1. Bedford dam (upper reservoir)

1.1	Full Supply Level	1738,6m.a.s.l.
1.2	Minimum level for all machines operating	1720,0 m.a.s.l.
1.3	Live volume	19,2 million m^3
1.4	Maximum storage volume	22,43 million m^3
1.5	Minimum storage volume (dead volume)	3,23 million m^3
1.6	Type of dam wall	Concrete Faced Rockfill

2. Bramhoek dam (lower reservoir)

2.1	Full Supply Level	1270 m.a.s.l.
2.2	Minimum level for 4 machines operating	1258 m.a.s.l.
2.3	Live volume	19,2 million m^3
2.4	Volume allowance for evaporation over and above active volume	2,72million m^3
2.5	Maximum storage volume	26,26 million m^3
2.6	Minimum storage volume (dead volume)	4,34 million m^3
2.7	Type of dam wall	Roller Compacted Concrete

3. Intake canal

3.1	Number	1
3.2	Profile	Trapezoidal
3.3	Base width	25m to 49.27m
3.4	Depth	From 5m to 15.45m
3.5	Length	840m

4. Headrace tunnels

4.1	Number	2
4.2	Internal diameter	6,60 m concrete-lined and 5,10 m steel lined
4.3	Length up to surge shaft	1061m for tunnel 1-2 and 1058m for tunnel 3-4
4.4	Type of construction	Concrete-lined for 873m for tunnel 1-2 and 873m for tunnel 3-4, thereafter steel-lined
4.5	Maximum flow velocity in concrete-lined section	5,0 m/s at rated generating flow 7,3 m/s at generating start-up (transient)
4.6	Maximum flow velocity in steel-lined section	8,3 m/s at rated generating flow 12,3 m/s at generating start-up (transient)

5. Headrace surge shafts

4.1	Number	2
4.2	Type	Cylindrical
4.3	Internal diameter	16,50 m
4.4	Height	191m

6. Pressure inclined shafts and tunnels

6.1	Number	2
6.2	Internal diameter	5,10 m to bifurcation, then 3,60 m to reducer, thereafter 2,50 m to spiral
6.3	Length (from surge shaft up to spiral	1081m

	inlet)	
6.4	Type of construction	Steel lined
6.5	Maximum flow velocity	Rated generating flow from 8,3 m/s to 17,3 m/s

7. Underground power station

7.1	Number of machines	4
7.2	Continuous rating of each machine for generation	333 MW
7.3	Maximum power for pumping per machine	360 MW
7.4	Range of net head for generation	433,6 m to 465,8 m
7.5	Head range for pumping	462,0 m to 489,7 m
7.6	Rated generating flow per machine	84,9 m^3/s
7.7	Maximum permissible pressure in penstocks	7,22 MPa
7.8	Type of pump-turbine	Single stage reversible Francis
7.9	Rated speed for both directions of rotation	428,6 r.p.m.
7.10	Method of pump starting	Static Frequency Converter
7.11	Type of control	Local and remote

8. Tailrace surge chambers

8.1	Number	2
8.2	Type	Cylindrical
8.3	Internal diameter	20 m
8.4	Height	109.3m

9. Tailrace tunnel

9.1	Number	1
9.2	Internal diameter	9,4 m
9.3	Length	2340m
9.4	Type of construction	Concrete-lined
9.5	Maximum flow velocity	4,9 m/s at rated generating flow 7,7 m/s at generating start-up (transient)

10. Operating data

10.1	Maximum energy storage capacity	21 GWh
10.2	Time required to pump live volume from lower to upper reservoir	20 hours
10.3	Type of cycle for operation	Weekly
10.4	Cycle efficiency	78%

11. Key abbreviations

m.a.s.l.	=	metres above sea level
MW	=	Megawatt
GWh	=	Gigawatt hours (1GW=1000MW)
MPa	=	Megapascals
m^3	=	cubic metres
r.p.m.	=	revolution per minute