

SOLAR OBSERVATIONS AT THE RED LEDGES

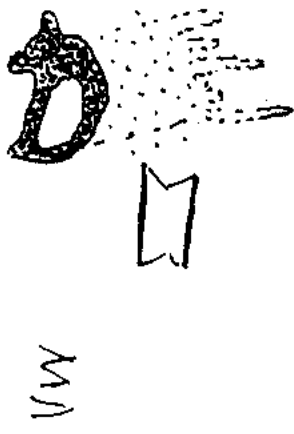
BY

JESSE EARL WARNER

Just east of the Molen Reef, on the western rim of the San Rafael Swell in Utah, is a long ridge of red ledges. Along one of the corridors that penetrates that ridge is a forked canyon where several different cultures left their symbols. The symbols at this site were placed in a concise, physically defined geographical area. In the open arena of the fork, four walls were used to place their graphic remains. Since one of our endeavors is to test the percentages of panels that interact at such a site, we began observations in 1987. The last observations in 1990 still leave a few panels that were not observed, or are not completely observed because of simultaneous performances on different panels or problems with cloudy weather. Further observations will be made when possible until the site is completely documented for all possible interactions. When that is accomplished, the information will be presented with other sites in this project for a statistical analysis. At present over eighty five percent of the panels interact. This paper will only consider the more significant panels.

The first panel occurs on the inside wall of a small rock shelter. This panel is protected by a large rock that leans against the cliff on one side and on a boulder on the other side. It faces the portal through the cliffs, to the far eastern horizon. The element farthest to the left consists of a red painted circle with ticked lines intersecting the bottom of the ring (Fig. 1). Above it are two small dots that have had the pigment smudged upward. The next element is a typical two horned trapezoidal Fremont figure. The paint that produced this image was viscous enough to bleed into the pores of the sandstone around the figure. Since it occurs above the head and horns, as well as spreading over an area that would probably be larger than normal for bleeding, it almost seems to indicate that it may have been a desired effect. The fact that the main portions of the figure were done with a more stable pigment may support this. From the figure's shoulder on our left, there is a ghost-like hand rising upward. The whole production creates a mystical, ethereal effect. Farther to the right there is a geometrical form and a legless animal produced in the same technique.

Sitting with ones head in front of the sun-like symbol allows one to view Equinox (hereafter EQ) sunrise at the tip of a very pointed overhanging ledge that aligns with the horizon. That marks that date with a very dramatic configuration of features. It was photographed on both spring and fall EQ with exactly the same procession (Fig. 2.A). The position of first light inside the cave fell to the left of the partially rayed circle and descended down to the right before coming into any conjunction (Fig. 2.B). At a period when the sun is farther south slightly after Fall EQ or before Spring EQ it should hit higher on the cliff and descend to bracket the circle (Fig. 2.B,



VW

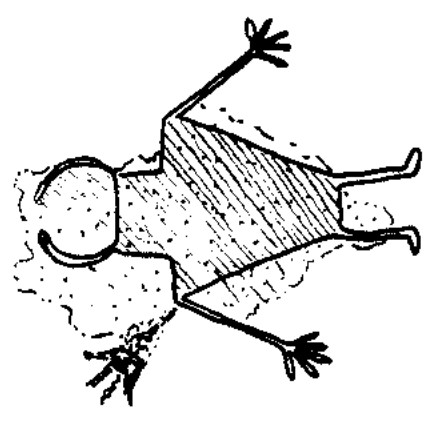
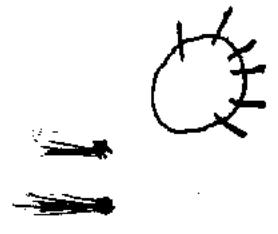


FIGURE 1



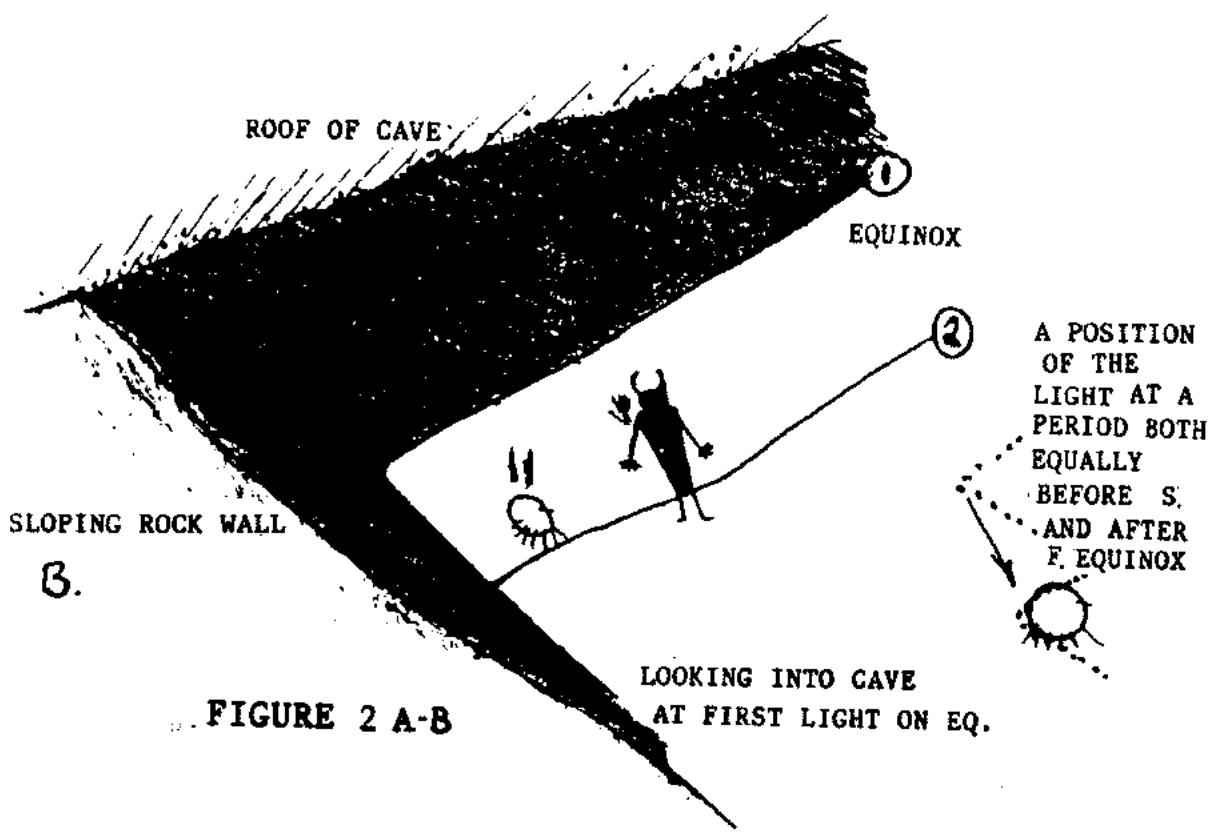
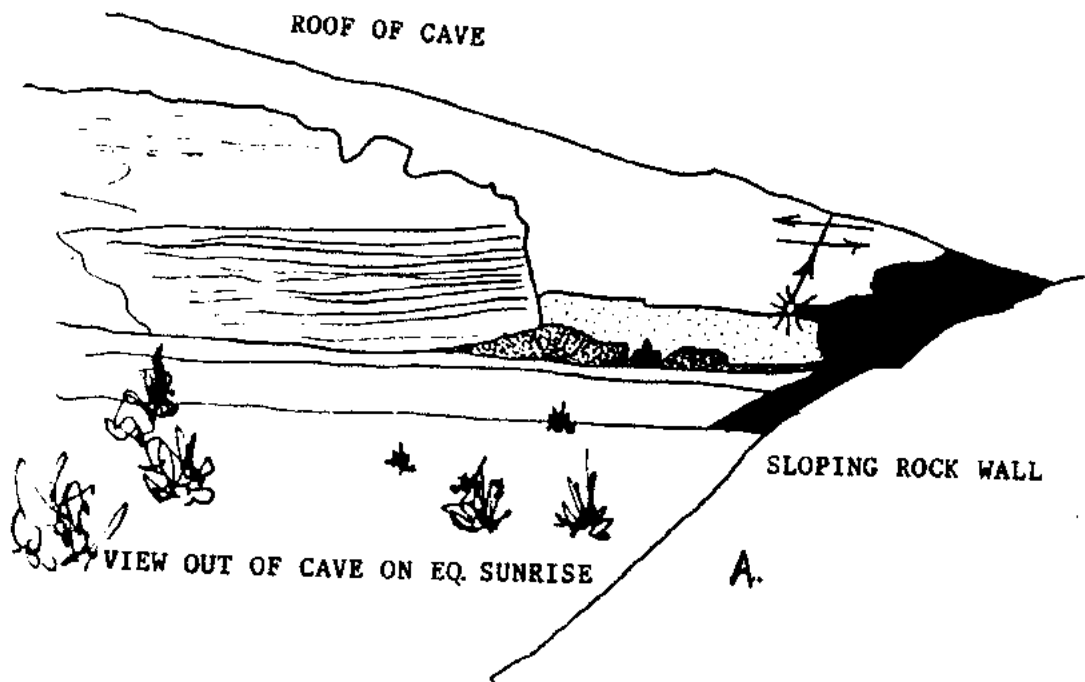
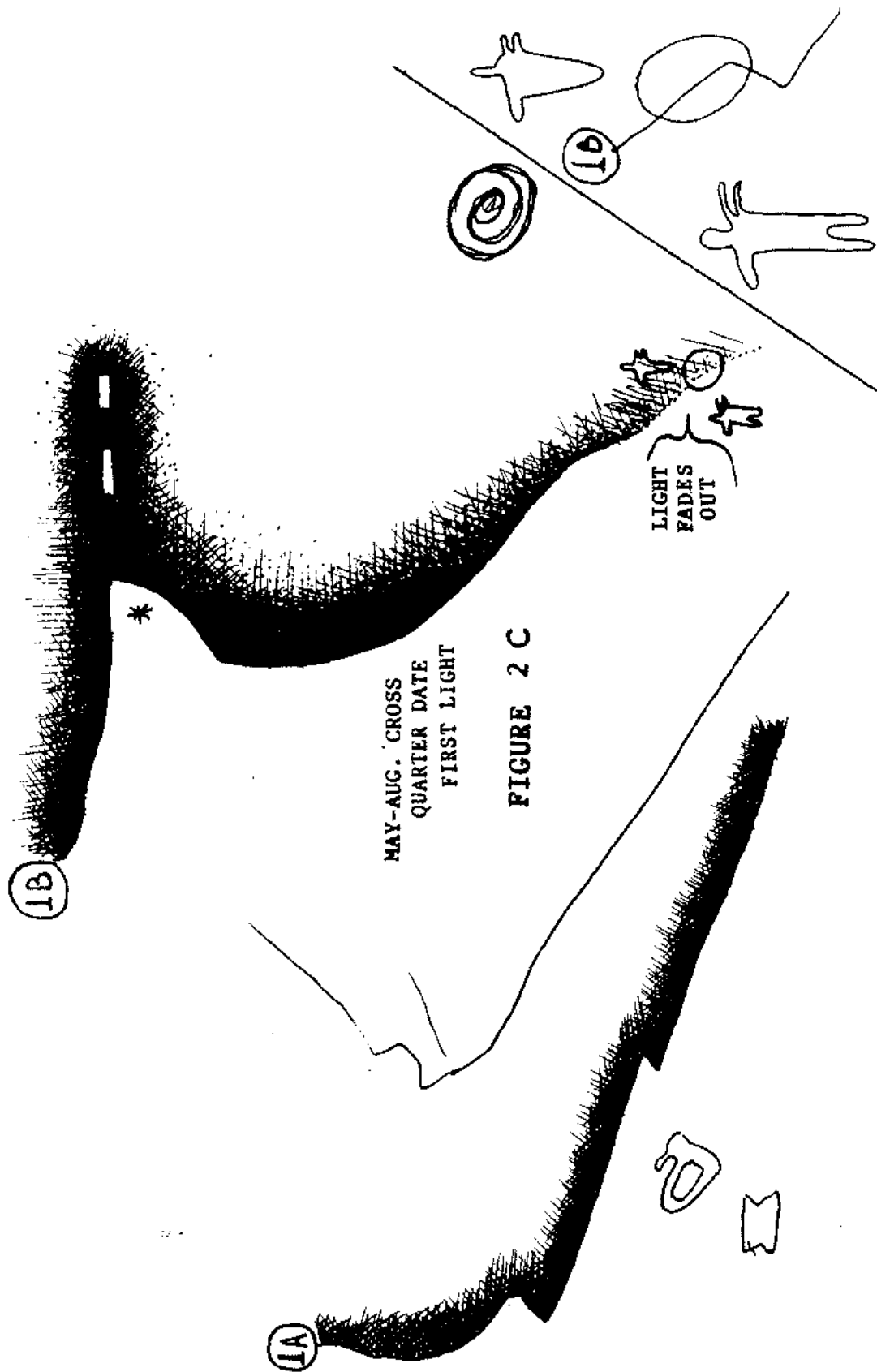


