

Mining the Margins: Archaeology of Remote, High Elevation Mineral Exploitation in the Absaroka Mountains, Wyoming.

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ABSTRACT

Mineral extraction has drawn humans to high elevations in Wyoming's Absaroka Mountains for millennia. Examples of both high elevation prehistoric chert resource extraction (Dollar Mountain quarries; above 3200 m), and late 19th century gold and silver mining operations in a comparable elevational range are described. Issues of subsistence, energetic expenditures, and environmental constraints operating on exploitation of resources in the human hypoxic zone are highlighted. Emphasis is placed on 1) blurring the boundary between historic and prehistoric archaeological investigations; 2) refining views of the role of high elevations in human adaptive cycles, and 3) applying lessons from mineral extraction studies to other aspects of changing resource structures in mountainous areas.



Archaeological research into human use of the high elevations of Wyoming's Absaroka mountains has focused on big game hunting. However, although hunting has been an important component and prehistoric utilization of the high country, evidence for forays into elevations above 3000m in search of abiotic resources has been accumulated as part of Colorado State University's Greybull River Sustainable Landscape (GRSLE) project. Three groups of mineral exploitation (Figure 1) are being investigated:

- Dollar Mountain Lithic Raw Material Source (Prehistoric)
- Gold Reef Mining District (Moderate Scale Historic)
- Meadow Creek Basin Mines (Small Scale Historic)

DOLLAR MOUNTAIN ARCHAIC LITHIC RAW MATERIAL EXTRACTION 3300-3700m

Archaeological models of prehistoric high elevation landuse often emphasize big game hunting. Public perceptions of prehistoric alpine settings are of limited, low impact human-environmental interactions. Research at Dollar Mountain calls both of these views into question and have implications for both archaeological research and management policy for backcountry resources.



Dollar Mountain is a unique block of Paleozoic sediments embedded within the basic volcanoclastic bedrock of the Absarokas. Preliminary documentation indicates that this high elevation lithic raw material source area was heavily used during the Archaic. During 2003 and 2004 several workshop areas associated with this source were recorded and the glacial geochronology of the area has been the subject of a MA thesis (Rietze 2004). In addition to the evidence for exploitation of this unique lithic raw material source, these sites also provide important information about past climates – particularly upper tree-line/temperature changes

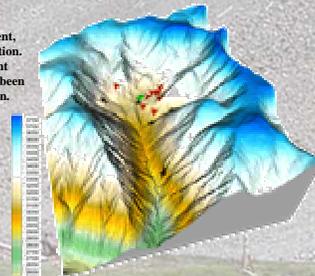


MEADOW CREEK MINE-MINING CABIN PAIRS 2900-3200m

During the late 19th and very early 20th centuries, the central Absarokas experienced a period of hopeful exploration for economically viable precious metals (primarily gold). While the remote mining district at Kirwin is relatively well known, there are also a series of other, more remote mining claims, adits, cuts, and cabins scattered through the backcountry. Although none of these efforts resulted in profitable, long-term mines, the archaeological record of this period of exploration provides a relatively high resolution look at very labor intensive activities at high elevations.



Three discrete pairs of mining cabins, mine adits are represented in the Meadow Creek basin, each representing what appears to be semi-autonomous small-scale prospecting activities. In addition to the record of mining, the basin also contains a series of archaeological sites, and sites associated with historic pastoral (sheep herding) use. Taken together, this group of historic and prehistoric sites allows investigation of multiple landuse patterns across a discretely bounded landscape. While it seems obvious that the placement of adits themselves have no overlap with prehistoric site placement, it is of interest to not that the mining cabins are also located in places devoid of prehistoric occupation. On the other hand, the largest, multi-component site in the basin is also the setting for a permanent sheep camp. Unlike the mining cabins, the sheep camp and the large prehistoric site seem to have been positioned at a central, prominent (yet protected) spot that gives a good overview of the entire basin.



GOLD REEF MINING DISTRICT 3300-3500m

The Gold Reef mining district represents a good deal of financial investment during the earliest twentieth century. In addition to adit and cabins, ore carts and tracks, air compressors, and other heavy machinery were freighted into this high cirque. However, as with the Meadow Creek operations, Gold Reef was abandoned after less than a decades' activity.

Survey of the Gold Reef area in 2003 showed no overlap between prehistoric and historic site placement. The historic archaeology of the Gold Reef area is the focus of Master's thesis by Mueller.



The earliest evidence of historic use of the Gold Reef area, which consists of what appears to be a cabin foundation and debris scatter was much closer to the basin floor and several lithic scatters than the most recent placement of the cabins. As in Meadow Creek, in addition to the mining use of the Gold Reef area, it has also been used as summer pasture for sheep and also as the location of historic hunting camps, both of which also exhibit evidence of prehistoric use.

While taken at face value, the observation that incongruence between habitation site selection by miners and other historic and prehistoric visitors to the high country seems self-evident and trivial. However, we are convinced that closer examination of these variations in landuse patterns can provide valuable insights into understanding less obvious distributional patterns exhibited in the prehistoric record

