

EQUINOX OBSERVATIONS IN INDIAN CREEK, UTAH, DURING 1981-1982

The observations for the equinox sites presented here were made during March 1981, September 1981 and March 1982. Not all panels selected for observation were observed because of the large number that had a high priority to be watched, time limitations, and the frequency of cloudy skies. There are still a large number of panels that need to be checked for solar interaction. Several partial performances (where only minimal parts of a panel performed) during equinox will be presented with similar situations during summer and winter solstice. Only seven panels from three different sites are included in this report. The following is a description of the results at each site.

The McCreery Site

During winter solstice, the observance of a sunrise at the McCreery Site (McCreery 1982) was so impressive that we were surprised no direct interactions with rock art were observed. With the several panels that looked probable, we returned during summer solstice with the McCreery's and observed the performance of the Time Clock (Warner 1983). During equinox the only panel that could be observed was the Upper Register.

The Upper Register consists of two parts. Each section was on either side of a ridge, so that each faces a slightly different angle.

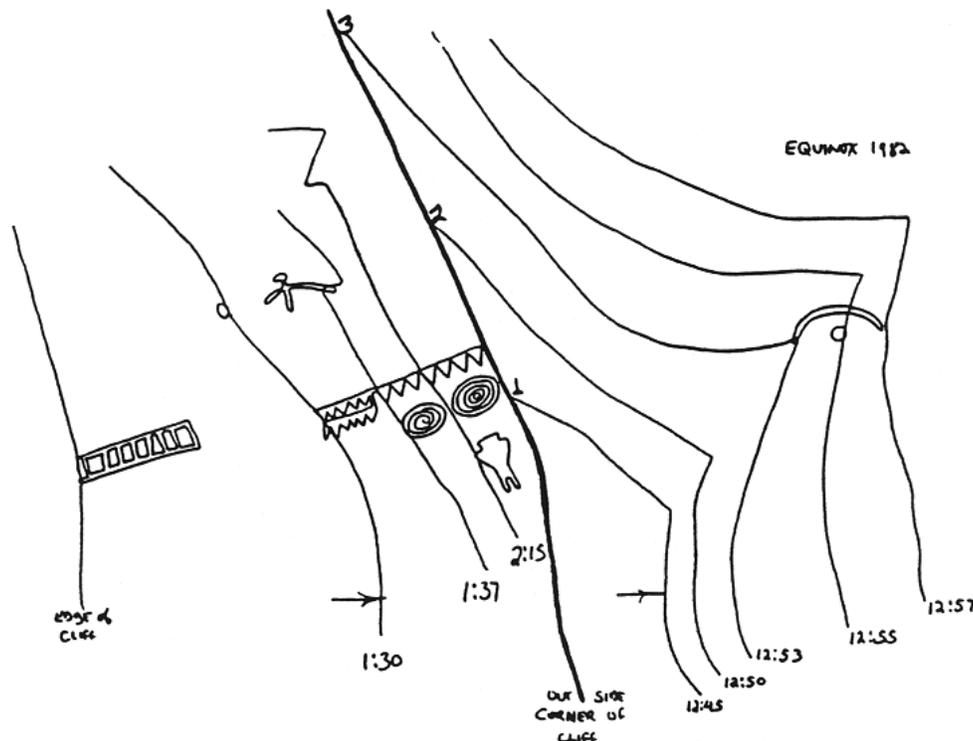


Figure 1. The McCreery Site.

The right section, which consists of an inverted crescent arched over a dot, performed first. At 12:45 P.M. (Mountain Standard Time unless noted) an angle at the edge of the shadow began to move upward toward the crescent. At 12:53 the acute angle touched the left point of the crescent (Figure 1 line 3.). One of the questions most often asked when presenting this type of information is, "Since the shadow moves across these glyphs every day, how do you know which conjunctions are important and which are coincidental?" Most of these questions are from those not familiar with solar movement. After watching several of these sites, one becomes familiar with what happens and what to expect.