FIGURE 2 A-B



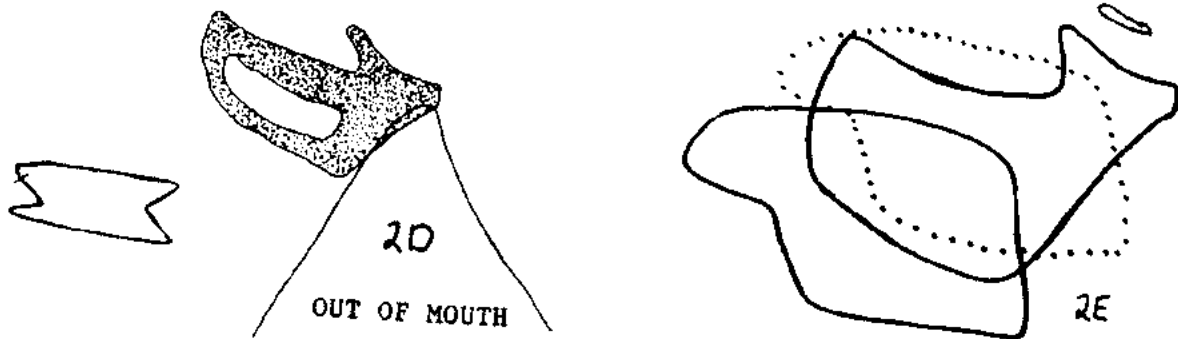


FIGURE 2 D-E

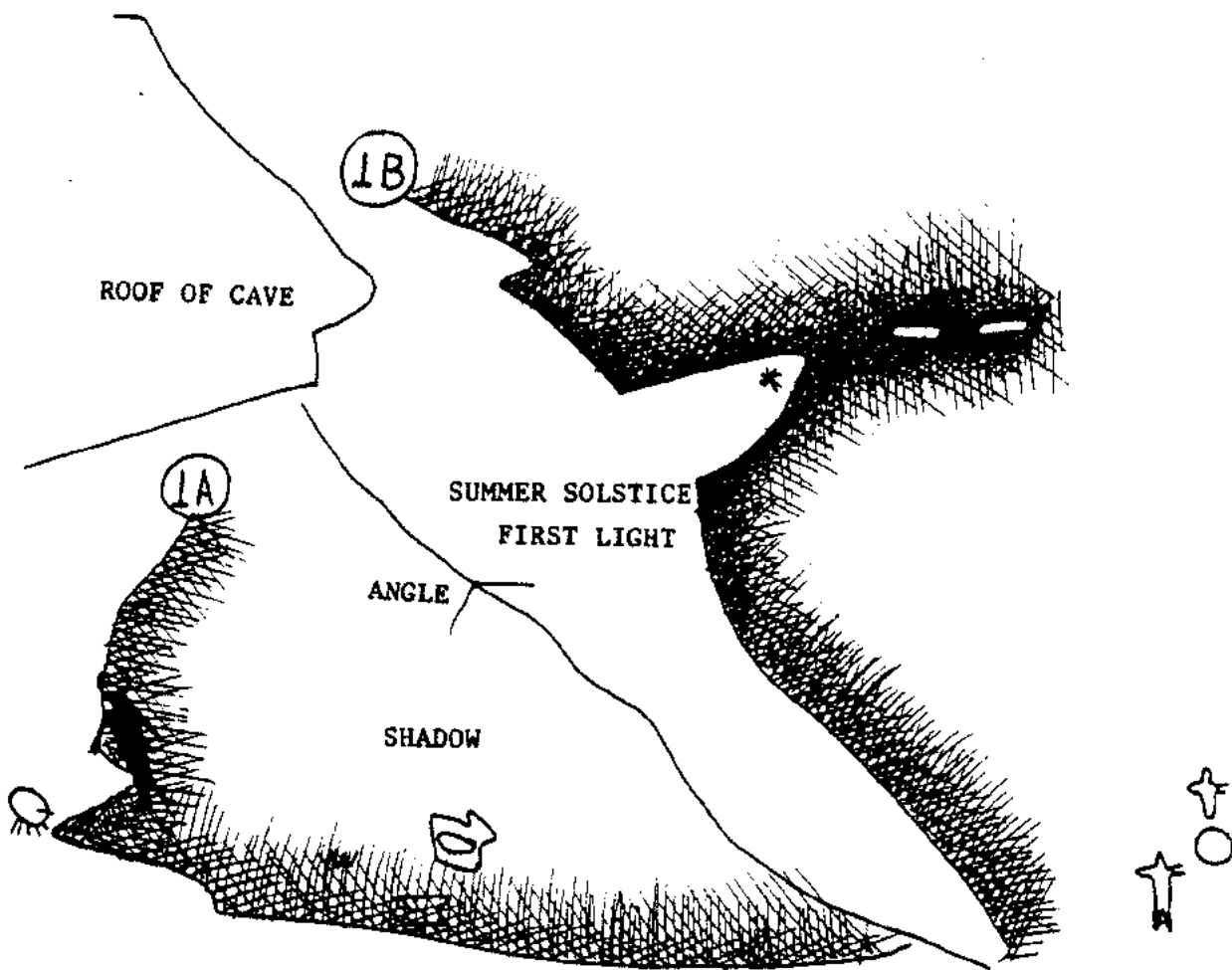


FIGURE 2 F

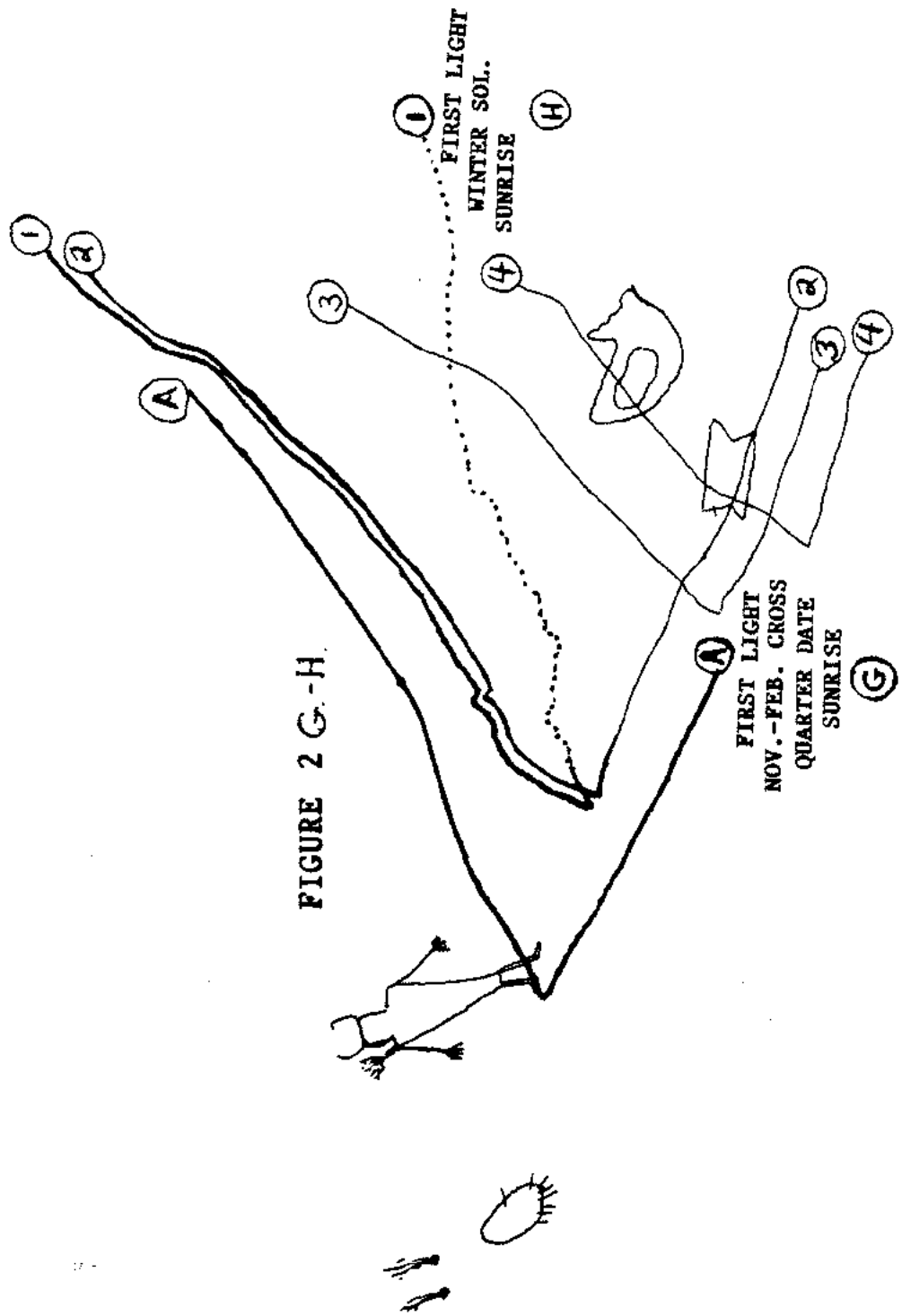


FIGURE 2 G.-H.

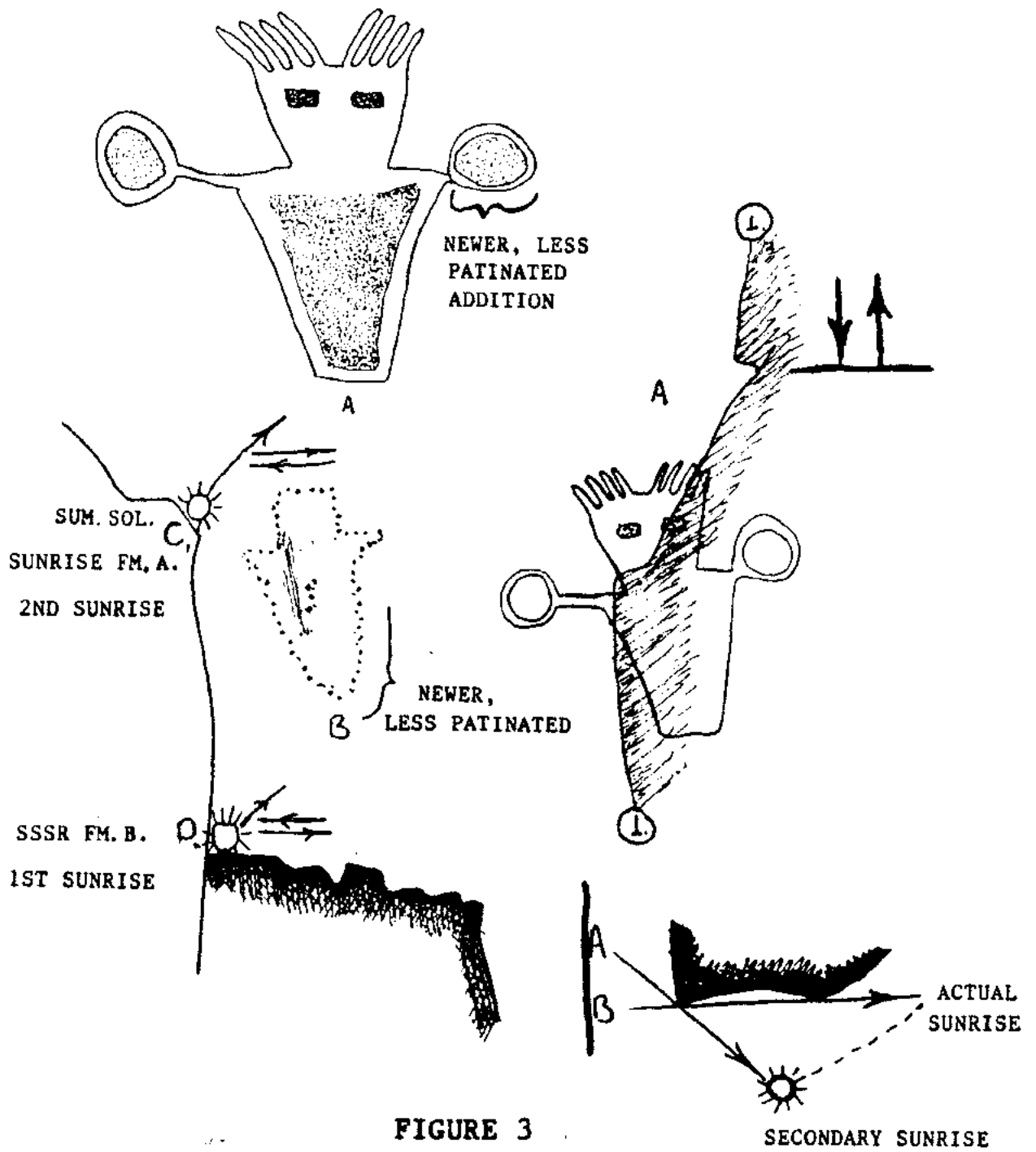


FIGURE 3

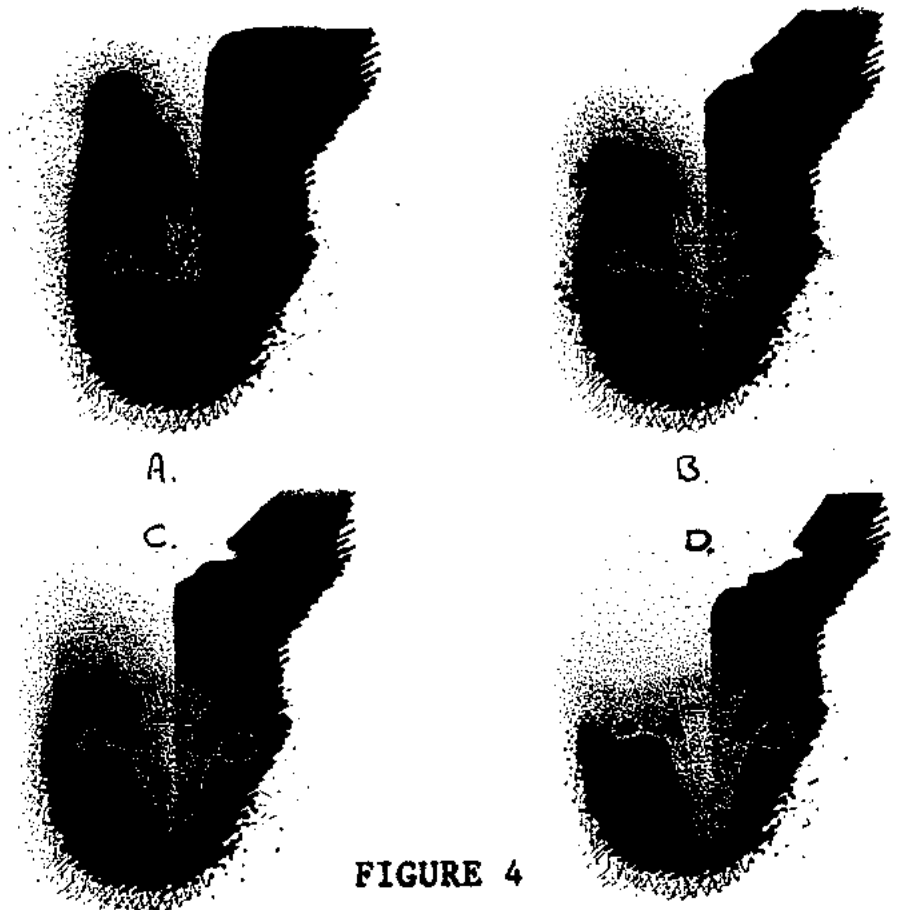
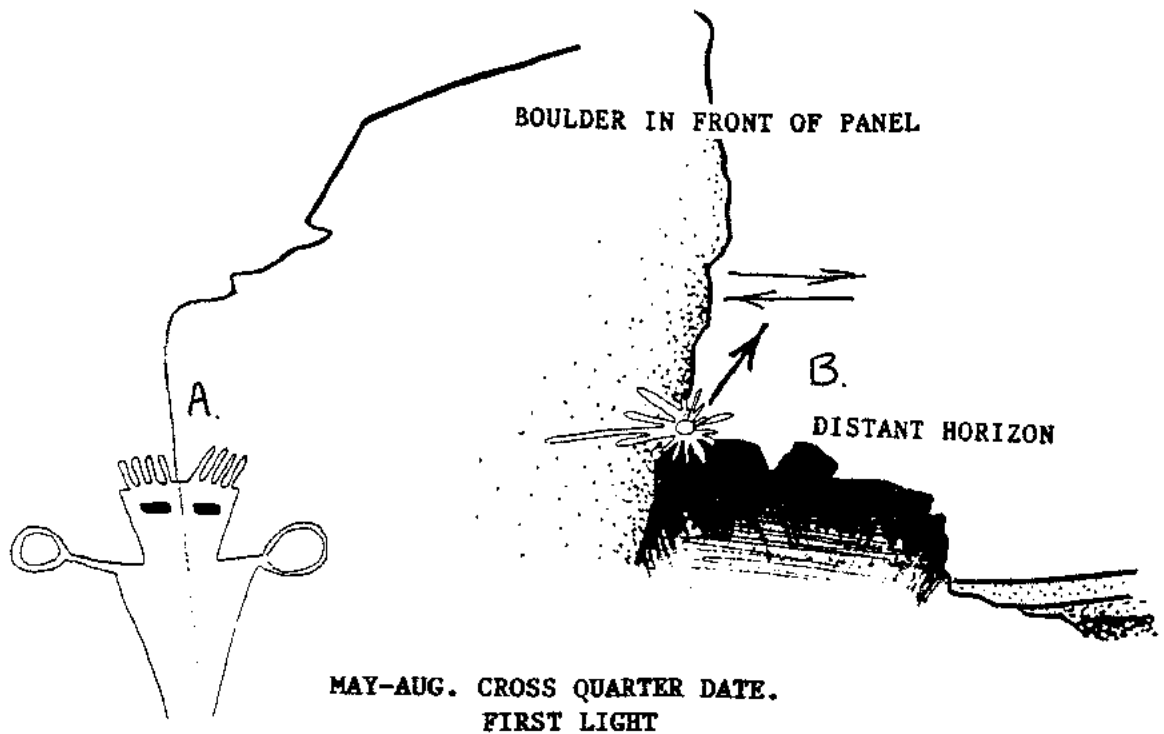


FIGURE 4

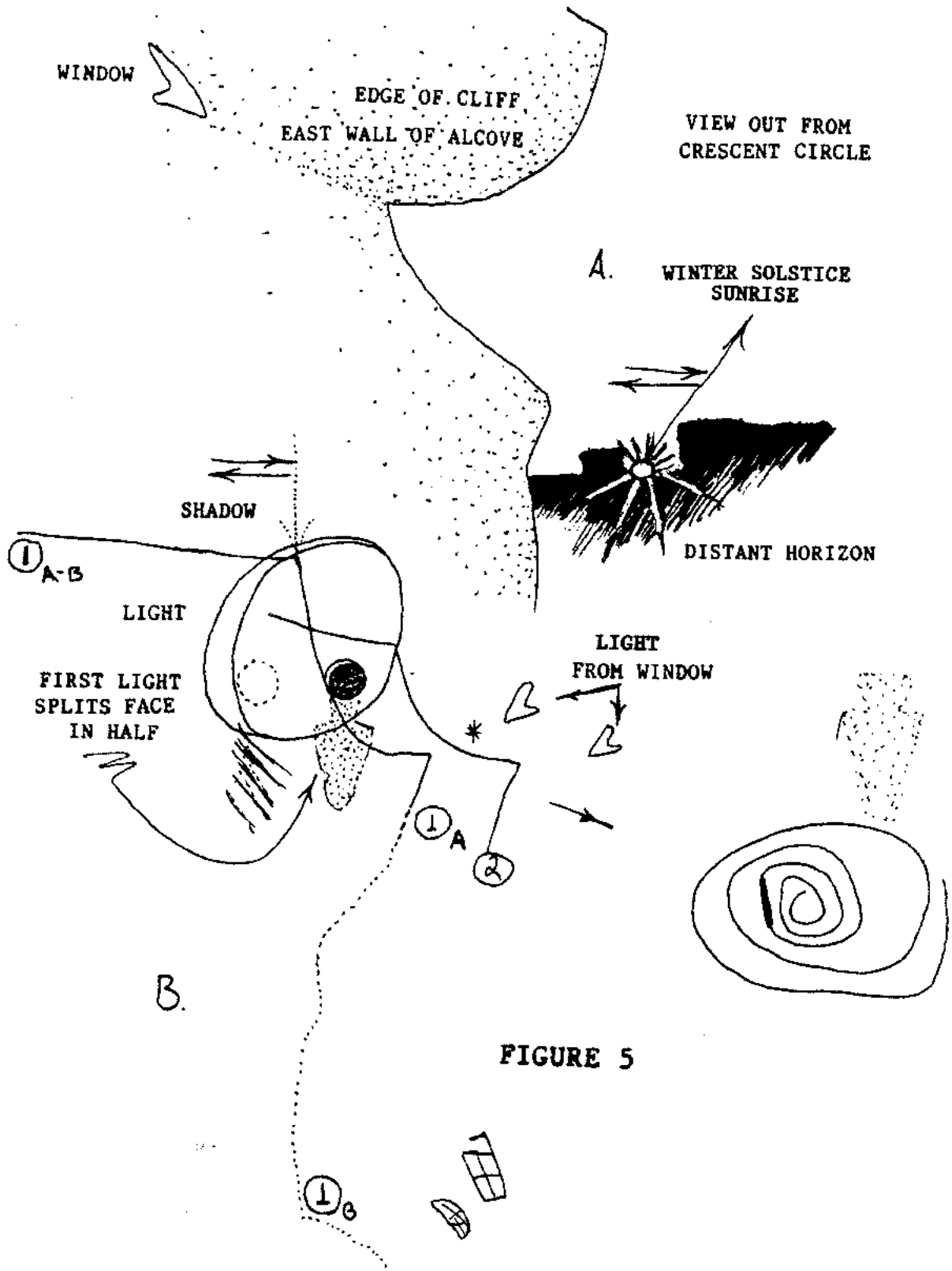
ACTION AFTER FIRST LIGHT SPLITS FIGURE IN HALF.

dotted lines). On Aug. 8, 1990 the Cross Quarter date dividing the period between EQ and Summer Solstice (hereafter SS) in half, the first light appeared on the cliff to the right of the human form and the legless animal (Fig. 2.C). Later that afternoon an angle of light moved over to come out of the snout of the animal (Fig. 2.D). Animals that "speak with light" are another ever increasing category of symbolic solar interactions. A little later a circle of light moves over to partially bracket its body (Fig. 2.E). The position for the dotted lines will probably occur a short period after the August Cross Quarter date. When that happens, the shaft of light will be right of the nose of the animal. That should be observed. The body could have been enlarged so the light centered on it on that date like it did on two other figures (Warner 1989A , Warner 1990). Since it didn't, it probably wasn't important, for that date at least.

