

## CLOSEOUT FOR M-92060022

This case was brought to the attention of OIG on [REDACTED] by the complainant, [REDACTED]

This case involved a series of allegations including: 1) alleged misrepresentation of a geological outcrop; 2) deletion of data; 3) fabrication of data; 4) plagiarism of a map; 5) misinterpretation of a fault angle; 6) misappropriation of credit for a previously known fault; 7) omission of a locality for a metamorphic rock discussed in a publication; and 8) misrepresentation of research support by the subject, [REDACTED]

[REDACTED] These allegations covered work supported by NSF awards [REDACTED] and [REDACTED]

OIG reviewed the NSF proposals, the information provided by the complainant, relevant maps and journal articles, and obtained expert advice in field geology and tectonics. OIG contacted the complainant several times to elicit more detailed information.

The first allegation involved the misrepresentation of [REDACTED] an outcrop. The subject described the [REDACTED] outcrop as representing an exposure of a "major fault" in the area he mapped; the complainant alleged that the [REDACTED] outcrop did not represent that particular "major fault." Careful review of the probable location and described character of this [REDACTED] outcrop resulted in three supportable geologic interpretations, two of which identified this outcrop as representing the "major fault." Because all three interpretations were reasonable, OIG concluded this allegation was without substance; different supportable interpretations of the same observations are not misconduct in science.

The second allegation involved the deletion of a [REDACTED] datum measured from the outcrop in the [REDACTED] discussed in the first allegation. The complainant claimed that when he found this outcrop and measured the [REDACTED] direction, it was different from other data representing directions for the "major fault" as plotted [REDACTED] by the subject. The complainant claimed that deletion of this point created a misleading sense of data consistency.

OIG determined that field geologists exercise some judgment based on personal experience when measuring field data. OIG notes, for example, that if the subject interpreted this fault as a splay fault (a fault that is part of the main fault but angles away from it) and not as a significant directional representation of the "major fault," and if the exposed fault surface is small or poor relative to other observed surfaces in the area, he might reasonably exclude it from the data set. Setting aside the uncertainty with respect to location of the outcrop and the complainant's fault-striation measurement, the exclusion of this potential datum, if the subject ever measured it in the first place, was within the realm of his personal judgment and therefore OIG concluded that this allegation had no substance.

The third allegation involved fabrication of data to represent outcrops that did not

exist. It was determined that the complainant was searching for outcrops to measure [REDACTED] directions along "relevant faults." In so doing, he was inferring that the "relevant faults" were extensions of the "major fault," in the subject's map area. When the complainant found no measurable outcrops along these relevant faults, he assumed the outcrop data had been fabricated. Another field geologist who walked the "major fault" in the subject's map area discovered measurable [REDACTED] exposures; these measurements agreed with the subject's published observations. This allegation involves differences in interpretation of the character and extent of a fault. This is not misconduct in science.

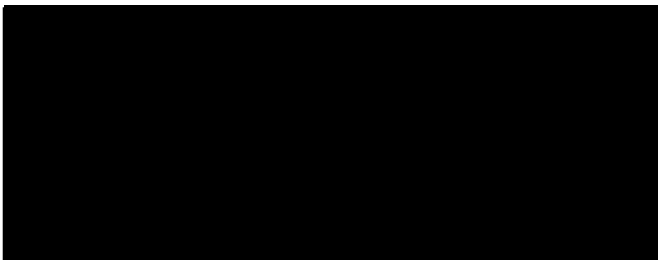
The fourth allegation involved alleged plagiarism of a geologic map from an earlier published map including the alleged [REDACTED] at the wrong orientation. OIG observed that the outcrop patterns between the two maps were different. It also determined that the placement [REDACTED] on the map was an interpretive issue based on the subject's view of the geology of the map area. Since the maps were not identical and the placement [REDACTED] was an interpretative issue, OIG concluded that this allegation lacked substance.

OIG determined that the fifth and sixth allegations pertaining to misinterpreting an angle of a fault plane and misappropriating credit for a known fault do not fall within the area of misconduct in science. These involve differences arising from equally supportable interpretations and disagreements over priority-of-discovery, respectively, and should be resolved by the scientific community in the literature.

The seventh allegation pertaining to an omission of a locality in a publication was determined to be within the author's discretion and not misconduct.

The eighth allegation concerning misrepresentation of research support was unrelated to any NSF proposal or award and therefore was not considered.

The OIG closed this case for lack of substance.



Concurrence:

Peggy Fischer 2-8-94  
Peggy L. Fischer  
Staff Scientist, Oversight

Donald E. Buzzelli 2/8/94  
Donald E. Buzzelli  
Deputy Assistant Inspector General for  
Oversight

PL Sunshine  
Philip L. Sunshine  
Deputy Inspector General

cc: Signatories  
Inspector General

*noted*

James J. Zwolenski  
James J. Zwolenski  
Assistant Inspector General for Oversight