Since the sun has a limit to its extreme northern and southern risings, there is also a limit to where the shadow will reach on the cliff. Often these extreme points of progression are marked with rock art, where unique shapes occur in the shadow's line. Twice a year, at equinox, the shadow moves across the exact same point on the cliff. The shape of the shadow on the Upper Register, like every other panel, will change every day as the sun moves between its two extreme positions of rising. Some shadows change drastically from summer solstice through equinox to winter solstice (Warner 1983, Figures 2A and C, 7A-C; see also this report, Figures 5 and 6). Many other shadows maintain the same diagnostic feature, but the position and shape alter with the passing of each day (Warner 1983, Figures 5 and 6). At summer solstice a shadow reaches one extreme then gradually changes until it arrives at autumnal equinox. The shadow then continues to change until it reaches its winter solstice extreme. From there the sun again returns to pass through the same configuration at vernal equinox that it had at its autumnal position; it then continues its cycle back to summer solstice.

The acute angle that touches the point of the crescent on equinox may seem insignificant. However, it gradually changes form and rises higher than the point on winter solstice and lower during summer solstice. Equinox occurs when the precise point of the angle of light touches the point of the crescent. This alignment is so exact, that in my estimation, it cannot be coincidental.

By contrast, at this time there are no particular unique conjunctions or alignments that are obvious on the left section of the Upper Register. At 1:30 P.M., the basically vertical shadow made a progression to the right, through the elements. The spiral and concentric circle in this panel may have a performance during another time of the year. These two circular elements may also simply record the presence of a solar observation post. This panel may simply be a record of observations made by an ancient astronomer as the McCreery's suggest (McCreery 1982).

The Granary Site

At the Granary Site a unique interaction occurs. During summer solstice (at 7:00 A.M. Daylight Saving Time) the sunlight is shaped by the curve in the cliff where the lines representing the shadow disappear (Figure 2). This creates a crescent in the shadow that cups the lower spiral so impressively, see Figure 2 (Warner 1983:48). This panel has Basketmaker, Later Pueblo glyphs, and is superimposed by a few Fremont figures. Because of the differences in technique, the spiral belongs to the Pueblo part of the panel.

During the afternoon, the shadow's line moves diagonally to the right until it touches the center of the spiral at 1:55 P.M. (Figure 2, line 4). At that exact moment, the upper portion of this line touches the outside edge of a concentric circle shield held by a Fremont anthropomorph. The

