Presentation of the Mineralogical Society of America Award for 1985 to
John M. Ferry

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Professor Eugster, Distinguished Guests, Ladies, and Gentlemen:

The Mineralogical Society of America once again has
assembled to honor members for their outstanding
achievements in research. Two members have been se-
lected for special awards today. Considered more gener-
ally, however, this meeting is an opportunity for all of us
to celebrate the personal triumphs known only to our-
selves and to share with colleagues our scientific victories.

It is a great pleasure to introduce John Mott Ferry,
recipient of the Mineralogical Society of America Award
for 1985.

John Ferry is one of the most outstanding metamorphic
petrologists actively involved in current research. Thanks
to his perseverance and originality, there has been a rev-
olution in the way we think about metamorphism. John
is at the forefront of the effort to go forward beyond the
old, static model of frozen-in, quenched equilibrium in
order to address problems raised by dynamic processes
such as fluid flow and heat transfer. The long-term con-
sequences of this revolution cannot be foreseen clearly,
but it is certain that a more profound understanding of
metamorphism will result.

John Ferry began his career working on the basis of the
static model of quenched equilibrium. His first publica-
tions (1976) are classic examples of the use of petrology
and thermochemistry to infer pressure-temperature con-
ditions and to estimate fluid compositions. These papers
clearly illustrate how to obtain thermodynamic data from
experimentally determined equilibrium curves and how
to use the equilibrium-constant approach to calculate
pressures, temperatures, and fluid compositions. His most-
cited contribution, on the experimental calibration of the
garnet-biotite geothermometer (co-authored with F. S.
Spear), has been called "the thermometer of choice for
medium grade, regional metamorphic rocks" (E. J. Es-
sene, 1982, Reviews in Mineralogy, 10, 165).

At about the time the garnet-biotite calibration was
nearing completion, John noticed a curious anomaly: the
appearance of an hydration reaction in an otherwise nor-
mal prograde sequence of dehydration reactions. The hy-
dration reaction was found to occur in the wall rocks of
granite plutons. The plutons themselves showed miner-
alogical evidence of alteration by CO₂- and CH₄-bearing
fluids. It was then that John first related the idea of using
mineralogical evidence to map fluid flow through rocks.
In the case of the plutons and their wall rocks, he deduced
that H₂O moved from the plutons into the wall rocks to
drive the hydration reaction and, reciprocating, meta-
morphic fluids infiltrated the plutons. His development
of a dynamic model of metamorphism can be dated from
this discovery.

There followed in rapid succession papers on (1) meth-
ods of measuring fluid flow, (2) pilot studies wherein pet-
rographic fluid-rock ratios were confirmed by stable-isot-
ople analyses, (3) measurement of element migration
cauised by fluid flow, and (4) mapping of fluid-rock ratios
in relation to geologic structures on a scale of 15 ´ quad-
rangles. These works and others research now in progress
are leading toward a new and deeper level of understand-
ing of metamorphism.

In addition to his scientific accomplishments, John Fer-
ry has served this society selflessly. Those who were for-
tunate enough to attend remember with pleasure the Min-
eralogical Society of America short course he organized
for the New Orleans meeting in 1982.

Finally, I would like to cite John for his patient efforts
to educate me over the years and for his steadfast friend-
ship.

Professor Eugster, Distinguished Guests, Ladies, and
Gentlemen, may I present John Mott Ferry, recipient of
the Mineralogical Society of America Award.