

## WINTER SOLSTICE OBSERVATIONS IN INDIAN CREEK: 1981-1982

Of the fifteen panels observed during winter solstice 1981-1982, only nine were observed to perform. Some of the six that did not perform had interactions during another period. Of the rest, this was their initial observation. There is a good possibility that the rest will perform at another time. This report will include only eight of these panels. The following is a site by site description.

### The Recessed Panel

At the McCreery site, after watching the sun rise through the upper window, the light began to appear on the recessed panel below. This panel is set back under an overhanging cliff with a slight opening to the right. Through this slit the sunlight cuts across two, three-ringed concentric circles (Figure 1, line 1). At 11:00 A.M. (all times are Mountain Standard Time) the edge of the light bisects the lower left concentric circle and touches the second ring of the right concentric circle. To the left of these

pecked circles is a white painted horned disc with two pendant lines. At 12:33 P.M., all at once, the edge of the light moved up to touch the top edge of the concentric circles and the top of the horned circle (Figure 1, line 4).

### The Black Circle Panel

At the base of the panels I call the Lost Glove Site is a section of cliffs that has a natural black circle. Next to this circle is a set of two, three-ringed concentric circles. At 1:40 P.M. the edge of the light approaches the bottom of the larger left circle. At 2:10 P.M. (Figure 2, line 4) the shadow bisects the center of the left circle and touches the outside bottom edge of the inner most ring of the right circle. The relationship of center to either the first or second inside ring of these two panels seems an odd relationship. The ideal conjunction, from my point of view, would appear to be center to center. The shadow line will move across this and the Recessed Panel at a different angle as time passes. This is the extreme position the shadow will reach during winter solstice. Movement from here would need to be observed to determine the possibility of a center to center bisection, as well as the summer solstice extreme.

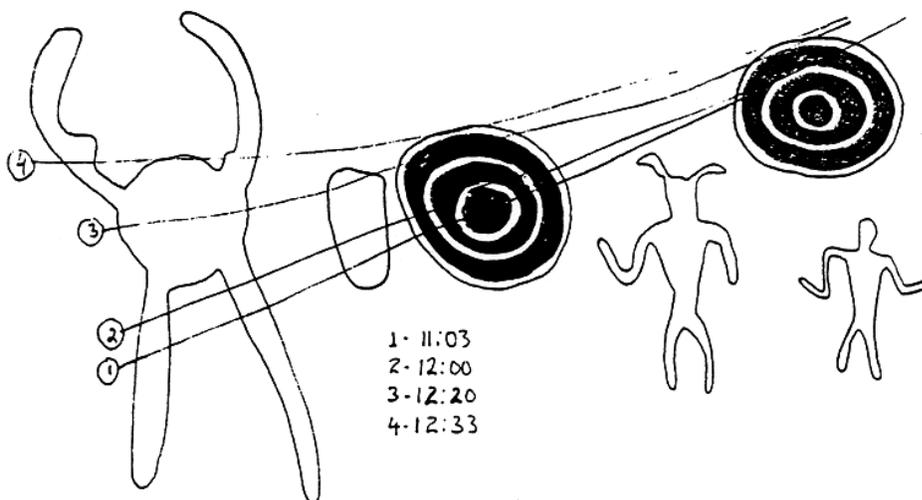


Figure 1. The Recessed Panel.

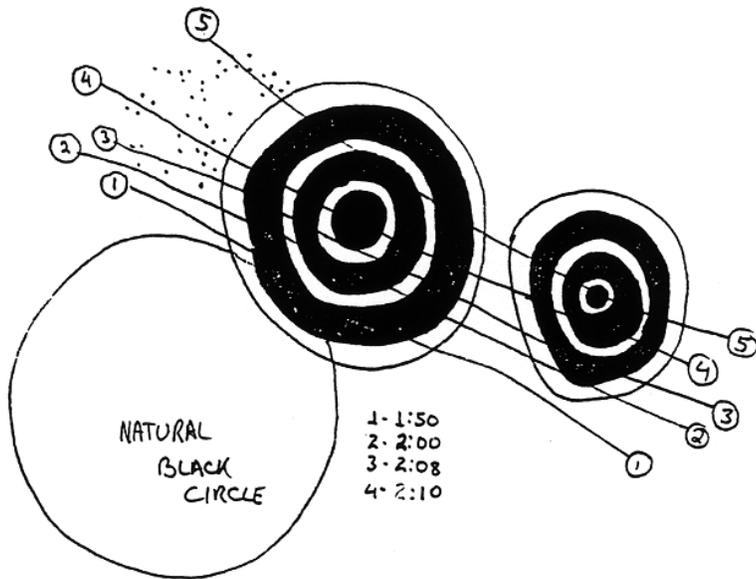


Figure 2. Black Circle Panel.

