Introduction to Layered Reading for Cultural Resource Management Archaeology

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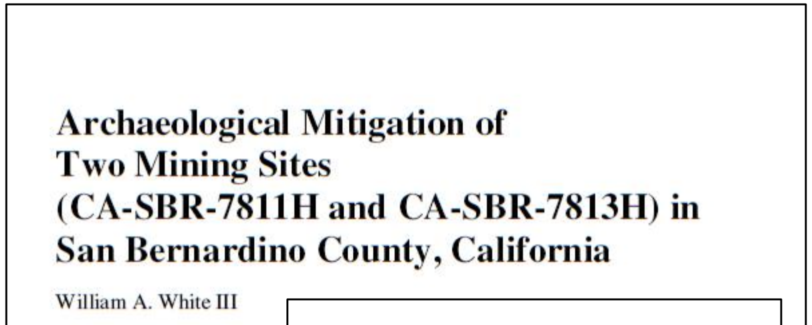
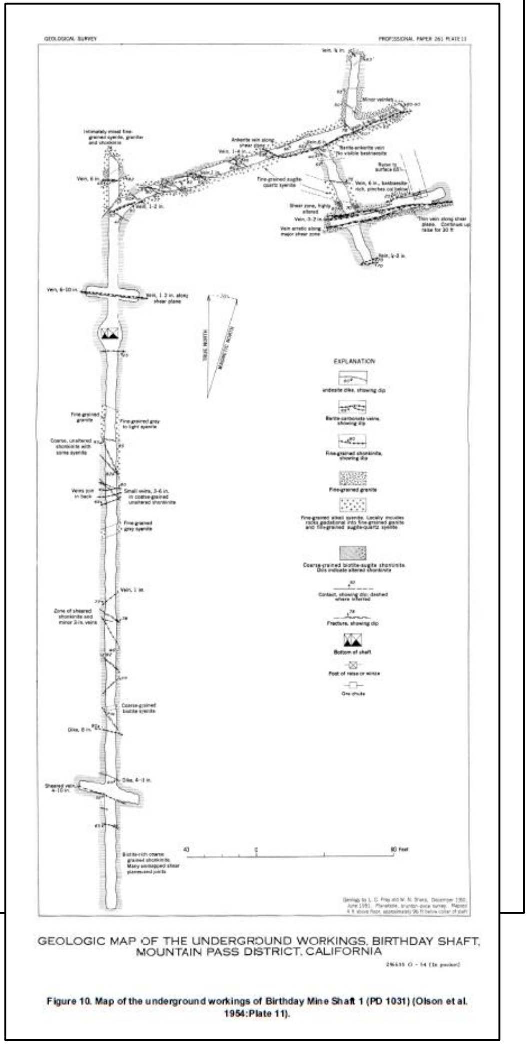
Succinct Research



Archaeological Mitigation of Two Mining Sites (CA-SBR-7811H and CA-SBR-7813H) in San Bernardino County, California

William A. White III



You're not a preschooler. Don't read like one anymore

How to read for Cultural Resource Management Research and Reporting

You do not need to read whole chapters in a single bound, silently saying each word in your head. You just need to know:

1. What the chapter/section/article/report is about,
2. The reason for the project (i.e. regulatory context),
3. Where the project was at,
4. What they found,
5. How they found it, and,
6. Where to find information within the text so you can cite it while writing the report.

The best way to do this is through **layered reading**

- Scan the text more than once
- Allows you to read large amounts of text in less time
- Keep current on archaeological concepts
- Harness the power of your brain
- Make it look like you know everything

Step 1: What is this chapter about

- Read first and last page of chapter/section
- Tells you what will be covered in the next few pages
- Main topics= 30,000 foot view of the chapter

- Critical questions– Does this matter for your report? If so, how? How long will it take to read this? Do I need to read this?
- Number of pages = how long it will take you to read the chapter
- **Should take 2—5 minutes**

Hard-Rock Mining in the American West: Examples from Mountain Pass

Hard-rock mining origins in the United States owe much to Cornish immigrant miners. Technologies and methods developed by Cornish miners in the eighteenth and nineteenth centuries were well adapted to conditions in the American West. Cornish equipment and ore-removal methods; standardized shafts, adits, drifts, raises, and winzes; and lode-exploration techniques were widely applied in the American West. Adapted forms of these techniques are still used today (Twitty 2005:18–20).

