CHAPTER 8 REDAN: 'MEANING BECOMES MANIFEST'

The key concept developed by Arnheim is that art is a 'fundamental means of orientation, born from man's need to understand himself and the world in which he lives' (1970:294). This concept of the significance of the natural environment in creating meaning, is shared by Norberg-Schulz (1975). In the first part of this chapter, this concept of the significance of 'place' as defined by Norberg-Schulz (1975) will be considered in relation to the rock engraving site of Redan, and the unique position it occupies in the environment. In the second part of the discussion, a representative selection of the engraved images will be closely examined and analysed according to Arnheim's formalist principles of 'visual perception' (1970:13).

Approximately 200 000 years ago the land on which the modern, industrial city of Vereeniging arose, was a marshy inland lake. The lake was fed by rivers that transported sand and gravel and deposited these into the lake. The climate was warm and moist and this led to the growth of plants, shrubs and vast forests. The dense vegetation gradually died, became submerged in the boggy waters, creating huge swamp areas, and the submerged plant debris gradually changed into peat. Sediments continued to be laid down; the sandstone and gravel deposits became conglomerates, and under pressure the peat dried, hardened and became coal (Du Toit 1954:264-290). The stratified layers of sandstone, conglomerates and coal (also referred to as Coal Measure Ecca) in the Vereeniging area are of the Vryheid

formation of the Ecca group of the Karoo sequence (Du Toit 1954:280-282). The ancient origin of these coal seams was confirmed when the Vereeniging pioneer T.N. Leslie (Du Toit 1954:287-288) discovered the unique remains of a fossilised forest with its exposed casts of fallen tree stumps and fossilised plants, exposed in the bed of the Vaal River (since submerged) (**fig. 9**).

THE SITE

The small village of Redan is situated in the fertile Vaal-Klip valley on the farm Waldrift, approximately six kilometres north of central Vereeniging and close to the Redan interchange on the R59. A short avenue of trees leads through the deserted village to the ruins of the Klip Power Station. In more affluent times the village owed its existence to this power station. Coal was supplied by the Springfield Colliery, situated on the neighbouring farm of Kookfontein, and the power station supplied power to a large area of the Witwatersrand and the Vaal triangle (Stander 1946:30). Both the power station and the mine have long since ceased to operate, and the area has become largely agricultural. A distant mine dump, a number of graves dating from the 1960s (presumably of black miners), and the last vestiges of power lines, are all that remain of earlier, more prosperous times (**fig. 34**). Approximately one kilometre north of the village on portion 29 of the neighbouring farm of Kookfontein, there is a large, isolated outcrop of sandstone (**fig. 33**). The outcrop occupies approximately 1660 square metres, and consists of a number of differentiated rocks of varying heights; the highest point is 1440 metres above sea level; the outcrop is a significant feature in the otherwise flat landscape. A large

number of enigmatic images and a small number of animal images, have been engraved on the uneven surfaces of this outcrop. The outcrop slopes down to a muddy stream that flows in a south-easterly direction into the Klip River (**fig. 36**). Before the settlement in the area by Voortrekker farmers in the early nineteenth century, and the subsequent building of two large drainage dams further north, the stream flowed freely. However, it has not flowed freely since the 1950s (Jeffreys 1953). The average annual rainfall in the area is high (914 mm) and the area immediately adjoining the stream has become a wetland (**fig. 36**). Until the turn of the previous century, game was plentiful in the area. The proximity of the engraving site to the stream is significant; available resources such as water, appear to have been a determining factor in the choice of engraving sites, as these are frequently adjacent to streams and other water sources (Wilman (1933) 1968:28; Willcox 1984:277; Fock & Fock 1989:154). A statistical analysis by Fock and Fock (1989:154) of the distribution of the rock engraving of the Vaal-Orange basin, shows that the greatest concentration of 'geometrics' (non-representational images), 'occurs on higher surfaces or uplands, but adjacent to small streams, springs, or seasonal lakes and marshy ground, where water is a prime criterion ...'. The research undertaken by David Morris (1988:114) in the Northern Cape (North-West Province), also indicates that the greatest concentration of non-representational engravings occurs in sites closest to water sources, and that further away from water sources, their number decreases.

Both the engraving sites in the Vereeniging area are close to water sources. While the boggy stream at Redan holds little threat to the engravings, at Leeukuil the majority of the engravings are already submerged beneath the waters of the Vaal River. Water as a life-sustaining force is emphasised in all cultures; in both hunter-gatherer and herder societies water is frequently the focus of myths, beliefs and ritual behaviour. The archaeological record has confirmed that the waters of the Vaal and its tributaries have been the focus of diverse cultures during the past 20 000 years (chapters 3 & 4). Travelling up the Vaal in 1823 the missionary Hodgson encountered remnants of each of the main ethnic groups; he was particularly struck by the numerous Korana cattle outposts situated on the banks of the Vaal (chapter 4). At Redan, the relentless passage of time has effected many irrevocable changes. The once rich water source has been engulfed by a dense wetland, presently extending to the base of the outcrop (**fig. 36**). Two ash heaps in the immediate vicinity of the outcrop testify to a succession of settlements during the past 100 years, and a total disregard for the legacy left by earlier occupants on the surface of the rocks. The large sinkhole that has developed immediately next to the outcrop is a frightening reminder of the heavy toll exacted by industrial progress (**figs. 19, 20, 22**). In spite of this disturbing scenario, the outcrop retains its primacy in the landscape, tangible evidence of the area's remote beginnings many hundreds of thousands of years ago. From its elevated position it offers an uncluttered view of the surrounding grasslands; it is the perfect outlook for grazing cattle or approaching game. From this secure base the ancient engravers could perceive the natural phenomena of the environment, and mark the rocks with countless images.