This alignment is significant because these two panels mark that precise relationship on winter solstice instead of being part way in between two precise points. In Davis Creek, a short distance away, this relationship was indicated by the glyph makers, when they scratched a line from the center of a spiral to the edge of the inside ring of a lower concentric circle (Figure 3). Because

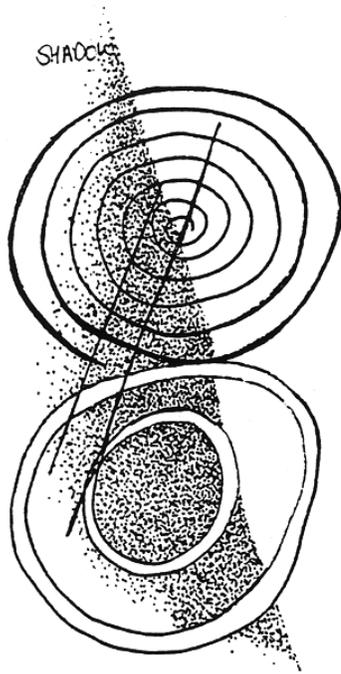


Figure 3. Davis Creek.

of that relationship, and the fact that the shadow made the same alignment in the opposite direction, these two panels are considered to be more meaningful. It should be determined if a more exact alignment does occur at another date.

### The Corral Panel

The dot-centered circle next to another dot was what attracted my attention and gave this panel its priority for observation. During summer solstice the shadow vertically bisected the dot-centered circle without any other contacts. During equinox there was an

interesting relationship with a group of sheep clustered to the left. During winter solstice there were two separate unique events. The first was the appearance of a dagger of light above the sheep (Figure 4,

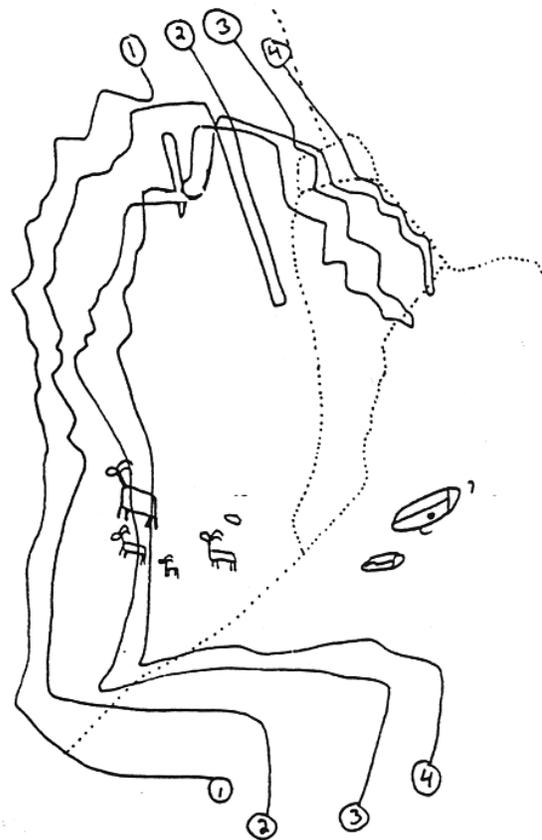


Figure 4. Left Half of the Corral Panel.

line 1, 10:50 A.M.). At 11:00 A.M. (Figure 4, line 2) the dagger lengthened into a long straight shaft of light that moved directly to the right. At 11:11 (Figure 4, line 3) the form of light widened as it took on a zig-zag lightning bolt appearance. At 11:20 (Figure 4, Line 4) it began to narrow until it pinched out and disappeared.

