–	75	159.0	–	72	476.8	–	168

¹ Represents Harmony's equity portion of 40%

² Represents Harmony's equity portion of 50%

NB Rounding of numbers may result in slight computational discrepancies

Note: 1 ton = 907 kg = 2 000 lbs

Mineral resources and mineral reserves cont.

Mineral reserve statement (Metric)

Gold

Operations	Proved			Probable			Total		
	Tonnes (Mt)	Gold Grade (g/t)	kg ¹ (000)	Tonnes (Mt)	Gold Grade (g/t)	kg ¹ (000)	Tonnes (Mt)	Gold Grade (g/t)	kg ¹ (000)
Free State									
Underground	32.5	5.98	194	45.1	6.46	291	77.6	6.26	485
Surface	–	–	–	926.5	0.24	224	926.5	0.24	224
Total	32.5	5.98	194	971.6	0.53	515	1 004.1	0.71	709
West Rand									
Underground	14.0	6.30	88	25.9	6.14	159	39.9	6.20	247
Evander									
Underground	2.2	7.20	16	1.6	9.12	15	3.8	8.00	31
Evander (below infrastructure)	–	–	–	42.3	7.28	308	42.3	7.28	308
Surface	–	–	–	202.9	0.29	59	202.9	0.29	59
Total	2.2	7.20	16	246.8	1.55	382	249.0	1.60	398
Rand Uranium ²									
Underground	2.2	4.20	9	4.4	3.45	15	6.6	3.70	24
Surface	30.6	0.29	9	8.8	0.45	4	39.4	0.33	13
Total	32.8	0.55	18	13.2	1.45	19	46.0	0.81	37
Kalgold	21.9	0.82	18	7.5	1.07	8	29.4	0.88	26
SA									
Underground	50.9	6.04	307	119.3	6.61	788	170.2	6.44	1 095
Surface	52.5	0.51	27	1 145.7	0.26	295	1 198.2	0.27	322
Total	103.4	–	334	1 265	–	1 083	1 368.4	–	1 417
Papua New Guinea ³	3.8	2.14	8	62.6	1.13	71	66.4	1.19	79
Grand total	107.2	–	342	1 327.5	–	1 154	1 434.8	–	1 496

Silver

Operations	Proved			Probable			Total		
	Tonnes (Mt)	Grade (g/t)	Silver kg ¹ (000)	Tonnes (Mt)	Grade (g/t)	Silver kg ¹ (000)	Tonnes (Mt)	Grade (g/t)	Silver kg ¹ (000)
Papua New Guinea ³									
Hidden Valley	3.8	35.58	134	24.3	35.52	862	28.1	35.53	996

Copper

Operations	Proved			Probable			Total		
	Tonnes (Mt)	Grade (%)	Cu (Mkg ¹)	Tonnes (Mt)	Grade (%)	Cu (Mkg ¹)	Tonnes (Mt)	Grade (%)	Cu (Mkg ¹)
Papua New Guinea ³									
Golpu	–	–	–	35.4	1.13	400	35.4	1.13	400

Molybdenum

Operations	Proved			Probable			Total		
	Tonnes (Mt)	Grade (ppm)	Mo (Mkg ¹)	Tonnes (Mt)	Grade (ppm)	Mo (Mkg ¹)	Tonnes (Mt)	Grade (ppm)	Mo (Mkg ¹)
Papua New Guinea ³									
Golpu	–	–	–	35.4	121.00	4	35.4	121.00	4

1 Metal figures are fully inclusive of all mining dilutions and gold losses, and are reported as mill delivered tonnes and head grades.

Metallurgical recovery factors have not been applied to the reserve figures.

2 Represents Harmony's equity portion of 40%

3 Represents Harmony's equity portion of 50%

NB Rounding of numbers may result in slight computational discrepancies

Note: 1 tonne = 1 000 kg = 2 204 lbs



Tshepong, South Africa

Mineral resources and mineral reserves cont.

Mineral reserve statement (Imperial)

Gold

Operations	Proved			Probable			Total		
	Tons (Mt)	Grade (oz/ ton)	Gold oz ¹ (000)	Tons (Mt)	Grade (oz/ ton)	Gold oz ¹ (000)	Tons (Mt)	Grade (oz/ ton)	Gold oz ¹ (000)
Free State									
Underground	35.8	0.174	6 242	49.7	0.188	9 356	85.5	0.182	15 598
Surface	–	–	–	1 021.3	0.007	7 212	1 021.3	0.007	7 212
Total	35.8	0.174	6 242	1 071.0	0.015	16 568	1 106.8	0.021	22 810
West Rand									
Underground	15.5	0.184	2 840	28.5	0.179	5 111	44.0	0.181	7 951
Evander									
Underground	2.5	0.210	520	1.8	0.266	470	4.3	0.234	990
Evander (below infrastructure)	–	–	–	46.6	0.212	9895	46.6	0.212	9 895
Surface	–	–	–	223.7	0.008	1 897	223.7	0.008	1 897
Total	2.5	0.210	520	272.1	0.045	12 262	274.6	0.047	12 782
Rand Uranium ²									
Underground	2.4	0.122	299	4.8	0.100	484	7.2	0.108	783
Surface	33.8	0.008	286	9.7	0.013	127	43.5	0.010	413
Total	36.2	0.016	585	14.5	0.042	611	50.7	0.024	1 196
Kalgold	24.1	0.024	575	8.3	0.031	258	32.4	0.026	833
SA									
Underground	56.2	0.176	9 901	131.4	0.193	25 316	187.6	0.188	35 217
Surface	57.9	0.015	861	1 263	0.008	9 494	1 320.9	0.008	10 355
Total	114.1	–	10 762	1 394.4	–	34 810	1 508.5	–	45 572
Papua New Guinea ³	4.2	0.062	260	69.0	0.033	2 272	73.1	0.035	2 532
Grand total	118.3	–	11 022	1 463.4	–	37 082	1 581.6	–	48 104

Silver

Operations	Proved			Probable			Total		
	Tons (Mt)	Grade (oz/ ton)	Silver oz (000)	Tons (Mt)	Grade (oz/ ton)	Silver oz (000)	Tons (Mt)	Grade (oz/ ton)	Silver oz (000)
Papua New Guinea ³									
Hidden Valley	4.2	1.038	4 320	26.8	1.036	27 726	31	1.036	32 046

Copper

Operations	Proved			Probable			Total		
	Tons (Mt)	Grade (%)	Cu (Mlb)	Tons (Mt)	Grade (%)	Cu (Mlb)	Tons (Mt)	Grade (%)	Cu (Mlb)
Papua New Guinea ³									
Golpu	–	–	–	39.0	1.025	882	39.0	1.025	882

Molybdenum

Operations	Proved			Probable			Total		
	Tons (Mt)	Grade (lb/ton)	Mo (Mlb)	Tons (Mt)	Grade (lb/ton)	Mo (Mlb)	Tons (Mt)	Grade (lb/ton)	Mo (Mlb)
Papua New Guinea ³									
Golpu	–	–	–	39.0	0.231	9	39.0	0.231	9

1 Metal figures are fully inclusive of all mining dilutions and gold losses, and are reported as mill delivered tonnes and head grades.

Metallurgical recovery factors have not been applied to the reserve figures.

2 Represents Harmony's equity portion of 40%

3 Represents Harmony's equity portion of 50%

NB Rounding of numbers may result in slight computational discrepancies

Note: 1 ton = 907 kg = 2 000 lbs

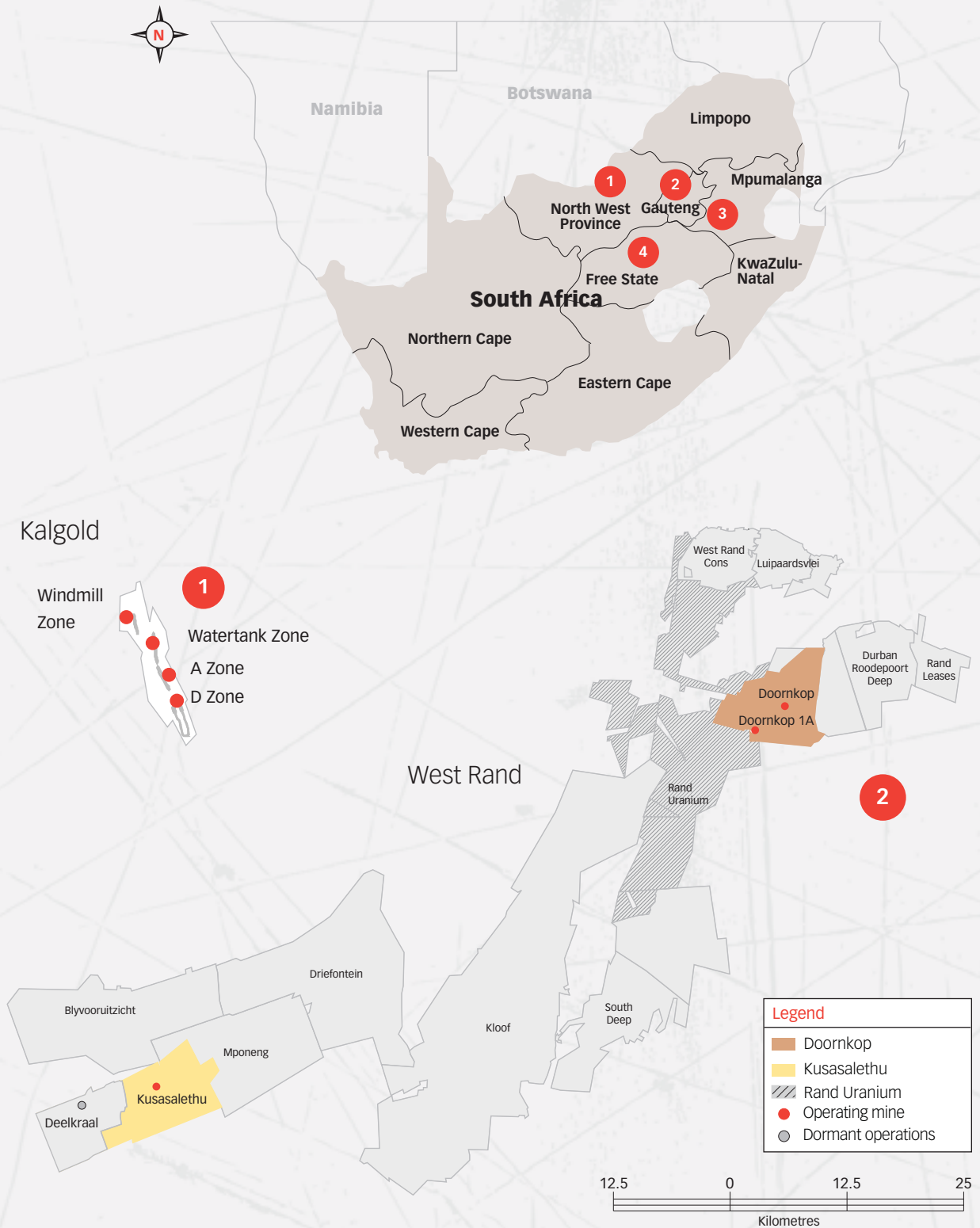


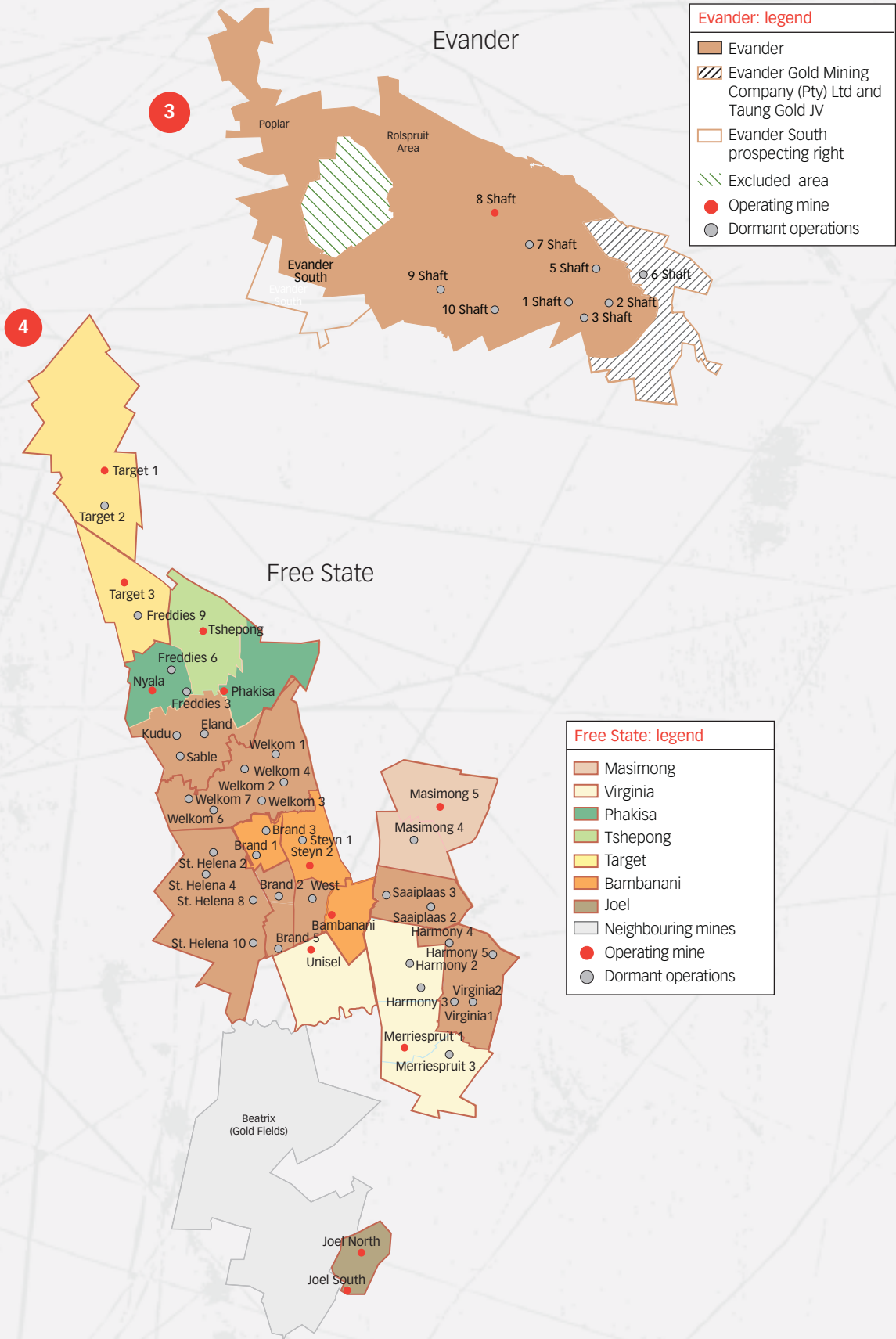
Wafi Golpu, PNG

Mineral resources and mineral reserves cont.

