

Paleontology Identification Report

Technology Identification Report

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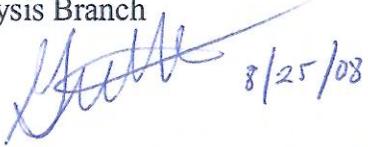
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Memorandum

*Flex your power!
Be energy efficient!*

To: Matthew Voss
Associate Environmental Planner
San Joaquin Valley Analysis Branch

Date: August 25, 2008
File: MPA-140
EA: 10-0P9200
PM: 42.0/42.7

From: Gerald H. White, Chief  8/25/08
Central Region Hazardous Waste and Paleontology Branch

Subject: Paleontological Identification Report for:
Ferguson Slide Permanent Restoration
State Route 140, Mariposa County

Staff from the Central Region Hazardous Waste and Paleontology Branch reviewed the proposed Ferguson Slide Permanent Restoration Project in Mariposa County with respect to potential paleontology resources. The preliminary evaluation included review of: The California State University, Fresno (CSUF), Department of Geology Paleontological Sensitivity Mapping Project database; geologic maps; and geologic and paleontologic literature (see attached references).

The Ferguson Slide Permanent Restoration project is located on State Route 140 between the towns of Mariposa and El Portal (see attached Project Vicinity and Location Maps). The project area is on the west side of the Sierra Nevada in the Sierra Nevada Geomorphic Province (Jenkins, 1943). In the project area, State Route 140 follows along the Merced River within the Merced River Canyon, and the project is located at a point where the westward flowing Merced River turns north for a short distance to flow around Ferguson Ridge. Elevations in the project area range from 1300 feet to over 3000 feet above sea level; project work is at about 1370 feet above sea level. The project area is on the Sierra and Stanislaus National Forests in the southeast portion of the Kinsley 7.5 minute quadrangle, within about one mile west of South Fork.

A major rockslide on the west side of the Merced River Canyon has closed State Route 140. The California Department of Transportation (Caltrans) proposes to provide permanent restoration of the Route 140 roadway to its pre-damage condition. Alternatives being considered include full restoration of the roadway along the existing alignment as well as new alignments. Proposed alternatives include major excavation in either the west canyon wall beneath the slide or through the hillside on the east side of the Merced River.

The project area is within the eastern block of the western Sierra Nevada metamorphic belt of Clark (1964). Turner (1893, p.309) reported finding Foraminifera in a limestone lens about four miles southeast of the project area near Hite Cove, which he identified as *Fusilina cylindrica* of Carboniferous or Permian age. Turner referred these rocks to the Calaveras formation, which at that time was defined to include all of the Paleozoic sedimentary rocks of the Sierra Nevada. Clark (1964) reports that Turner's collection has apparently been lost and that a collection from the Hite Cove area made by L.D. Clark and N.K. Huber was unidentifiable. Strand (1967) mapped the rocks of the project area as Paleozoic marine metasedimentary rocks.

Bateman and Krauskopf (1987) mapped the rocks of this area as Triassic phyllite and chert of Hite Cove composed of sequences of rhythmically banded chert in a matrix of phyllite with a few limestone lenses. Interstratified limestone beds along the Merced River about one mile west of the project area were found to contain Early Triassic conodonts (Bateman and others, 1985; Bateman and Krauskopf, 1987).

Conodonts and Foraminifera are abundant and widespread microfossils primarily of interest for dating the rocks they are found in, and the limestone lens near the project are readily accessible for collecting. The CSUF (2000) database ranked this area as low sensitivity. Construction activity in these fossiliferous limestone lenses would be a less than significant impact, and in any event the project alternatives would not be in the area of the limestone lenses.

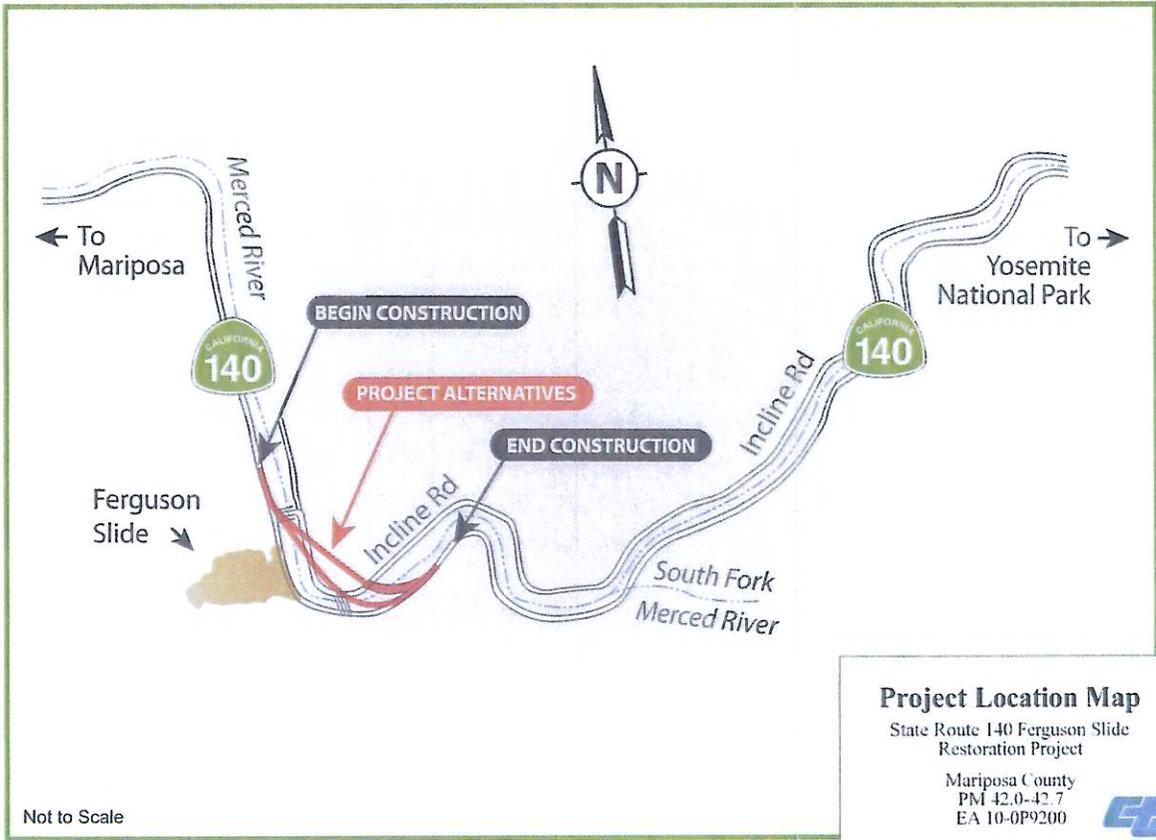
The Ferguson Slide Permanent Restoration Project appears unlikely to encounter scientifically important fossils, and further paleontology studies are not recommended for this project.

If further information is needed, please contact Peter Hansen at 559-243-8229.

Attachment

REFERENCES

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- Turner, H.W., 1883, Some recent contributions to the geology of California: *The American Geologist*, vol. XI, p. 307-324.



Not to Scale

Project Location Map

State Route 140 Ferguson Slide
Restoration Project

Mariposa County
PM 42.0-42.7
EA 10-0P9200