THE PHENOMENOLOGICAL APPROACH: THE 'SPIRIT OF PLACE'

In his ground-breaking study of the meaning of architecture, the art historian Christian Norberg-Schulz (1975) advances a radically new way of looking at the natural and built environment. Relying heavily on the writings of Heidegger (1954; 1959) and Eliade (1957; 1958; 1959), he explores the relationship between specific cultures and their environment. His central thesis is that the geographical phenomena and spatial characteristics of a region, and how they are perceived and experienced are concretised in the built environment and give meaning to man's existence. He explains that this is possible because of man's ability to abstract and generalise:

> This means that man is capable of recognizing similarities and relationships between phenomena and discovering the laws which govern natural and human processes. What he abstracts from the continuous flow of phenomena constitutes his existential meanings. ... The faculty of abstraction and generalization, or induction, is therefore the basic distinction of man, and the experience of *meaning* his basic need. (Norberg-Schulz 1975:428)

Norberg-Schulz writes persuasively about art and religion, and their common purpose of making man aware of existential meanings. His thesis of 'existential meanings' and Arnheim's 'visual thinking' show remarkable congruencies:

> The purpose of the work of art is to conserve and communicate experienced existential meanings. In perceiving an articulate symbol, a man experiences an act of identification which gives his individual existence meaning by relating it to a complex of natural and human dimensions. (Norberg-Schulz 1975:429)

This congruency is extended to the act of 'perceiving' and 'making'. Norberg-Schulz (1975:430) refers to *gestalt* psychology and asserts that this existential space is not identical with geographic space, and does not deal with 'permanent distances, angles and areas, but is based on relations such as proximity, separation, succession, continuity, and closure (inside-outside)'. In order to orient himself, man needs to grasp such relations and establish 'centres or places (proximity), directions or paths (continuity), and areas or domains (closure)'. This relationship is reaffirmed and augmented by 'articulating' the landscape in various ways:

> Architecture is a concrete phenomenon. It comprises landscapes and settlements, buildings and *characterizing articulation*. Therefore it is a living reality. Since remote times architecture has helped man in making his existence meaningful ... In architecture spatial form means place, path and domain, that is, the concrete structure of man's environment. (Norberg-Schulz 1975:preface, emphasis added)

Norberg-Schulz believes that the study of early civilizations and their culture confirms these findings, and that the experience of 'centre' is particularly significant in how the landscape is perceived and articulated. 'The notion of centre may be considered the basic element of primitive existential space. Every place where a

meaning becomes manifest is, in fact, a centre' (Norberg-Schulz 1975:430). A place has to be relatively small to offer psychological security: 'The limited size of known places goes together with centralized form. A place therefore, is basically round'. The concept of place also implies that it is situated within a larger space, and contains directions and openings. Norberg-Schulz (1975:430) distinguishes two directions: a horizontal direction representing man's concrete world of activity; and a vertical direction representing the *axis mundi,* literally meaning the centre of the earth. The *axis mundi* is an archetypal symbol of a passageway from one cosmic region to another, from the earthly to the spiritual: 'the simplest model of man's existential space is then a horizontal plane pierced by a vertical axis'.

At Redan, the outcrop is a powerful presence in the landscape: it is horizontally grounded in the earth below, but also soars in a vertical direction to the heavens above. This centricity and axiality is encircled by the vast dome of the sky. During the day the sun wipes out the engraved images on the rock face; as the sun sinks they are miraculously restored. At night the sky is transformed and the passage of stars and moon can be closely followed; this is the time for reflection and introspection. The relationship between the external world of visible phenomena, and the internal world of human experience, is reflected in the images engraved on the rock surface. In a subsequent publication the concept of existential space is expanded to include the *genius loci,* literally meaning 'spirit of place' (Norberg-Schulz 1979:18). The *genius loci,* of ancient Roman origin, was originally a fictional character assigned to guard a settlement or town. Norberg-Schulz uses the

term metaphorically to define the basic, natural phenomena of a specific region, and how it is concretized in the 'marked' and built environment.