South Africa

Mineral resources and mineral reserves – location of mining operations





Mineral resources and mineral reserves cont.

Free State operations

Geology

Harmony's Free State operations are located on the south-western corner of the Witwatersrand Basin, between the towns of Allanridge, Welkom, Theunissen and Virginia. The basin, situated on the Kaapvaal Craton, has been filled by a 6-kilometre thick succession of sedimentary rocks, which extends laterally for hundreds of kilometres.

The Free State goldfield is divided into two sections, cut by the north-south striking De Bron Fault. This major structure has a vertical displacement of about 1 500 metres in the region of Bambanani, as well as a lateral shift of 4 kilometres. This lateral shift can allow a reconstruction of the orebodies of Unisel to the west of the De Bron Fault and Merriespruit to the east. A number of other major faults (Stuirmanspan, Dagbreek, Arrarat and Eureka) lie parallel to the De Bron Fault.

To the west of the De Bron, the mines and shafts currently in operation are Target, Tshepong, Phakisa, Nyala, Unisel, Bambanani and Joel. Dips are mostly towards the east, averaging 30 degrees but become steeper as they approach the De Bron Fault. To the east of the fault lie Merriespruit 1 and Masimong. These mostly dip towards the west at 20 degrees, although Masimong is structurally complex and dips of up to 40 degrees have been measured. Between these two blocks lies the uplifted horst block of West Rand Group sediments with no reef preserved.

The western margin area is bound by synclines and reverse thrust faults and is structurally complex. Towards the south and east, reefs sub-crop against overlying strata, eventually cutting out against the Karoo to the east of the lease area.

Most of the mineral resource tends to be concentrated in reef bands located on one or two distinct unconformities. A smaller portion of the mineral resource is located on other unconformities. Mining that has taken place is mostly deep-level underground mining, exploiting the narrow, generally shallow dipping tabular reefs.

The Basal Reef is the most common reef horizon and is mined at all shafts except Target and Joel. It varies from a single pebble lag to channels of more than 2 metres thick. It is commonly overlain by shale, which thickens northwards. Tshepong has resorted to undercutting of its mining panels to reduce the effect of shale dilution.

The second major reef is the Leader Reef, located 15-20 metres above the Basal Reef. This is mined mostly at shafts to the south – Unisel and Merriespruit 1. Further north, it becomes poorly developed with erratic grades. The reef consists of multiple conglomerate units, separated by thin quartzitic zones, often up to 4 metres thick. A selected mining cut on the most economic horizon is often undertaken.

The B Reef is a highly channelised orebody located 140 metres stratigraphically above the Basal Reef. Because of its erratic nature, it is only mined at Masimong and Tshepong. Within the channels, grades are excellent, but this reduces to nothing outside of the channels. Consequently, both shafts have undertaken extensive exploration to locate these pay channels.

The A Reef is also a highly channelised reef, located some 40 metres above the B Reef. This is currently only mined at Harmony 2 and Brand, although an extensive channel lies along the western margin from Nyala to Lorraine. It consists of multiple conglomerate bands of up to 4 metres thick and a selected mining cut is usually required to optimise the orebody.

Joel Mine, located 30 kilometres south of Welkom, is the only Harmony Free State operation to mine the Beatrix Reef. This varies from a single-pebble lag to a multiple conglomerate, often showing mixing of the reef with some of the overlying lower grade VS5 (mixed pebble conglomerate) material. None of the other reefs are present this far south, having sub-cropped against the Beatrix Reef.

The Target operations are located at the northern extent of the Free State goldfields, some 20 kilometres north of Welkom. The reefs currently exploited are the Elsburg-Dreyerskuil conglomerates, which form a wedge-shaped stacked package, comprising 35 separate reef horizons, often separated by quartzite beds. The Elsburg Reefs are truncated by an unconformity surface at the base of the overlying Dreyerskuil Member. Below the sub-crop, the Elsburg dips steeply to the east, with dips becoming progressively shallower down dip. Close to the sub-outcrop,

the thickness of the intervening quartzites reduces, resulting in the Elsburg Reefs coalescing to form composite reef packages that are exploited by massive mining techniques at the Target mine. The Dreyerskuil also consists of stacked reefs dipping shallowly to the east. These reefs tend to be less numerous, but more laterally extensive than the underlying Elsburg Reefs.

Gold – Mineral resources

Operations	Measured				Indicated				Inferred				Total			
	Tonnes		Gold	Gold	Tonnes		Gold	Gold	Tonnes		Gold	Gold	Tonnes		Gold	Gold
	(Mt)	g/t	(000 kg)	(000 oz)	(Mt)	g/t	(000 kg)	(000 oz)	(Mt)	g/t	(000 kg)	(000 oz)	(Mt)	g/t	(000 kg)	(000 oz)
Underground																
Bambanani																
Bambanani	11.7	11.47	134	4 318	3.2	9.75	31	1 009	1.0	10.67	11	356	15.9	11.07	176	5 683
Steyn 2	3.2	11.49	37	1 190	0.7	12.04	8	272	0.9	10.01	9	284	4.8	11.30	54	1 746
Total	14.9	11.47	171	5 508	3.9	10.16	39	1 281	1.9	10.37	20	640	20.7	11.12	230	7 429
Joel	5.0	6.85	34	1 096	5.5	7.27	40	1 276	12.5	6.06	76	2 439	23.0	6.52	149	4 811
Masimong 5	11.1	7.68	85	2 732	6.0	7.09	43	1 371	79.7	5.89	469	15 073	96.8	6.17	597	19 176
Phakisa	4.6	7.06	33	1 052	25.7	10.90	279	8 986	60.7	6.69	407	13 074	91.0	7.90	719	23 112
Target																
Target 1	5.4	10.11	55	1 770	14.4	7.37	106	3 411	5.1	6.32	32	1 038	24.9	7.75	193	6 219
Target 3	7.1	9.83	70	2 240	10.1	8.67	88	2 827	5.5	6.85	38	1 210	22.7	8.59	196	6 277
Total	12.5	9.95	125	4 010	24.5	7.91	194	6 238	10.6	6.59	70	2 248	47.6	8.15	389	12 496
Tshepong	12.8	11.00	141	4 527	12.5	10.90	136	4 371	11.3	9.55	108	3 473	36.6	10.52	385	12 371
Virginia																
Merriespruit 1	8.1	5.47	44	1 417	3.3	4.21	14	444	35.4	3.88	137	4 410	46.8	4.18	195	6 271
Unisel	9.8	5.82	57	1 828	9.4	5.29	50	1 604	17.3	5.39	93	3 001	36.5	5.48	200	6 433
Total	17.9	5.66	101	3 245	12.7	5.01	64	2 048	52.7	4.37	230	7 411	83.3	4.75	395	12 704
Total Free State																
Underground	78.8	8.75	690	22 170	90.8	8.76	795	25 571	229.4	6.01	1 380	44 358	399.0	7.18	2 864	92 099
Surface																
Free State Surface																
Phoenix	–	–	–	–	92.4	0.30	28	899	1.2	0.22	0	9	93.6	0.30	28	908
St Helena	–	–	–	–	288.5	0.25	72	2 319	–	–	–	–	288.5	0.25	72	2 319
Waste rock dumps	–	–	–	–	9.0	0.56	5	162	22.0	0.49	11	345	31.0	0.51	16	507
Slimes dams	–	–	–	–	582.0	0.22	129	4 135	183.6	0.21	38	1,220	765.6	0.22	167	5 355
Total Free State																
Surface	–	–	–	–	971.9	0.24	234	7 515	206.8	0.24	49	1 574	1 178.7	0.24	283	9 089
Grand total	78.8	–	690	22 170	1 062.7	–	1 029	33 086	436.2	–	1 429	45 932	1 577.7	–	3 147	101 188

Mineral resources and mineral reserves cont.

Free State operations cont.

Uranium – Mineral resources

Operations	Measured				Indicated				Inferred				Total			
	Tonnes (Mt)	U ₃ O ₈ (kg/t)	U ₃ O ₈ (Mkg)	U ₃ O ₈ (Mlb)	Tonnes (Mt)	U ₃ O ₈ (kg/t)	U ₃ O ₈ (Mkg)	U ₃ O ₈ (Mlb)	Tonnes (Mt)	U ₃ O ₈ (kg/t)	U ₃ O ₈ (Mkg)	U ₃ O ₈ (Mlb)	Tonnes (Mt)	U ₃ O ₈ (kg/t)	U ₃ O ₈ (Mkg)	U ₃ O ₈ (Mlb)
Underground																
Masimong 5	9.7	0.28	3	6	10.7	0.28	3	7	76.7	0.24	18	40	97.1	0.25	24	53
Phakisa	0.5	0.16	0	0	22.2	0.20	4	10	12.7	0.20	2	5	35.4	0.20	6	15
Tshepong	0.3	0.21	0	0	3.5	0.20	1	2	33.3	0.16	5	12	37.1	0.16	6	14
Total Free State Underground	10.5	0.28	3	6	36.4	0.22	8	19	122.7	0.21	25	57	169.6	0.22	36	82
Surface	0.0	0.00	–	0	159.9	0.11	17	38	13.5	0.34	5	10	173.4	0.12	22	48
Total Free State Surface	0.0	0.00	–	0	159.9	0.11	17	38	13.5	0.34	5	10	173.4	0.12	22	48
Grand total	10.5	0.28	3	6	196.3	0.13	25	56	136.2	0.22	30	67	343	0.17	58	130

Modifying factors

Operations	MCF (%)	SW (cm)	MW (cm)	PRF (%)
Bambanani	82	187	206	96
Steyn 2	81	142	173	96
Joel	88	150	176	95
Masimong 5	68	135	156	96
Phakisa	82	106	127	96
Target 3	76	100	119	96
Tshepong	66	105	130	96
Merriespruit 1	68	173	214	94
Unisel	76	186	203	95

MCF = Mine call factor

MW = Milling width

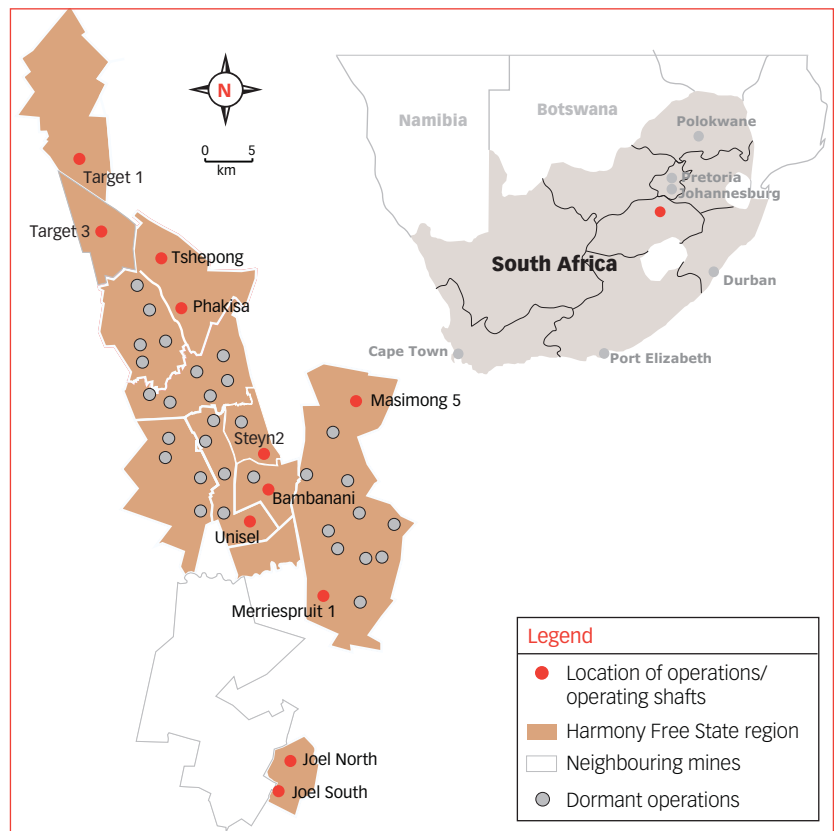
SW = Stopping width

PRF = Plant recovery factor

Operations	MCF (%)	PRF (%)
Target 1	100	96
Free State (Phoenix)	100	55
Free State (St Helena)	100	55
Free State (Other)	100	55