On SS with the sun higher, at first light the shadows create a double pointed form, one of light and one of shadow. This first appears at the edge of the human form and the circle (Fig. 2.F Line 1A). The point of shadow barely misses the circle while the point of light descends to form a shaft of light coming out of the groin only moments after sunrise. Out of the groin is another highly symbolic category that continues to grow. On the Nov. 7th Cross Quarter date, first light placed the angle of light on the anthropomorphs right foot (to our left), an odd relationship (Fig. 2.G Line A). Sometime between the November Cross Quarter date and Winter Solstice (hereafter WS), that angle will rise as the sun lowers toward the south. It would be logical that as it does, it may cross the groin as well. On WS the angle of light appeared at line 1 in Figure 2.H.

To the west, behind the upper boulder forming the cave is a circle holding a legless Fremont figure. The circle to our right has been re-pecked at a later period, an evidence of maintenance by another group, who were probably not Fremont (Fig. 3.A). There is a considerable difference in the repatinations. Those later individuals also placed a randomly pecked outline of a figurine form to the left. On SS an interesting interaction occurred. From Figure 3.B the sun could be seen to rise at the exact conjunction of the upper boulder and the top of the cliffs to the east (Fig. 3.D). First light then splits the face of the circle holder (Fig. 3 line 1). However, as one steps in front of the circle holder, one can see the sun emerge from a flat nipple off of the upper block of stone as a secondary sunrise (Fig. 3.C). This like many other observations seem to indicate that different individuals or even groups had a preference for specific types of observations. This will be filed with others of that type for later analysis. On the August/May Cross Quarter dates, first light splits the circle holder (Fig. 4.A), who can now see the sun rise far enough south to appear in the right angle juncture of the horizon and the edge of the upper boulder (Fig. 4.B). Notice how the edge of the light above is very distinct. Then it begins to fade out as it approaches the circle holder. As the sun rises the distinctness lowers, literally splitting the figure in half. This expresses much the same symbolism as the half figure bisected with light that comes from his mouth at Ferron Creek and the one in the Book Cliffs (c.f. Solar Observations Ferron Creek this vol.). Circle holders are also a prime symbol on our priority list to observe.

To the right of the cave is a small alcove with inscriptions on all three



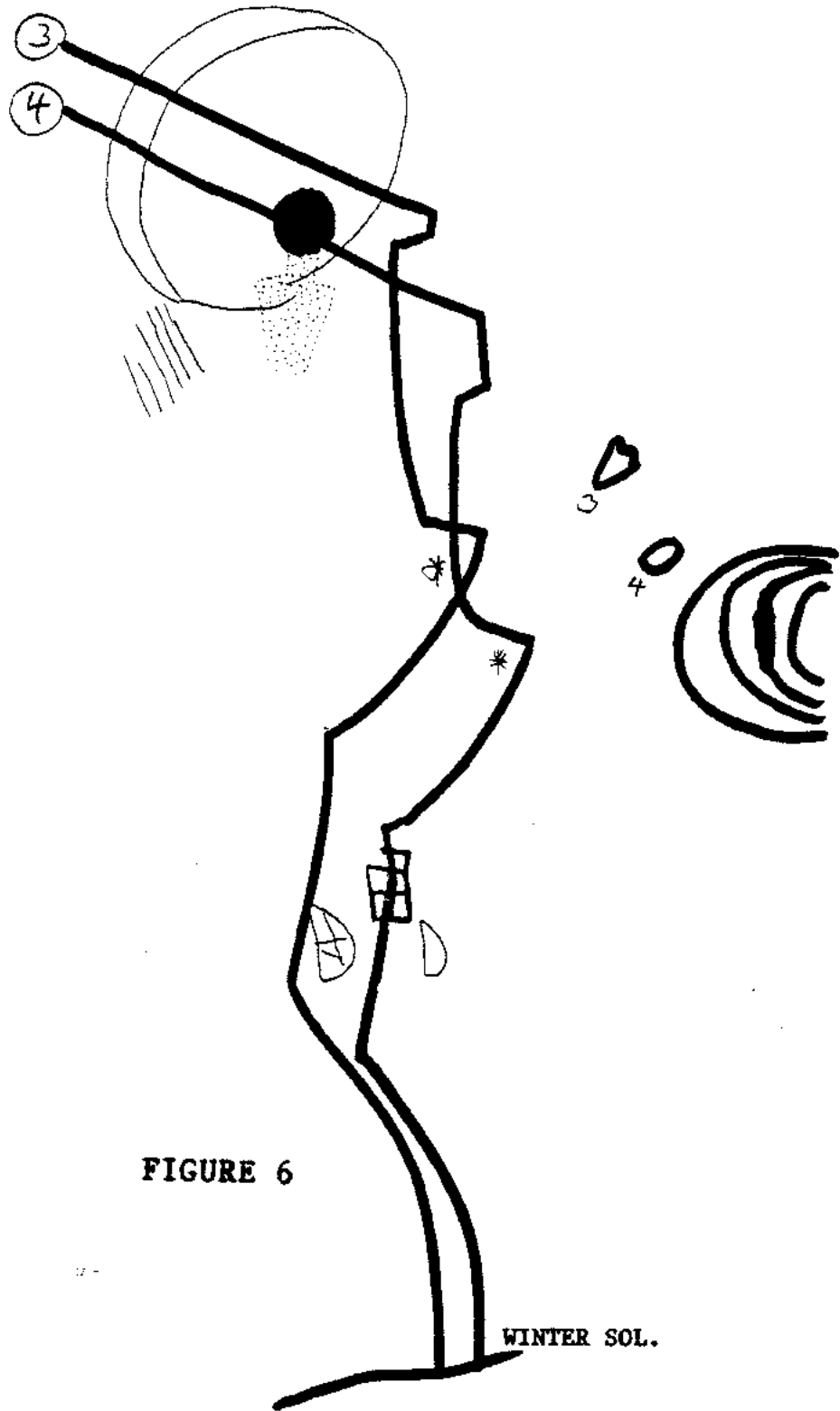


FIGURE 6

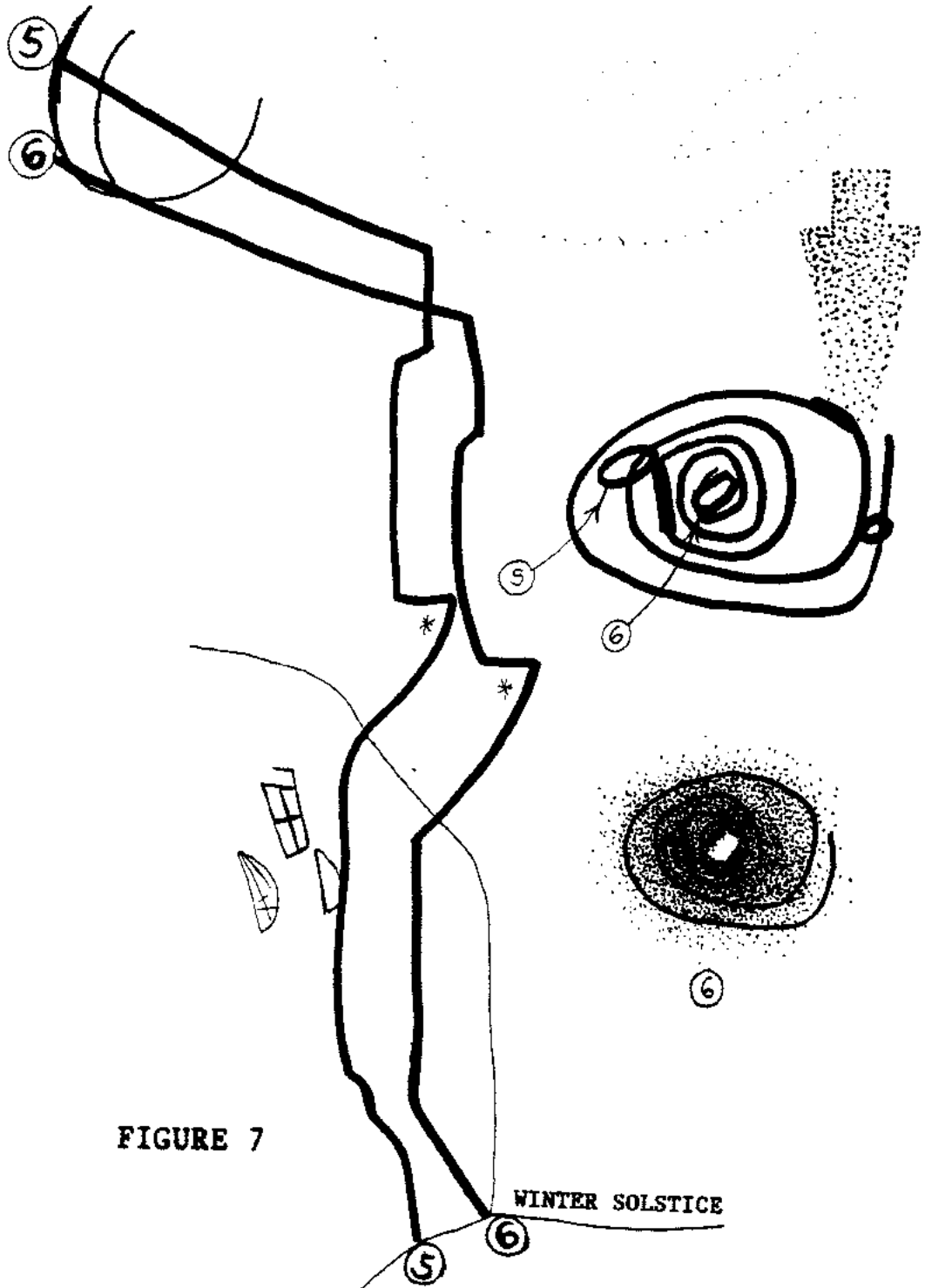
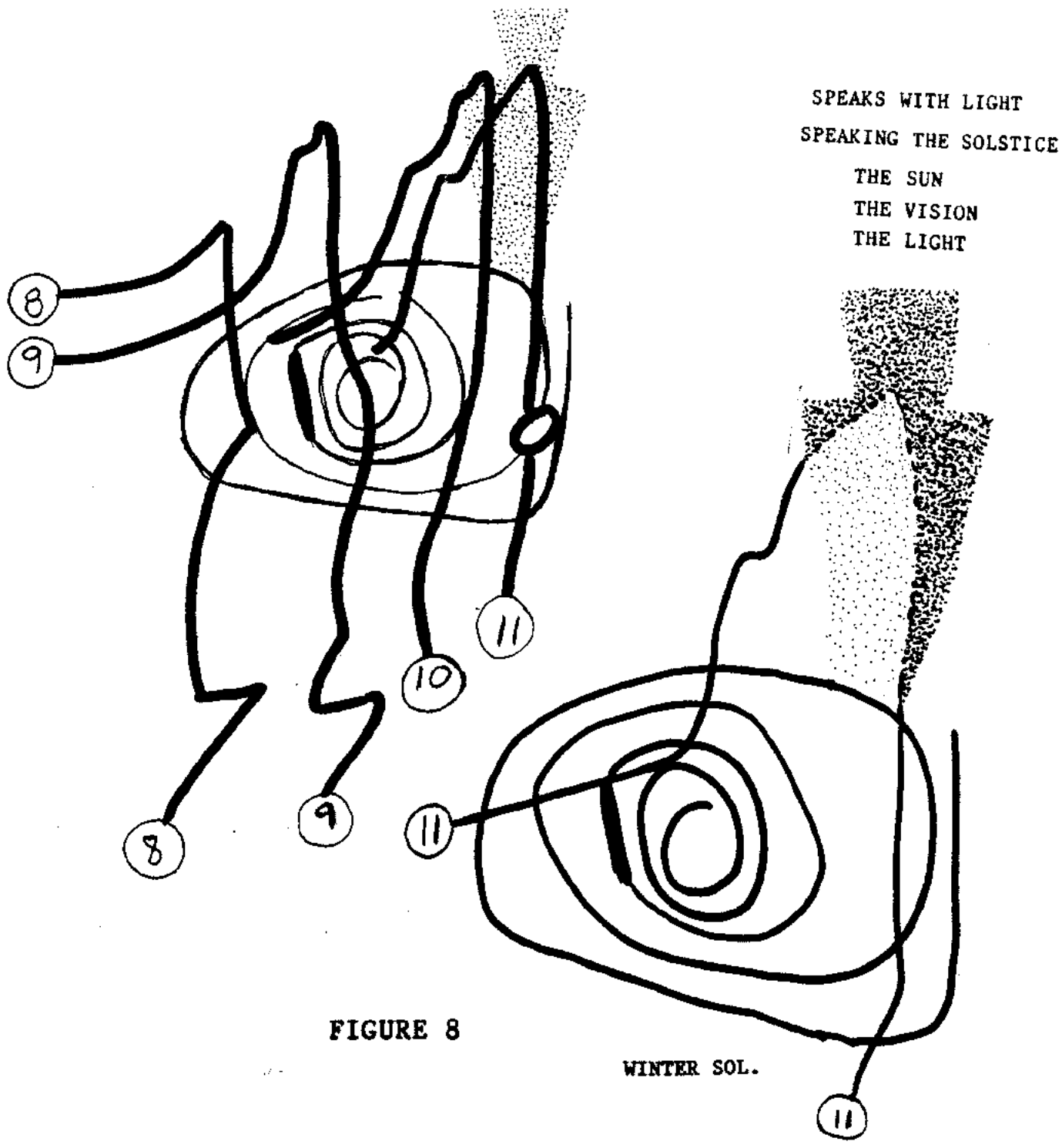