The appearance, movement and disappearance of this form of light never made any contact with any rock art elements, but moved across a block of stone outset from the inside corner of the cliff. This in itself was exciting and seems significant. As the shadow continues to move, a lower step-like form progresses toward the dot-centered circle. At the moment it touches the left outside edge of the dot-centered circle, it also touches the center of a dot within an abstract form higher up to the left (Figure 5,

line 6). When i dot-centered circle shadow lies acrony horizontal and vertical form.

The dot-to-dot sufficient to determine marking step-like pattern during winter so furthestmost extent also mark the si

The lack of any rock art intersecting that feature, in my estimation, does not exclude its consideration as an occurrence they could have observed.

The presence of many other elements, which seem to be contemporaneous, indicates that other concepts are at play. The



Figure 6B

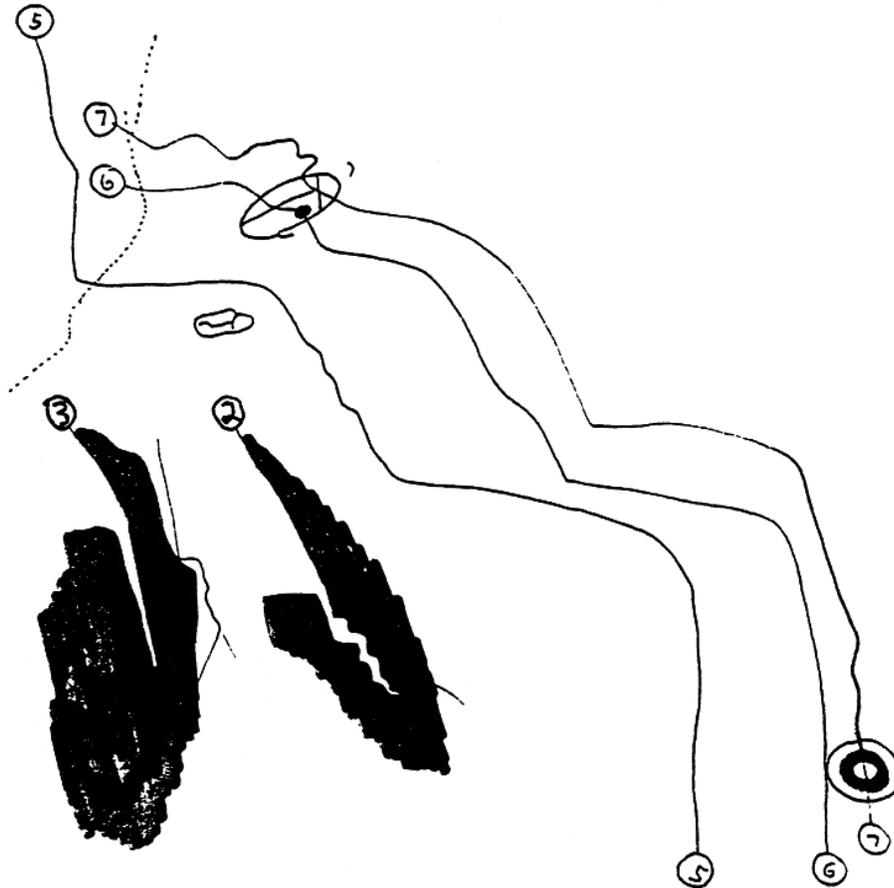


Figure 5. Right Half of the Corral Panel.

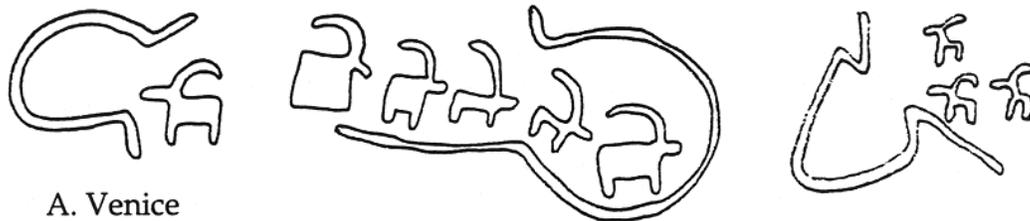
equinox performance of an angle in the shadow with the deepest point moving toward the back of the group of sheep gave this panel its name. The general curvature of the right edge of this cliff also echoes this form. This shadowy corral also occurs on the next panel to the left (Figure 6A). On The Swallowed Up One panel when the



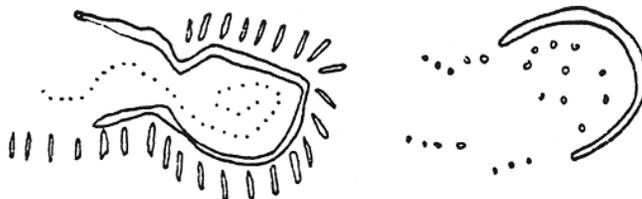
Figure 6A.

triangle of light reaches dot C, it forms a corral-like posture around a quadruped. Both of these panels create the visual imagery of placing a corral of shadow around animals.