Miners in the American West applied these techniques in order to overcome geologic, geographic, and economic challenges. Mine operators and engineers had to adapt their operations to site-specific geologic conditions that shaped mine location and construction. Underground workings sought to locate ore veins and extract the highest-density deposits in the most economical manner possible. Engineering underground workings for ventilation, optimal ore extraction, and machinery usage required experienced miners and mine engineers. Subsurface ore distributions affected the shape of underground workings, which in turn influenced the extent of the surface plant required for extraction. Hoists were used to remove ore and transport miners. By the twentieth century, compressors supplied air for pneumatic equipment used in the underground workings. These tools were powered by machine houses and generators on the surface. Once the ore had been extracted, mine operators had to decide how much more processing was necessary to create a profitable product. A mine's geographic location in relation to transportation nodes influenced the level of processing necessary to ship the ore out at a profitable level. The infrastructure, equipment, transportation needs, and day-to-day operation of a hard-rock mine in the American West required a significant outlay of money. Mining high-grade ore was the easiest way to cover mine expenses and make a profit (Twitty 2005:20–22, 74–110).

Historical Background

untain Pass vicinity lived within the western region of the Southern Paiute
er 1986:368). Prehistorically, the project area was occupied by the Uto-Az-
and Las Vegas Southern Paiute subgroups. These subgroups were culturally
eighboring Great Basin Paiute groups, but maintained contact with the Ca-
along the Colorado River (Kelly and Fowler 1986:368–369; Moratto 1984:344).
od, the Southern Paiute maintained a lifestyle oriented toward seasonal
a large territory and throughout a diverse range of environments within the
e non-Native occupation, the Chemehuevi and Las Vegas groups' foodways
vation of corn, squash, beans, sunflowers, amaranth, and winter wheat
ups adopted floodplain farming practices similar to patterns practiced by the
Mojave (Kelly and Fowler 1986:370–371; Moratto 1984:344).

Step 2: Skim the chapter

- Don't read the main text of the body right away
- Just scan the section titles/subtitles
- Pay particular attention to the pictures/diagrams and their captions, definitions, and bolded/italicized text words
- This gives you a better idea of what's in the chapter, where you can find information, and how the chapter is structured
- Make sure to *write down any definitions/keywords* you do not already know
- **Should take 10—20 minutes** depending on how much you write and how long you look at the pictures

The 2,222-acre Molycorp Mountain Pass Mine facility is located about 15 miles (21 km) southwest of Primm, Nevada (see Figure 1). The Birthday Mine (CA-SBR-7811H) is in the northern portion of the Mountain Pass Mine property—specifically, in the southwest ¼ of the northwest ¼ of Township 16 North, Range 13 East, Section 12, San Bernardino Baseline and Meridian (see Figure 2). This site encompasses about 43,123 m^2 (10.66 acres) and consists of open cuts, shafts, and structural features. Measuring approximately 22,560 m^2 (5.57 acres), the Sulphide Queen Mine (CA-SBR-7813H) is situated in the southwest ¼ of the southeast ¼ of Township 16 North, Range 13 East, Section 12, San Bernardino Baseline and Meridian. This site is in the central portion of the Mountain Pass Mine property, close to several active roads and modern buildings. Both sites are on the 1983 Mescal Range, California, U.S. Geological Survey (USGS) 7.5-minute quadrangle.

Watch for keywords, especially ones that answer *who, what, when, where and why*?