FIGURE 7



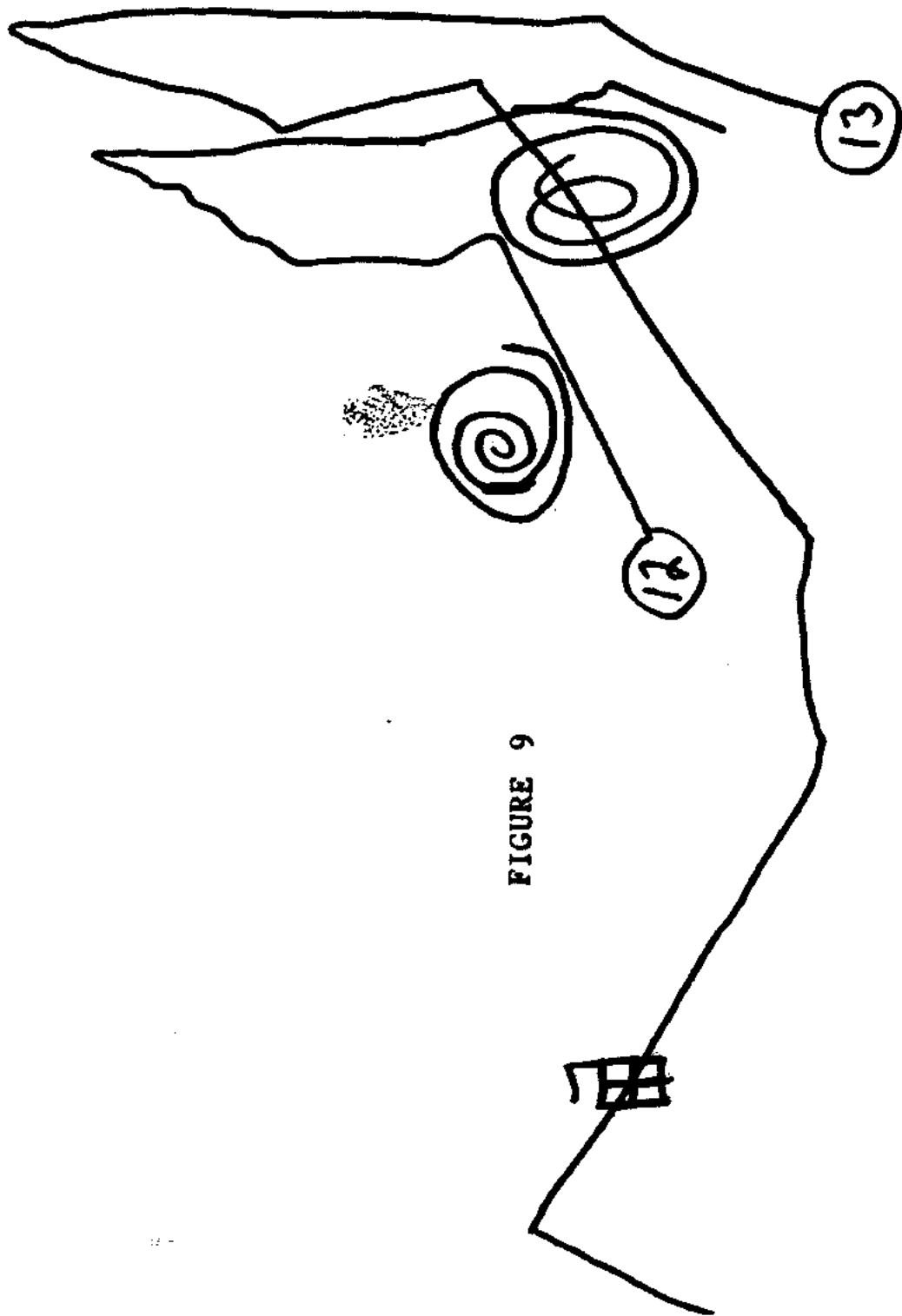


FIGURE 9

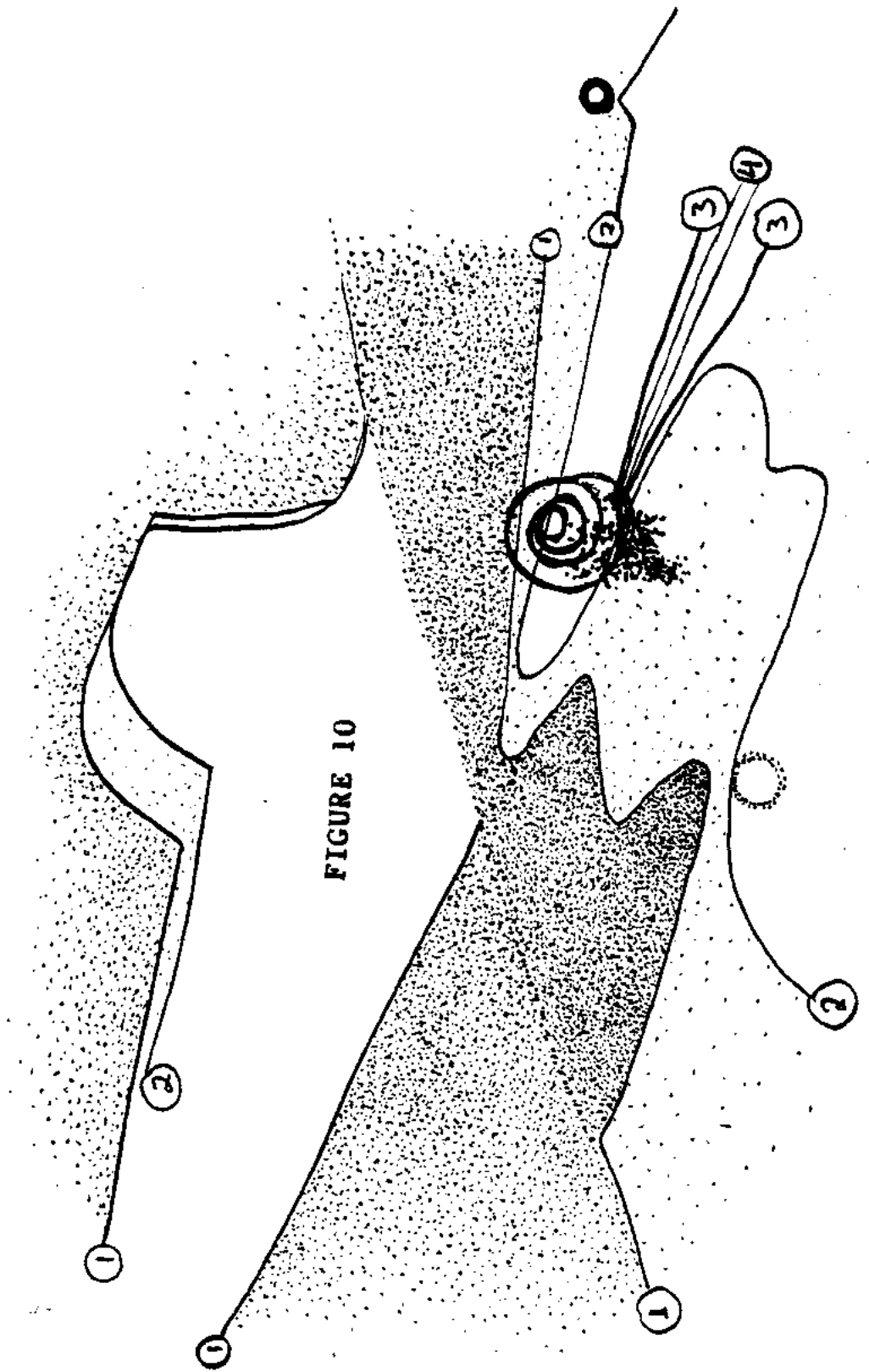
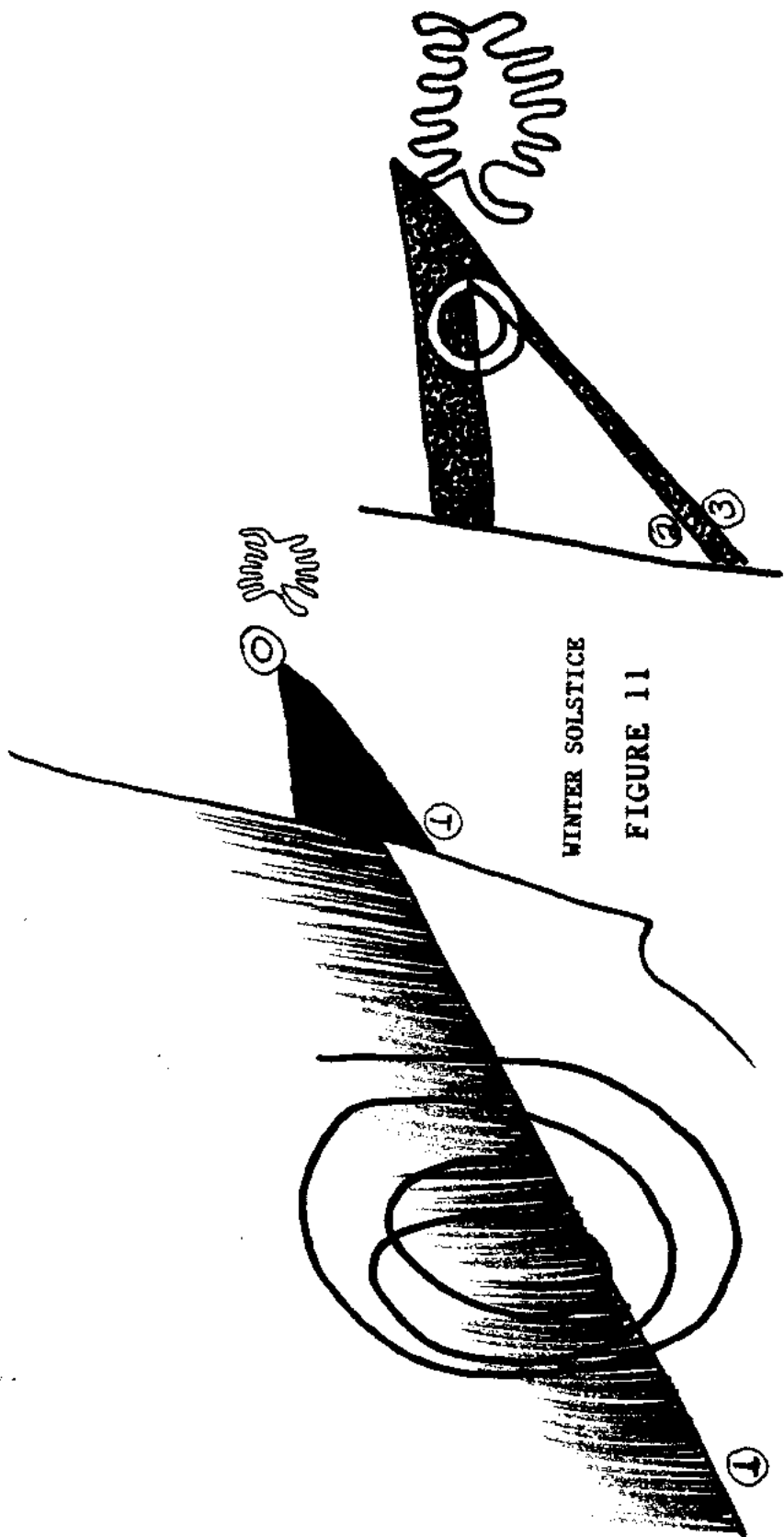


FIGURE 10



WINTER SOLSTICE

FIGURE 11

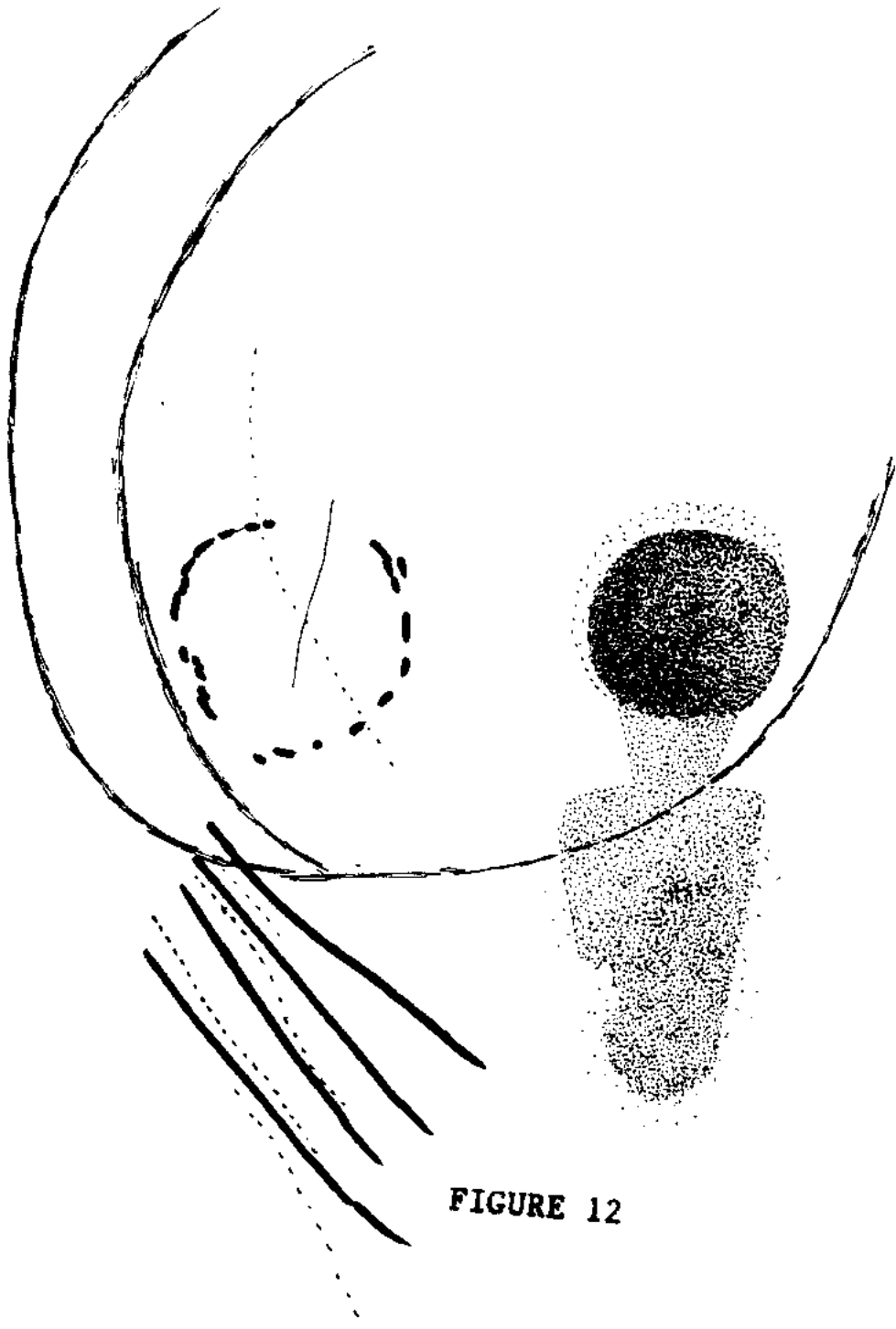
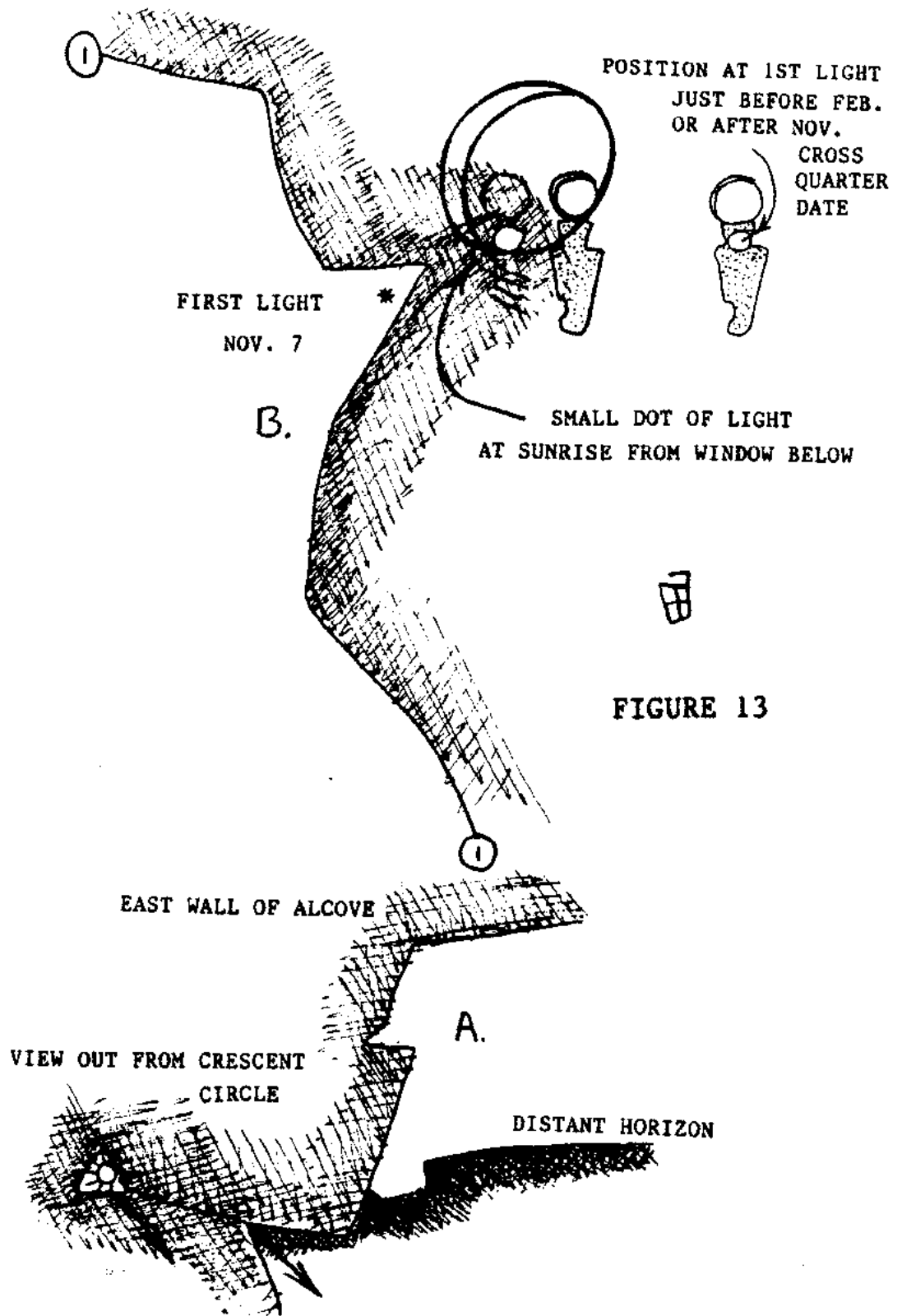