The phenomenological approach as defined by Norberg-Schulz is a relatively new concept in rock art studies. However, it has been an accepted approach in history of architecture studies for many years; the History of Art Department at the University of Johannesburg (formerly the Rand Afrikaans University) actively promoted this approach (1970 - 1995). Limited initially to the field of art history and psychology, it was increasingly adopted by students of rock art after the 1980s, particularly in America and Australia. One of the first researchers to pursue this approach was B.K. Swartz Jr. (1991). His research of rock engraving sites near Nevada in the USA led him to formulate and distinguish between what he terms 'locational analysis' and 'contextual analysis' (Swartz Jr. 1991:51-52). The former refers to features in the landscape, the latter to the recognition of recurring 'design elements' in the engravings, and their relation to these features. In a subsequent, more detailed paper, he joins forces with an architect (Swartz Jr. & Hurlbutt 1994:13-22). The basic premise put forward by Norberg-Schulz, 'the propensity of humans to develop phenomenological spiritual relationships with elements in the material world', is acknowledged and Swartz and Hurlbutt propose a 'unified space model' to analyse and explain the surviving spatial and distributional evidence at the site. Architectural constructs such as place, path and domain, as constituent elements of existential space, as defined by Norberg-Schulz are retained and expanded. This approach was rapidly assimilated into numerous rock art studies (see Ingold 1993)

and was the topic of international conferences. In South Africa archaeologists were slower to follow, but elements of the phenomenological approach filtered through in the work of a number of researchers. Janette Deacon (1988:129-140) refers to the iconography recorded by W.H.I. Bleek and Lucy Lloyd in the 1880s, and suggests that outstanding topographical features in the landscape were both practical and spiritual focal points for the /Xam of the Northern Cape; and that the placement of imagery on selected boulders at selected spots can be seen as a deliberate attempt to mark the landscape. Sven Ouzman (1995) relies heavily on the shamanistic approach, but elements of the phenomenological approach are becoming increasingly prominent in his work. Thaba Sione in the North-West Province is a site that has been used by both San and Tswana-speakers. Ouzman compares the rain-making beliefs of Tswana- speakers and of San from different areas, and their propensity for hills and waterholes. He argues that similarities in topography might lend themselves to similar perceptions of space, and that Thaba Sione was deliberately selected as an 'appropriate and potent rain-making locus' (Ouzman 1995:62). In a more recent paper Ouzman (2001) adds a further dimension to the concept of rock engraving sites as 'potent places' and includes non-visual aspects such as 'touch' and 'sound'. Echoing Norberg-Schulz's (1975) concept of space in hunter-gatherer societies, he describes the site as the meeting place of the 'Spirit World' and the 'Ordinary World':

> The Spirit World's immanence was manifest at certain potent locales in the Ordinary World - often in the form of rock-art sites. Rock-art sites are thus best understood as places where a world order could be contemplated, questioned,

> suggested or altered at both corporate and individual levels. Much of this 'mindscaping' (Ouzman 1998) - shaping the landscape culturally - is visible in the form of engraved and painted imagery. (Ouzman 2001:238)

Morris (2004:10-11) writes persuasively about Driekopseiland (near Kimberley) as 'a powerful place' and proposes that the 'unique combination of (palaeo) geographical features here, and the way the site is marked with rock art' is a key to its interpretation. He draws parallels between the non-representational images engraved on the glaciated andecite river bed of the Riet River, and the beliefs and ritual practices associated with water and female puberty rites (chapter 4). This is also the site that Stow visited in the 1870s, and where he made copies of the non-representational engravings that he subsequently sent to W.H.I. Bleek in Cape Town. Morris draws on many sources and relies particularly on a model devised by Lewis-Williams (1996:124-126) to describe the bi-axial structuring apparent in /Xam cosmology. It is immediately apparent that this model has close affinities with the model devised by Norberg-Schulz and discussed earlier. Morris (2004:16) refers to a 'horizontal' axis between camp and hunting ground, and a 'vertical' one between spirit worlds over and under the earth, which are mediated by water - and how this is made manifest at Driekopseiland:

> The combination of geological features and riverine processes - in a semi-arid region often parched by drought - make for a potent congruity with beliefs associated with *!Kwa* and the watersnake. Imagery engraved at Driekopseiland

> arguably reinforced an inherent power of place, directly at that intersection of structural axes in Khoe-San cosmology. (Morris 2004:17)

The phenomenological approach is providing valuable insights towards a better understanding of rock art. Both Ouzman and Morris convincingly describe sites with a predominance of non-representational engravings within this paradigm of the 'power of place' - the conviction that the cosmology of a particular group is influenced by, and becomes congruent with outstanding geographical features in the landscape. While the phenomenological approach recognises a congruency between features in the landscape and the built (engraved) environment, it fails to explain the precise nature of this congruency. The central and most perplexing question remains unanswered: the overwhelming prevalence of non-representational imagery at certain sites, their predominantly geometric configurations, and their role in defining the 'power of place'. A close reading of Arnheim's writings (1956, 1966, 1970, 1986, 1988) reveals that his basic premise of 'visual thinking', augments and supports the phenomenological approach to a remarkable degree. Central to both approaches is a recognition of the significance of the environment and its impact on the human mind and spirit. Arnheim's basic concern was not the rock art of prehistoric and preliterate societies, and he refers to the subject infrequently. His overriding concern was with the mind's cognitive dealings with the external (and internal) world, and the role of art *praxis* in this endeavour. However, the general principles of his thesis can be widely applied; used in conjunction with the phenomenological approach, it offers a plausible framework for the description and discussion of the engravings of Redan.