MCF = Mine call factor

PRF = Plant recovery factor



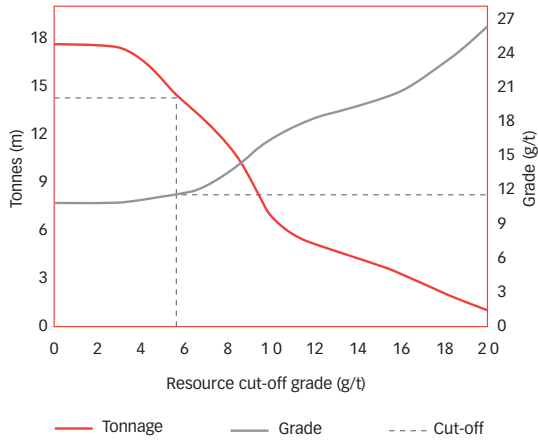
Gold – Mineral reserves

Operations	Proved				Probable				Total			
	Tonnes (Mt)	g/t	Gold (000 kg)	Gold (000 oz)	Tonnes (Mt)	g/t	Gold (000 kg)	Gold (000 oz)	Tonnes (Mt)	g/t	Gold (000 kg)	Gold (000 oz)
Underground												
Bambanani												
Bambanani	3.9	10.41	40	1 301	–	–	–	–	3.9	10.41	40	1 301
Steyn 2	0.5	7.26	3	105	0.1	6.95	1	25	0.6	7.20	4	130
Total	4.4	10.08	43	1 406	0.1	6.95	1	25	4.5	10.00	44	1 431
Joel	1.2	6.25	7	240	1.5	5.61	8	264	2.7	5.90	15	504
Masimong 5	5.4	5.11	28	894	1.9	5.09	10	306	7.3	5.10	38	1 200
Phakisa	0.6	4.65	3	94	19.4	8.13	158	5 065	20.0	8.02	161	5 159
Target												
Target 1	4.0	5.50	22	702	7.6	4.49	34	1 104	11.6	4.84	56	1 806
Target 3	1.0	7.59	8	252	3.6	6.33	23	743	4.6	6.61	31	995
Total	5.0	5.93	30	954	11.2	5.08	57	1 847	16.2	5.34	87	2 801
Tshepong	13.1	5.33	70	2 247	9.4	5.36	51	1 626	22.5	5.34	121	3 873
Virginia												
Merriespruit 1	0.4	4.01	2	58	0.1	3.55	0	9	0.5	3.94	2	67
Unisel	2.3	4.71	11	349	1.4	4.67	7	214	3.7	4.70	18	563
Total	2.7	4.60	13	407	1.5	4.62	7	223	4.2	4.60	20	630
Total Free State Underground	32.4	5.98	194	6 242	45	6.46	292	9 356	77.4	6.26	486	15 598
Surface												
Free State Surface												
Phoenix	–	–	–	–	92.4	0.30	28	899	92.4	0.30	28	899
St Helena	–	–	–	–	288.5	0.25	72	2 319	288.5	0.25	72	2 319
Waste rock dumps	–	–	–	–	5.1	0.61	3	99	5.1	0.61	3	99
Slimes dams	–	–	–	–	540.5	0.22	121	3 895	540.5	0.22	121	3 895
Total Free State Surface	–	–	–	–	926.5	0.24	224	7 212	926.5	0.24	224	7 212
Grand total	32.4	–	194	6 242	971.5	–	516	16 568	1 003.90	–	710	22 810

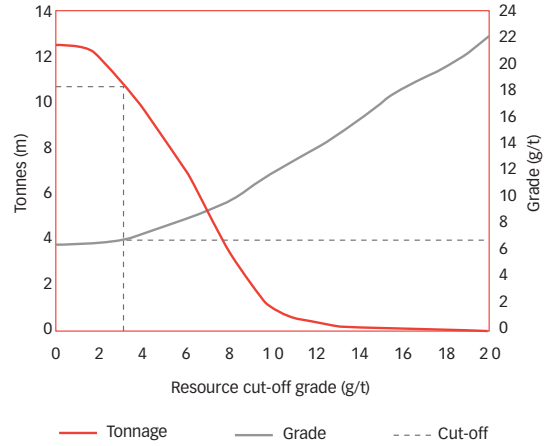
Mineral resources and mineral reserves cont.

Free State operations cont.

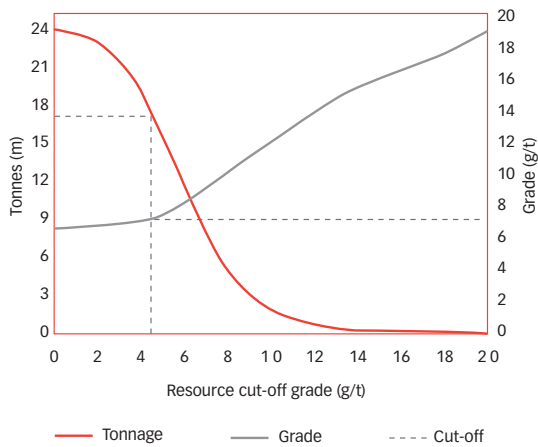
Bambanani: Grade tonnage curve (excl Steyn 2)
(measured and indicated resources)



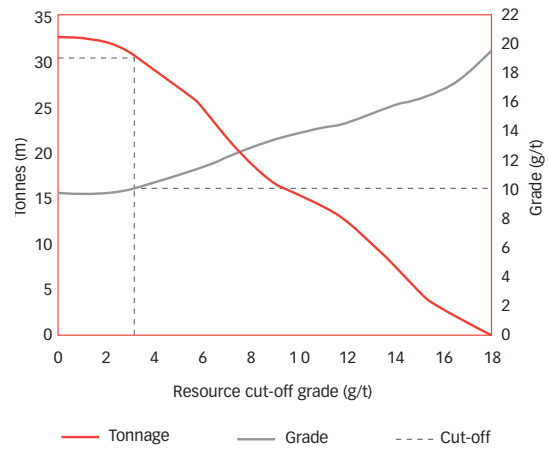
Joel: Grade tonnage curve
(measured and indicated resources)



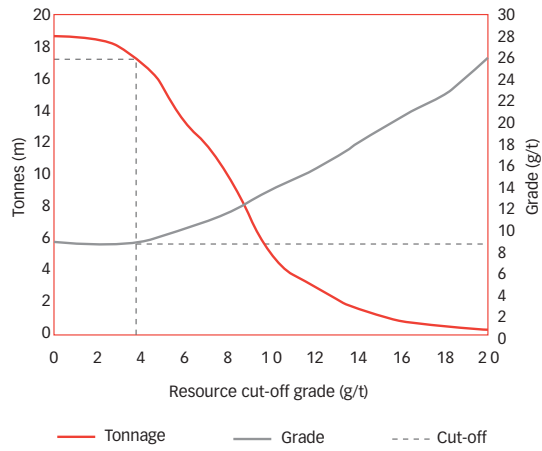
Masimong: Grade tonnage curve
(measured and indicated resources)



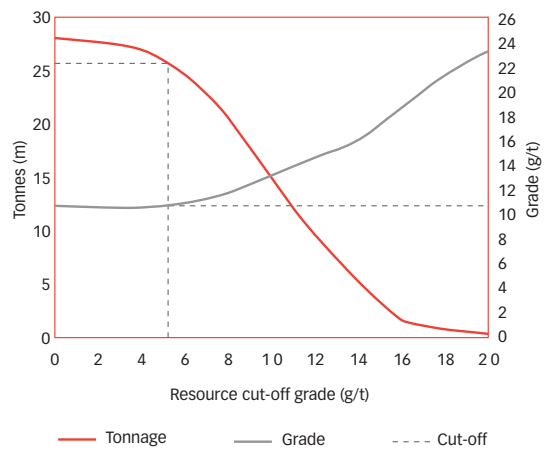
Phakisa: Grade tonnage curve
(measured and indicated resources)



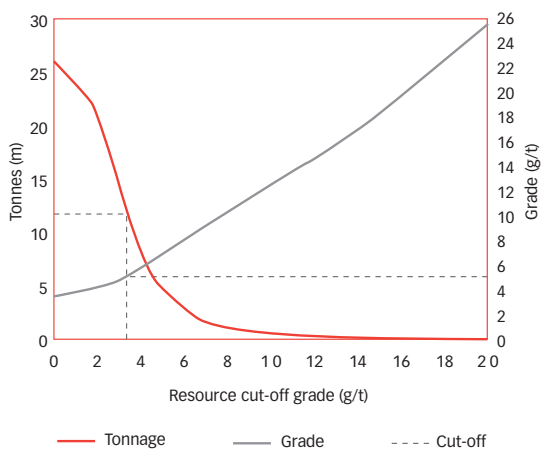
Target: Grade tonnage curve (excl Target 3)
(measured and indicated resources)



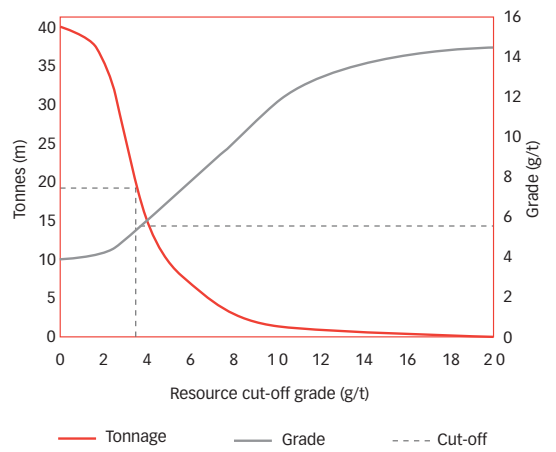
Tshepong: Grade tonnage curve
(measured and indicated resources)



Merriespruit: Grade tonnage curve
(measured and indicated resources)



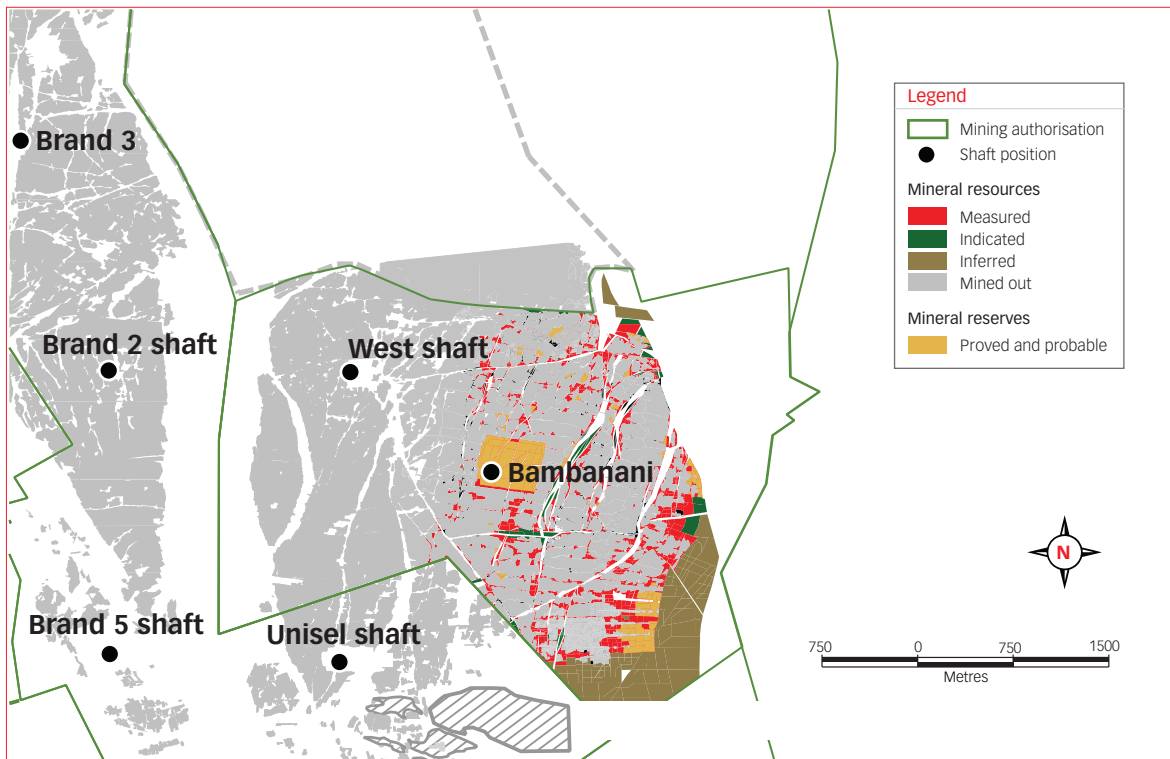
Unisel: Grade tonnage curve
(measured and indicated resources)