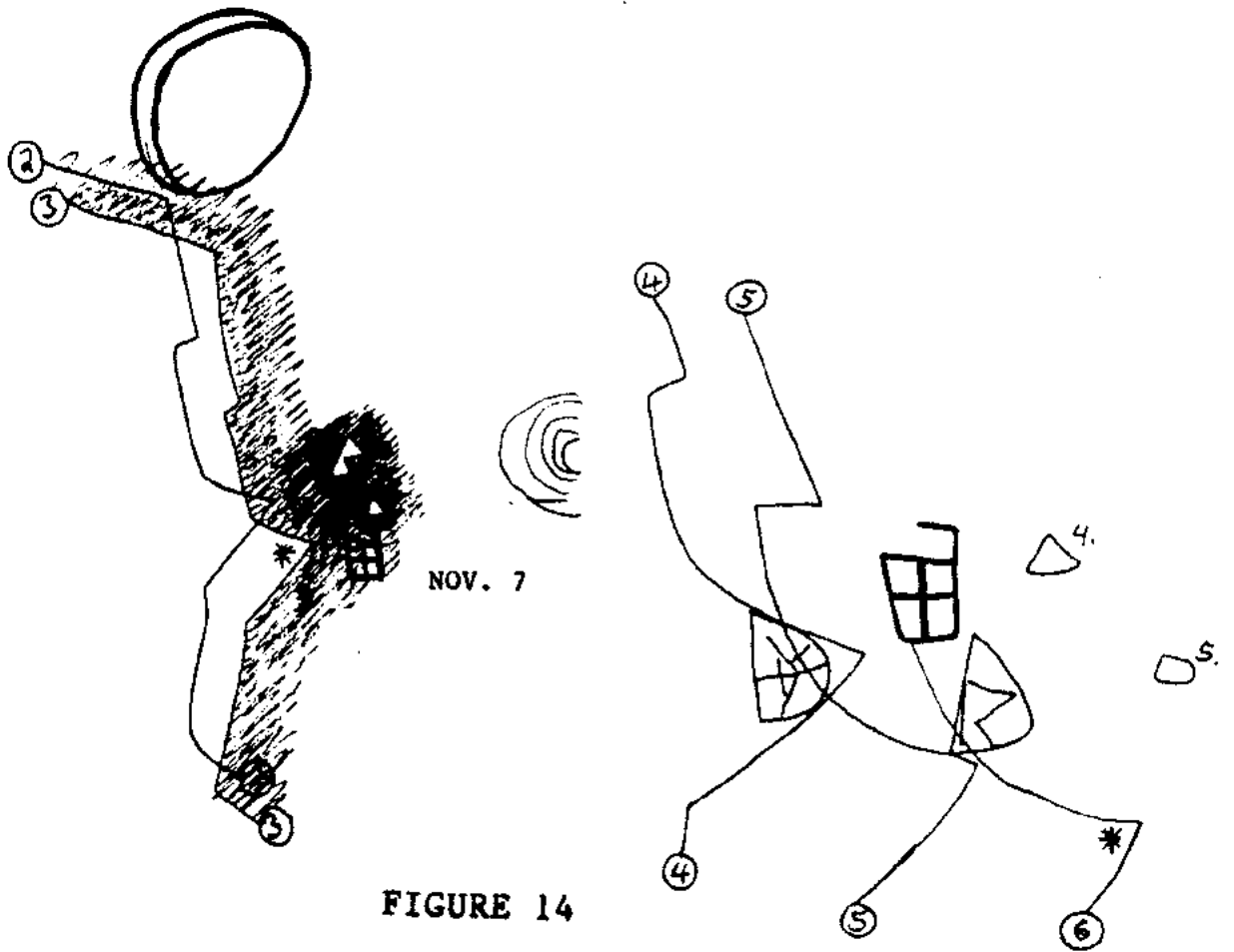
FIGURE 12



walls. It seem there is at least three different styles represented, an older probably Basketmaker set of petroglyphs, Fremont pictographs, and a later set of cruder painted spirals. On WS the first light in the alcove appears to the farthest right that a sunrise will ever reach. At that time a point of light (marked with an asterisk), forms on the back wall to the right of a circle enclosing a crescent (Fig. 5). Soon a little detached triangle of light appears and descends to the exact center of the left spiral (Figs. 6-7). That is a beautiful interaction. The dot of light continues on down as the angle of light (Fig. 8 lines 8-10) continues to enlarge and move to the upper right to the point it provides another out of the mouth context. The figure seems to speak the symbolism of the spiral, possibly the symbolism of the sun (Fig. 8 line 11). It then continues to move toward the right wall (Fig. 9). In the afternoon prior to the light hitting the right wall, on the left wall a mouth-like form of shadow descends to slightly miss swallowing a red spiral. As the open mouth passes the spiral, the spiral rides up the edge of the shadow continuing to maintain that performance until a point of light on the shadows edge descends to cross the center of the spiral as it pinches out (Fig. 10 lines 4). That is another very precise and convincing interaction. From there the shadow moves across the back wall and then interacts precisely with elements on the right wall (Fig. 11).

In Figure 12 notice the solid red circle to the right within a larger circle with a crescent on the left. The red ball was placed on the head of a white Fremont figurine body form. This combines symbols to create a Sunheaded figure. Also notice the white outlined, dashed circle to the inside left of the larger circle. Below it are alternating red and white lines believed to possibly be the body decorations of another figurine form (this is not all that uncommon). The white circle would probably be above this figure's head, based on the duplication of the concept and the size and space relationships with the Sunheaded figurine form to the right. This creates an interesting situation with one definite and one probable sunheaded figure side by side. Remember that on WS the detached dot of light appeared on the wall to the right of the circle enclosing the crescent. On the November Cross Quarter date the point of light (marked with an asterisk on Fig. 5), appears to the left, within the circle enclosing the crescent. The little dot of light appears directly below the little white dashed lined circle probably creating an actual "Sunhead" or sunface or at least encasing the face of that figure with light. At a date just shortly prior to the February Cross Quarter date and shortly after the November Cross Quarter it will move to the right as the sun moves in to or out of this relationship and appear on the face of the right "Sunheaded" figure, another offset date possibly a preparatory marker (Fig. 13).

As the light descends it brackets a square, quartered box with an attached line. At that time the point of light brackets an interior lined D shaped element (Fig. 14 line 4). As the edge of the light moves across the grid to touch its upper right corner, the sun moves into a position to allow light to flow through a slot in the roof of the overhang. At that moment a hair thin line widens to form a shaft of light that reached up as high as the center of the left spiral on the back wall, at its first appearance (Fig. 15). It seemed like an arrow shot stright to the center of the target. It remained there momentarily until it had widened a little more, then it rose to pass the



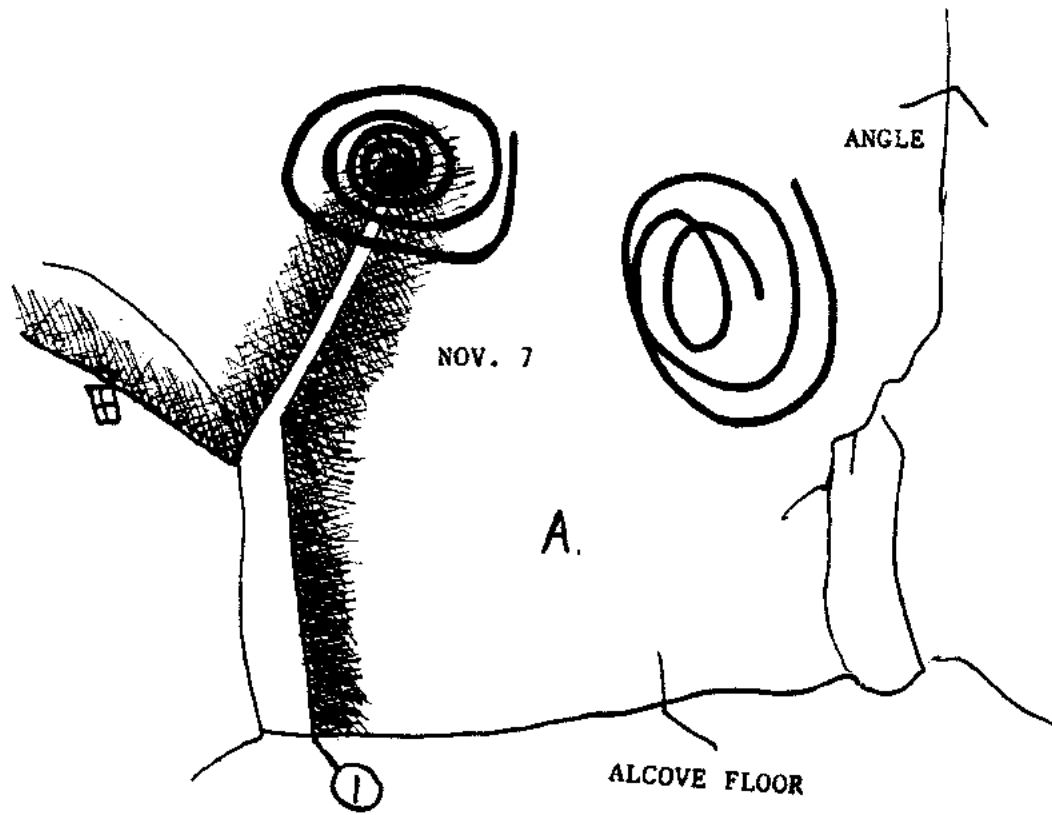
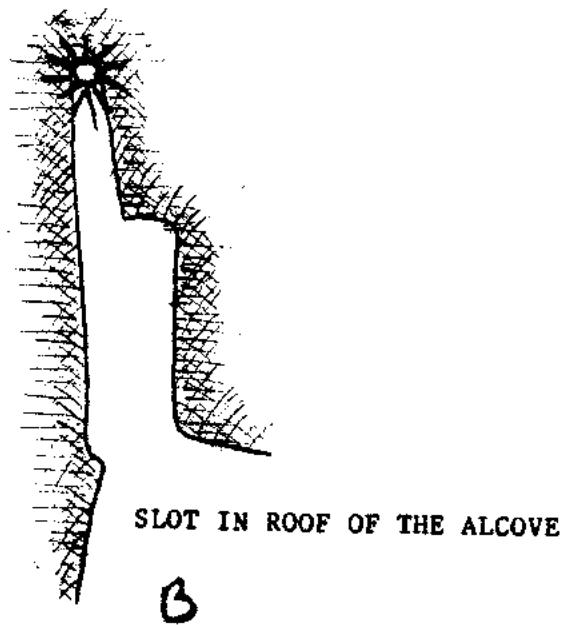