At summer solstice on The Double Spiral



A. Venice



B. Indian Creek

Figure 7.

panel (Figure 6B) there is a shadowy corral-like triangle of light above an enclosure similar to those around Venice, Utah (Figure 7A) (Warner 1982). Since two enclosures occur in Indian Creek with implications of hunting contexts, the notion was not unfamiliar to people who lived there (Figure 7B). Figure 6B shows that the enclosure was placed so that the small triangle of light was placed in a symmetrical relationship. This places a pecked enclosure, often depicted as a corral, directly under and opposed to a form of shadow used as a corral at The Swallowed Up One and the Corral panels. The possibility of these sites being related to hunting concepts is strengthened by the two archers shooting at a modified sheep directly above the double spiral (Figure 7). Norman (1936) notes a site in Nine Mile Canyon that he suggests has good possibilities as a marker for spring hunting rituals that could be associated with equinox. There are many hunting scenes in my files that are associated with solar observation sites. As of yet, no one has tabulated the number associated with particular times of the year.

### The Eight Circle Panel

Along the angular sections of cliffs there are many places that look like stairs resting on their side. On one of these is a panel with eight dot-centered circles, set in two rows of four (Figure 8). One of the curious things that puzzled me from the first was that the two rows are composed to form two sections of four. Since a dot-centered circle is such a prominent solar symbol, and there are eight, (possibly corresponding to the eight Pueblo solar months) this panel was assigned a high priority for observation. These circles occur under a rayed circle.

During equinox the first set of four circles has a center-to-out-side/outside-to-center alternating relationship from lines 1-6. Lines 7 and 8, on the other hand, have an outside-to-outside/center-to-center alignment. This panel is one of those that is difficult to work with because of the small degree of divergence in shadow movement

from one time of the year to the next. During winter solstice the same points of contact were made on the first two circles as at equinox. From there, the alignments are not quite the same.

During equinox, the first set of four (or five) circles seem to be the important relationship, since line 8 has the only center-to-center alignment. If that alignment had continued with all of the last four circles, then that would have more consideration for being intentional at this time of the year. Since there are three center-to-outside alignments (Figure 9, lines 12 to 14) during winter solstice, it seems that the last three circles were placed at that time of the year. If that is the case the alignment of line 8 on Figure 8 during equinox would have to be coincidental.

Why the circle bisected by line 10 in Figure 9 during winter solstice wasn't placed so it