Watch out for those same keywords elsewhere in the text

Step 3: Quickly “read” the chapter

- You’ve already totally familiarized yourself with what’s in the text, quickly read it
- The key is: ***don’t say the words in your head***; I repeat: **Do. Not. Say. The. Words. In. Your. Head**
- Use your fingers in an S-shaped pattern to guide your eyes down the pages
- Don’t look at the pictures or diagrams this time
- You’re looking to fill in the gaps between what wasn’t covered in the previous times you read the chapter
- Add to your previous notes

Layered reading gives you three chances to absorb content: **1) just the basics, 2) getting the key concepts, 3) filling in the gaps**

- **Your brain can handle this better than trying to consume the whole report or chapter in one sitting**
- **You will retain information better as well**
- **You will start “seeing” the pages with the answers in your mind**

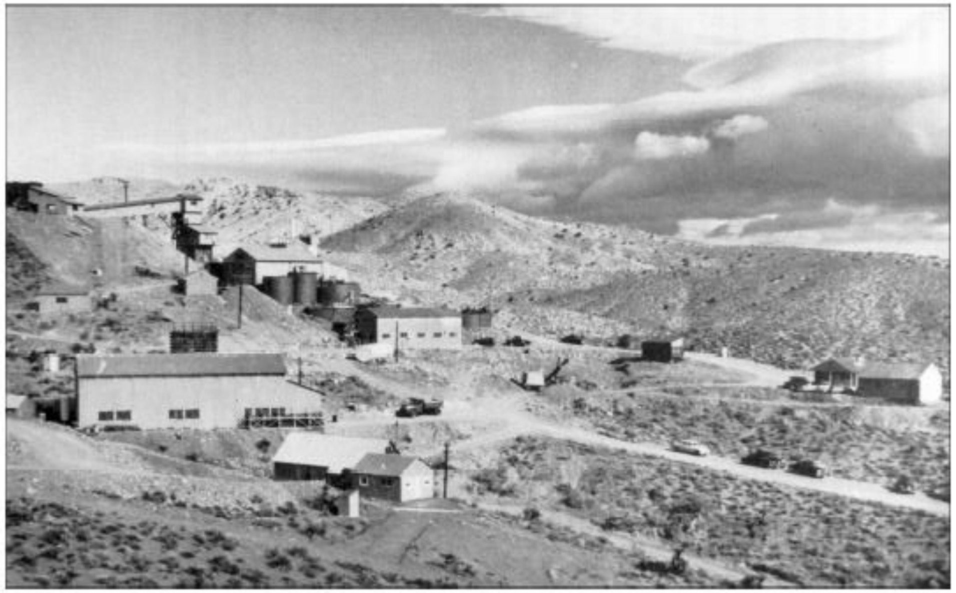
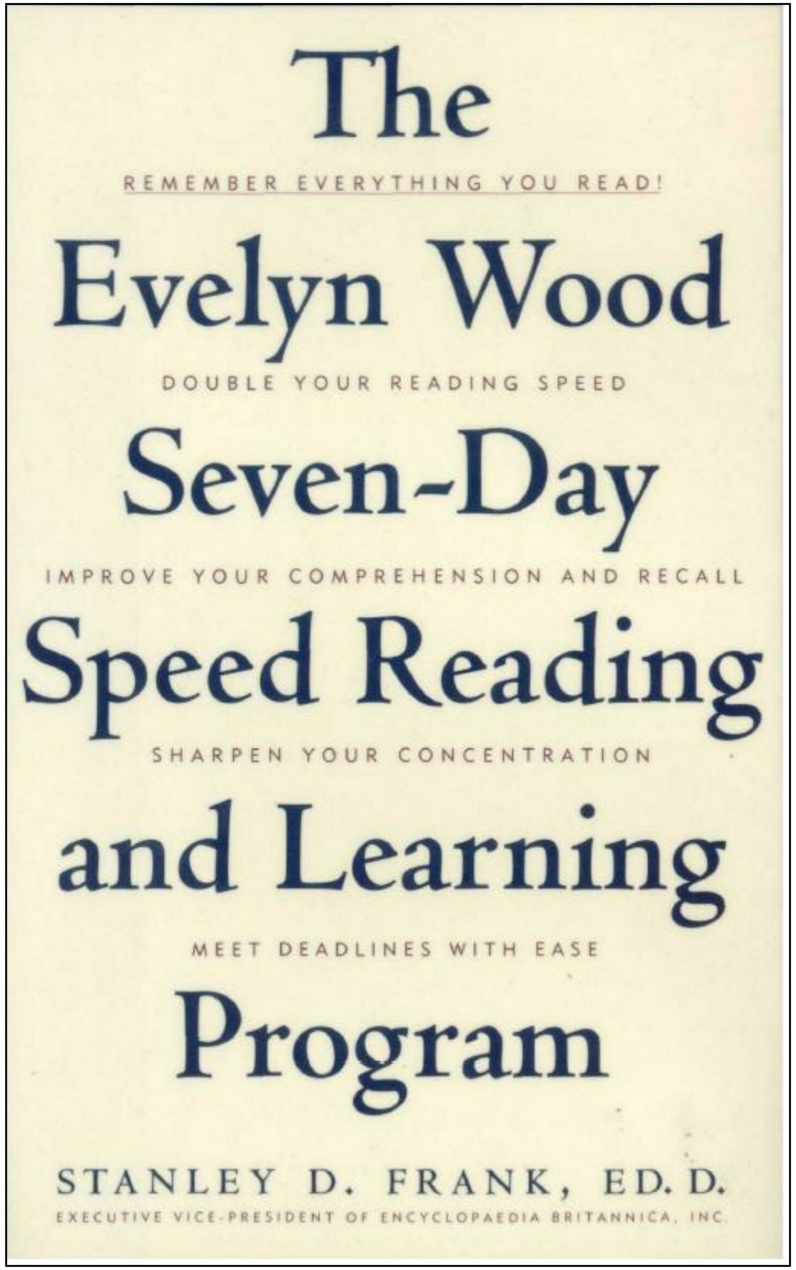