THE OUTCROP

The fence that was originally erected by the Historic Monuments Commission in the 1950s, enclosed 33 separate rock surfaces; three surfaces extend beyond the fence on the north-western side (**fig. 36**). A close inspection of the different rocks that constitute the outcrop, and the dispersal of the engravings, reveals that the engravings were not placed in a haphazard fashion, but that deliberate choices were made. In spite of the availability of several good surfaces, preference was given to specific rocks, while others were deliberately overlooked (**fig. 38**). Twelve of these contain no engravings, 15 contain relatively few (Rocks A, B, I, D, J, N, O, P, Q, E, F, M, G, H, R), while a high concentration of engravings occur on Rocks C, K, and L (**fig. 38**). The height of individual rocks does not appear to have been a factor, as engravings occur on both the highest rocks (Rocks D, C and K), and those almost on ground level (Rocks G and H). The rock surfaces are all very similar, with the exception that cup-like depressions (also referred to as cupules), do not occur on all the surfaces. The two rocks with the most dense concentration of engravings, Rocks C and L, also have the most cup-like depressions, suggesting that they were associated with the engravings in either a practical or ritual capacity.

A number of built features occur on the north-western side of the outcrop. A broken circle, consisting of small, closely packed rocks, occurs on one of the rock surfaces (**fig. 36**). This structure is presently almost completely obscured by debris, encroaching vegetation and a small tree, and some of the rocks have become dislodged. During a visit to the site in 1998 (Kovaks 1998:10-11) an additional

structure consisting of a large flat stone slab resting on two piles of stones (like a table), and a passage of large stone boulders leading up to it, were observed. This passage of stone boulders occurs on ground level, and in spite of encroaching silt and vegetation from the wetland area, some of the boulders are still visible. The purpose of these structures is not known. The position of the stone circle on one of the highest points of the outcrop, suggests that it served some ceremonial and ritual purpose requiring seclusion and isolation; it recalls the Khoekhoe practice of isolating young female initiates during the first menses (see chapter 4). The close proximity of the stream reinforces this possibility; during the period of isolation and while experiencing *!nau* (danger), cold water had to be avoided. At the end of the period of isolation, a purification ceremony, including a re-introduction to water, took place at the water source (Schapera (1930) 1963:275-278).

THE ROCK SURFACE

CUPULES

A number of cup-like depressions occur on the rock face; while the majority appear to be completely natural, a small number have nevertheless been manually manipulated. The walls of a number of the cupules have been deliberately ground and smoothed, and transformed into symmetrical holes of approximately 50 mm x 50 mm wide, and 50 mm - 80 mm deep (**fig. 42**). Apart from the natural depressions, there are a few that appear to be entirely man-made; two of these have been joined by a groove (**fig. 41**). In two instances the surrounding area has also

been manually depressed, resulting in large bowl-like shapes of approximately 150 mm deep, with stepped and grooved walls (**fig. 43**). Research undertaken by the writer in 1988, revealed en engraved cupule on one of the levels. One cupule has been emphasized with incised radiating lines at regular intervals, echoing the configurations of the majority of the engravings. Since then considerable erosion has taken place, and the cupules and this large depression are presently covered with a thick layer of black residue and debris; these details are no longer visible. Their dispersal on the rock face suggests a close association with the engraved images. They probably initially served a practical function, but acquired a symbolic meaning over time. Cupules are found at prehistoric engraving sites throughout the world. They occur in every inhabited continent, and often show a striking similarity. The art historian Siegfried Giedion (1962) was the first researcher to attach any importance to them. He maintains that these man-made cupules with their typical spherical and symmetrical shape are the oldest form of symbolic expression brought forth by the human race, and also the first perfectly regular form in prehistoric art. He emphasises that cupules occur widely in Europe, that they date from the late Neolithic period, and that they invariably occur on elevated, open surfaces, frequently in close proximity to engravings of animals (Giedion 1962:143). He concludes that these are archetypal shapes, similar to stone balls, perforated stones and engraved or painted rows of dots, and he equates them with fertility and the quest for survival. A variation commonly found in Europe, are the cupules encircled with an engraved circle. References to cupules are extremely rare in the South African literature. An exception is an early description by Cornelis Pyper

(1918) of an engraving site near Lydenburg. Numerous concentric circles are engraved on the rocks, but Pyper refers only to the occurrence of 12 cup-like hollows, and one cup-like hollow surrounded by two concentric rings. These are obviously man-made and are almost completely circular. Pyper (1918:417) does not present any hypothesis concerning their meaning, but remarks on their age: 'I am, therefore, of opinion that we are here face to face with old - very old engravings which consist of cup-like hollows and systems of rings, occurring singly or in various combinations'. This site at Lydenburg is included in a review of the rock engravings of agropastoralist (as opposed to hunter-gatherer) communities in South Africa (Maggs 1995). However, Maggs refrains from mentioning the cupules, and only describes the concentric engraved circles.

