GEOS 315 – Sedimentation and Stratigraphy

Project 4 – Table Rock

DELIVERABLES:

– Research Proposal (pdf format) – due 5:30 pm Friday 9 November 2012
– Field Notebook – due 10:30 am Wednesday 5 December 2012
– Poster – due 10:30 am Wednesday 5 December 2012

GRADING RUBRIC:

					Score (out of 5)
10%	FIELD NOTES	Daily Log Entries		1%	
		Outcrop Descriptions		3%	
		Stratigraphic Columns		3%	
		Stratigraphic Unit Descriptions		3%	
20%	RESEARCH PROPOSAL	Hypothesis Description		5%	
		Disciplinary/Regional Context		5%	
		Methods Description		5%	
		Curriculum Vitae		2%	
		References		3%	
70%	POSTER	Abstract		3%	
		Introduction		4%	
		Materials and Methods	Location Map	7%	
			Methods Description	5%	
		Results and Discussion	Description of Stratigraphic Units	8%	
			Fence Diagram	8%	
			Justification of Unit Correlations	8%	
			Interpretation of Depositional Environments	8%	
		Conclusions and Geologic History		8%	
		References		3%	
		Presentation (14 December 2012)		8	
100%				100%	

For each of the assessment criteria for this project (outlined on previous page, with relative weights), I will assign you a score on a scale of 0 to 5. In general, you can think of these scores as follows:

5 – *Far above average.* Work is impressive, strongly exceeds basic expectations, and contains unusually insightful or in-depth commentary or analysis. Student put in more effort than required to complete the assignment. Student uses correct terminology throughout, and commits no grammatical, spelling, or formatting errors. Work is professional, neat, and easy to follow. Student clearly understands the main point, and demonstrates their understanding clearly and concisely.
5/5 is equivalent to a grade of 100%.

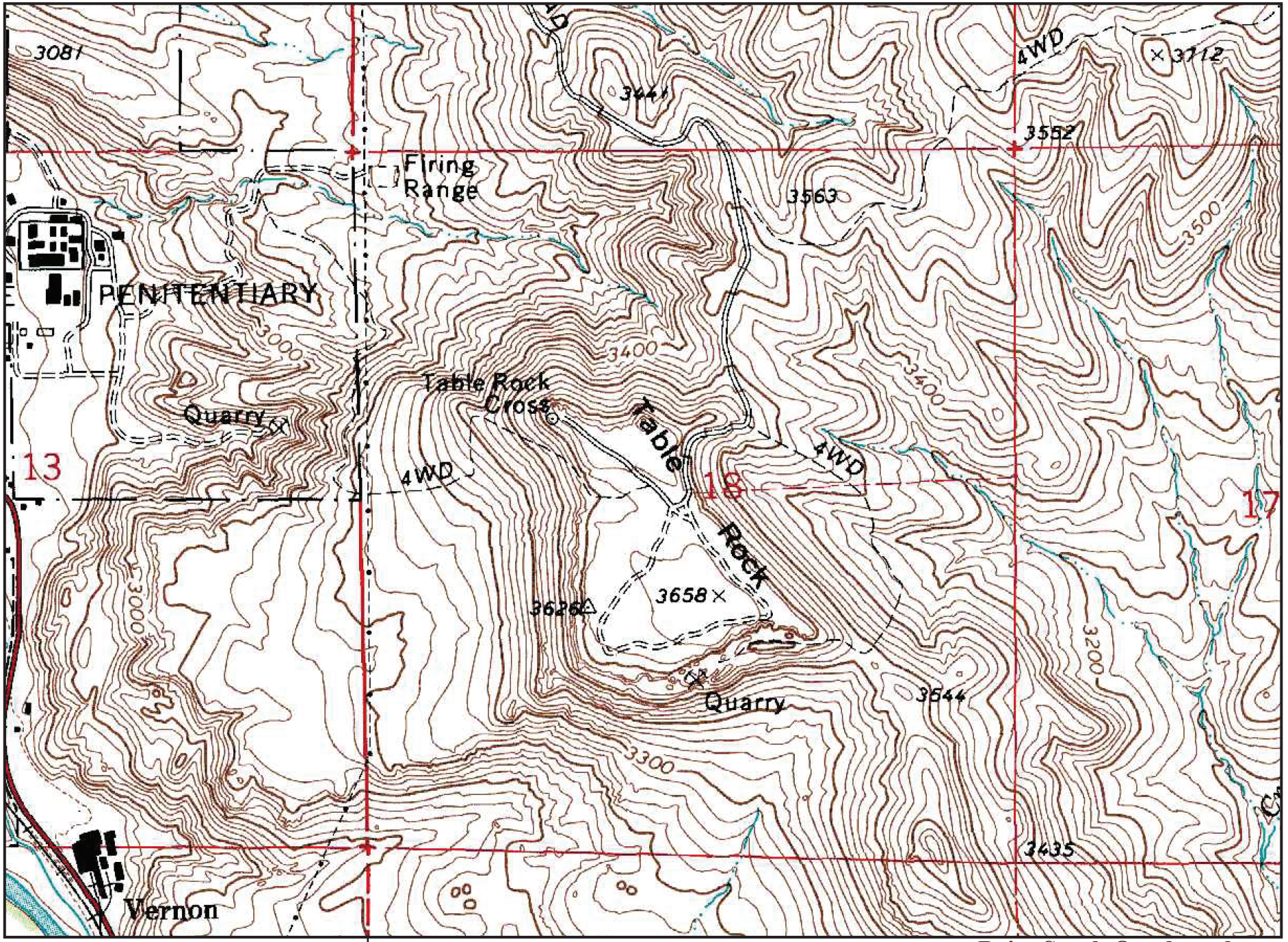
4 – *Above average*. Work exceeds basic expectations, and shows a degree of insight beyond the average. Student put in sufficient effort to complete the assignment. Student uses correct terminology most of the time, commits very few and/or minor grammatical, spelling, or formatting errors. Work is neat and easy to follow. Student clearly understands the main point, but demonstrates their understanding in a way that is wordy, indirect, or otherwise not perfectly clear.
4/5 is equivalent to a grade of 90%.