Figure 6. View of Molycorp flotation mill and archaeological features of the Sulphide Queen site, ca. 1953. (Wright et al. 1953:122).

Molycorp be[illegible] the Sulphide Queen mine included a 479-foot-deep shaft with multiple levels, drifts, and winzes. Hoists were pow[illegible] gasoline, and a pneumatic compressor provided air to the shaft. The ore-processing facility included a blacksm[illegible] a jaw crusher, a [illegible]on-veyor that brought ore to a series of other crushers and bins, an oil-fired roaster, and a series of de[illegible]ters, thickeners, and agitators. [illegible] (Tucker and Sampson 1943:461). Operations were expanded during the 1950s; this included enlarging the Sulphide Queen mi[illegible]'s original shaft into an open-pit mine. The Sulphide Queen archaeological site (CA-SBR-7813H) is the [illegible] flotation mill at [illegible] Pass, but it may include portions of earlier infrastructure (Figure 6).

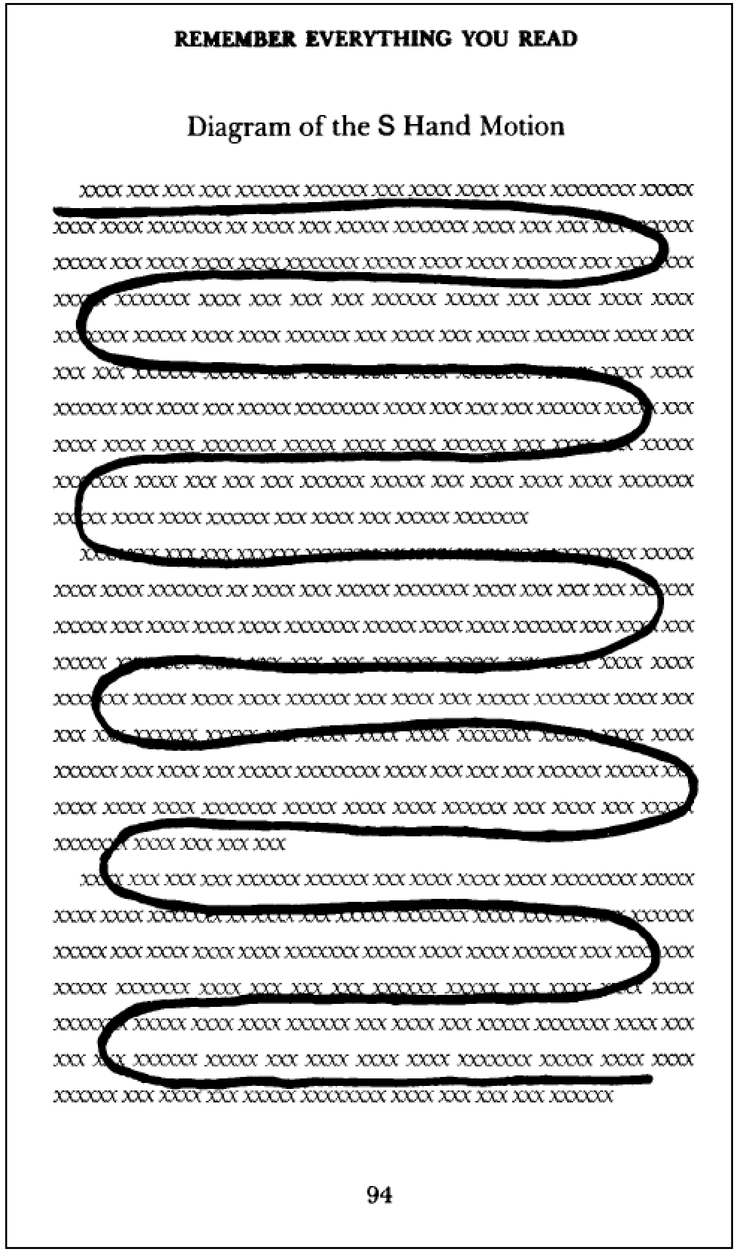
A complex, three-part flotation system was used in order to obtain rare-earth elements from [illegible]he ore. After the ore was excavated from the nearby pit mine, it was first crushed into smaller parti[illegible]: trucks dumped th[illegible] coarse-ore bin, where it was fed through a large ja[illegible] crusher. Crushed ore fragm[illegible]ts dropped through a grizzly onto a conveyor [illegible] to a Symons cone crusher. These two cr[illegible]hers reduced the ore into fragments smaller than 3/4-inch. Next, the ore was fed into a ball mill, where it was crushed into even smaller [illegible] 1956:44–45, 112). These activities were conducted in buildings represented by Features 1003 and 1004 identified during cultural-resource-[illegible] fieldwork.

The second part of the process was designed to remove undesirable carbonates and sulfates in o[illegible]der to isolate the rare-earth mi[illegible] with different acids. The [illegible]ed ore was fed through a series of tanks where it was heated to more than 200°F and clean[illegible]. Next [illegible] 300 or Orzan A) were used to balance the ore pulp’s pH. After the pH was reduced, undesirable carbonates were [illegible] (HCl). The reagent flotation and HCl leaching process concentrated the rare-earth mineral content to more than 72 per[illegible]t of the total mass (Dayton 1956:44–45,112; Kruesi and Duker 1965:848).



This is Next Level Stuff

- This layered reading concept comes from the *Evelyn Wood Speed Reading Program*
- Program is over 50 years old
- I started when I was a junior in college (2000) and have done it ever since
- It's the *secret to survival* in social sciences and the cultural resource management industry
- Works better on fiction
- Also helps you skim online articles and PDFs
- Get a free PDF of the speed reading course book: https://cdn.preterhuman.net/texts/thought_and_writing/language/The.Evelyn.Wood.Seven.Day.Speed.Reading.and.Learning.Program.pdf



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