Research undertaken at cupule sites in Australia's Northern Territory (Ouzman *et al.* 1997), indicate that these engraving sites are amongst the oldest in the world, and could be approximately 16 000 years old. Ouzman points out that they do not appear to have served a utilitarian purpose, but that they have been strategically placed to emphasise certain natural features on the rock face. He contends that there is a complex interplay between 'natural' and 'cultural' space, and that this suggests 'that the interstices between archaeological sites and the routes by which particular sites were approached helped Aboriginal people define a relationship with the external world' (Ouzman *et al.* 1997). Ouzman also refers to the worldwide distribution of cupules, including those at the Tsodilo Hills in Botswana and speculates that 'cupule manufacture may represent a nascent attempt by people to

give expression to their mental conceptualisation and physical experience of the lived-in places and unexplored spaces presented to them' (Ouzman *et al.* 1997:7). In a paper the authors (Van der Ryst *et al.* 2004) describe the recently discovered Dovedale Ward rock engraving sites in Botswana. The sites comprise a number of engraved sandstone panels around a central pan. The engravings consist predominantly of animal spoor, grooves, human footprints, and seven cupules. Drawing heavily on !Kung and /Xam San narratives and myths, and emphasising the significance of a central water source, the authors suggest that the entire site, with its engravings and cupules, 'seems not only to mark places that were endowed with potency and spiritual importance but also to emphasize emotional ties with the landscape ...' (Van der Ryst *et al.* 2004:6).

GROOVES AND DEPRESSIONS

The cupules are not the only 'markers' on the rock surface. A significant feature is the occurrence of a number of longitudinal grooves on the rock face. They differ in size and shape, but are approximately 127 - 152 mm in length (**fig. 44**). They do not occur randomly but are positioned at almost regular intervals around the largest of the bowl-like depressions. In the rainy season this bowl-like depression is capable of retaining a considerable amount of water. The positioning of the grooves around this large depression suggests that some practical or ritual activity requiring water was enacted here. Similar grooves have been reported from various sites in southern Africa, and they invariably occur on flat rocky surfaces near water sources. Various hypotheses have been suggested for their function, ranging from the

shaping of stone artefacts to the sharpening of metal spears. Derricourt (1986:27-31) refers to the large number of sites with grinding grooves that occur in Zambia, and explores various possibilities. His research included a systematic analysis of the physical processes involved with various grinding materials. He confirms that the grooves could only have been made with a spherical or round-ended object, and he rules out the suggestion that the grooves had been caused by the shaping of metal artefacts. He concludes that the grooves are closely associated with the grinding of clay for pot-making, a process that requires water. A different view is expressed by Smith (1986:93-94) who refers to the occurrence of similar grooves at the Khoekhoe site of Kasteelberg (chapter 5). Substantial amounts of ochre were found at this site, and some of the grooves retained ochre staining. The latter findings were confirmed by Boonzaaier *et al.* (1996:21-22). If the grooves at Redan were indeed used to crush ochre, it is a further indication of a Khoekhoe presence and of ritual activities associated with the initiation rites of young women (chapter 5).

A number of small, natural depressions, much smaller than the cupules also occur on the rock face. In several instances these have been skillfully incorporated into the imagery as the central core of a circular image (**figs. 55a, 67b**), or as the eye or nostril of an animal (**fig. 53b**). This is fairly common practice in both rock engravings and rock paintings and has been well documented by Woodhouse (1990:112-116). However, this type of occurrence has received scant attention as a sculptural device. The ability to utilise the natural features on the rock face and include them in conceptualising three-dimensional images on a two-dimensional

plane, requires considerable cognitive skills; it can be considered a tentative first step towards relief sculpture. This ability is demonstrated to a remarkable degree in what appears to be a stylised face or mask (**figs. 54a, 54c**). Natural depressions in the rock face have been augmented with man-made depressions to emphasise the salient features of the human face. This modification of the rock face at Redan included the deliberate smoothing and abrading of surfaces before the image was engraved (**figs. 57, 68, 87**). This conscious attempt to indicate figure-ground relationship can be seen as the beginnings of representation in depth - a pictorial device that is usually not associated with non-Western art. The entire assemblage of richly textured rock surfaces of different heights has a marked sculptural quality; it is enhanced by the judicious placing of engravings on selected rock surfaces.