3 – *Average*. Work is complete and meets basic expectations. Student put in just enough effort to complete the assignment. Student uses correct terminology more than half of the time, and commits a few grammatical, spelling, or formatting errors. Work is generally neat but sometimes difficult to follow. Student appears to have understood the main point, but their demonstration of that understanding leaves some doubt remains in my mind.
3/5 is equivalent to a grade of 80%.

2 – *Below average*. Work is somewhat incomplete and/or offers insight and effort below basic expectations. Student didn't quite complete the assignment as outlined. Student uses incorrect terminology more than half the time, and commits several important grammatical, spelling, or formatting errors. Work is somewhat sloppy and unprofessional. Evidence suggests that the main point was mostly missed.
2/5 is equivalent to a grade of 70%.

1 – *Far below average*. Work is essentially incomplete and/or irrelevant to the assignment. Student demonstrates very little insight and effort. Student uses incorrect terminology much of the time, and commits many important grammatical, spelling, or formatting errors. Work is very sloppy and unprofessional. Evidence suggests that the main point was not understood at all.
1/5 is equivalent to a grade of 60%.

0 – Nonexistent. No work was turned in. *0/5 is equivalent to a grade of 0%.*



Boise South Quadrangle
Scale = 1:12,000 C.I. = 20 ft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Instructions and examples for citations and bibliography

For this project, we will use the citation style of the journal *Geology*. The following information about that style is from the Guide to Authors website for that journal (www.geosociety.org/pubs/geoguid5.htm).

All references mentioned in the text, figures, captions, tables, and appendices must be listed in the References Cited section. Only references cited in the paper are to be listed. Do not cite – or list in the References Cited – papers that are unpublished, in preparation, in review, or in revision. At the end of the text, list references alphabetically by author's surname. For references with two authors, list alphabetically by first author and then alphabetically by second author. For references with more than two authors, list alphabetically by first author and then chronologically, earliest year first. Do not abbreviate journal titles or book publishers in references. Include the city of publication for books. For references that do not match any of the examples provided below, include all information that would help a reader locate the reference.

In-text citations

This is a sample in-text citation from the Geological Society of America website (Sawyer et al., 1991; Kane and Neuzil, 1993). Note the commas following the authors, as well as the semicolon separating references.

Journal Article

Arias, O., and Denyer, P., 1991, Estructura geológica de la región comprendida en las hojas topográficas Abras, Caraigres, Candelaria y Río Grande, Costa Rica: Revista Geológica de América Central, no. 12, p. 61–74.

