Jordan Formation Project

In class last week we came up with the following outline for the Jordan Project. Recall also that I suggested you look over the paper on the Wheeler Gorge Conglomerate (Walker, 1985) and use it as a guideline for writing up the Jordan Formation Project. You do not have to use the precise outline below, but you should follow the spirit of it. Also, recall that there are figures that should be associated with some portions of this outline and that must appear in your write-up.

Outline

I. Introduction
- A. Problem
- B. Location
- C. Age
- D. General description of Jordan Outcrops (Homer and Stockton)

II. Observation
- A. Lithologies
- B. Bedding
  1. Contacts
  2. Lateral pinch-outs
- C. Grain size
- D. Primary sedimentary structures
  1. HCS
  2. cross strat
  3. Other lamination
  4. Other?
- E. Secondary structures
  1. Trace fossils
  2. Laminated sst clasts as breccia at Stockton
- F. Fossils?

III. Lithofacies: description and interpretation
- A. Lithofacies 1
  1. Description
  2. Interpretation
- B. Lithofacies 2, etc.

IV. Discussion/Interpretation
- A. Interpretation of depositional environment
- B. Supporting literature
- C. Time sequential history of deposition (evolution of the depositional system)

Project deliverables

- A project write-up that follows the outline we developed

Project milestones

- October 23: Individual measured sections due at beginning of class, in Adobe Illustrator format
- October 30: Draft of Introduction, Observations, and Lithofacies descriptions section due at beginning of class, ***with figures.***
- November 6: Draft of final write-up due at beginning of class (bring 3 copies)
- Thursday, November 13: Final write-up due at beginning of class.

Interpreting your individual strat columns in terms of primary and secondary sedimentary structures

You and your field partner should submit a write-up by the end of class today that includes the following:

- A written description of your individual measured section (this will be given to everyone in the class to accompany the overall measured section that I will compile from your individual sections). This should be a written description of your observations and *must* include a description of primary and secondary sedimentary structures, and their variation over your section (if any).
- An interpretation of the primary and secondary sedimentary structures in your measured section, based on our discussions of cross stratification in class, your textbook, and the Rubin bedforms site.
- In your interpretation, make sure that you address the following:
    - What kinds of bedforms made the cross strat you see? 2D or 3D? Unidirectional, oscillatory, or combined flow? What are reasonable depth and velocity conditions for these bedforms?
    - If you have trace fossils: what *trace fossil assemblage* do they belong to (see Boggs, pp114-123) and what is the significance of this assemblage?

This write-up should be done in Word, following the usual guidelines (12-point, Times font, double-spaced, 1.25" right and left margins and 1" top and bottom margins).

The group's measured section

While you are working on the above, I will attempt to piece together your individual measured sections in Adobe Illustrator, then make this section available on the course website. Once I have completed this (hopefully before the end of lab today), I will make hard copies of it for you. However, for your final copy, you will want to modify this section to make patterns, fonts, etc. consistent.