

K-Ar age of lamprophyre dike from the Kerr-McGee potash mine, southeastern New Mexico

D.G. Brookings

Isochron/West, Bulletin of Isotopic Geochronology, v. 29, pp. 27-28

Downloaded from: <https://geoinfo.nmt.edu/publications/periodicals/isochronwest/home.cfm?Issue=29>

Isochron/West was published at irregular intervals from 1971 to 1996. The journal was patterned after the journal *Radiocarbon* and covered isotopic age-dating (except carbon-14) on rocks and minerals from the Western Hemisphere. Initially, the geographic scope of papers was restricted to the western half of the United States, but was later expanded. The journal was sponsored and staffed by the New Mexico Bureau of Mines (now Geology) & Mineral Resources and the Nevada Bureau of Mines & Geology.



All back-issue papers are available for free: <https://geoinfo.nmt.edu/publications/periodicals/isochronwest>

This page is intentionally left blank to maintain order of facing pages.

K-AR AGE OF LAMPROPHYRE DIKE FROM THE KERR-McGEE POTASH MINE, SOUTHEASTERN NEW MEXICO

DOUGLAS G. BROOKINS

Department of Geology, University of New Mexico, Albuquerque, NM 87131

This paper lists four K-Ar radiometric age determinations for a lamprophyre dike intrusive into evaporite in the Kerr-McGee Potash Mine, Lea County, New Mex. (32°31'47"N, 108°13'28"W; S31,T20S,R32E). The samples were taken from 466 meters below the surface at several times. The area of the mine is now closed for subsequent sampling as it has been mined out and being allowed to cave. Samples 1 and 2 have been reported by Calzia and Hiss (1978); samples 3 and 4 are from lamprophyre in contact with evaporite. Calzia and Hiss (1978) have described the lamprophyre and its setting in detail.

1. *022 WR (Calzia and Hiss, 1978)* K-Ar
Biotite basalt, Kerr-McGee Potash Mine. *Analytical data:* K₂O = 5.97%, ⁴⁰Ar = 2.79 x 10⁻¹⁰ moles/g, ⁴⁰Ar/Σ⁴⁰Ar = 67%. *Collected by:* J. P. Calzia and W. P. Hiss. *Analyzed by:* J. H. Tilling, J. Morton, M. L. Silberman (U.S.G.S., Menlo Park).
(whole rock) **32.2 ± 1.0 m.y.**
2. *3-1-71 WR (Calzia and Hiss, 1978)* K-Ar
Lamprophyre, Kerr-McGee Potash Mine. *Analytical data:* K₂O = 5.46%, ⁴⁰Ar = 2.76 x 10⁻¹⁰ moles/g, ⁴⁰Ar/Σ⁴⁰Ar = 65%. *Collected by:* C. Jones. *Analyzed by:* R. R. Marvin, H. H. Mehnert, V. Merritt (U.S.G.S., Denver).
(whole rock) **33.9 ± 0.8 m.y.***

3. *MB76-23* K-Ar
Contact zone lamprophyre, Kerr-McGee Potash Mine. *Analytical data:* K = 5.935%, ⁴⁰Ar = 0.01485 ppm, ⁴⁰Ar/Σ⁴⁰Ar = 43.2%. *Collected by:* Marc Bodin, Jr. *Analyzed by:* Geochron Laboratories, Inc.
(whole rock) **34.7 ± 1.4 m.y.**
4. *MB76-34* K-Ar
Contact zone lamprophyre, Kerr-McGee Potash Mine. *Analytical data:* K = 5.951%, ⁴⁰Ar = 0.01474 ppm, ⁴⁰Ar/Σ⁴⁰Ar = 63.3%. *Collected by:* Marc Bodin, Jr. *Analyzed by:* Geochron Laboratories, Inc.
(whole rock) **34.4 ± 1.3 m.y.**

*This date has been recalculated to be 34.8 ± 0.8 m.y. (Isochron/West, no. 26, 1979; p. 26).

REFERENCE

- Calzia, J. P., and Hiss, W. L. (1978) Igneous rocks in northern Delaware Basin, New Mexico and Texas: N. M. Bur. Mines & Min. Resources Circ. 159, p. 39.