Bernardin, T., Cowgill, E., Gold, R.D., Hamann, B., Kreylos, O., and Schmitt, A., 2006, Interactive mapping on 3-D terrain models: Geochemistry Geophysics Geosystems, v. 7, no. 10, Q10013, doi: 10.1029/2006GC001335.

Brown, M., 1993 *P-T-t* evolution of orogenic belts and the causes of regional metamorphism: Journal of the Geological Society [London], v. 150, p. 227–241.

Doglioni, C., 1994, Foredeeps versus subduction zones: Geology, v. 22, p. 271–274.

Drygant, D.M., 1986, Novye konodonty roda Polygnathus Hinde, 1879 iz srednego I verkhnego devona L'vovskogo progiba (New conodonts of the genus Polygnathus Hinde, 1879, from the Middle and Upper Devonian of the L'vov Depression): Paleontologiche-skiy sbornik (L'vovskiy gosudarstvennyy universiteit), no. 23, p. 47–52.

Walter, L.M., Bischof, S.A., Patterson, W.P., and Lyons, T.L., 1993, Dissolution and recrystallization in modern shelf carbonates: Evidence from pore water and solid phase chemistry: Royal Society of London Philosophical Transactions, ser. A, v. 344, p. 27–36.

Book

Burchfiel, B.C., Chen Zhiliang, Hodges, K.V., Liu Yuping, Royden, L.H., Deng Changrong, and Xu Jiene, 1992, The South Tibetan detachment system, Himalayan orogen: Extension contemporaneous with and parallel to shortening in a collisional mountain belt: Boulder, Colorado, Geological Society of America Special Paper 269, 41 p.

Coffin, M.F., Frey, F.A., Wallace, P.J., et al., 2000, Proceedings of the Ocean Drilling Program, Initial reports, Volume 183: College Station, Texas, Ocean Drilling Program, CD-ROM.

France-Lanord, C., Derry, L., and Michard, A., 1993, Evolution of the Himalaya since Miocene time: Isotopic and sedimentologic evidence from the Bengal Fan, *in* Treloar, P.J., and Searle, M., eds., Himalayan tectonics: London, Geological Society [London] Special Publication 74, p. 603–621.

Shipboard Scientific Party, 1987, Site 612, *in* Poag, C.W., Watts, A.B., et al., Initial reports of the Deep Sea Drilling Project, Volume 95: Washington, D.C., U.S. Government Printing Office, p. 31–153.

Vogt, P., and Tucholke, B., editors, 1986, The western North Atlantic region: Boulder, Colorado, Geological Society of America, Geology of North America, v. M, 696 p.

Guidebook

Barton, C.C., and Hsieh, P.A., 1989, Physical and hydrologic-flow properties of fractures, *in* International Geological Congress, 28th, Field Trip Guidebook T385: Washington, D.C., American Geophysical Union, 36 p.

Blackstone, D.L., Jr., 1990, Rocky Mountain foreland exemplified by the Owl Creek Mountains, Bridger Range and Casper Arch, central Wyoming, *in* Specht, R., ed., Wyoming sedimentation and tectonics: Wyoming Geological Association, 41st Annual Field Conference, Guidebook, p. 151–166.

Abstract

Fitzgerald, P.G., 1989, Uplift and formation of Transantarctic Mountains: Applications of apatite fission track analysis to tectonic problems: International Geological Congress, 28th, Washington, D.C., Abstracts, v. 1, p. 491.

LeMasurier, W.E., and Landis, C.A., 1991, Plume related uplift measured by fault displacement of the West Antarctic erosion surface, Marie Byrd Land [abs.]: Eos (Transactions, American Geophysical Union), v. 72, p. 501.

McKinnon, W.B., and Schenk, P.M., 2000, Chaos on Io: A model for formation of mountain blocks by crustal heating, melting, and tilting: Houston, Texas, Lunar and Planetary Institute, Lunar and Planetary Science XXXI, CD-ROM, abstract 2079.

Sammis, C.G., 1993, Relating fault stability to fault zone structure: Geological Society of America Abstracts with Programs, v. 25, no. 6, p. A115–A116.

Comment, Discussion, Reply

Retallack, G.J., 1993, Classification of paleosols: Discussion: Geological Society of America Bulletin, v. 105, p. 1635–1636.

Silberling, N.J., Jewell, P.W., and Nichols, K.M., 2001, Earliest Carboniferous cooling step triggered by the Antler orogeny?: Comment: Geology, v. 29, p. 92.