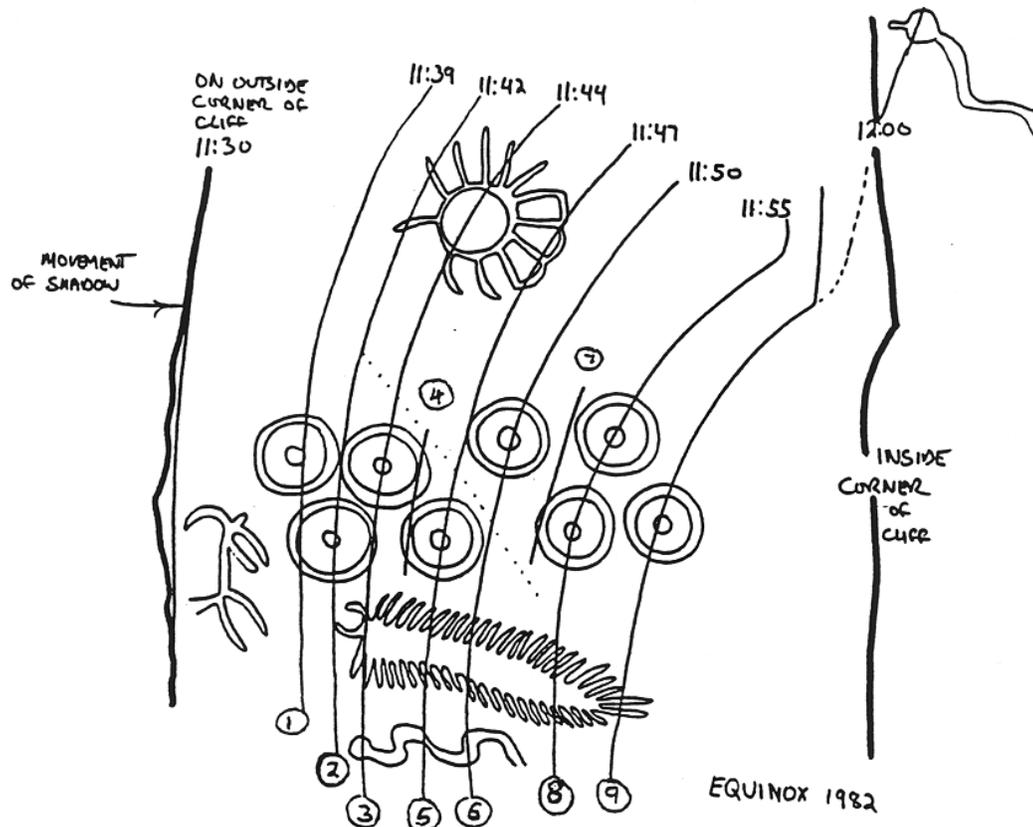


Figure 8. The Eight Circle Panel.

would join into the center-to-outside sequence must mean that the equinox alignment was of greater concern. During equinox it is joined to the center-to-outside alternations by two alignments (Figure 8, lines 5 and 6). One fact provides conclusive evidence to prove that this circle was placed

satisfy my mind that solar interactions were a concern in this composition. The center-to-center alignments with the first five circles during equinox, and the last three during winter solstice also add to the credibility.

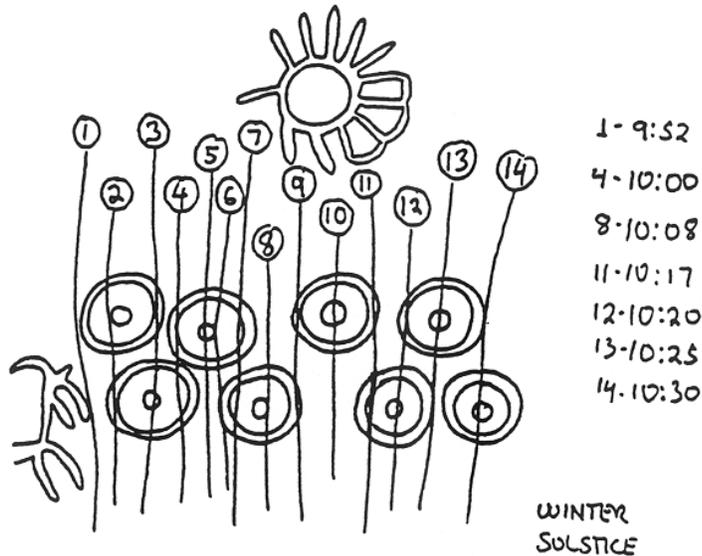


Figure 9.

during equinox. Notice the gradual curvature of the top of the shadow lines 1 through 9 on Figure 8. Also notice the close clustering of the first four circles before the diagonal space separating them from the last four circles (Figure 8, dotted line). If no solar considerations existed in the mind of the artist, the fifth circle would have been placed in a symmetrical position with the first four circles. Instead, it is higher and farther to the right, to maintain the center-to-outside alignments with the shadow on lines 5 and 6. This position is necessary because of the beginning curve in the shadow.

Before any credibility can be placed on panels with such minimal shadow divergence, a considerable amount of observation at other times is necessary to verify the uniqueness of those alignments just described. The positioning of the fifth circle, however, provides enough evidence to

The reason for including such panels into a publication before complete observations have been made is that it is felt it is important to place this information in front of as many people, as soon as possible, so that these and other sites can be considered as more than insignificant or simply aesthetic doodling—especially since this area could suffer disastrous impacts if selected for a nuclear waste dump.

