

STB Finance Docket 33407

Forest Service Comments for DME report: **Geoarchaeology and Geomorphology of the DME RR New Build Route, Western SD**

Page 1 of 3

1. Areas identified for high potential for buried deposits outside of specific site discussions

- a. The Edgemont Cheyenne River Valley, page 71, was identified as having a high potential for buried deposits for cliff and eolian dunes.
- b. Hat Creek Valley, page 82, Discussion section, low terrace at the foot of stepped secondary spurs along the low order stream valley.
- c. Loess Mantled Lake Bed, page 127, Discussion section, buried deposits to 1.4 meters and likely more deeply buried deposits.
- d. Playa Basin on Lake Flat Northeast, page 131, Discussion section, buried shoreline about 1 m below ground surface, “a highly suitable paleolandscape position for cultural occupation... and potential for.. preservation is high”
- e. Several units lack discussions of potential for buried deposits and thus can’t be listed here if they have good potential (see below).

2. Recommendations Section (pages 131-135)

- a. The recommendations don’t discuss the all the areas listed above where there might be deposits outside of recorded archaeological sites. At least this is the impression I get from reading the report. Maybe the areas discussed above all lie within known site boundaries?

For example, the Loess Mantled Lake Bed (page 127) has buried deposits up to 1.4 meters and potentially deeper, but no site discussion in the recommendations section on pages 133-135 contains this area description.

Additionally the Playa Basin on Lake Flat Northeast (page 131) has a very suitable buried shoreline, but is also not mentioned in the recommendations.

Lastly, the Edgemonet Valley and Battle Creek Valley both seem to list potential buried deposits outside known archaeological sites, but nothing appears to be recommended.

There should be recommendations for potential buried deposits outside of known archaeological sites in this report.

Forest Service Comments for DME report: **Geoarchaeology and Geomorphology of the DME RR New Build Route, Western SD**

Page 2 of 3

3. Content Review

- a. Blank pages: pages 64,65,66, and 68 are blank. Is this intentional or is there missing material?
- b. Hat Creek Valley, page 82, several items are left blank without explanation: Stratigraphy and Sedimentology Section B, Geomorphology and Strat. And Sed. Area C, Geochronology Area C. Is there missing content? What is the information for these sections (the figures may relate information but should be interpreted).
- c. Cheyenne River Valley Crossing, page 101, headers provided for but no discussions of **Stratigraphy** and **Sedimentology**, **Geochronology**, and **Discussion and Geologic Potential for Surface and Buried Archaeology**. Is there missing content? This section is unclear. In addition the route crosses an archaeological site (39FA1766) and there is no discussion of the deposit potential.
- d. Harrison Flat **Geochronology**, page 106. A pending radiocarbon date is discussed. When is it expected and how will this section be updated when the date comes in?
- e. Shale Uplands, **Discussion and Geologic Potential for Surface and Buried Archaeology**, page 110. An excavated pit feature is mentioned, but not tied to a site. Is there the potential for further excavated pits on the site?
- f. French Creek Valley, **Geochronology** and **Discussion and Geologic Potential for Surface and Buried Archaeology**, page 120, are left blank. Is there missing information and interpretation? On page 117, in the last sentence of **Stratigraphy and Sedimentology**, there is in brackets “detailed discussion of Units 9, 10”. Should this discussion be in the missing content on page 120?
- g. Battle Creek Valley, **Stratigraphy and Sedimentology**, **Geochronology** and **Discussion and Geologic Potential for Surface and Buried Archaeology**, page 120, have no content. Is there missing information and interpretation?

Forest Service Comments for DME report: **Geoarchaeology and Geomorphology of the DME RR New Build Route, Western SD**

Page 3 of 3

- h.** With the missing sections as noted above (like pages 82, 101, 120) for those lengths it is difficult to determine the potential for buried deposits. These sections need to be completed and/or clarified so that the recommendations can be evaluated and comments can be provided.
- i.** Methodology: it is unclear what the cutoff date for potential for human occupation is. Is it the beginning of the Holocene? A given radiocarbon date? Perhaps this cut off could be spelled out in the methodology section.
- j.** It is interesting this report is listed as Draft report with a date of June 2008. Has the missing information been developed and not incorporated? Perhaps these reviews could have been started a year ago? Is there an anticipated date for a final report? We look forward to reviewing the final report.