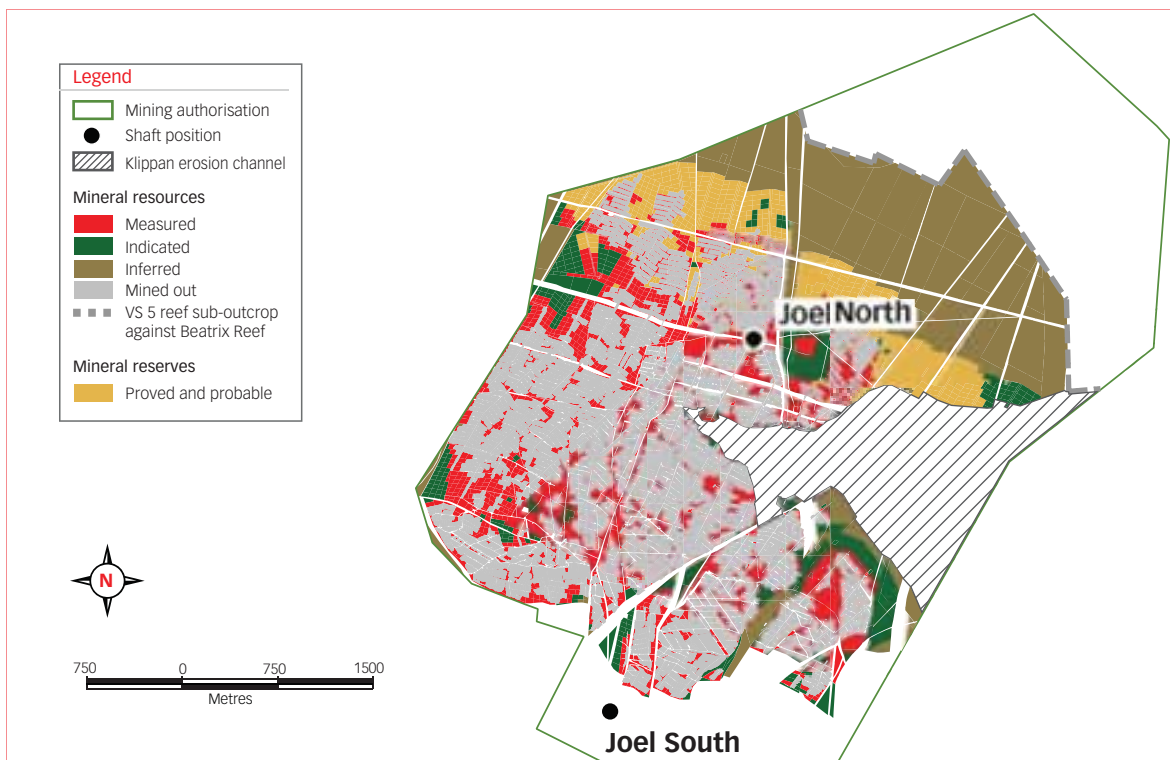
Mineral resources and mineral reserves cont.

Free State operations cont.

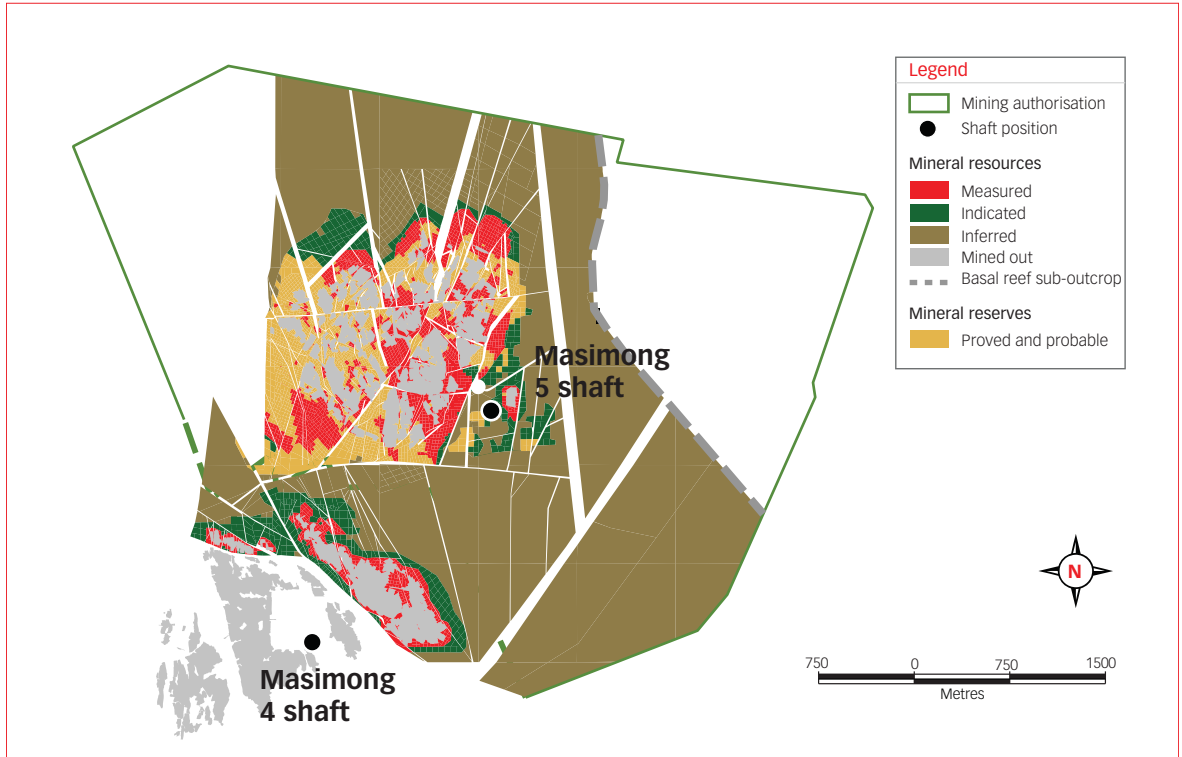
Bambanani – Basal reef



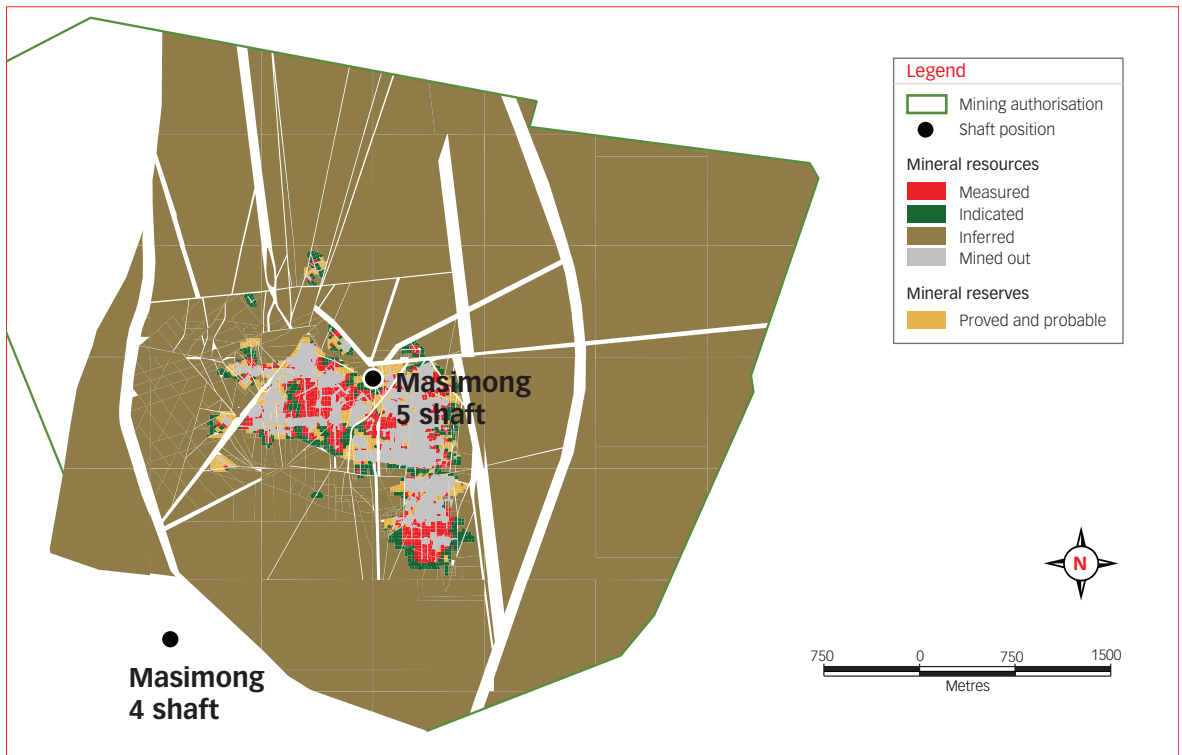
Joel mine – Beatrix reef



Masimong mine – Basal reef



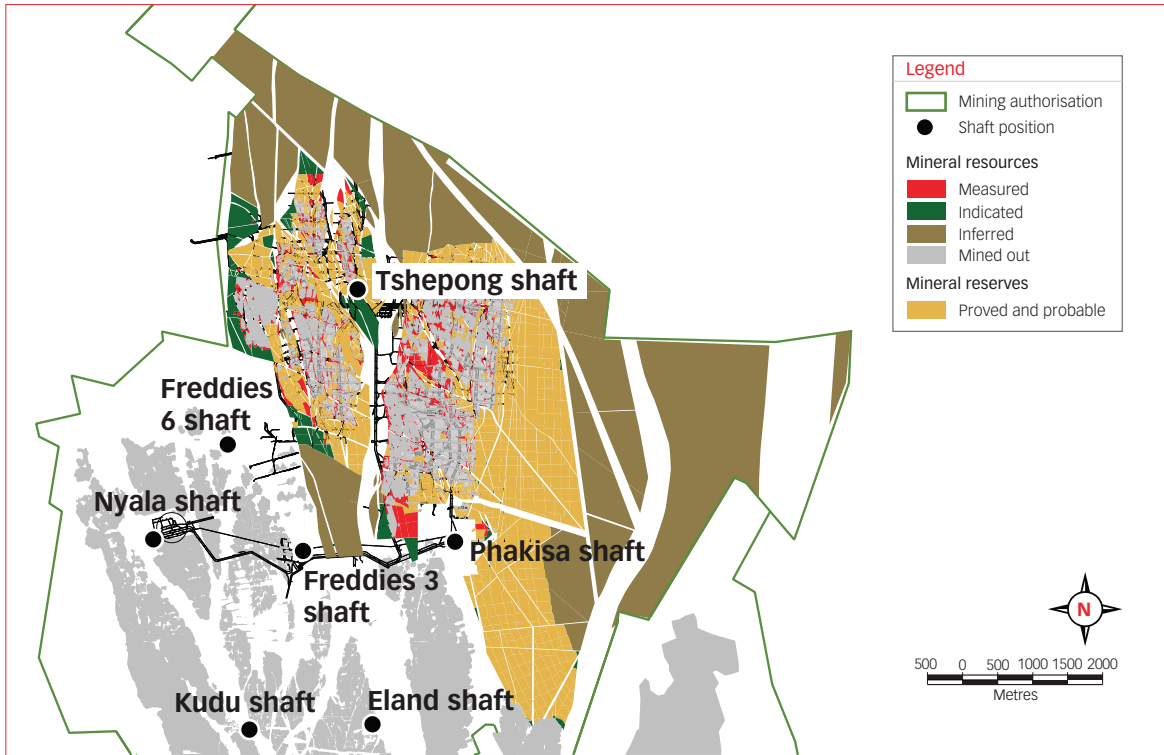
Masimong mine – B reef



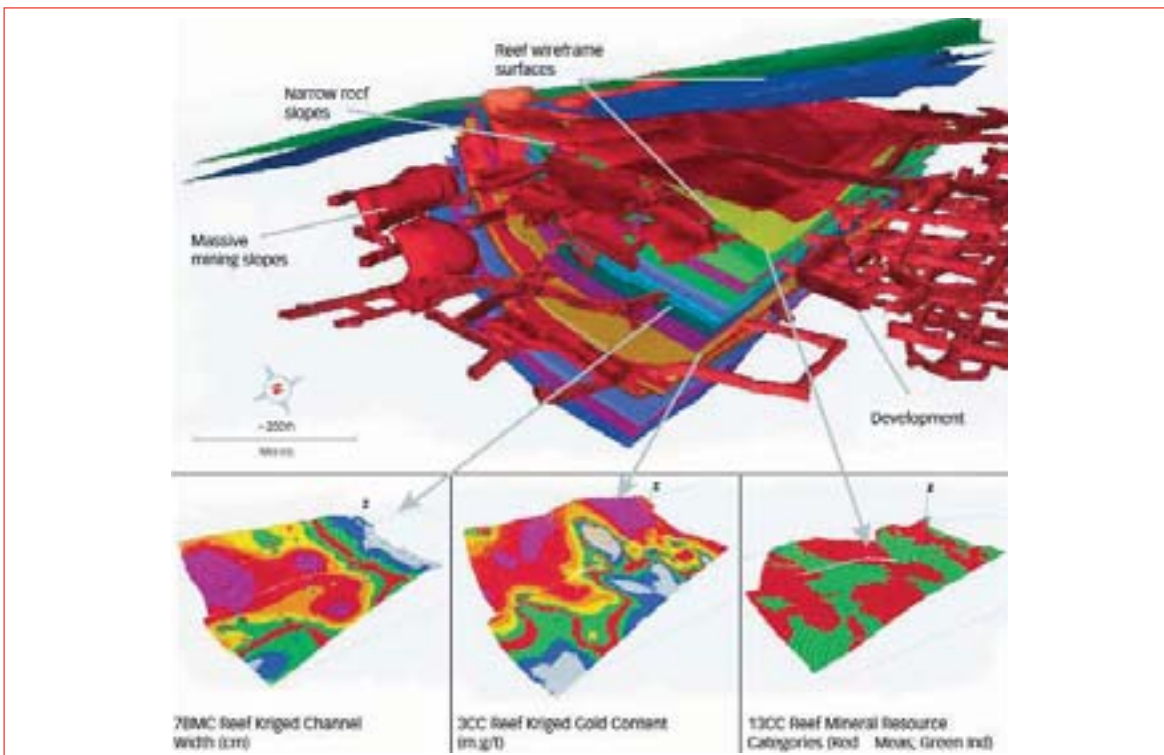
Mineral resources and mineral reserves cont.