THE ENGRAVINGS

Close examination reveals that the engravings occur on only 18 of the available 33 rock surfaces (**figs. 36, 38**). Dense concentrations of engravings occur on Rocks C and L, both relatively small rocks; the greatest number of engravings (65) occur on the largest, most central surface, Rock K. This centricity is further emphasised by a centrally positioned, large circular image (**figs. 55a, 55b**). No logical explanation could be found for this particular dispersal of images, and no underlying stylistic or iconographic pattern could be identified. Norberg-Schulz (1975:430) argues that the experience of centricity adds to man's sense of security: 'From the beginning the centre represents to man what is known in contrast to the unknown and frightening world around'. One can also surmise that certain individuals, or individual groups,

claimed ownership of particular rocks, much in the same way as mobile San groups claimed ownership of certain water sources (chapter 5); a further confirmation of a pervasive sense of place at Redan. Of the total number of 273 images, 10 can be identified as animal images (**see fig. 40**), and one face or mask (**fig. 54a**). Sixty images can be classified as indeterminate in shape; most of these are so badly weathered that further classification is impossible. The remaining 200 images are all geometrically constructed (**see figs. 39 & 40**).

THE PRIMORDIAL CIRCLE

The most significant feature of the engravings is the predominance of the circle. These vary considerably in size from approximately 5 cm to 20 cm in circumference, and from simple undifferentiated circles to complex, highly differentiated configurations. The following basic categories can be identified:

1. undifferentiated circles and dots (**figs. 56, 57, 59, 61, 63**);
2. concentric circles (**figs. 64, 65, 66, 67a, 68, 86**);
3. concentric circles with rays (**figs. 55a, 72, 73, 74, 75, 77, 78, 82, 104**);
4. concentric circles with vertical-horizontal axes (typical 'mandala' shapes) (**figs. 70, 79a, 80a, 81**);
5. conflated circles (**figs. 83, 84, 85, 86, 102**).

Referring to the art of children, Arnheim (1956:137) emphasises that understanding takes place through the conception of definite shapes, and that the circle with its

centric symmetry is the simplest shape available to the human mind. 'The perceptual preference for the simplicity of round shape expresses itself genetically in the priority of circles in early drawings.' The circle does, however, not always stand for observed 'roundness' in the environment; before shape becomes differentiated the circle stands for any shape or concept. Arnheim (1956:140) further points out that in adult thinking and visual representation, objects and concepts are often represented by dots, circles and spheres when the actual shape is unknown or irrelevant. He refers to the fact that spheres and discs figure prominently in the earliest theories of the shape of the earth and the universe, before scientific knowledge was available: '... not so much on the basis of observation as because unknown shape or spatial relationships are represented in the simplest way possible'. Arnheim asserts that complex circles are invariably preceded by simple circles and dots. A large number of these undifferentiated circles occur at Redan (**figs. 56, 57, 59**). They are generally very small, incomplete circles. Most of them are so badly weathered that they are almost indistinguishable from the rock face. They appear to be the oldest engravings. In a chapter entitled *Growth* (1956:140-154) Arnheim traces the evolution of 'form' in visual expression. Once a formal pattern (e.g. the circle) has been acquired, it will be used repeatedly to describe diverse objects before proceeding 'to the next' form. As the mind becomes more differentiated and observation more acute, the primary, self-contained circle differentiates into concentric circles (**figs. 64, 65, 66**), indicating perhaps an expanding understanding of the environment and a greater engagement with the outer world (**figs. 67, 68, 86**). A significant addition to the concentric circle is the

discovery of direction, a vertical-horizontal relationship in the form of straight lines emanating from a central core (**figs. 55a, 72, 73, 74**), and forming the typical 'sunburst' configuration. According to Arnheim (1956:145) the straight line does not occur in nature, and is essentially a product of the human mind. When the vertical-horizontal configuration occurs independently, it suggests *terra firma* - as opposed to a shape 'floating' in space (**figs. 93, 98, 99**). In the typical 'sunbursts', line is essentially part of the configuration. The relatively undifferentiated rays (**figs. 73a, 75, 87**) progressively become more complex (**fig. 55a**), and are finally arranged in groups of three each, possibly indicating an understanding of numbers (**figs. 70, 76, 104**). A particularly large and striking concentric circle with rays, occurs on Rock K13 (**figs. 55a, 55b**). It consists of four concentric circles and a double row of rays and its central core is strongly defined. This centricity is emphasised by its central position on the most central and largest of the rocks. It recalls the words of Norberg-Schulz (1975:430): 'The notion of centre may be considered the basic element of primitive existential space. Every place where meaning becomes manifest is, in fact, a centre'. It has frequently been suggested that these typical 'sunburst' configurations are depictions of the celestial bodies. Willcox and Pager (1967:493) ask: 'Are these representations of the sun, indicative perhaps of a solar cult?' We will never know. However the spherical bodies rotating along a predictable geometrical path, must have been a source of endless wonder and contemplation. The Khoisan veneration for the moon and the stars is well-documented in their stories and myths (chapter 5) (see Lewis-Williams (ed.) 2000:245).