FIGURE 15



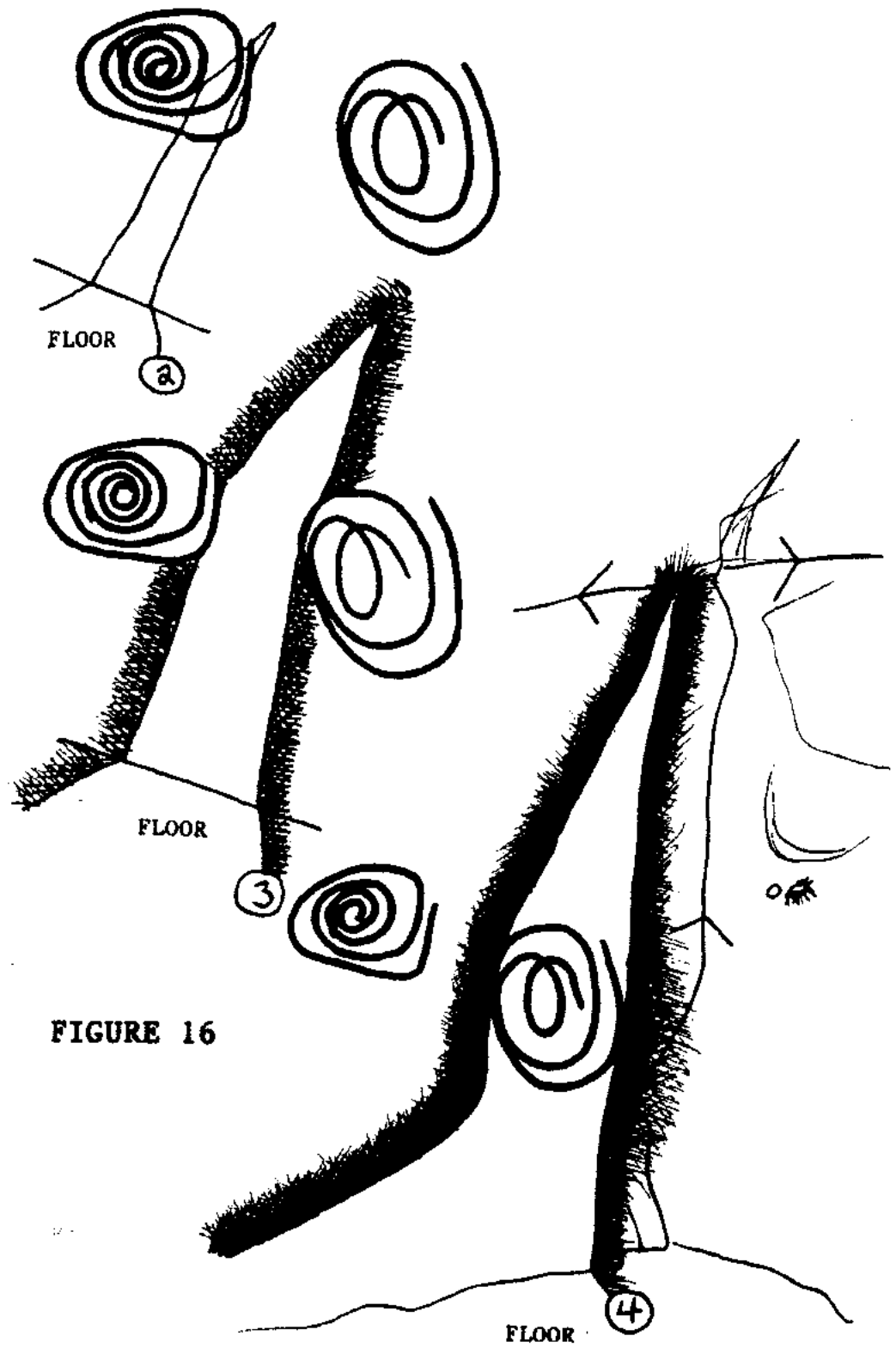


FIGURE 16

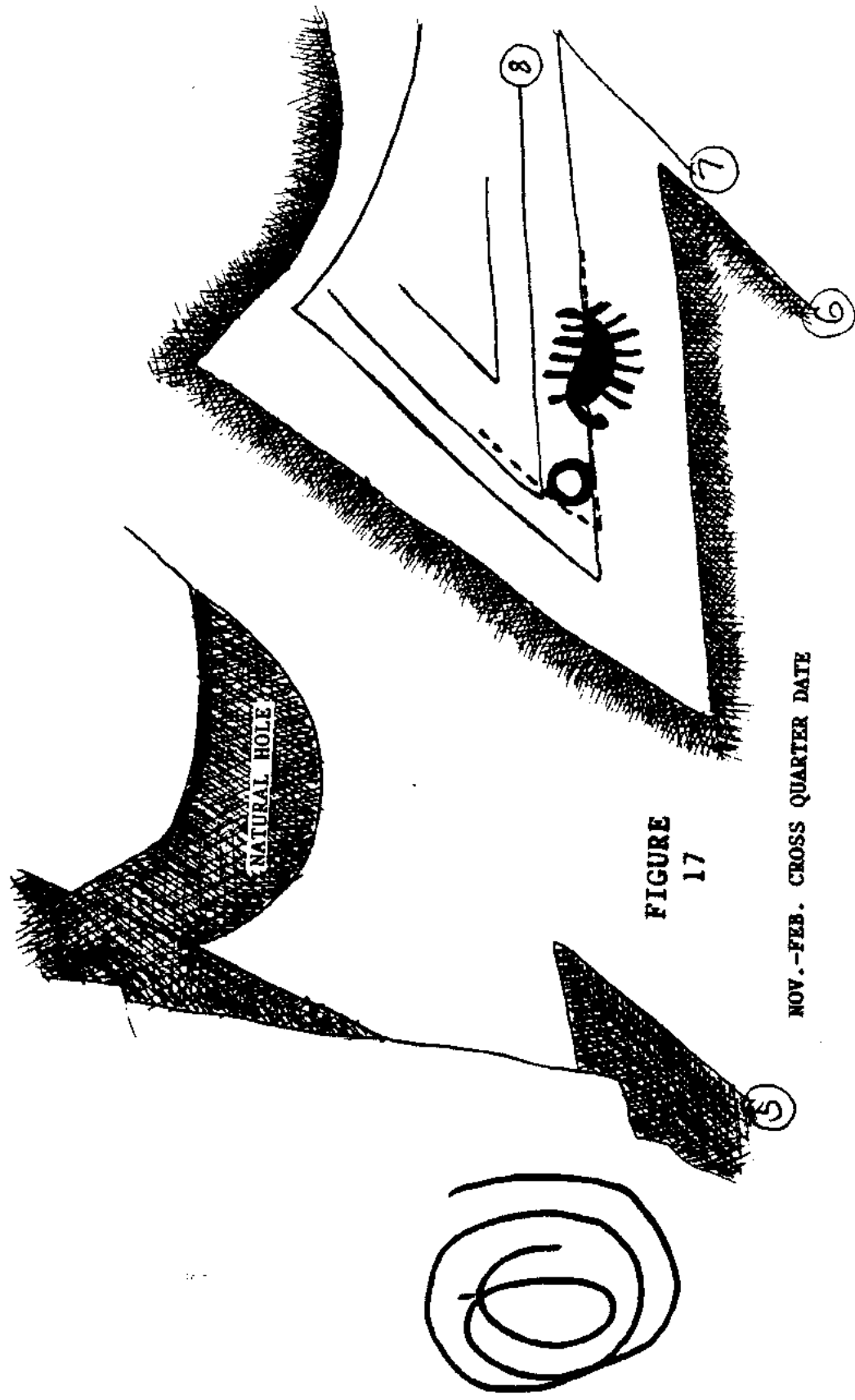


FIGURE
17

NOV.-FEB. CROSS QUARTER DATE

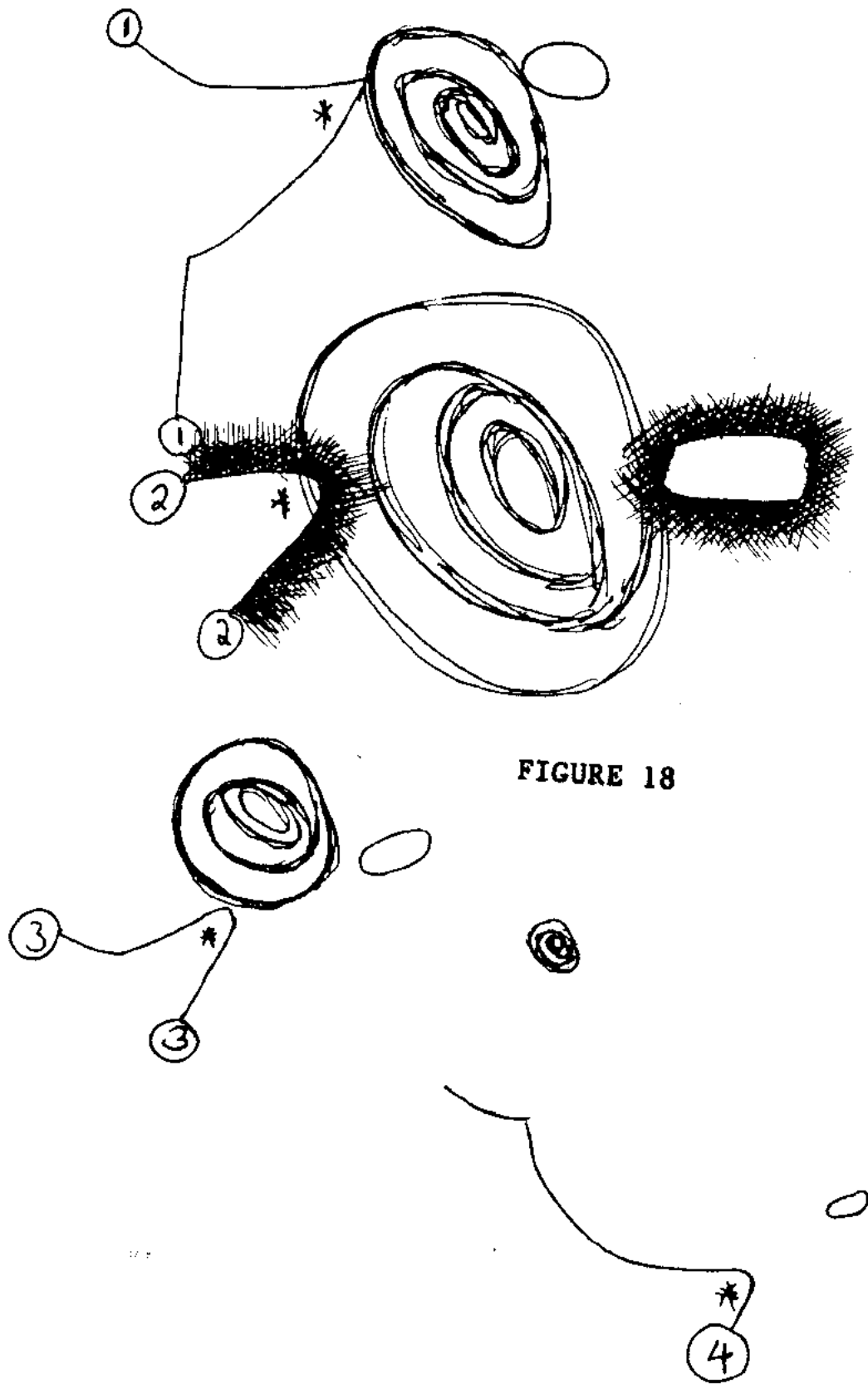


FIGURE 18

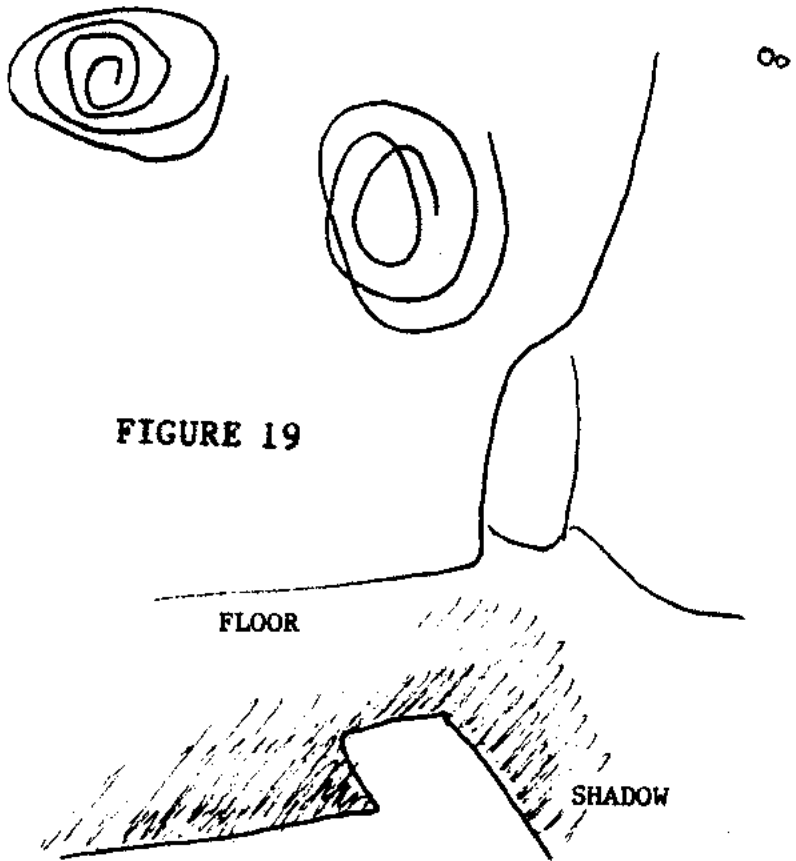


FIGURE 19

white anthropomorph that spoke with light on WS (Fig. 16). As it continued to rise it moved to the right to touch the right edge of the left spiral and the left edge of the right spiral, perfectly fitting between them (Fig. 16 line 3). As it rose it perfectly bracketed the right spiral within the width of the shaft of light (Fig. 16 line 4). The interaction with the elements on the right wall are markedly reversed from those on WS. The difference between those two performances provide a very interesting relationship (Fig. 17, c.f. Fig. 11).

With all the possibilities of speaking with light here, it is interesting to note that at those times that the shaft of light is there during solar observations the sun watcher can also literally speak with light. If one stands in such a position to see the sun at the top of the slot, the apex of the shaft of light will begin on the area of the mouth of the sun watcher. This creates a literal image of one speaking with light or speaking the light or speaking that time of the light and its symbolism. An interesting possibility we have noticed elsewhere.

On the August Cross Quarter date, the point of light marked with an asterisk, appears to the upper left on the left wall. As it appears, two evenly formed thin rectangular slots of light appear off of the point. These are so strikingly eye like, especially since Fremont eyes in the rock art are usually, but not always, produced with the exact same shape (c.f. Fig. 2 vs, Fig. 2.F). Looking in toward the cliff, they seem to represent sun eyes. The eyes themselves could represent several different things (c.f. Warner 1989B, the sun eyes in Barrier Canyon). If one stands in front of them and looks out, the view would be two slots with the sun blazing through them. It kind of gives the impression of seeing the sun behind a mask of stone with his brilliant eyes shining through. This was the same impression with a similar situation at Pleasant Creek (Warner and Rayl 1990).

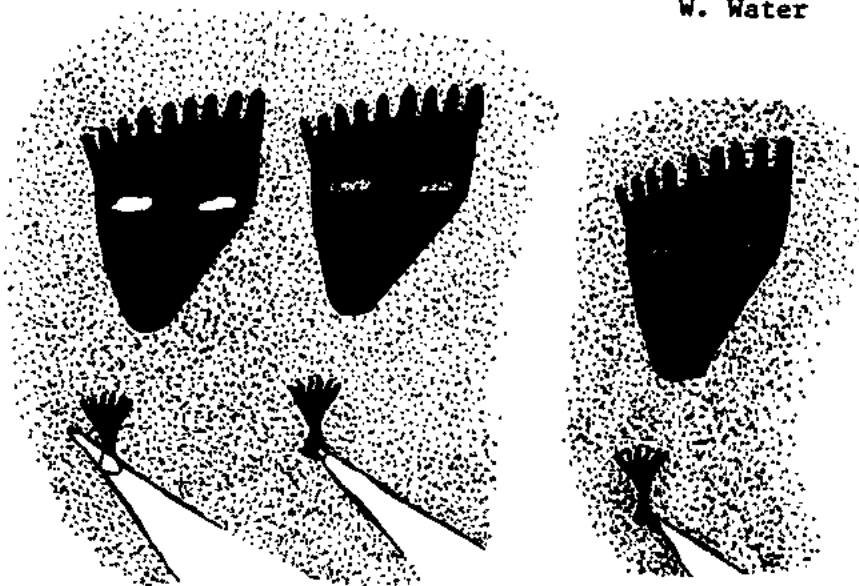
At the moment the light first began to appear on the cliff, while it was quite distinct at the top, it faded out at the bottom of the panel on a pecked circle exactly like it did on the circle holder. At that point it was neither light nor shadow, a mystically symbolical situation if you wanted one (Fig. 2.C end of Line 1B). That terminating point of indefiniteness lowered from that point as the sun rose. The important thing is that where the light and shadow line stabilized on the cliff that definiteness terminated on the pecked circle by bisecting it. Then from that circle the indistinctness began, almost seeming to indicate the door that opens into another world. The hoop that provides a rite of passage (Wyman, 1973). The circle not only marked the first appearance of the verticalness of the shadow, it marked that realm of horizontal indistinctness, thus marking two different angles, two different dimensions.

By the time the light began to lower, one of the eyes disappeared and the single detached triangle of light beautifully bracketed both sides of the spiral on the left wall (Fig. 18). Figure 2.F provides a comparison of where the light appears about 45 days later on SS. Notice that at the time the shaft of light crosses the groin of the anthropomorph in the cave, the eyes of light are also visible to the far left on the left wall of the alcove. Cloud