Free State operations cont.

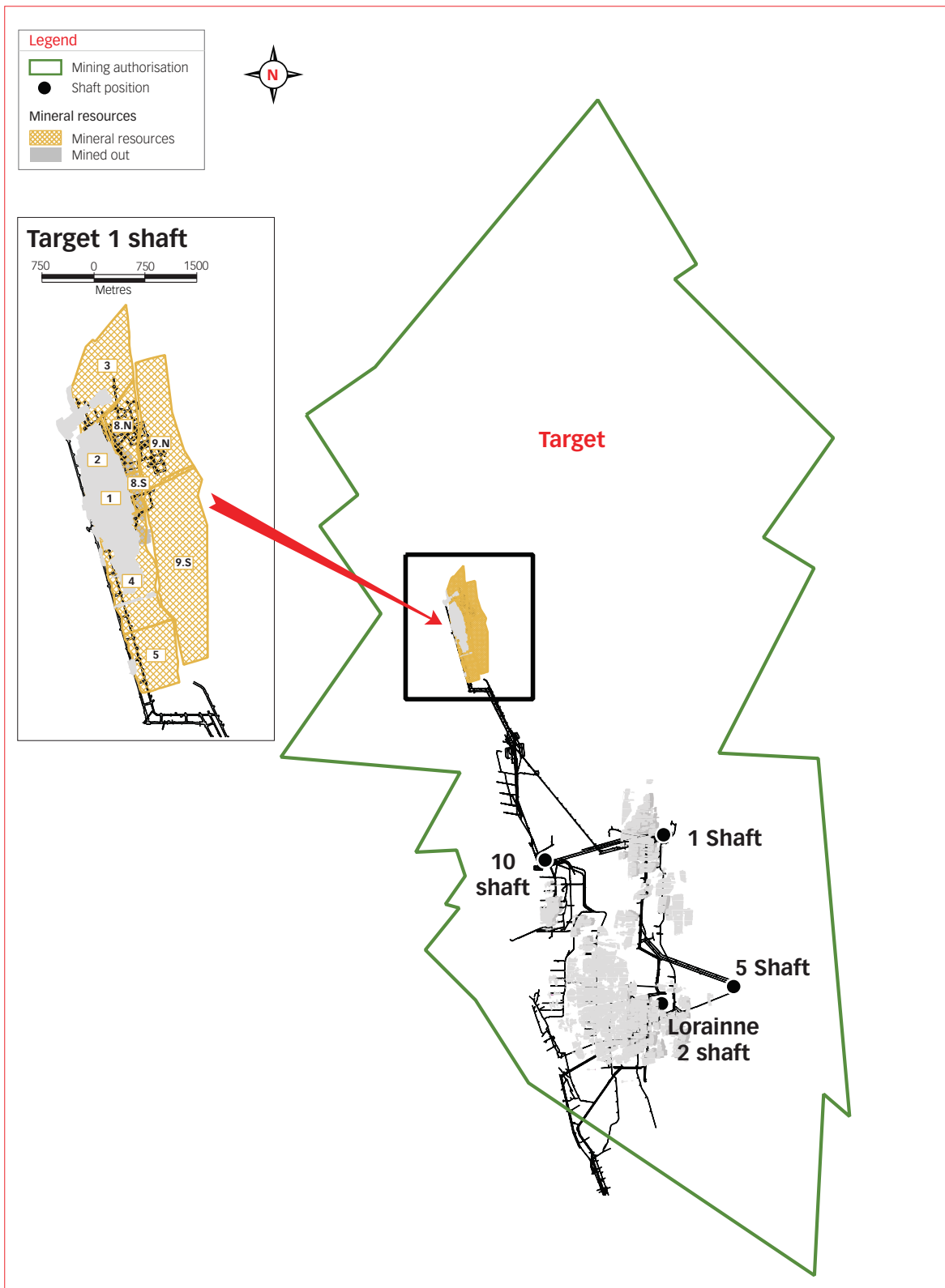
Phakisa mine, Tshepong mine – Basal reef



Target mine – Elsburg and Dreyerskuil reefs



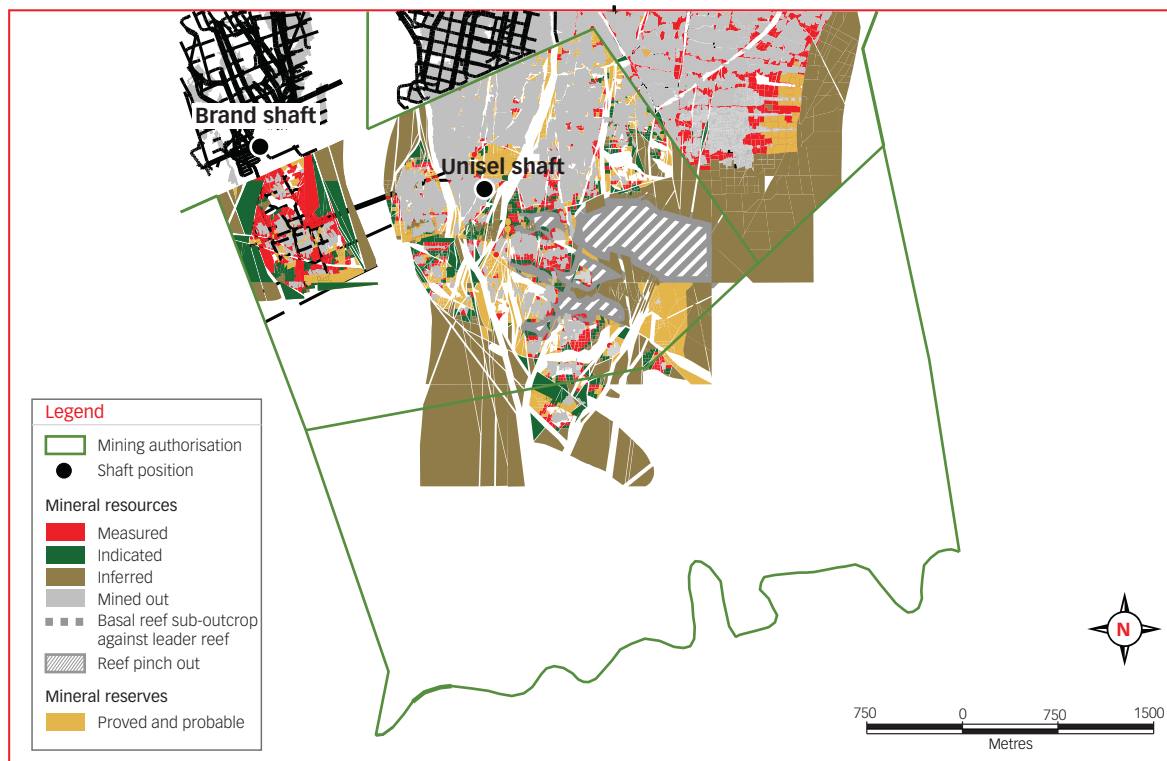
Target mine



Mineral resources and mineral reserves cont.

Free State operations cont.

Unisel – Basal reef



Unisel – Leader reef



West Rand

Doornkop

Geology

The structure of the West Rand goldfield is dominated by the Witpoortjie and Panvlakte Horst blocks, which are superimposed over broad folding associated with the south-east plunging West Rand syncline. At the Doornkop mine, both the Kimberley Reef and the South Reef are exploited.

The Doornkop shaft lease area is bounded by and lies to the south-east of the major north-easterly striking Roodepoort Fault, which dips to the south and constitutes the southern edge of the Witpoortjie Horst Block or Gap. This Horst Block is comprised of the stratigraphically older sediments of the West Rand Group, the overlying Central Rand Group sediments having been removed by erosion. A number of other faults, forming part of and lying south-east of the Roodepoort Fault, including the Saxon Fault, also constitute conspicuous structural breaks. A second major fault, the Doornkop Fault, which trends in an east-west direction occurs towards the southern portion of the lease area. This fault dips to the south and has an up-throw to the north.

Nearly the entire upper Witwatersrand section is present in the Doornkop lease area and therefore all the major zones are present, though, due to the distance of the area from the fan head, the number of economic bands and their payability is limited. Eight of the well-known reefs are present in the area, but only the Kimberley Reef and South Reef are considered viable at this stage.

The resource is concentrated in the Kimberley and South Reefs. The Kimberley Reef is contained in the Vlakfontein member of the Westonia Formation. This reef, also known as the K9 Reef horizon, rests on an unconformity and is a complex multi-pulse conglomerate, which can be separated into four facies or cycles. All four cycles consist on average of an upper conglomerate and a lower quartzite. The characteristics of every cycle are area-dependent and the grades are variable within each cycle.

The South Reef is approximately 900 metres below the current Kimberley Reef mining area, and between 7.5 and 60 metres above the Main Reef horizon. The hanging wall to the South Reef consists of siliceous quartzites with non-persistent bands of 'blue-shot' grit and thin argillite partings. The footwall to the South Reef is a light coloured and fairly siliceous quartzite. Secondary conglomerate bands and stringers in the hanging wall and footwall of the South Reef may contain sporadic gold values.

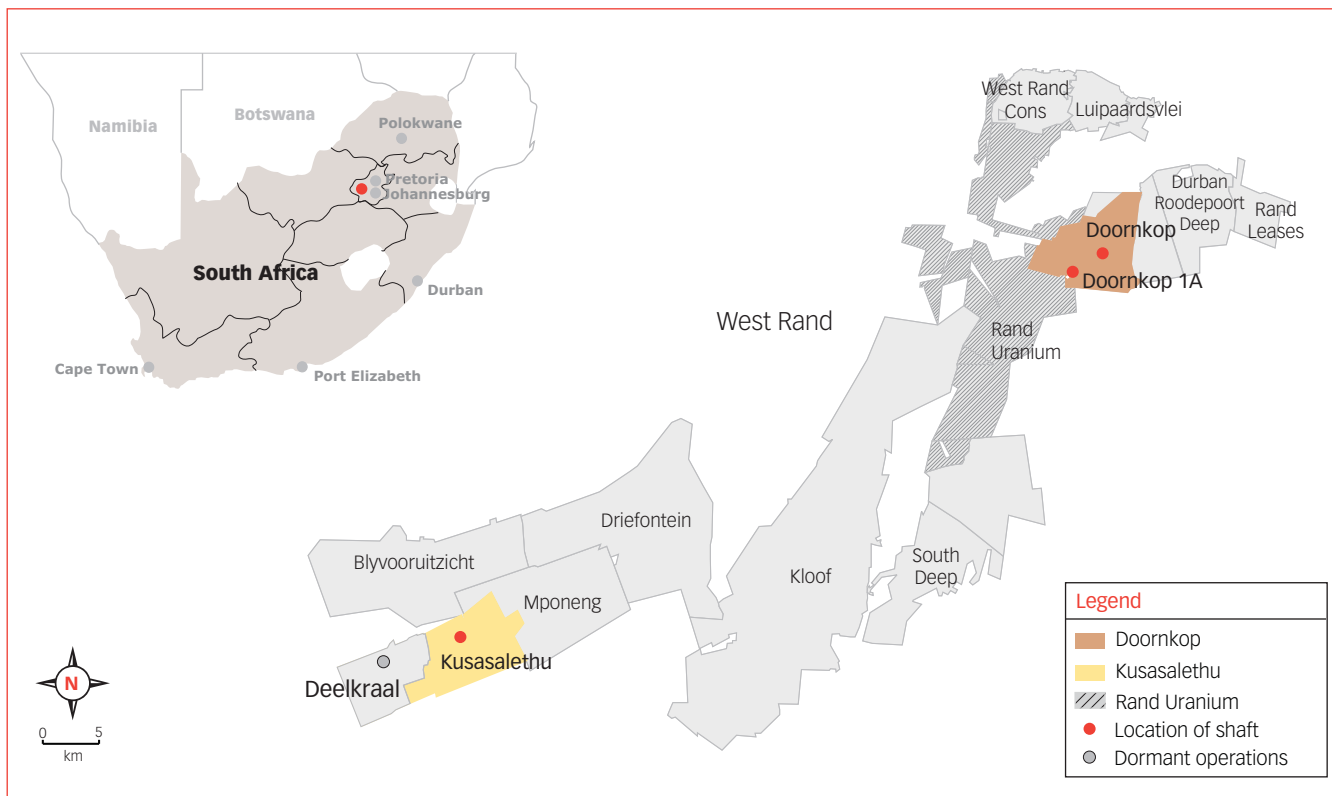
The general strike of the reef is east-west, with a dip from 10 to 20 degrees. The orebody at Doornkop has a strike length of 4 kilometres and a width of 4 kilometres from west to east.