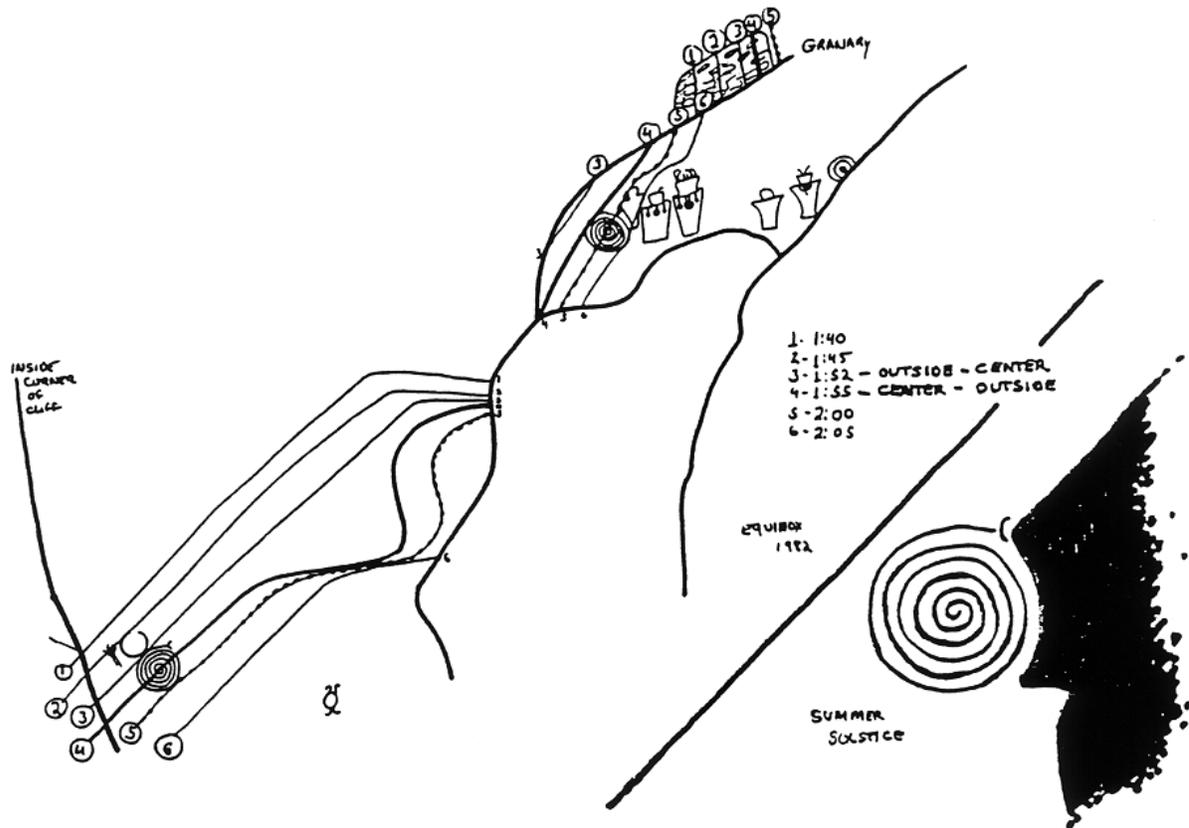


Figure 2. The Granary Site.

next conjunction has an opposite relationship. Line 5 (Figure 2) touches the center of the upper concentric circle shield and the outside edge of the lower spiral. The relationship of the shadow to the rock art is bottom-center to top-outside and then bottom-outside to top-center. The Fremont took advantage of the earlier spiral to interact with their concentric circle on the upper section of the cliff. This is an extremely unique situation. The function of the symbol is calendrical—a sundial-like effect to denote equinox. The fact that the upper solar symbol (the concentric circle) is a shield, possibly relates to mythic accounts of heroes carrying the "Sun's shield". Thus these symbols possibly also have mythical connotations. These symbols then both reveal and conceal information.

The Barrier Canyon Site

The total observations at the Barrier Canyon Site in Indian Creek, I believe, are equal in many respects to, if not more impressive than, the overall impact of the Fajada Butte Sun Dagger. After visiting the site a couple of times it became obvious that the five notches in three different vertical angles of the cliff were not accidental but intentional modifications. Two of these show repeated percussions, which have reworked the knife-like edge of the cliff into two crescent-shaped notches. During equinox there were four panels that performed at this site: the Ambassadors, the Right and Left Circle and the Channel Panel.

The Ambassadors

The main panel that I refer to as the Ambassadors, consisting of two heroic-sized

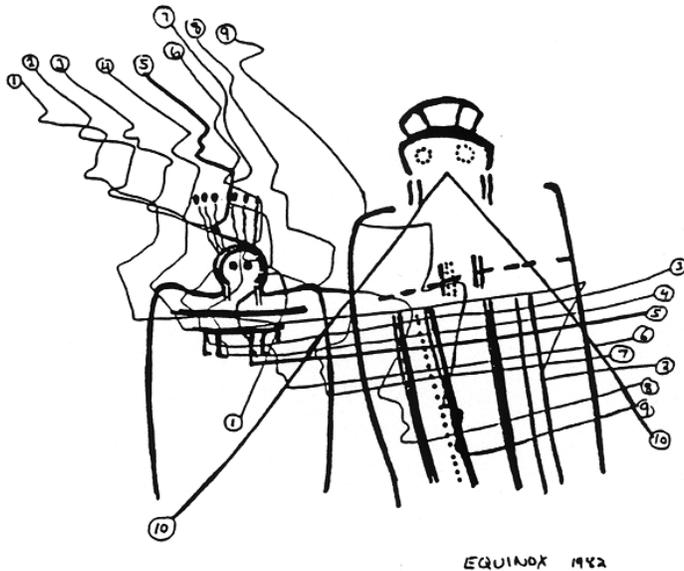


Figure 3. The Barrier Canyon Site.

Barrier Canyon anthropomorphs, interacts with two of the notches. At the moment of sunrise at equinox the sun casts two notches in the shadow at line 1 (Figure 3). As the sun rises, the shadows lower. As the sun moves across the sky, the notches move toward the right. This creates a downward movement at a forty-five degree angle. On this path the lower notch moves across the smaller anthropomorph's head, so that it cups perfectly around the spherical outline of the face (Figure 3, line 5 and Figure 4, line 5), As the shadow continues to move, its form changes to eventually create a triangle of light. As the point of this triangle moves to the right, it crosses over the area of the mouth of the larger figure (Figure 3, line 10 and Figure 4, line 10). The right edge of this triangle of light is created by sunlight passing over the edge of the cliff where the notches are located.