FIGURE 20

W. Water



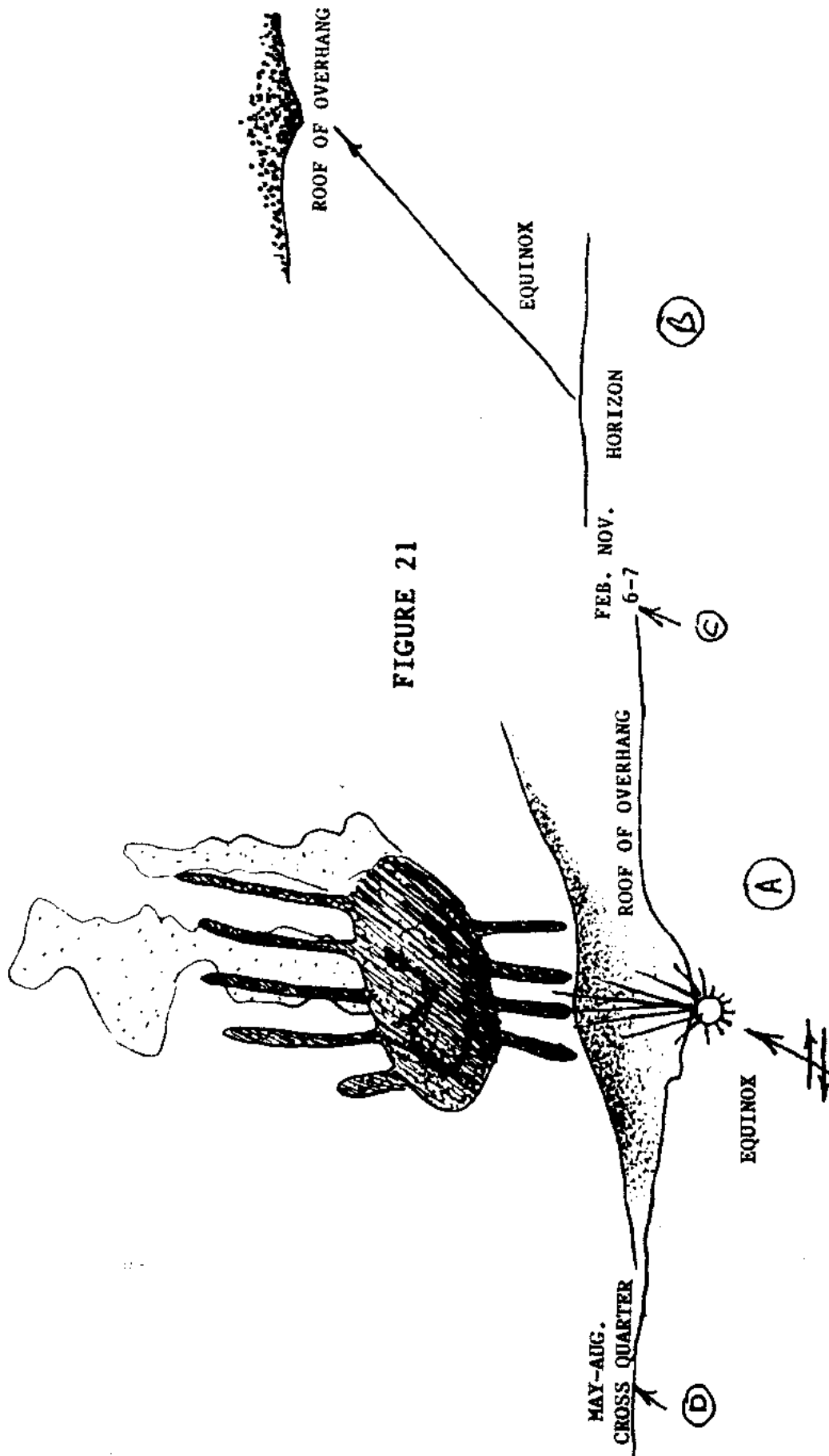


FIGURE 21

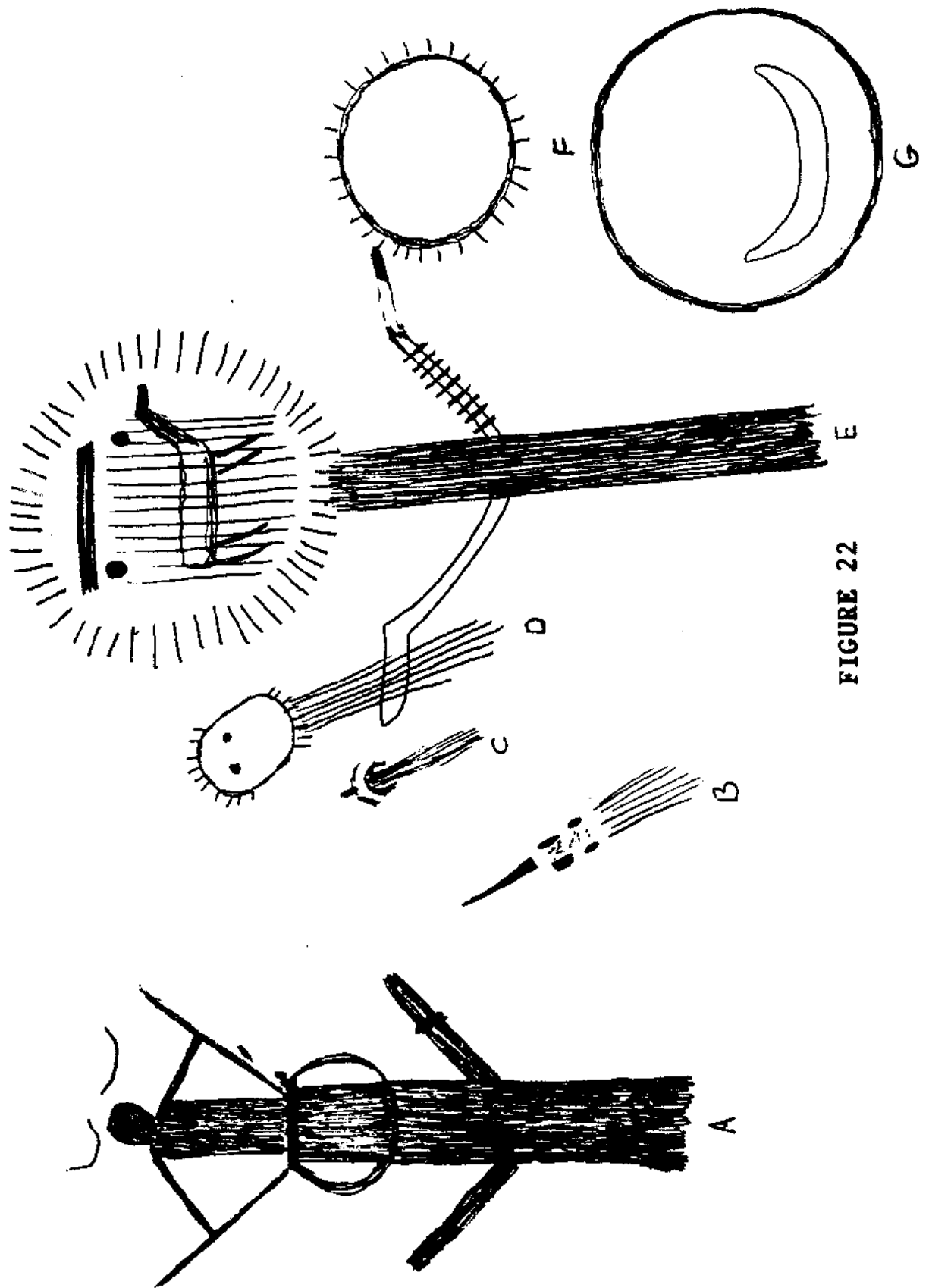


FIGURE 22

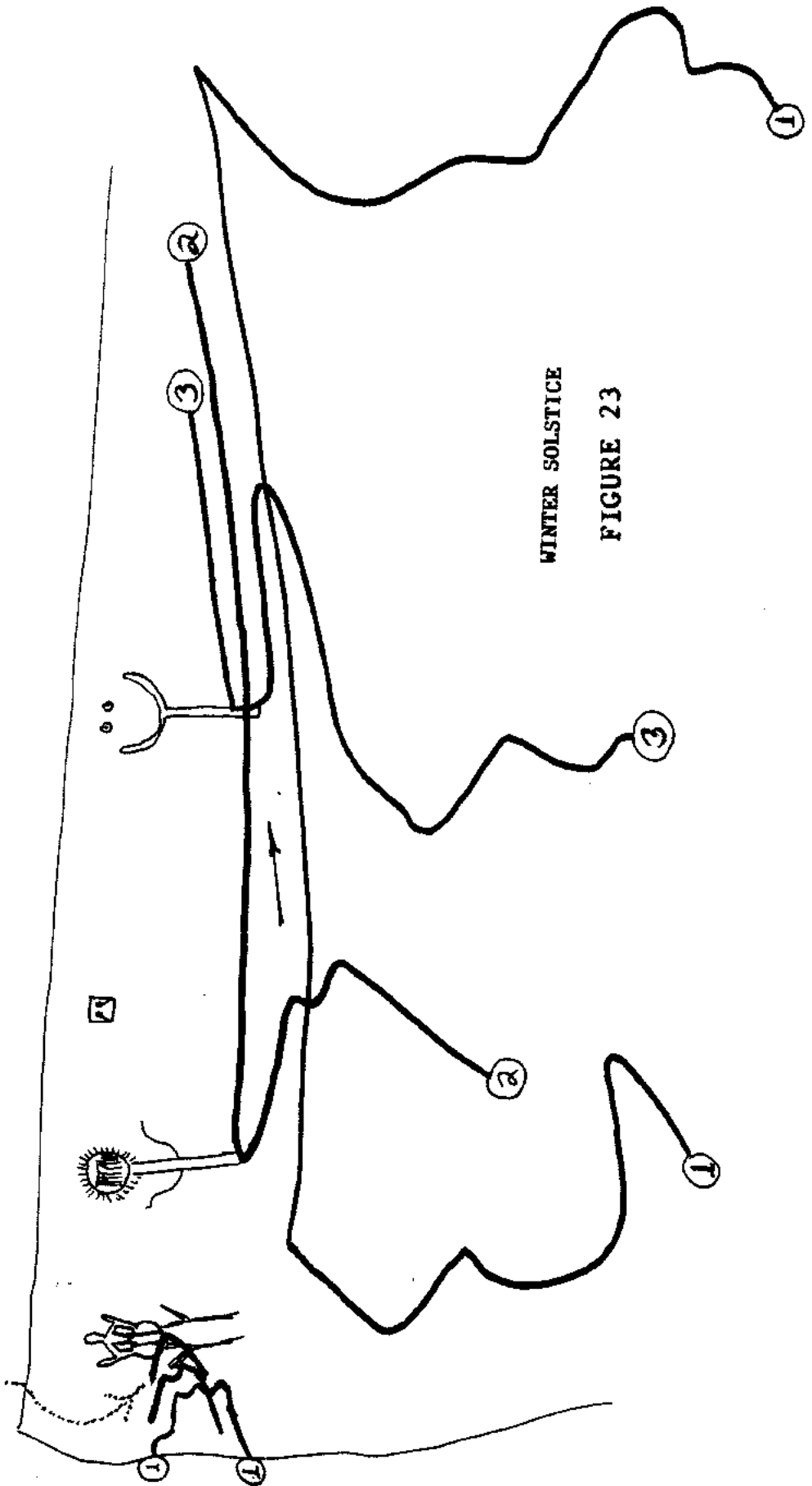
shadows didn't allow any other observations in the rest of the alcove, but later a shaft of light did cross the floor (Fig. 19).

The probability that the eyes of light were important can be supported by an interaction in West Water Creek. On a pictograph that looks like a foot with too many toes are two protruding natural concretions, one on each side that would look like eyes on a face if it were a head (Fig. 20). These nodules stick out far enough that they catch the sunlight when the sun is directly over head and the cliff itself has gone into shadow. This provides a dramatic performance that was probably highly symbolic. With the cliff face and pictograph in the darkness of shadow, the red eye-like protrusions glow with light until the sun moves farther west and then both eyes suddenly seem to close as the protrusions are swallowed up in the shadow. When first observed, both eyes shut simultaneously. During a later observation the left one shut first, then the right. The importance of the eyes "closing" as a significant interaction can be supported by the fact an object below the face is touched by a point of light as the eyes grow dark.

Across the wash there is a ceiling panel produced with the same type of vicious pigment used in the shelter. It consists of a circular center with four lines pushing out to the front of the overhang to where a prominent point of rock dips down. Four larger lines and one shorter one push out in the opposite direction (Fig. 21A). This panel has become the type panel for what we have come to call "twinkle" panels, named by Clifford Rayl. This is now just one of a growing list. On EQ, the sun rises across this side canyon to disappear on the exact point formed by the pointed edge of the overhang (Fig. 21B). If you stand underneath it on EQ the sun will rise, arc up and reach the point on the edge of the cliff directly in front of the forward lines. To keep the blinding sun from hurting your eyes it has become customary to squint (slightly closing the eyes, and sort of look through the eyelashes which diffuses the light and allows one to look at the partially obscured sun). At the moment the observer does this, the diffused sunlight shoots rays up into the center of the design, interlocking with the painted lines. This provides another of those very obvious mystical moments. This is the same effect that the camera captures as a lens flare. Take a moment now and experience this for yourself. Look at a light bulb (any kind). Place your hand out arms length, bent at the wrist at a 90 degree angle, palm facing you. Put the bottom of your hand below the bulb and squint as you slowly raise your hand. Watch the flair of light suck up into your palm. Then do it again without squinting. This provides fairly good likeness of that experience.

Light was discussed in the previous Quitchupah paper, concerning a similar situation. I have come to believe that they were continually searching for new ways to play with light. This allows a new, unique way to not only express devotion, but also to provide that impetus seen at nearly all solar observation sites where we believe they desired to obtain an altered state. With whatever preparations were necessary this would probably culminate the preparatory portion of the "ceremony" and commence the "ecstatic" experience. This panel, unlike the Quitchupah panel marks a solar period (EQs), with greater precision. The sun moves from a period before EQ (from the left), to the projection of stone where it disappear into the point

SPEAKING THE
EXPERIENCE



WINTER SOLSTICE
FIGURE 23

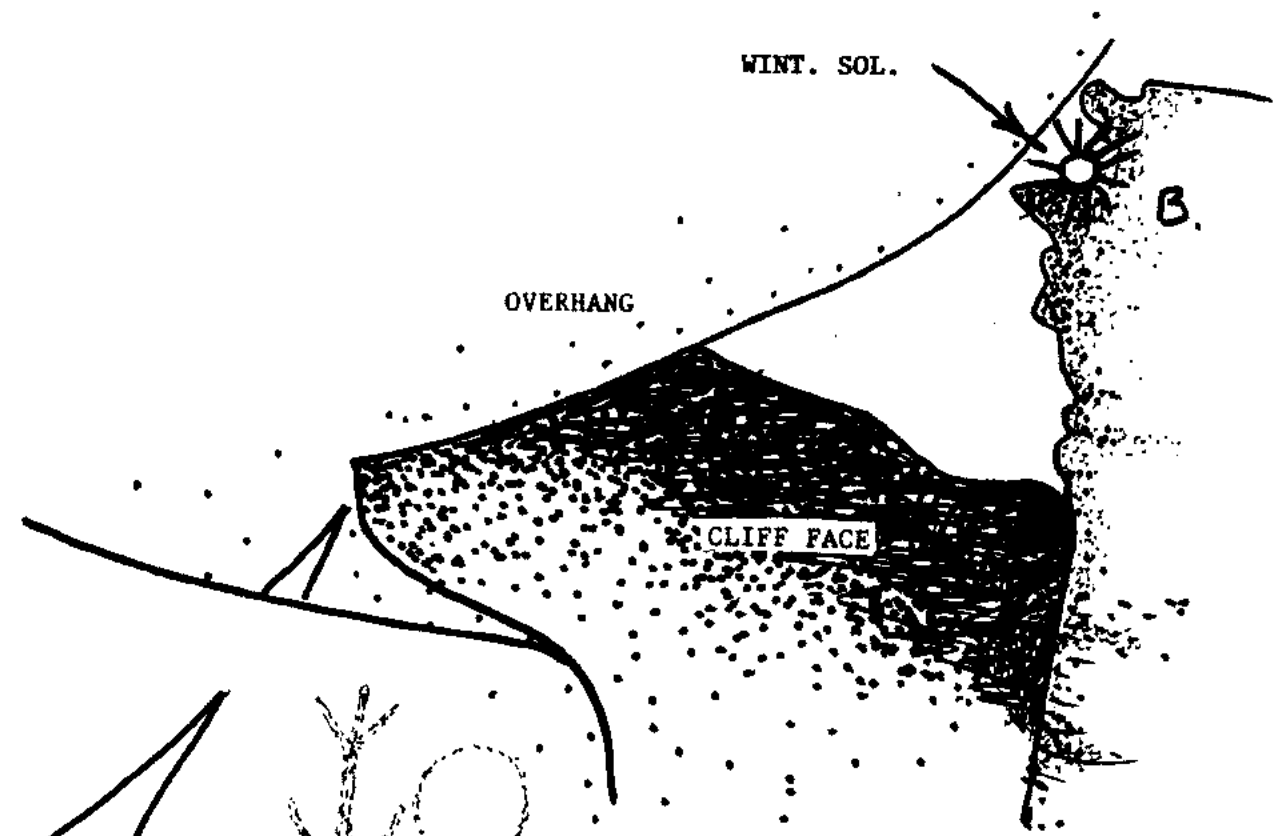
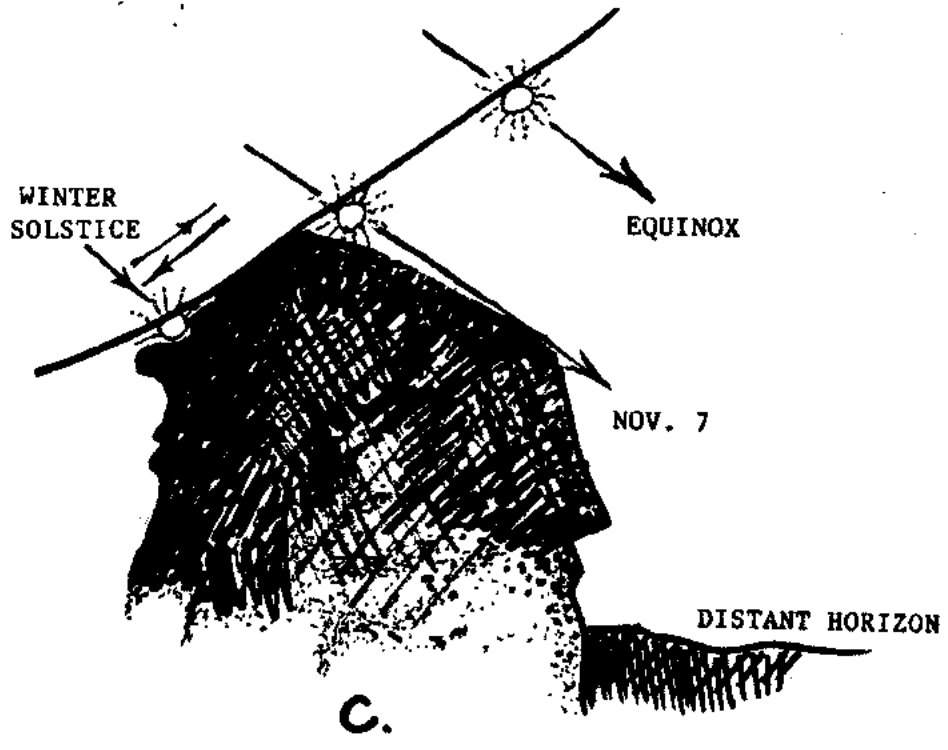
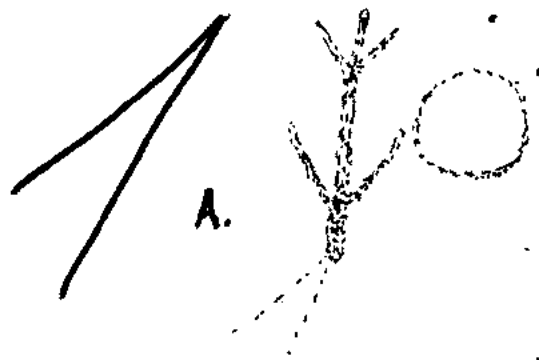


FIGURE 24



during EQ and then continues on through to the right after EQ. Because of the speed with which the sun moves at this time, the alignment with the painted lines will only occur during the period of EQ. The point for disappearance for Aug/May 6,7 is also illustrated. From that date it takes the sun approximately 45 days to reach the point of stone on EQ. Correspondingly, 45 days after Spring EQ, the sun rises a similar distance to the south on the Nov/Feb, 6,7 Cross Quarter dates (Fig. 21C, D).

In a secluded recess is a panel assumed to be "Classic Vernal" in style (Fig. 22). The fact that a fair amount of such representations of that style, which predominantly occurs in northeastern Utah, can be found in this vicinity raises some interesting questions. Like what were they doing here? Were they just passing through? How long did they stay? What were the interrelationships with the other LIPs (local indigenous personnel), and can solar interactions provide us with any clues? Well, this is only one of those many panels, but with an analysis of a large number of them, I believe we can approach most of those questions. This panel provides some information that they were here in this canyon for almost all of the solar dates from SS to the Nov/Feb Cross Quarter dates. WS is questionable but just prior to or after there may be some evidence. That indicates they were not just passing through.

This panel is very faint and fragile and we are very concerned about its safety, as well as the safety of all rock art. This should not be touched or sprayed with water. Notice the Category Number 2 Double Entity (out of head), to the left. It has the torso, arms and head of a smaller figure emerging up out of the top of the main figure's head. It also holds on to two extensions from the lower head (Fig. 22.A). To the right are two almost bird-like images. To their right is a beautiful Sunheaded figure, very similar to one at a solar site near Vernal. Notice the vertical lines across the face below the red eyes. There is also an animal enclosed within the radiating lines (Fig. 22.E). I would seriously doubt that this is a horse, unless there were "Fremont" horses, especially the "Classic Vernal Fremont", which may even turn out to be a possibility. There are too many features on this panel that indicate that it belongs to that northern style and the quadruped could as easily be a doe.

In both hands there are solar symbols. In the figure's left hand (to our right), is a smaller rayed face with two eyes and a long trail of lines that cross the Sunheaded figure's right hand (Fig. 22.D). The left arm has hatch marks and a round rayed disk extends to the right of the hand (Fig. 22.F). Below that is a larger circle with a horizontal crescent similar to those at Sid and Charlie (Fig. 22.G). The rest of the panel consists of a row of faces and a partially complete body. On WS, the afternoon light first appears to the left of and then moves toward the lower head of the Double Entity (Fig. 23 Line 1). This form changes to those in Figure 23 lines 2-3 where it comes out of the groins of the Sunheaded figure and the figure with red eyes and a yoke. The final shaft of light to the far right seems to indicate the probability of an interaction with a reversed figure to the far right at an earlier or later date close to WS (Fig. 24.A). WS sunset occurs to the east of a thick pedestal within a triangle of open sky (Fig. 24.B-C).