Kusasaletu

Geology

The structure of the orebody on the Far West Rand is dominated by a series of east-trending normal faults with throws of up to 40 metres, as well as a series of north-north-east striking normal faults with generally smaller displacements in the north-west. Faulting is generally less prevalent than in other Witwatersrand Basin goldfields. The primary reefs exploited are the Ventersdorp Contact Reef (VCR) and the Carbon Leader, which are 900 to 1 300 metres apart, increasing from east to west. Secondary targets are the Middelveit Reef (50 to 75 metres above the Carbon Leader) and the Mondeor Conglomerate Reef Zone, which sub-crops beneath the VCR at Deelkraal and on the western side of Kusasaletu.

Mineral resources and mineral reserves cont.



Doornkop

Gold – Mineral resources

Operations	Measured				Indicated				Inferred				Total			
	Tonnes		Gold		Tonnes		Gold		Tonnes		Gold		Tonnes		Gold	
	(Mt)	g/t	(000 kg)	(000 oz)	(Mt)	g/t	(000 kg)	(000 oz)	(Mt)	g/t	(000 kg)	(000 oz)	(Mt)	g/t	(000 kg)	(000 oz)
Underground																
Doornkop																
Kimberley Reef	31.8	2.22	71	2 269	50.4	1.86	93	3 006	177.9	1.81	321	10 335	260.1	1.87	486	15 610
South Reef	1.0	7.08	7	229	1.9	6.42	12	398	20.0	8.35	167	5 366	22.9	8.13	186	5 993
Grand total	32.8	2.37	78	2 498	52.3	2.01	105	3 404	197.9	2.47	488	15 701	283.0	2.37	672	21 603

Modifying factors

Operations	MCF (%)	SW (cm)	MW (cm)	PRF (%)
Doornkop				
Kimberley Reef	95	434	434	95
South Reef	75	124	151	95

MCF = Mine call factor

MW = Milling width

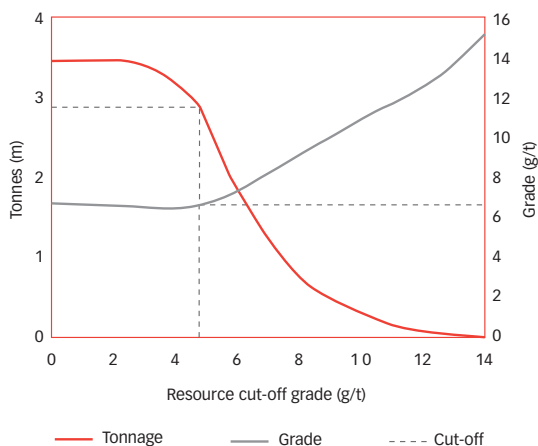
SW = Stopping width

PRF = Plant recovery factor

Gold – Mineral reserves

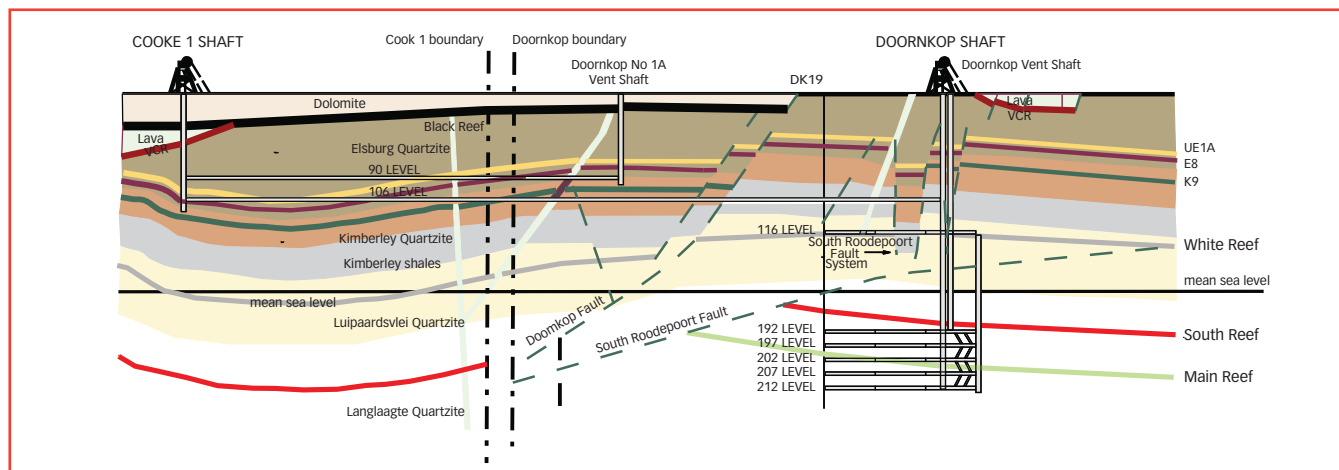
Operations	Proved				Probable				Total			
	Tonnes (Mt)	g/t	Gold (000 kg)	Gold (000 oz)	Tonnes (Mt)	g/t	Gold (000 kg)	Gold (000 oz)	Tonnes (Mt)	g/t	Gold (000 kg)	Gold (000 oz)
Underground												
Doornkop												
Kimberley Reef	0.9	1.79	2	53	1.0	2.16	2	68	1.9	1.98	4	121
South Reef	0.7	5.06	3	107	1.5	4.41	7	209	2.1	4.61	10	316
Grand total	1.6	3.13	5	160	2.5	3.6	9	277	4.0	3.5	14	437

Doornkop South Reef: Grade tonnage curve (measured and indicated resources)



Cooke 1/Doornkop geological section looking west

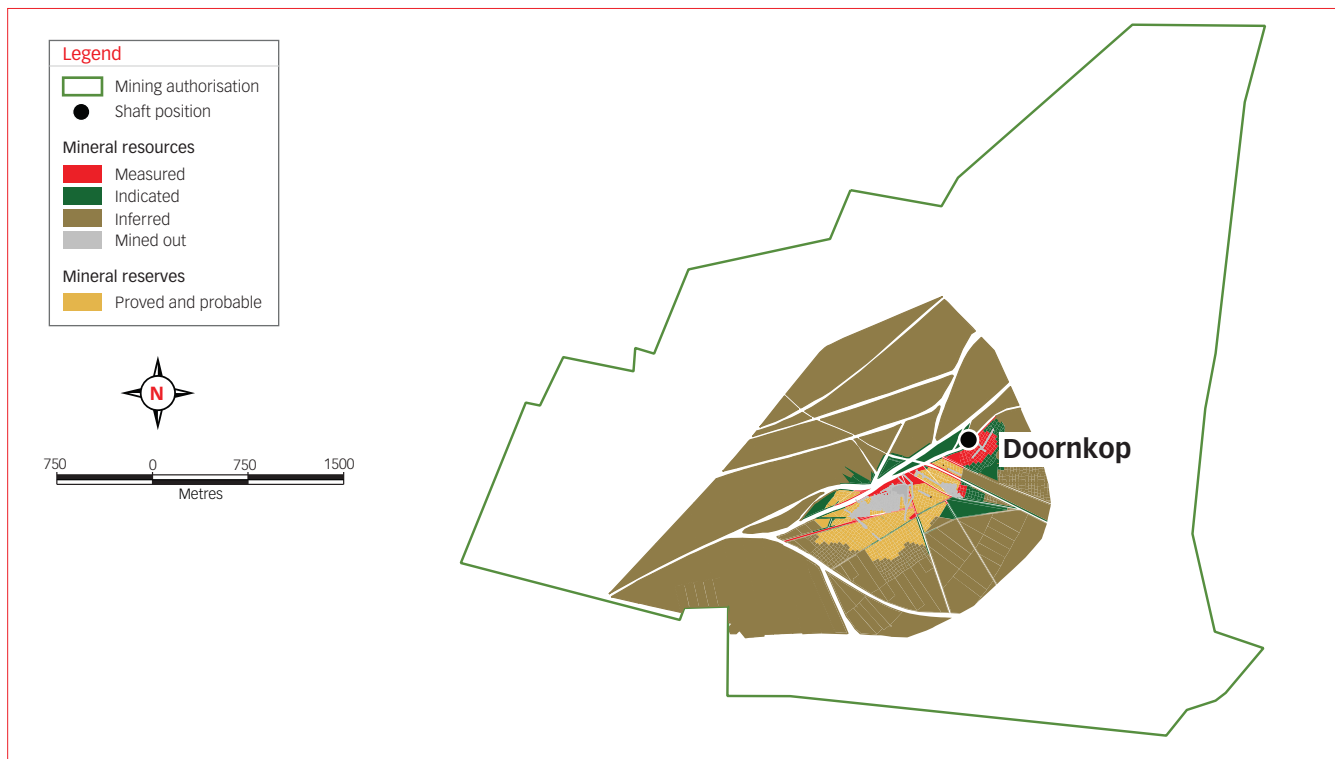
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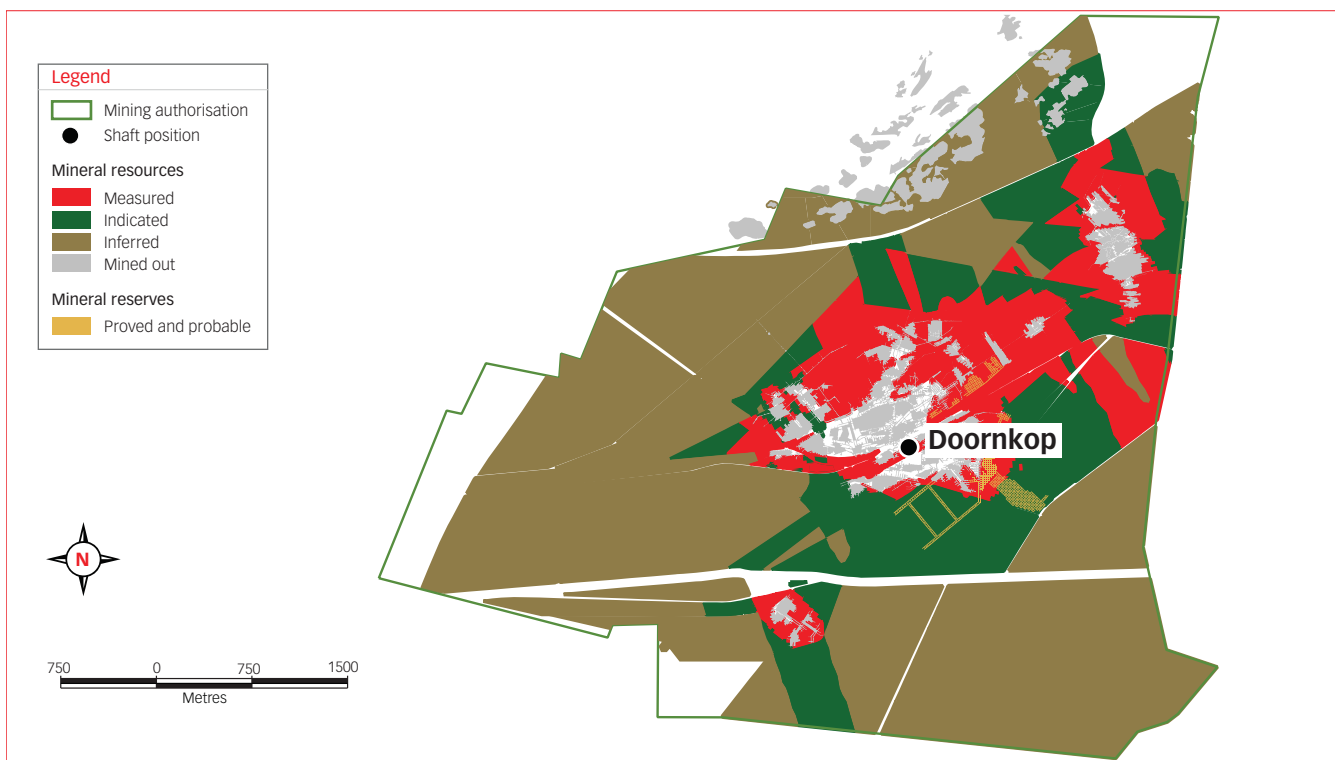
Mineral resources and mineral reserves cont.

Doornkop cont.