Arnheim's early research into the basic principles of visual perception, led inevitably to a theory of visual composition (Arnheim 1988:vii). He expands his earlier concepts of the 'sunburst pattern' and demonstrates that composition derives from the interaction of two visual principles, the centric and the eccentric. The most basic centric composition is that of a circle with a centre; the rays that emanate from the centre are termed 'vectors'. He emphasises that 'centricity' and 'eccentricity' are not merely compositional devices, but also reflect vital aspects of the human experience: the spread of action from the generating core of the self and the interaction with other centres in the social sphere.

A small number of the engravings at Redan digress from the predominantly circular configuration, and consist of straight lines; the straight line inevitably led to the discovery of oblique angles, chevrons, grids and squares (**figs. 89, 90, 92, 93, 94**). The square, with its allegiance to the grid, is grounded in the earthly; it reports about the existence of the world. Arnheim (1988:79) cites the example of Christian symbols and emphasises that 'the square has always been considered inferior to the circle, and hence was employed to symbolize the earth, whereas the circle expresses Heaven and eternal existence'. It occurs in its simplest form as a cross, as the unification of two opposing forces, the earthly and the spiritual, and in its more complex form as a cross within a circle - the typical 'mandalla', a Sanskrit word meaning 'sacred circle'. Both undifferentiated crosses (**figs. 98, 99, 97**) and more complex mandalas (**figs. 79b, 80b**) occur at Redan; they are extremely weathered

and appear to be very old. Arnheim (1956:167) recognises certain affinities between his theory of 'visual thinking' and C.G. Jung's theory of archetypes and the collective unconscious, particularly relating to the universal occurrence of the mandala in visual expression (see Jung 1968). This is not the place for a detailed exposition of Jung's theory of archetypes and the collective unconscious. Briefly, an archetype is an inherited idea in the individual unconsciousness, derived from the collective experience of mankind as a whole; archetypes are revealed in myths, dreams and in symbols - frequently in the form of a mandala. Arnheim (1956:167) concedes that 'such patterns are able to symbolize deepest insights into the nature of the cosmos as they are intuited and shaped by the unconscious and conscious mind ...' but emphasises that early 'symbols, like the sun wheel or the cross, reflect basic human experiences by means of equally basic pictorial form' (see also Krüger 1995). In a thought-provoking paper Mansfield (1981:269-277) explores the relationship between the engraved circles that occur on the rocky outcrops in Mesoamerica, and the concept of mandalas as defined psychologically by Jung, and metaphysically in certain Eastern religions. Mansfield also explores the possible astronomical alignments of these pecked circles and suggests that they may have functioned as calendars. This paper was not well received in the archaeological world; the consensus was that the concept of Jungian archetypes could not be verified empirically and that the theory lacked a scientific basis (Mansfield 1981:277-284).

J.S. Krüger (1995) writes about non-representational rock engravings in South Africa, from the very different perspective of comparative religion (San, Christian and Buddhist). His concern is not primarily with rock engravings, but to provide a religious philosophy for a post-1995 South Africa. He draws heavily on archaeology and anthropology, and on the Jungian concept of archetypes and the collective unconscious. He writes with authority about the 'great primordial visual symbols' (Krüger 1995:286) that occur in Buddhist and Bushman rock art and suggests that these symbols 'mostly express a set of associations closely related to the notions of centring, ordering and integrating'. He refers specifically to the powerful symbolism of the cross, and that it 'combines the ideas of the return to the centre, radical emptying and all-pervading extension'. In a chapter entitled *Bushman mandala*, Krüger (1995:328) draws attention to the recurrence of circular shapes at rock engraving sites:

> These may be interpreted, I suggest, as mandalas. A Sanskrit word meaning 'circle' or 'disk', mandala in tantric Buddhism refers to a mystic cosmogram (symbolic map) of the outside world and the inner world of the mediator. In a wider religious application, it may be used as a visual symbol expressing the search for perfection and transcendence, both within oneself (the microcosm) and in the universe (the macrocosm).

A Jungian analysis of the non-representational imagery at rock engraving sites in the South African context has never been attempted. As Krüger has indicated, it could lead to some meaningful new insights. Clearly, there are parallels to be drawn

between Arnheim's concept of 'visual percepts', Norberg-Schulz's 'model of existential space' and Krüger's 'microcosm' and 'macrocosm'. This is not purely a structural correlation, but is extended to the underlying meaning of the configurations. Central to each of these seemingly diverse approaches is the concept of humankind's close interaction with the environment (both the inner and outside world), in the search for meaning.

REPRESENTATIONAL IMAGES

The majority of the engravings at Redan are non-representational; however a small percentage can be classified as representational. This is not an unusual phenomenon. The comprehensive survey of all the rock engraving sites of the Vaal-Orange River basin, undertaken over a period of more than 20 years by the McGregor Museum, revealed a similar pattern (Butzer 1989:137-156). Of the total number of 273 images engraved on the rock face at Redan, 10 are of animals. They all appear to be wild animals; only three could be positively identified:

1. an eland (**fig. 52**), removed after 1967;
2. a hartebeest (**fig. 53a**);
3. a lion (**fig. 50**).

