

# A CATALOGUE OF KIMBERLITIC OCCURRENCES

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Since the first affirmed discoveries of kimberlite in the 1870's, and especially over the last 25 years, a wealth of literature has been published describing various aspects of individual occurrences, groups of occurrences or world-wide distribution of this rock. At least 700 individual kimberlite bodies are on public record. Recently many features of closely related rocks, such as lamproite and alnoite, have received increased attention. Information derived from mantle nodules, which are often present as xenoliths within kimberlite and similar rocks, is important for research into upper mantle conditions. With the ever-increasing volume of available data, many researchers face the problem of assimilating the new material and reviewing the total data bank on kimberlites and related types. It is likely that less obvious, but meaningful and diagnostic, data groupings are being overlooked. This paper discusses a systematic method of tabulating essential information on individual occurrences of these rocks in order to provide a convenient catalogue which can be readily adapted to a personalized computer database.

A sample of the reference catalogue is given in Table 1 (see Fig. 1 for relevant localities). Kimberlites and related rocks are listed primarily according to country of origin. Tabulated information on district and precise location is shown. The lists also indicate a kimberlitic body's membership of clusters, fields and provinces where clearly defined in the literature. Latest accepted petrological classifications and radiometric and/or geological ages are an essential component. Where known, grade and economic status are given. Additional information, such as relation to craton and nature and age of craton, basement and country rock, is included. This classification incorporates data on significant minerals and xenoliths, beyond the scope of similar previously published tables (e.g. Dawson 1980), and includes a summary of relevant published references on each occurrence.

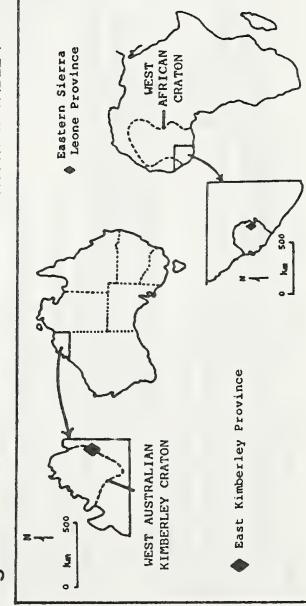
The catalogue has been developed in database format on an Apple Macintosh computer system using Microsoft File, a programme that allows interactive addition, re-ordering and re-sizing of information fields at any stage during data entry and comprehensive sorting of records on one or more of these fields. These features are powerful tools, facilitating extension of the catalogue to include new information and reshuffling of data to permit its presentation in numerous different sequences. In order to optimize these characteristics, data entered into the catalogue have been consistently formatted. This ensures that re-ordering of the database, or searching for specific information within it, is done efficiently. Much of the information is coded to conserve space. However, further coding has been avoided for presentation purposes and to minimize time-consuming reference to keys. In the catalogue database, information on an individual kimberlite province, field, cluster or body constitutes a single record, and the data are partitioned into several fields each representing a different geological or geographical parameter. Reference to Table 1 shows that common information, such as "Country", is repeated from one record to another. This is so that a record displaced from its initial position during database re-ordering still has all the data needed to characterize it, either for immediate clarity or further sorting. Sorting a database on a variety of parameters is a means by which data can be studied and assessed in detail from many viewpoints. The application has great potential for kimberlitic rocks, where useful ordering of data on some individual parameter(s), e.g. "body type" and "grade", can be achieved (see Table 2), and there is the distinct possibility of disclosing interesting, perhaps subtle, data correlations that have hitherto gone unnoticed.

In summary, apart from providing a condensed reference system on kimberlites and related lithologies this catalogue, if used as a computer database, is designed to permit easy correlation between, and integration of, data belonging to any of the fields of information listed.

DAWSON J.B. 1980. Kimberlites and their xenoliths. Springer Verlag, NY, 252 pp.

**Table 1** SAMPLE OF CATALOGUE: PART 1 OF 2

**Fig. 1** LOCATION OF KIMBERLITE PROVINCES SHOWN IN TABLE 1



**Table 2** EXAMPLES OF COMPUTER SORTING OF INFORMATION IN TABLE 1

Kinderhook Body	BODY TYPE	Surface Area	GRADE	Significant Mineral	
				E	Mineral
Korab Pipe 3	Blow-in Pipe?	Very small	>20 m <sup>d</sup>	Pg110	Pg110Pcr
Argie Ark1	Darrene Pl.	50 m <sup>d</sup>	4-0.15 m <sup>d</sup>	Ag/Ce/FeSh/Pt/Am/Pt/Sn (Gd/Gd)	Im (Mn) *
Koedl Pipe 2 Complex	Darrene Pl.	4 m <sup>d</sup>	0.65 m <sup>d</sup>	RhPt/Co	Pt/Rh/SpCr
Koedl Pipe 1	Darrene Pl.	3-h	70 m <sup>d</sup>	Pg110	Pt/Rh/SpCr
Maud Creek	Dyke	Dyke ~1 km <sup>d</sup>	1-	Gcc9InRhPb1Ov	D2C9Op/CrD7Se
Duck Creek	Dykes	Several dykes (two or more)	0	Gcc9InRhPb1Ov	D2C9Op/CrD7Se
Devils Elbow Dykes	Dykes	Zone several km Pg, mNsSE mt	0	Gcc9InRhPb1Ov	D2C9Op/CrD7Se
Koedl Dyke Zone A	Dykes en echelon	Zone several km Pg, mNsSE mt	um	RhPt	... Pq111HeSpMt/GrPt/Pt/Rh/Cs/Sch
Koedl Dyke Zone B	Dykes en echelon	Zone several km Pg, mNsSE mt	um	RhPt	Pg110SpMt/Pt/CdPdApk *
Koedl Dyke Zone C	Dykes en echelon	Zone several km Pg, mNsSE mt	um	RhPt	Pg110SpMt/Pt/CdPdApk *
Koedl Dyke Zone D	Dykes en echelon	Zone 1 km Pg, trend-NNE	ui	RhPt	Pg110SpMt/Pt/CdPdApk *
Lisselard Road Dykes	Dykes en echelon	Zone 25 km Pg, trend-NNE	ui	MnOv	Dp
Baw Hill Dyke (Zone?)	Dykes in Rock Complex	Complex of dykes 10-15 m <sup>d</sup>	ui	AtMnOv	Pt/Rh/SpCr
Yeremba Pipe-Dyke Complex	Dykes in Rock Complex	Complex of dykes 10-15 m <sup>d</sup>	ui	AtMnOv	Pt/Rh/SpCr

Table 1 SAMPLE CATALOGUE: PART 2 OF