Doornkop mine – South reef



Doornkop mine – Kimberley reef



Kusasaletu

Gold – Mineral resources

Operations	Measured				Indicated				Inferred				Total			
	Tonnes		Gold	Gold	Tonnes		Gold	Gold	Tonnes		Gold	Gold	Tonnes		Gold	Gold
	(Mt)	g/t	(000 kg)	(000 oz)	(Mt)	g/t	(000 kg)	(000 oz)	(Mt)	g/t	(000 kg)	(000 oz)	(Mt)	g/t	(000 kg)	(000 oz)
Underground																
Kusasaletu	13.0	9.46	123	3 957	24.8	8.97	223	7 169	1.5	9.35	14	440	39.3	9.15	360	11 566
Grand total	13.0	9.46	123	3 957	24.8	8.97	223	7 169	1.5	9.35	14	440	39.3	9.15	360	11 566

Modifying factors

Operations	MCF	SW	MW	PRF
	(%)	(cm)	(cm)	(%)
Kusasaletu	87	129	158	96

MCF = Mine call factor

MW = Milling width

SW = Stopping width

PRF = Plant recovery factor

Gold – Mineral reserves

Operations	Proved				Probable				Total			
	Tonnes		Gold	Gold	Tonnes		Gold	Gold	Tonnes		Gold	Gold
	(Mt)	g/t	(000 kg)	(000 oz)	(Mt)	g/t	(000 kg)	(000 oz)	(Mt)	g/t	(000 kg)	(000 oz)
Underground												
Kusasaletu	12.4	6.70	83	2 680	23.4	6.42	150	4 834	35.9	6.51	234	7 514
Grand total	12.4	6.70	83	2 680	23.4	6.42	150	4 834	35.9	6.51	234	7 514

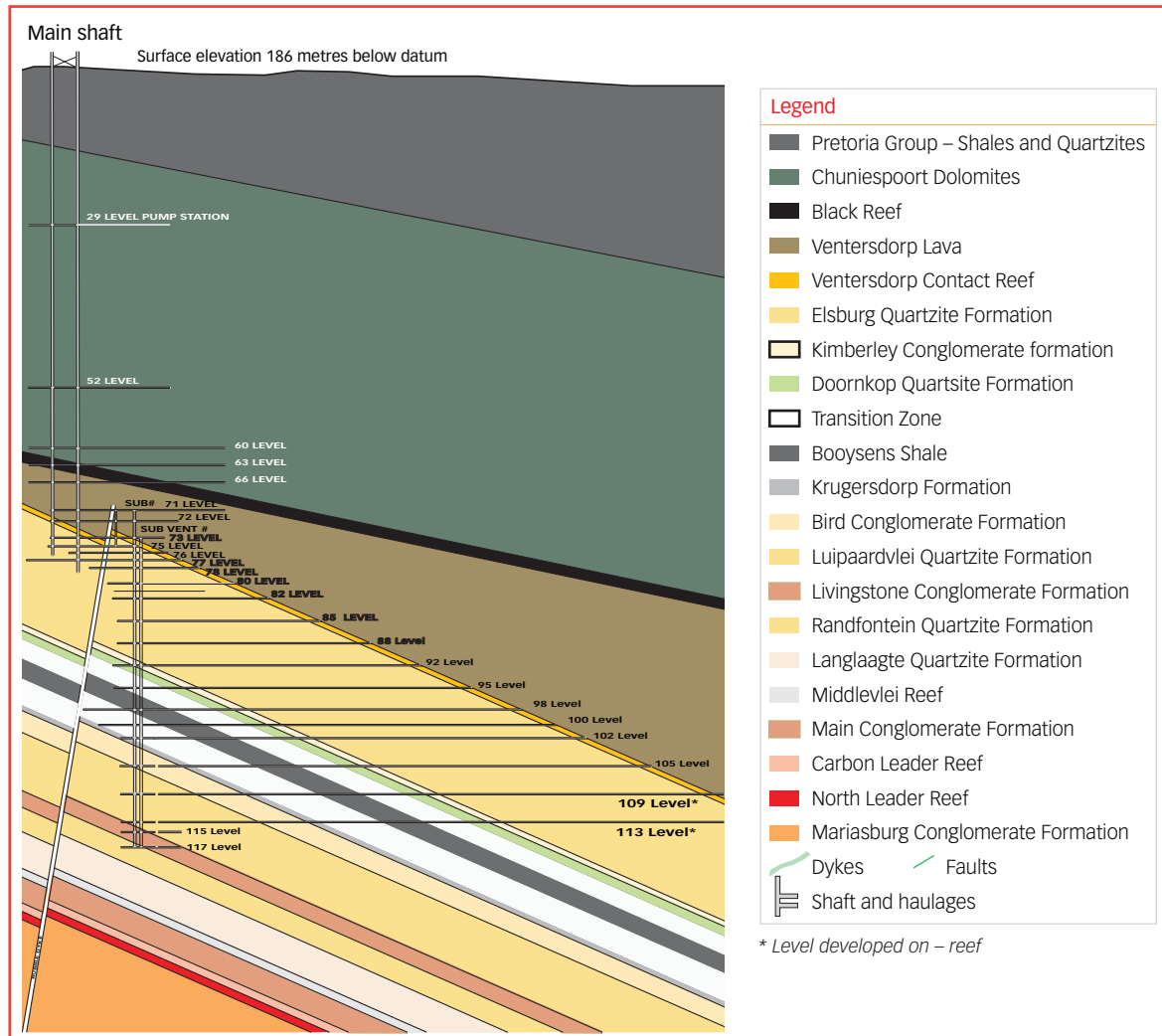


Hidden Valley, PNG

Mineral resources and mineral reserves cont.

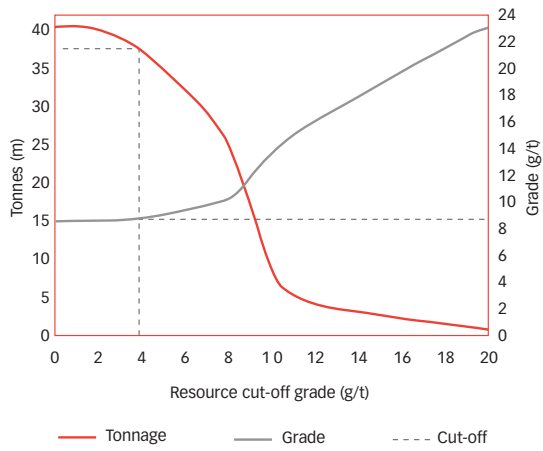
Kusasaletu cont.

Kusasaletu – Section through main shaft and sub-shaft looking east – Not to scale

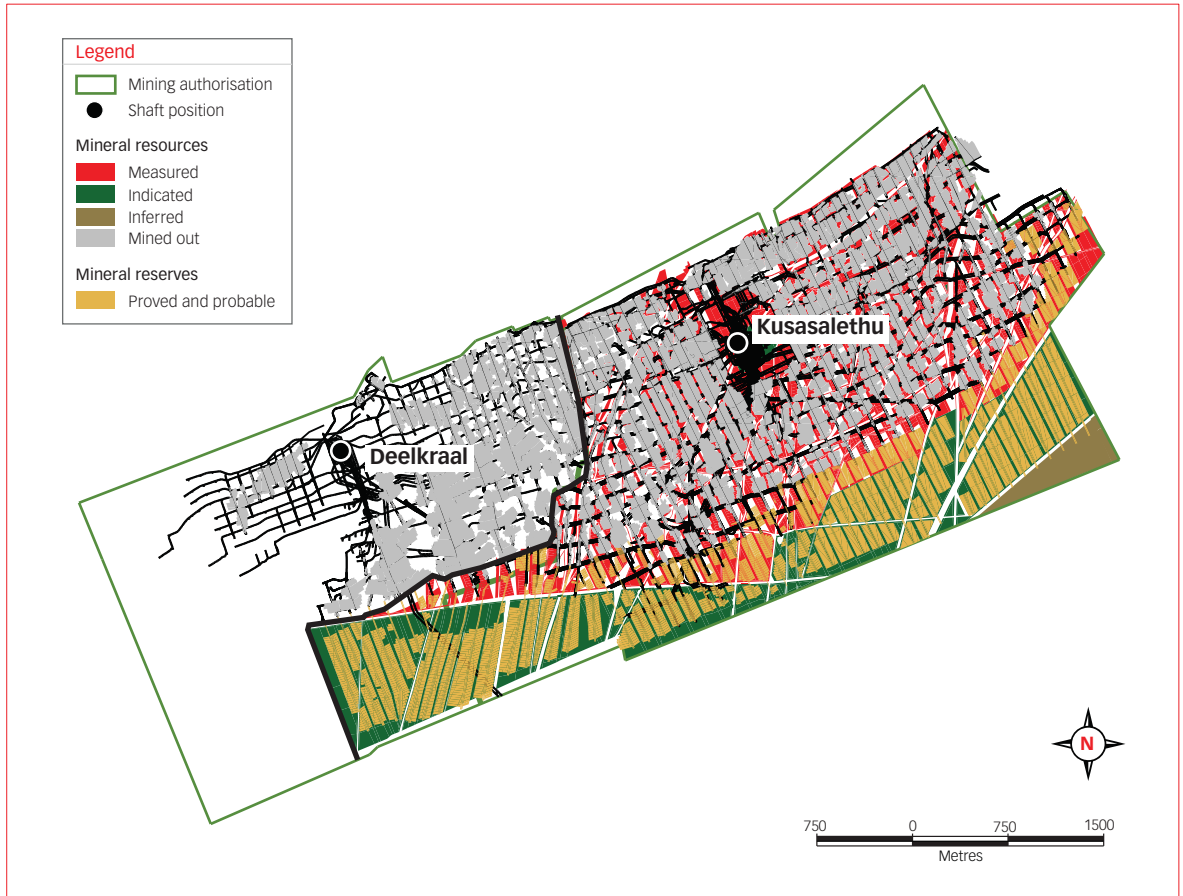


Doornkop, South Africa

Kusasaletu: Grade tonnage curve
(measured and indicated resources)



Kusasaletu
Ventersdorp Contact Reef (VCR)



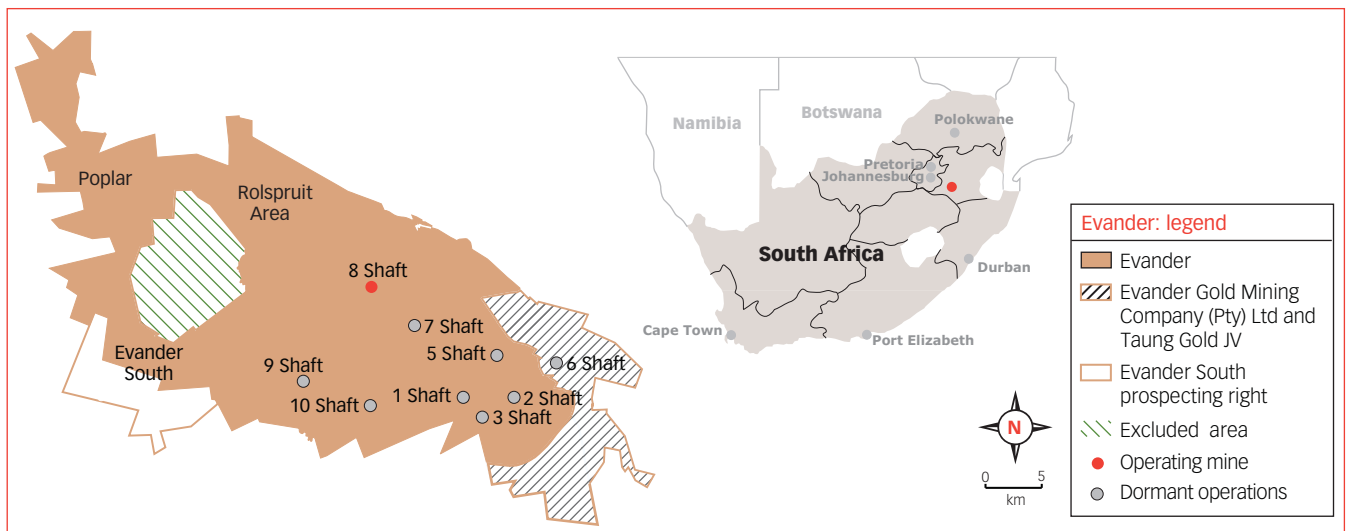
Mineral resources and mineral reserves cont.

East Rand

Evander

Geology

The Evander Basin is a tectonically preserved sub-basin outside the main Witwatersrand Basin and forms an asymmetric syncline, plunging to the north-east. It is structurally complex with a series of east-north-east striking normal faults. At the south-east margin of the basin, vertically to locally overturned reef is present. The only economic reef horizon exploited in the Evander Basin is the Kimberley Reef. The Intermediate Reef is generally poorly mineralised, except where it erodes the sub-cropping Kimberley Reef to the south and west of the basin.