The sites described in this canyon during summer and winter solstice and equinox have been verified as sacred shrines by Hopi consultants. It is also hoped that others with greater expertise can expand on these sites. Another reason is that this one panel has been observed since 1981 and a complete record has not yet been obtained. Finances, times available for observation, being at the spot at the right time and cloud interference have hampered complete observations. I continue to attempt observations so that we will be able to understand every ramification of these and other panels. When that information is obtained it will be presented in an updated report if necessary.

### The Barrier Canyon Site

At the Barrier Canyon Site there are four panels that have interactions during winter solstice: the Left Circle, the Right Circle, the Rainbow Panel and the Double Notch Panel.

### The Left Circle

The Left Circle interacted as an equinox marker by being set into a notch of shadow (Figure 10A). Because it had an off-set line, instead of a dot inside the circle, it was watched again to see if any other interaction occurred with the line. During the November cross-quarter date clouds prevented any observations. During winter solstice the shadow configuration was drastically different. Figure 10B illustrates how the shadow descends to the left and touches the top of the line. It then jogs along the same angle and length of the line. At the end it again jogs and continues the original angle downward to the left. This proves convincingly that the circle marks two times of the year. During summer solstice the light never touches the circle.

In determining the process of line accumu-



Figure 10. The Left Circle.

however, must have anticipated a difference in the shadow form, or from previous observations knew that there was a unique form present during winter solstice. Whatever the case, it took multiple observations before the completion of the glyph.

### The Right Circle

The Right Circle was cupped by a man-made notch in the cliff during equinox. During winter solstice, however, one can stand in front of the Right Circle and look through the man-made notch to see the sun appear over the far canyon wall at the instant of sunrise on winter solstice (Figure 11). At present, this is the only panel known to me to combine in one glyph the dual performance of an active solar site (light and shadow interaction) and a passive observation site (a horizontal sunrise observation site) that functions in this manner.

### The Rainbow Panel

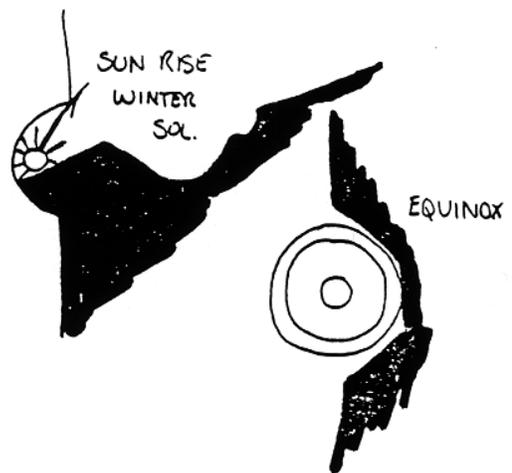


Figure 11.

The Rainbow Panel is probably the most complicated panel at the site. Most of the panel is scratched and so far does not interact with the light. At 10:24 A.M. (Figure 12, line 2) there was a notch in the edge of the shadow moving towards the right toward another dot-centered circle. It seemed certain that it would cup the circle. The notch, however, transformed in shape to a simple angle as it moved through the circle (Figure 12, line 10). Since the point in the shadow gradually moves upward to

this position on winter solstice, then begins to retreat back down, the notch or point will never center on the dot in the circle. What is puzzling is why the circle wasn't placed in the notch of Lines 2 or 3. This notch seems to be produced by a natural form of the cliff. Since all the other circles at the site perform, it was felt that this should also perform. During equinox a triangle of light descends to the lower right passing under the dot-centered circle, but the exact position could not be determined because of