After observing this alignment, it became obvious that the larger figure was placed where it was because of the movement of the triangle of light. After placing the larger anthropomorph where the point would move across its mouth, the lower notch could then be pecked where it would cup around the smaller anthropomorph's head. The upper notch could then also be placed so it would cup the larger anthropomorph's head at its appropriate time.

Here again, there is the outward symbolism denoting the calendrical aspects of marking time. Intermixed with inward symbolism connoting mythical situations, the deeper significance of the notch cupping each anthropomorph's face at its appointed time is not obvious. However, after subsequent study, more subtle concepts have been discovered which will be dealt with in more detail in a special presentation on this site. The triangle of light, however, connotes obvious tones of symbolic expression. If symbolism was intended, it would seem to portray a figure of importance. With the triangle of light coming out of its mouth it would figuratively be speaking with "light", truth, power,

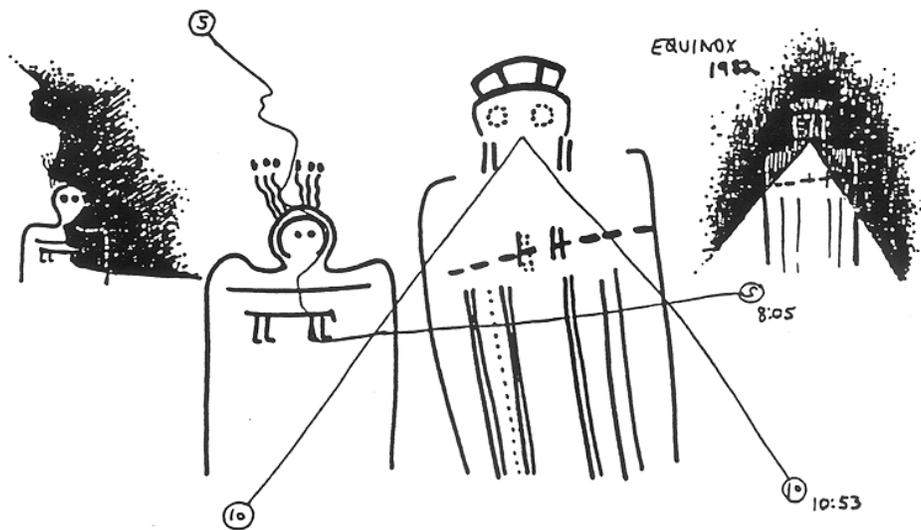


Figure 4. The Barrier Canyon Site.

authority, knowledge and wisdom. It will take at least another year to observe all the implications of this panel, since each notch will pass over each anthropomorph's head twice from summer solstice to winter solstice.

The Right Circle and the Left Circle

One of the remaining three notches casts a cup-shaped notch in the shadow that touches the outside edge of a faint dot-centered circle painted on the cliff (Figure 5A). This in itself is spectacular, but in constantly

had a line slightly off-center, a question arose as to why? During winter solstice observations it was discovered that this line functions at that time of the year as well. It was also discovered that the Right Circle helps to determine winter solstice. Thus, both circles are dual performers marking both equinox and winter solstice. The intelligence and sophistication to create this effect is staggering, and to realize that all of these panels at equinox are multi-performers becomes fascinating.

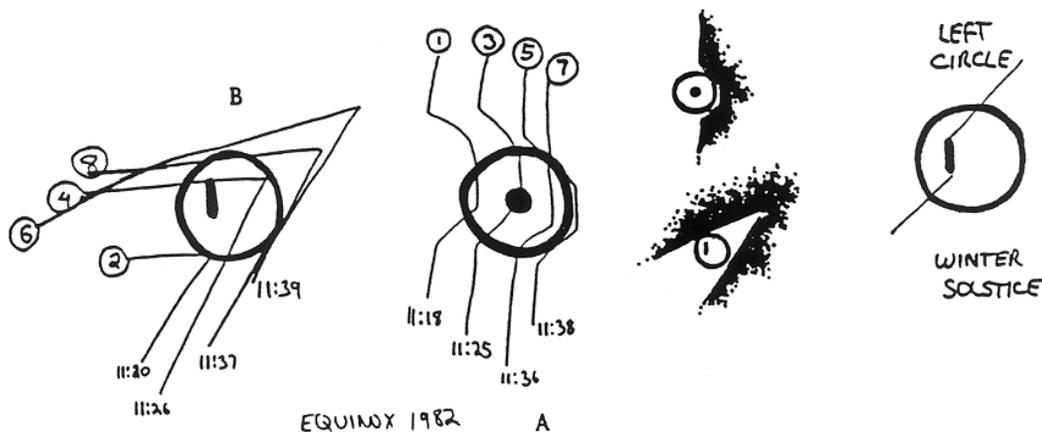


Figure 5. The Barrier Canyon Site.