Gold – Mineral resources

Operations	Measured				Indicated				Inferred				Total			
	Tonnes (Mt)	g/t	Gold (000 kg)	Gold (000 oz)	Tonnes (Mt)	g/t	Gold (000 kg)	Gold (000 oz)	Tonnes (Mt)	g/t	Gold (000 kg)	Gold (000 oz)	Tonnes (Mt)	g/t	Gold (000 kg)	Gold (000 oz)
Underground																
Evander 8	3.7	14.02	52	1 659	3.6	15.51	56	1 805	12.4	11.13	138	4 446	19.7	12.47	246	7 910
Evander 9	0.1	13.69	2	50	0.1	13.99	1	31	0.6	11.57	7	240	0.8	12.07	10	321
Total	3.8	14.2	54	1 709	3.7	15.48	57	1 836	13	11.15	145	4 686	20.5	12.46	256	8 231
Projects - Below Infrastructure																
Evander South	–	–	–	–	23.9	5.35	128	4 107	40.4	3.08	125	4 006	64.3	3.92	253	8 113
Rolspruit	–	–	–	–	29.1	11.59	337	10 847	4.9	5.69	28	902	34.0	10.74	365	11 749
Poplar	–	–	–	–	17.2	9.28	159	5 123	–	–	–	–	17.2	9.28	159	5 123
Total	–	–	–	–	70.2	8.90	624	20 077	45.3	3.36	153	4 908	115.5	6.73	776	24 985
Subtotal	3.8	14.01	53	1 709	73.9	9.23	681	21 913	58.3	5.11	298	9 594	136	7.59	1 032	33 216
Surface																
Libra Project	–	–	–	–	202.9	0.29	59	1 897	–	–	–	–	202.9	0.29	59	1 897
Total	–	–	–	–	202.9	0.29	59	1 897	–	–	–	–	202.9	0.29	59	1 897
Grand total	3.8	14.01	53	1 709	276.8	2.68	740	23 810	58.3	5.11	298	9 594	338.9	3.22	1 091	35 113

Modifying factors

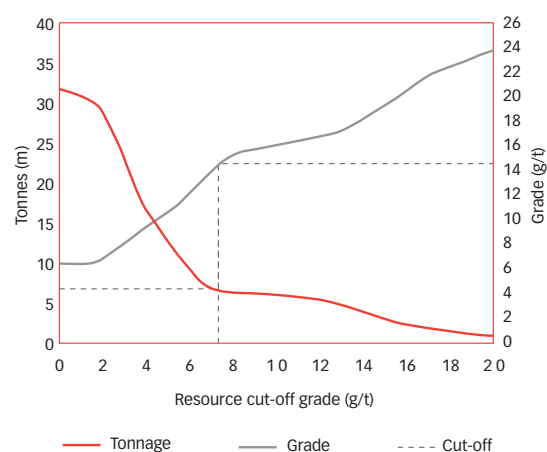
Operations	MCF (%)	SW (cm)	MW (cm)	PRF (%)
Evander 8	74	120	169	96
Rolspruit	80	110	137	95
Poplar	70	110	139	95

MCF = Mine call factor MW = Milling width
SW = Stopping width PRF = Plant recovery factor

Operations	MCF (%)	PRF (%)
Libra Project	100	45

MCF = Mine call factor PRF = Plant recovery factor

Evander: Grade tonnage curve
(measured and indicated resources)



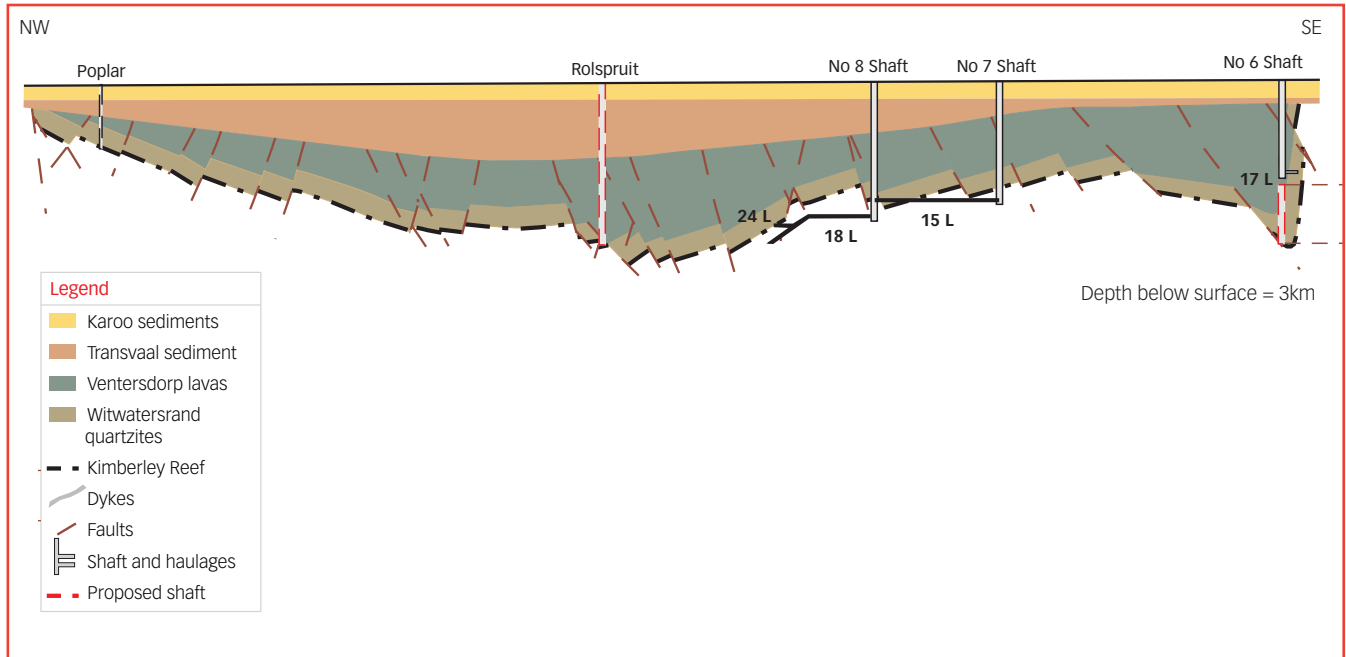
Gold – Mineral reserves

Operations	Proved				Probable				Total			
	Tonnes (Mt)	g/t	Gold (000 kg)	Gold (000 oz)	Tonnes (Mt)	g/t	Gold (000 kg)	Gold (000 oz)	Tonnes (Mt)	g/t	Gold (000 kg)	Gold (000 oz)
Underground												
Evander 8	2.2	7.20	16	520	1.6	9.12	15	470	3.8	8.00	31	990
Total	2.2	7.20	16	520	1.6	9.12	15	470	3.8	8.00	31	990
Projects - Below Infrastructure												
Rolspruit	-	-	-	-	26.2	8.08	211	6 790	26.2	8.08	211	6 790
Poplar	-	-	-	-	16.1	5.99	97	3 105	16.1	5.99	97	3 105
Total	-	-	-	-	42.3	7.28	308	9 895	42.3	7.28	308	9 895
Subtotal	2.2	7.20	16	520	43.9	7.35	323	10 365	46.1	7.34	339	10 885
Surface												
Libra Project	-	-	-	-	202.9	0.29	59	1 897	202.9	0.29	59	1 897
Total	-	-	-	-	202.9	0.29	59	1 897	202.9	0.29	59	1 897
Grand total	2.2	7.20	16	520	246.8	1.55	382	12 262	249.0	1.60	398	12 782

Mineral resources and mineral reserves cont.

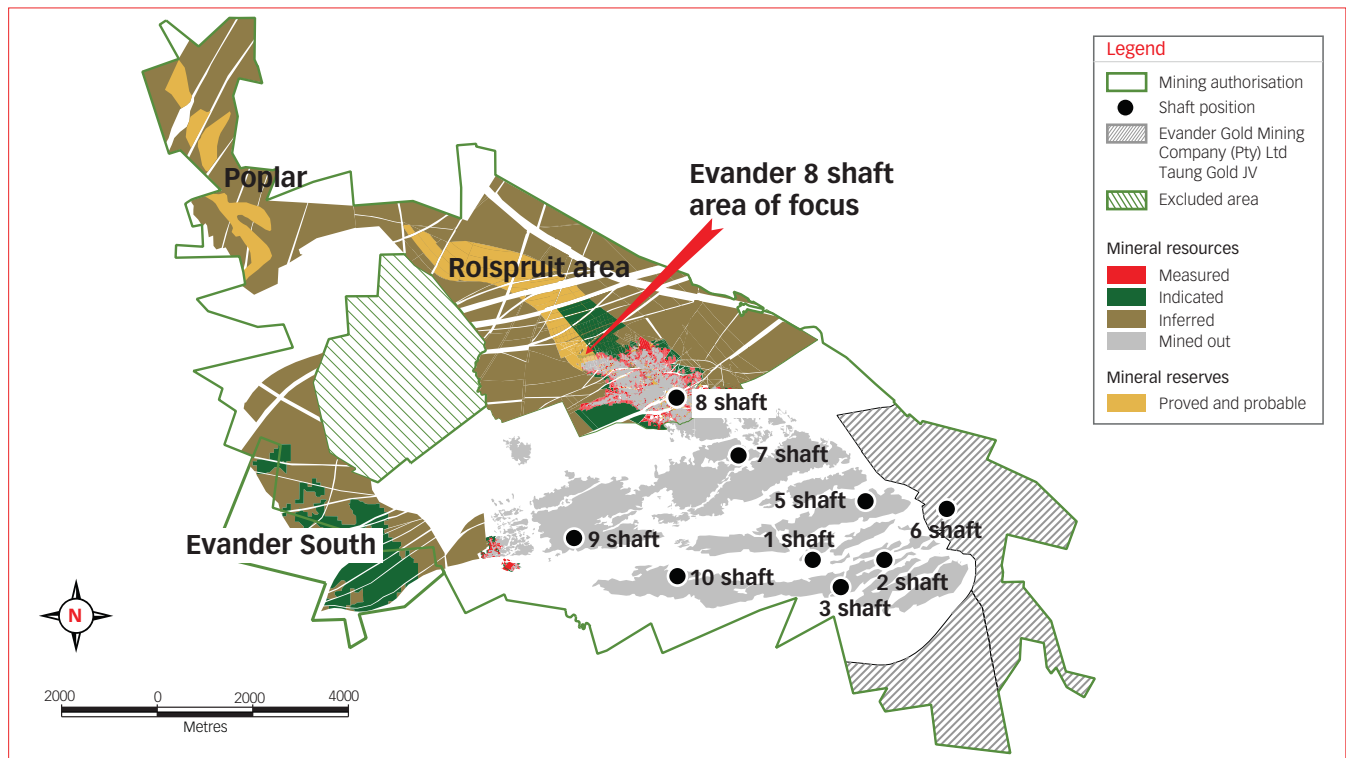
Section across Evander Basin

Not to scale



Evander operations

Evander 8 shaft and 9 shaft, Poplar, Rolspruit and Evander South – Kimberley reef



Far West

Kalgold

Geology

The Kalgold operation is located within the Kraaipan Greenstone Belt, 60 kilometres south of Mafikeng. This belt is part of the larger Amalia-Kraaipan Greenstone terrain, consisting of north trending linear belts of Archaean meta-volcanic and metasedimentary rocks, separated by granitoid units. Mineralisation occurs in shallow dipping quartz veins, which occur in clusters or swarms, within the steeply dipping magnetitechert banded iron formation. Disseminated sulphide mineralisation, dominated mostly by pyrite, occurs around and between the shallow dipping quartz vein swarms. The D Zone, the largest orebody encountered here, has been extensively mined within a single open-pit operation, along a strike length of 1 300 metres. Mineralisation has also been found in the Mielie Field Zone (adjacent to the D Zone), the A Zone and A Zone West (along strike to the north of the D Zone), and the Watertank and Windmill areas to the north of the A Zone.

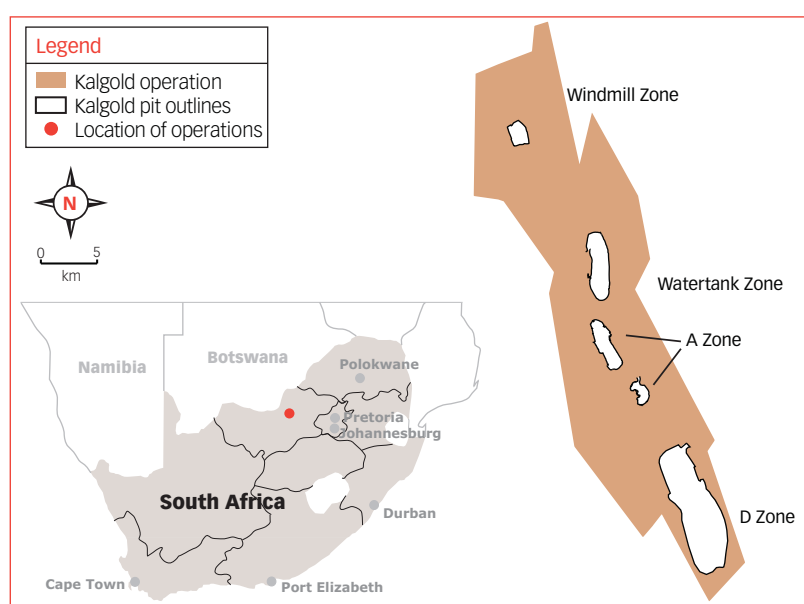
Gold – Mineral resources

Operations	Measured				Indicated				Inferred				Total			
	Tonnes		Gold	Gold	Tonnes		Gold	Gold	Tonnes		Gold	Gold	Tonnes		Gold	Gold
	(Mt)	g/t	(000 kg)	(000 oz)	(Mt)	g/t	(000 kg)	(000 oz)	(Mt)	g/t	(000 kg)	(000 oz)	(Mt)	g/t	(000 kg)	(000 oz)
Kalgold	34.0	0.86	29	944	63.8	0.94	60	1 922	27.2	0.93	25	818	125.0	0.92	115	3 684
Grand total	34.0	0.86	29	944	63.8	0.94	60	1 922	27.2	0.93	25	818	125.0	0.92	115	3 684

Modifying factors

Operations	MCF	Dilution	PRF
	(%)	(%)	(%)
Kalgold	100	2	85

MCF = Mine call factor PRF = Plant recovery factor



Gold – Mineral reserves

Operations	Proved				Probable				Total			
	Tonnes		Gold	Gold	Tonnes		Gold	Gold	Tonnes		Gold	Gold
	(Mt)	g/t	(000 kg)	(000 oz)	(Mt)	g/t	(000 kg)	(000 oz)	(Mt)	g/t	(000 kg)	(000 oz)
Kalgold	21.9	0.82	18	575	7.5	1.07	8	258	29.4	0.88	26	833
Grand total	21.9	0.82	18	575	7.5	1.07	8	258	29.4	0.88	26	833

Mineral resources and mineral reserves cont.

Kalgold operations Kimberley reef