Saltzman, M.R., 2001, Earliest Carboniferous cooling step triggered by the Antler orogeny?: Reply: Geology, v. 29, p. 93.

Map

Abrams, G.A., 1993, Complete Bouguer gravity anomaly map of the State of Colorado: U.S. Geological Survey Miscellaneous Field Studies Map MF-2236, scale 1:500 000, 1 sheet.

Bayley, R.W., and Muehlberger, W.R., compilers, 1968, Basement rock map of the United States, exclusive of Alaska and Hawaii: U.S. Geological Survey, scale 1:2 500 000, 2 sheets.

Ernst, W.G., 1993, Geology of the Pacheco Pass quadrangle, central California Coast Ranges: Geological Society of America Map and Chart Series MCH078, scale 1:24 000, 1 sheet, 12 p. text.

Open-File Report

Wilson, A.B., 2001, Compilation of various geologic time scales: U.S. Geological Survey Open-File Report 01-0052.

National Earthquake Information Center, 1992, Earthquake data report, August 1992: U.S. Geological Survey Open-File Report 92-0608-A, 458 p.

Paper in a Government or University Serial Publication

Hay, R.L., 1963, Stratigraphy and zeolitic diagenesis of the John Day Formation of Oregon: University of California Publications in Geological Sciences, v. 42, p. 199–262.

Smith, D.C., Fox, C., Craig, B., and Bridges, A.E., 1989, A contribution to the earthquake history of Maine, *in* Anderson, W.A., and Borns, H.W., Jr., eds., Neotectonics of Maine: Maine Geological Survey Bulletin 40, p. 139–148.

Paper in a Multiauthor Volume

Carpenter, F.M., 1992, Superclass Hexapoda, *in* Kaesler, R.L., ed., Treatise on invertebrate paleontology, Part R, Arthropoda 4, Volume 3: Boulder, Colorado, Geological Society of America (and University of Kansas Press), 277 p.

Kane, J.S., and Neuzil, S.G., 1993, Geochemical and analytical implications of extensive sulfur retention in ash from Indonesian peats, *in* Cobb, J.C., and Cecil, C.B., eds., Modern and ancient coal-forming environments: Boulder, Colorado, Geological Society of America Special Paper 286, p. 97–106.

Keller, G., 1992, Paleoecologic response of Tethyan benthic foraminifera to the Cretaceous-Tertiary transition, *in* Takayanagi, Y., and Saito, T., eds., Studies in benthic foraminifera: Tokyo, Tokai University Press, p. 77–91.

Sawyer, D.S., Buffler, R.T., and Pilger, R.H., 1991, The crust under the Gulf of Mexico basin, *in* Salvador, A., ed., The Gulf of Mexico Basin: Boulder, Colorado, Geological Society of America, Geology of North America, v. J, p. 53–72.

Taylor, J.C.M., 1990, Upper Permian—Zechstein, *in* Glennie, K.W., ed., Introduction to the petroleum geology of the North Sea (third edition): Oxford, UK, Blackwell, p. 153–190.

Proceedings from a Symposium or Conference

Baar, C., 1972, Creep measured in deep potash mines vs. theoretical predictions, *in* Proceedings, Canadian Rock Mechanics Symposium, 7th, Edmonton: Ottawa, Canada Department of Energy, Mines and Resources, p. 23–77.

MacLeod, N.S., Walker, G.W., and McKee, E.H., 1976, Geothermal significance of eastward increase in age of upper Cenozoic rhyolitic domes in southeastern Oregon, *in* Proceedings, Second United Nations Symposium on the Development and Use of Geothermal Resources, San Francisco, May 1975, Volume 1: Washington, D.C., U.S. Government Printing Office (Lawrence Berkeley Laboratory, University of California), p. 465–474.

Thesis

Wopat, M.A., 1990, Quaternary alkaline volcanism and tectonics in the Mexican Volcanic Belt near Tequila, Jalisco, southwestern Mexico [Ph.D. thesis]: Berkeley, University of California, 277 p.

Web Site

MARGINS, 1999, The Seismogenic Zone Experiment (SEIZE): Science plan: http://www.soest.hawaii.edu/margins/SEIZE_sci_plan.html (July 2001).

Johnson, A.B., 2001, Raw data for relay stations AB1–AB15 in the Mojave desert: http://www.seismo.berkeley.edu/mojave (December 2001).