

## MEMORANDUM

TO: Steve Frost, Coal Geologist, NMBMMR

FROM: H. B. Nickelson, Mining Geologist, Consultant, NMBMMR

SUBJECT: Reclamation Evaluation for OSM, Gallup Field, Brothers Mine,

Defiance Mine, Sisters Mine St. Michaels Indian School  
Brothers Mine and Defiance Mine, sec. 5-16-20; Sisters Mine,  
probably NW¼ of 5-16-20 Hunters Point or Samson Lake Quads

Old dumps are present 1800' NL, 3500' EL of sec. 5, and this mine is believed to have been the Brothers Mine, operated by the St. Michael's Mission near Window Rock, Arizona.

In the SE corner of the section the Navajo Agency operated a mine to furnish coal for the Navajo Agency at Fort Defiance. The mine lasted for only a couple of years because of poor management, and then another mine was begun. The series of Defiance mines were then opened on the Reservation land near the old Window Rock Coal Mine.

A mine called the Sisters Mine was opened along the southern coal outcrop in sec. 13-16-21. The mine provided coal for the nunnery near Window Rock. I was at this mine after Pittsburg and Midway had stripmined through the old workings.

All the mines have been dug up or will be dug up by the stripmining operation of P & M. No reclamation is needed.

H. B. Nickelson