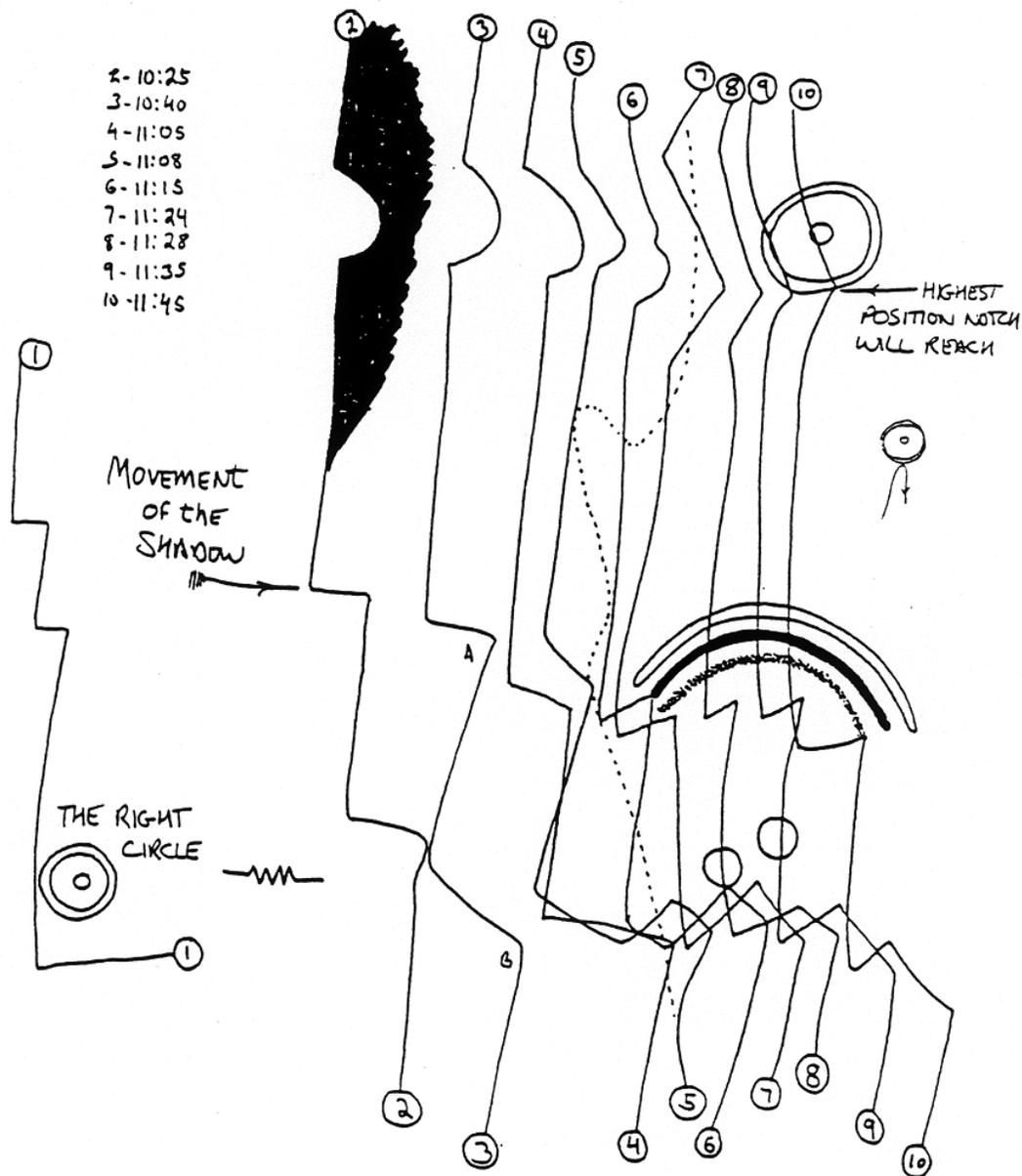


Figure 12. The Rainbow Panel.

cloud interference on the last two periods of observation.

The "rainbow" painted in red, black and white has two off-set white dots centered beneath it. The angles in the shadow made some interesting relationships with the dots and the rainbow. These again are the kinds of conjunctions that are difficult to assess as intentional or not. It is interesting the way the notches at Points A and B move to the right underneath the rainbow and the two small dots. Before any confidence can be placed in this observation it needs to be observed during other times of the year.

