LITHIC QUARRY SITES & STONE TOOLS
OF THE OWYHEES
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PROJECT OBJECTIVE:
IDENTIFY QUARRY SITES; LOCATE ARTIFACTS; REGISTER SITES WITH IDAHO/OR. HISTORIC PRESERVATION

BACKGROUND
I first visited these sites in 2007 with Howard Emry, Curator of Paleontology who had collected fossils in the area for well over 30 years. I began finding partial biface tools and stone ground artifacts in the walls and around quarries; including stream beds below the quarries.

GEOLOGY OF THE AREA
Owyhees are 12+ million year old volcanic deposits, fault blocks, basalt, rhyolite, sedimentary deposits and surface lava, part of the Columbia

ARCHAEOLOGY OF THE AREA
The area has been inhabited for more than 13,000 years. The nomadic Shoshone Paiute claim the land as their ancestral home (now Duck Valley Res. 300,000 acres). About 500 archaeological sites are known including excavations of cave sites dating to the Holocene. Since there is little soil, most of the archaeological record lies on the surface. This includes lithic scatters, quarries, petroglyph sites, rock outcrops, ground stone tools and pottery. Most site concentrations are near water sources.

Other Clovis discoveries in southwest Idaho have been isolated surface finds. Most sites are dated at late Archaic period (6,000) B.C.

LOCATION OF QUARRIES
Southeast corner of Idaho-Oregon border (Malheur county); Quarries are mainly on north trending faults;

Largest quarry IS Windy Hill (a.k.a. Crissman Hill,) sec. 24 & 25; t 26s, r 46e; USGS map indicates Crissman Hill in sec. 26 t 26s, r46e; NW 1/4, se 1/2, SE ¼, SW ¼; (Rockville, Or.) 7-1/2 quad. The BLM manages 65% of the land in Malheur Co.

The site is named after immigrants to Oregon in 1851, Campbell Chrisman (1810-1885), (m.Phoebe Flannery;) Gabriel R. Chrisman (1848) and Winfield Scott Chrisman 1847;

THE ARTIFACT MATERIAL
Materials – Jaspers, (picture rock), a/k/a/ chert and other descriptive terms, can be dull, glossy, banded, all colors; no obsidian in this area of quarries. Formed from quartz (cryptocrystalline). On the Mohs scale (mineral hardness) is 7 (a 10 being diamond).

Ground stone tools are also found at quarry sites i.e., hammerstones, scrapers of basalt, rhyolite, granite.

No dating is available for jaspers/ccs materials; Artifacts have been tested by K. Languirand, P.G. of Environmental Services) which gave a breakdown of the mineral elements.
Locations of Quarries in area of research (map by DV)
WILLIAM H. HOLMES

Illustrator and Curator with the Smithsonian Holmes was the first to illustrate that quarry debitage contains the artifacts we are finding. They are often confused with older material like Acheulean hand axes etc. typically found with Homo Erectus. However, the artifacts here are actually representative of the lithic reduction process.
WORKED CORES
BIFACE KNIFE
HAMMERSTONES IN SITU
LARGE HAND SIZE CORE
BIFACE TIP FOUND ON SURFACE
BIFACE TIP IN SIDE WALL
BIFACE KNIVES
CONCLUSIONS:

The area has been inhabited for more than 13,000 years. The nomadic Shoshone Paiute claim the land as their ancestral home (now Duck Valley Res. 300,000 acres);

About 500 archaeological sites are known including excavations of cave sites dating to the Holocene. Since there is little soil, most of the archaeological record lies on the surface. This includes lithic scatters, quarries, petroglyph sites, rock outcrops, ground stone tools and pottery. Most site concentrations are near water sources. Excavations include a prehistoric Great Basin site with a large house pit dated at 7,000-2,000 yrs. ago (WSU); Deep Creek rockshelter, a middle Archaic site excavated by BSU;

The quarries are large tool-making sites where artifacts were worked in several stages for easy transport. The volcanic faults in the area allowed hydrothermal fluid to move through and silicify bedrock, producing the material suitable for knapping. Stages of a tool making site: 1. quarrying the material; 2. shaping the pieces into blanks, cores or biface cache blades that could be transported; 3. refining and putting finishing touches to the blades/tools; The artifacts show little evidence of ground edges or polishing;

Depth of most knives if not near surface are found at 8-10’ in walls of quarry; Long cylindrical cores – has been suggested that they were used for slicing salmon.

In the 1970s a Clovis point was surface collected near an archaeological site along a creek east of Big Springs Creek in south-central Owyhee County; Other Clovis discoveries in southwest Idaho have been isolated surface finds.

Materials – jaspers, (banded) (picture rock) dull, glossy, all colors; no obsidian in this area of quarries. Ground stone tools are found at quarry sites i.e., hammerstones, scrapers. No dating is available for jaspers/ccs materials;

* Technological studies of biface manufacturing based on modern experiments (Ahler 1986; Callahan 1979; Johnson, 1979, 1981) reveal one of the most crucial factors in biface production is maintaining the width of the tool while reducing thickness (width-thickness ratio). Many of the biface tools found are very wide and thick.