observing each panel as time passed, I noticed about 75 feet to the left, on the other side of the Ambassadors, another circle being touched in the same way by a triangle of light (Figure 5B). When the Right Circle was bisected, the Left Circle was also bisected (Figure 5, lines 3 and 4). When the Right Circle was completely cupped by the manmade notch, the Left Circle was set in the natural triangle of light (Figure 5, lines 7 and 8). The times recorded were simultaneous.

The height of emotion after watching the Ambassadors perform was only intensified after seeing the two circles. These circles on each side of the Ambassadors create a harmonious balance that adds to the simultaneous performance. Since the Right Circle was dot centered and the Left Circle

The Channel Panel

One final panel performed at this site during equinox. During the initial survey, there was some discussion whether this panel was even intentional. It is very unimpressive. The effect (not the technique) looks as if the artist was cleaning out his brushes. Haphazard, irregular, splatters around splotchy blotches of white paint, possibly blown from a reed, are badly faded. If this panel had been elsewhere, it would not have been observed to perform as it does. At 9:23 A.M. (Figure 6, line 1). the shadow's edge comes down and makes a jog to the left around the upper left circle and bisects another circle as it continues down before it angles back to the right to touch the bottom right circle. At 9:30 the outside edges of all three circles were connected by the edge of the shadow. Line 2 (Figure 6) touches the

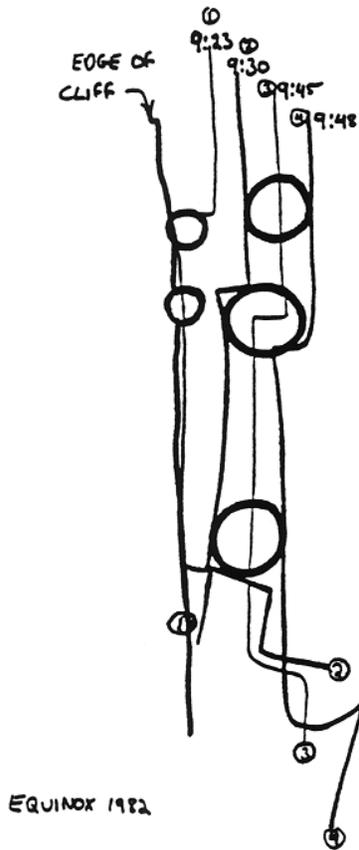


Figure 6. The Barrier Canyon Site.

outside of the top right circle, descends to jog to the left around the center circle and descends again to move around the bottom circle. At 9:45 the line moves to the right far enough to cut through the center of all three circles at the same time. Three minutes later the right out-side edges of all three circles are joined by the shadow's line (line 4). This erases any doubt whether this is, "an insignificant panel". It provides sufficient evidence to me that this is an equinox marker and the circles were placed as the shadow moved during equinox.

There are many other panels in Indian Creek that need to be observed for equinox interactions. I have observed a total of eight during equinox that have significant interactions, another four have partial interactions, and five were checked to determine the degree of shadow divergence on panels that performed during either summer or winter

solstice. One panel marks the place to stand to see the sunrise over The Three Sisters, a unique geological formation on the east rim of the canyon. There are about twenty more panels that remain on my priority list for observation, that have not been observed, or were in the process when clouds interrupted the observation.

So far there are ten panels that have been observed to have some performance during summer solstice—thirteen during equinox and nine during winter solstice. Part of my interest is to try to determine which time of the year was of greater concern for observation. As of yet, these figures cannot be reliable, because of insufficient observation. The heavy clouds that occurred during most equinox observations, and only two observation periods during winter solstice haven't, provided enough criteria for determination. It will take many more years or a greater cooperative effort to make all the observations that need to be made.

The reason this canyon needs to have as complete a study as possible is because it is one of the few places that exist where there is such a complete rock art survey and inventory of solar related symbolism.

REFERENCES CITED

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