### Double Notch Panel

The Double Notch Panel has two man-made notches that create a double notch pattern in the shadow. When I first originally visited

this panel only two figures were noticed—the figurine-like anthropomorph to the left and the abstract figure to the right. As the lower notch approached the randomly pecked dots in front of the abstract figure I became puzzled why no rock art occurred near the upper arch. After a very close examination of the spot I could identify a circular scratched pattern not visible from below. This made more sense. The upper notch passed over the circular element, then approached the abstract element. As the lower notch moved across the abstract figure it created the illusion of something coming out of a cavern. Line 5 at 10:10 A.M. makes a unique conjunction. Like the jog in the shadow on the Left Circle, the shadow jogs on the left leg of the abstract figure in exactly the same way (Figure 13 line 5). As the shadow touches the top of

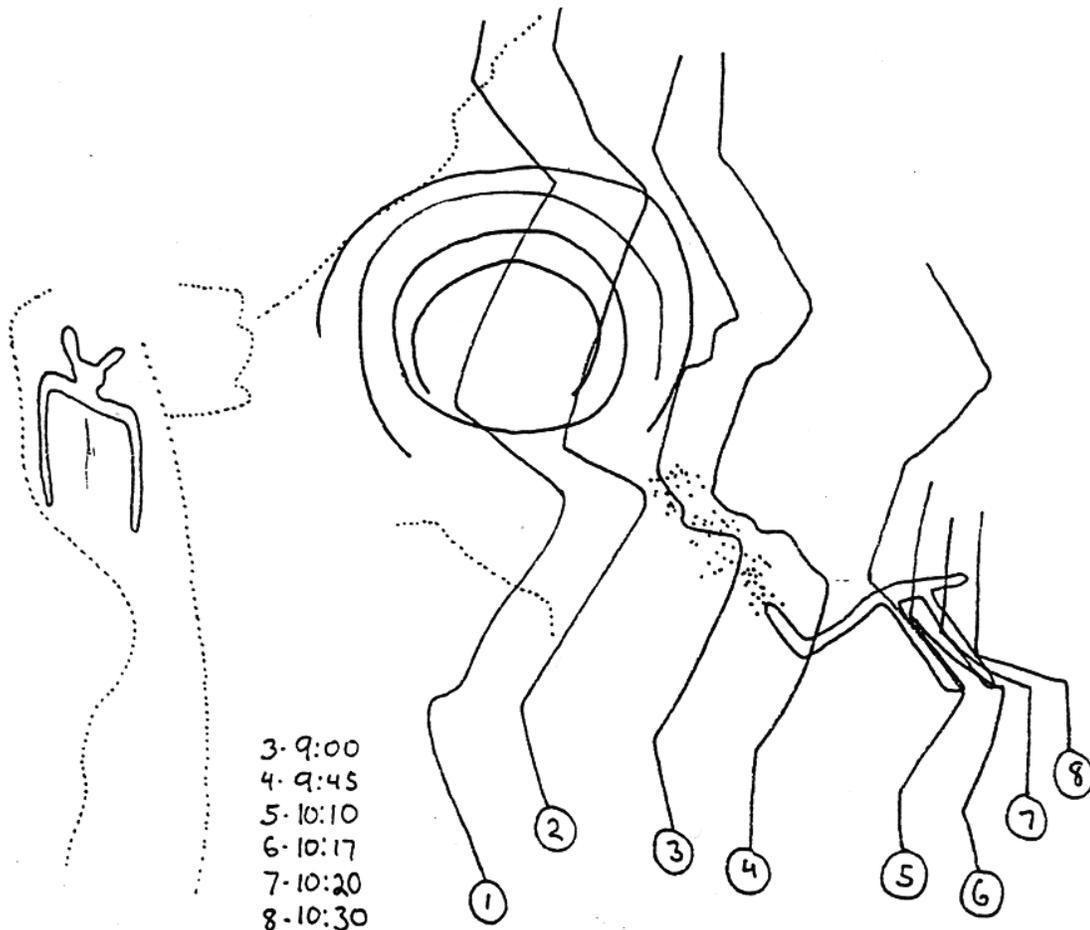


Figure 13. The Double Notch Panel.

the line, it jogs the same length and angle as the line. As it reaches the bottom end, it jogs again—continuing the same angle as before. Lines 6-8 lower enough and change their angle, so that the right leg is not aligned. Again, like the simultaneous performance of the Right and Left Circles at equinox, the fact that twice on winter solstice at each end of the active panels, two lines jog in the exact pattern on the same day over rock art is impressive.

This site is a vital location for understanding solar observations of the Barrier Canyon Culture because of the divergency of types of solar involvement. This is the very first Barrier Canyon site noticed to have solar interactions. Since the first observations here, many other Barrier Canyon style sites have been discovered to have solar interactions. This has led to a new view of the Barrier Canyon Culture.