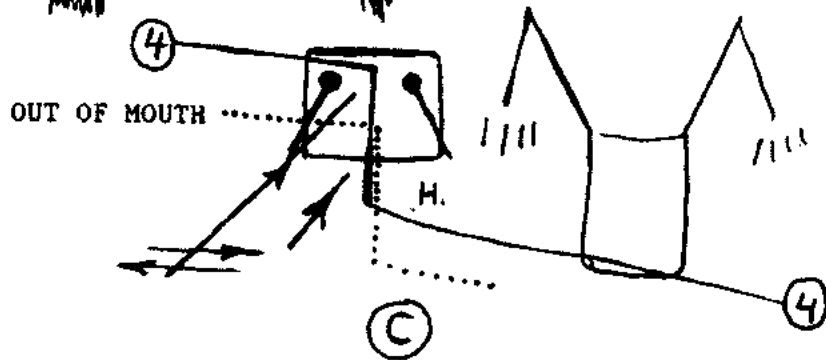
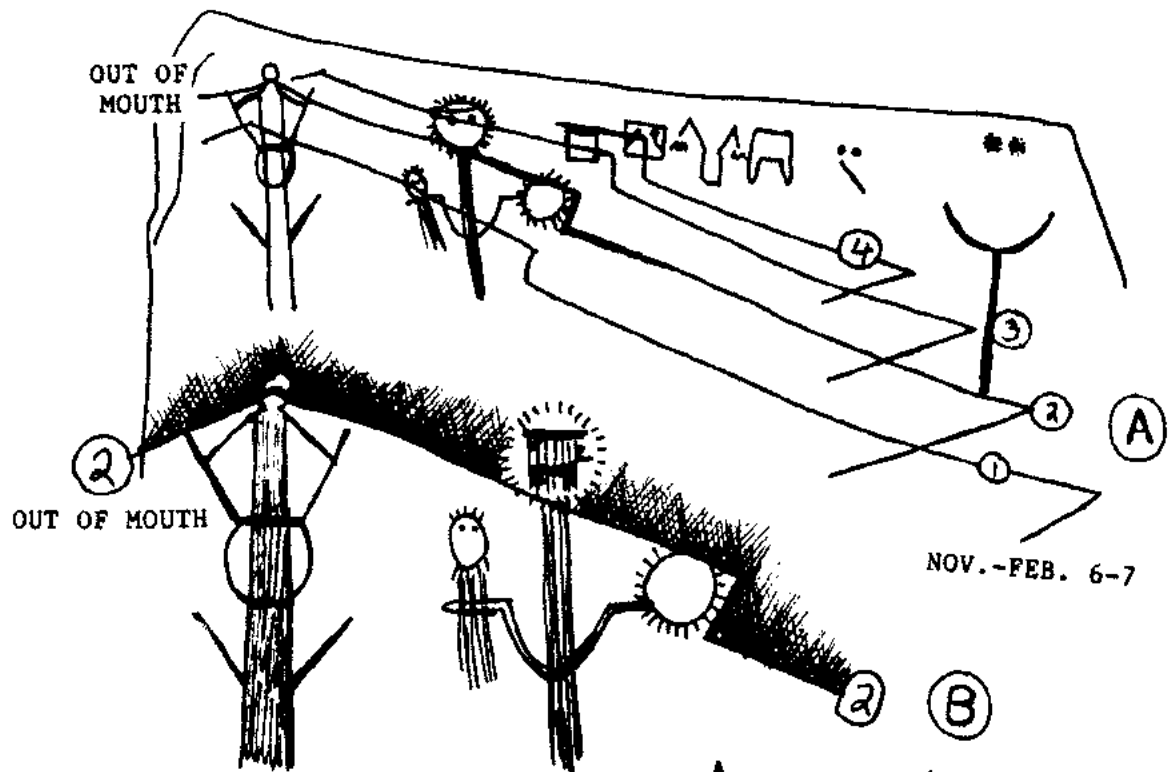
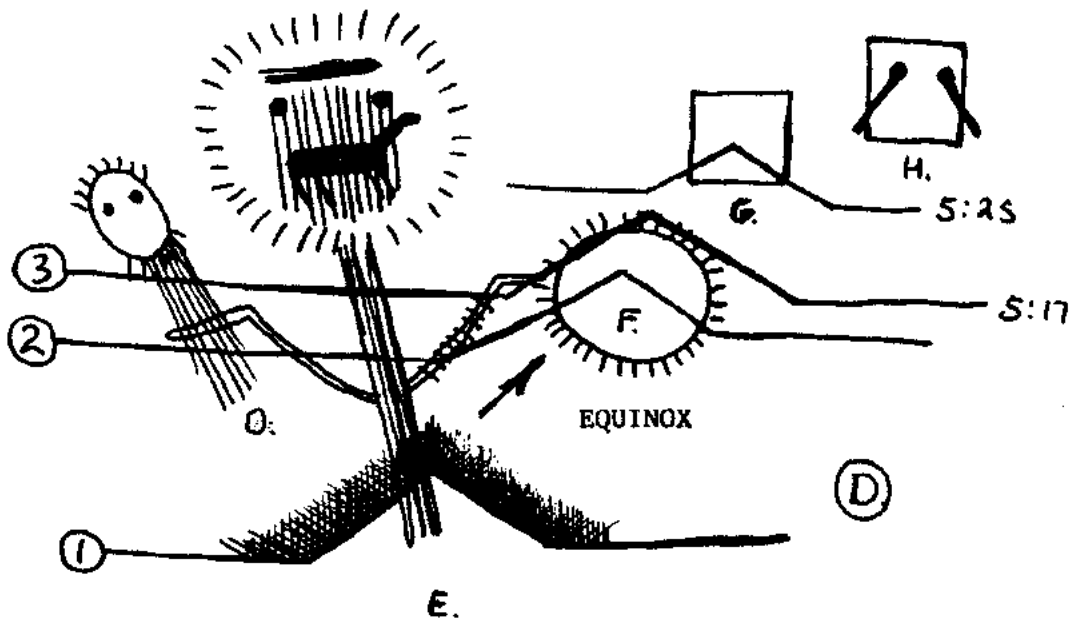


FIGURE 25



MAY-AUG.
-CROSS QUARTER DATES

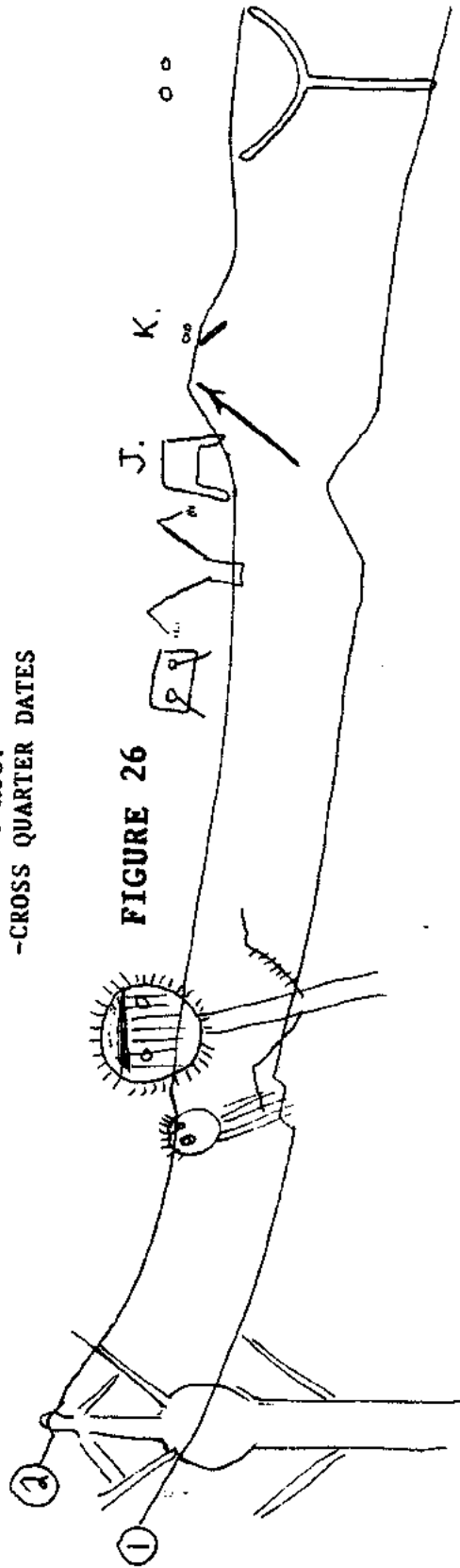


FIGURE 26

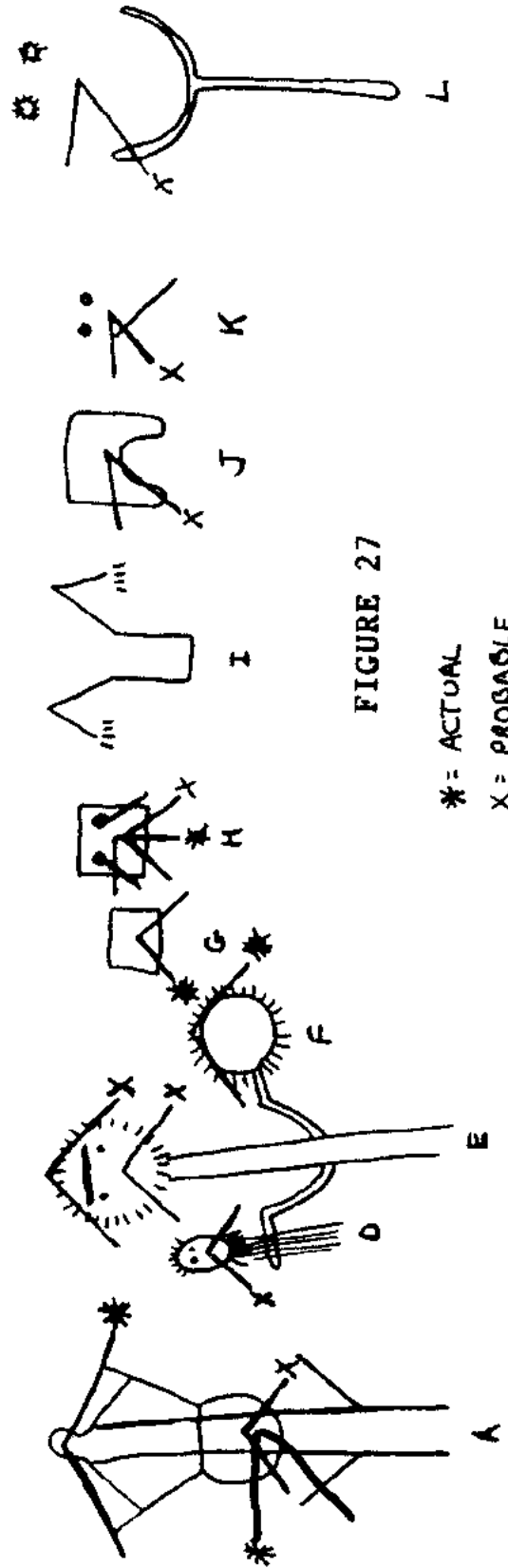


FIGURE 27

* = ACTUAL
X = PROBABLE

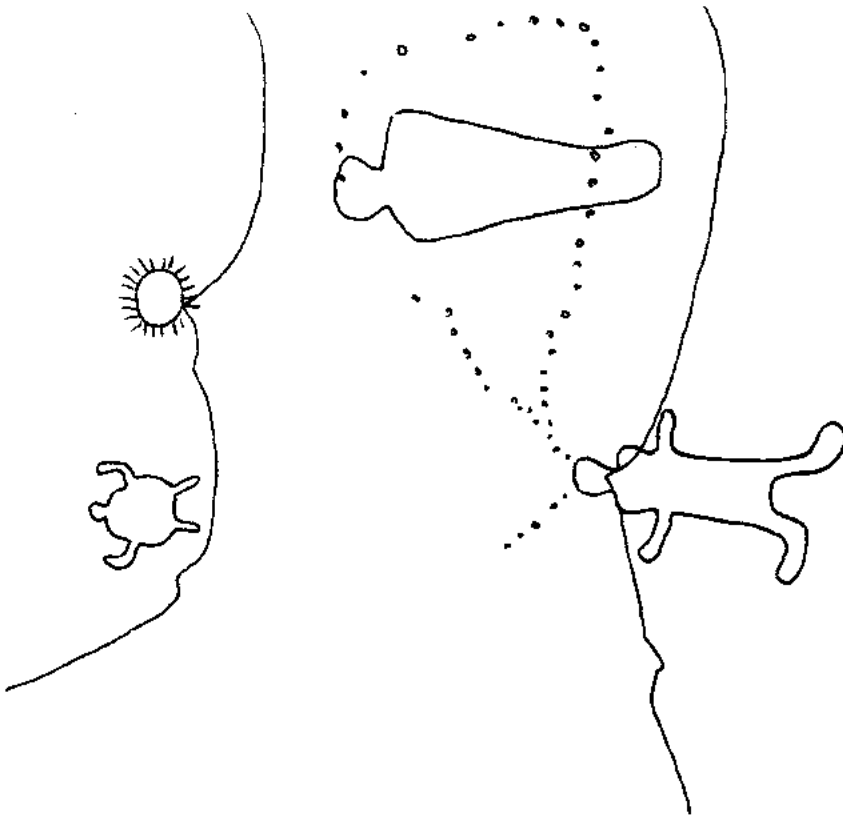


FIGURE 29

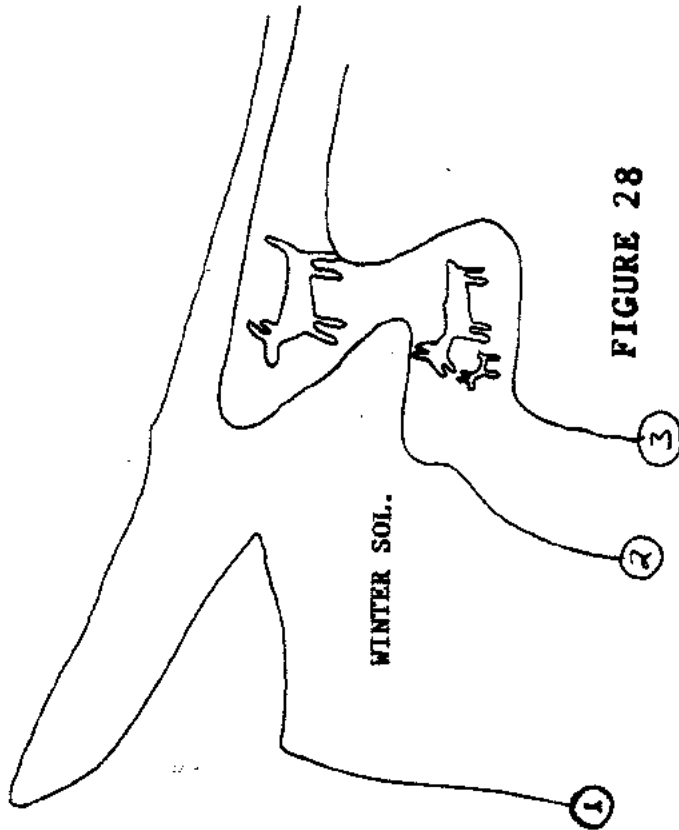


FIGURE 28

On the Nov/Feb. 6,7 Cross Quarter dates, a triangle of light moves up to the upper face of the emerging entity. At the moment it centers on that figure's face another angle of light brackets the sun symbol to the right of the Sunheaded figure (Fig. 25 lines 2). Again this is a Double Entity seeming to speak a sun symbolism, or "sunniness". From the position where that bracketed the sun, it rose to move across the face, between the tear streaks of Figure H. Within only a day or two it would probably center over the area of the mouth a little better (Fig. 25 dotted lines). The type of performance where two faces interact sequentially is rare, but to have the edge of light that leaves the face bracket a sun, then that bracket interact with another face is phenomenal.

On EQ, an angle of light moves up to again bracket the sun symbol and then it again moves up to interact with another face (Fig. 25.D). This is an amazingly similar, duplicate interaction, but with different forms of light. This is way too much to be coincidental. On the Aug/May 6,7 Cross Quarter dates the line of light moves up with the main notch of light moving between the faces of Figures J and K (Fig. 26.B). On SS, the line had advanced to the base of the figures when the clouds blocked the sun for the rest of that interaction. With all of these interactions, it seems possible that others are likely (Fig. 27). The point of light that moves to the right in November and February will rise between those dates and WS. It should maintain the pointed form long enough that it may move across the faces of J, K and L (Fig. 27.J ,K ,L, X). The Sunheaded figure will also probably have an angle of light bracket its head and again in a few days cross its face, sometime between November and March EQ and September EQ and February Cross Quarter date. Prior to that it will also move across the face in the Sunheaded figure's left hand (Fig. 27.DX). We are in the process of determining those dates and will attempt to watch to see if those predictions are valid. If they are, we anticipate two periods; First the periods shortly before or after a date (the preparatory or conformation period markers), and Second the dates half way between the dates that divide the year into eighths. If that occurs here to any degree of satisfaction, other panels will be observed that are felt to divide the year into sixteenths.

The Hunting with Light Category of Symbolic Solar Interactions also seems to be represented here. The movement of the angle of light down and around the probably yew and lamb in Figure 28 seems to typify those kinds of interactions. Figure 29 shows a few of the other interactions that are also not quite complete.

The solar interactions at this site, for being fairly simple and not quite the Rochester quality types of panels, have pointed out one very important fact. There are and always will be very dramatic, very impressive and very unexpected interactions in the most unlikely places. These will occur with the most unlikely simple and maybe even crude elements. Fajada Butte in Chaco Canyon has won world acclaim because of the sophisticated interactions there, as simple as these are, I believe they are just as great.

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