Stylistically, they are diverse, and vary from a single naturalistic depiction of the eland (**fig. 52**), to the schematised, contour line depiction of the lion (**fig. 50**). This stylistic diversity could indicate a considerable time-span between the execution of the different engravings, or multiple authorship. The eland with its well-

proportioned body and naturalistic detail, is reminiscent of the style adopted in many San rock paintings; this suggests an isolated San presence at Redan (chapter 5). Two stylistic characteristics are shared: all the animals are portrayed in profile; a continuous, flowing contour line delineates the form of each animal. This stylistic convention is particularly evident in the engraving of the lion (**fig. 50**). The strength and power of the animal has been captured in one bold, uninterrupted sweep; muscle and bone have been reduced to a basic *gestalt*. According to Arnheim (1956:151-152), this ability to fuse the various parts of an animal into one complex, whole configuration, requires a considerable amount of skill. Although the animal is static, tension has been created by the oblique direction of the mane - the lion appears to be poised to spring. The skilful use of oblique lines to create movement, is also evident in the engraving of an elephant from the Leeukuil site (**fig. 49**); the extended and enlarged hind leg is propelling the heavy body forward with a strong oblique movement.

From the discovery of the vertical-horizontal relationship, the artist proceeds to the more complex problem of oblique direction. In art *praxis* the oblique line involves a change of spatial orientation; when a square is turned by 45 degrees, it becomes a new shape - a diamond or a chevron (Arnheim 1956:66-68). At Redan the chevron evolves from a simple configuration (**fig. 88a**) to an appendage of a circular form (**fig. 104**), then as a complex pattern of chevrons arranged symmetrically around a central stem (**fig. 91a**). This particular image suggests a natural form, perhaps a butterfly; equally, it could represent a completely abstract concept. The visual

possibilities are endless; at Redan there is a remarkable example of the ingenuous use of the chevron to portray the human face.

A HUMAN PRESENCE

During the 1967 survey of Redan (Willcox & Pager 1967) an image on Rock K was identified and copied as a pair of chevrons (**fig. 54b**). A rubbing made by the writer in 1988 (**fig. 54c**) revealed that the engraving had only been partly copied, and that it was in fact a stylised face or mask; this was confirmed by photographs that were subsequently taken (**fig. 54a**). This omission was probably due to the fact that the engraving is extremely patinated, and is only visible at certain times of the day. This incomplete image is also included in Smith and Ouzman (2004:505, fig. 5). Depictions of front-view faces are non-existent in the context of rock engravings in South Africa, although they do occur in other countries, particularly in Australia and the United States (see Bahn 1998). Engravings of the human body, however, are fairly common in South Africa; invariably both the bodies and heads are portrayed in side view, and the head is usually small and insignificant with little indication of features. While the spherical shape of the human skull presents few problems to the aspiring artist, the face with its relief surface, is far more problematic. Arnheim (1988:158) points out that in much early sculpture the face is either reduced to a few markings on the ball of the head or conceived as a flat shield, to be somehow combined with the volume of the skull. At Redan, the face has been reduced to a simple triangle, and within this basic *gestalt,* a number of chevrons have been ingeniously arranged to portray the centric symmetry of the face. The eyes consist

of two man-made depressions, and are heavily emphasised with a series of expanding chevrons. These sharp planes and angles emphasise the pronounced frontality of the face. The *gestalt* principle of simplicity has been extended to the depiction of the nose: only its most salient characteristic, the nostrils, have been portrayed - one man-made, the other a natural depression on the rock face. The sharp base of the triangle appears to be a pointed beard or chin, and two identical elongated ears (or earrings) hang on either side of the face.

Endless speculation is possible on the origin of this face. It is the more startling because it digresses from the predominantly circular images on the rock face. A few possibilities can be considered. The fact that it is presented as an independent structure (not attached) to a human body, suggests that it represents a mask. However, there is no record of Khoisan people making or using facial masks. The controversial issue of the use of animal masks by the San during hunting activities, is not relevant to this discussion. Presumably these masks covered the entire head and were not facial masks. Rudner (1982), writes in great detail of the various pigments and binders used by the Khoisan for facial and bodily decoration; unfortunately the actual facial patterning is not described in any detail, although there are a few cursory references to the preference given to stripes and dots (Rudner 1982:207). Citing Hoernlé (1918, 1923), Rudner emphasises the significance of facial painting during and after the initiation ceremonies of the young Khoekhoe female. In a small number of historic illustrations facial painting is indicated (**fig. 31**); these show quite clearly the centric symmetry of the face,

particularly the heavily emphasised eyes. It is also immediately apparent that this 'mask' bears a superficial resemblance to typical African masks from areas further north (due to constraints of time this possibility will not be explored in the present research). This resemblance does, however, not necessarily indicate a north African origin. Rather, it is a generic form, a structural equivalent of the human face. However, its occurrence amidst a plethora of non-representational images remains an enigma; it has no precedent in the context of South African rock engravings. Although the ancient engravers have long since departed from Redan, their presence remains enshrined in this face engraved on the rock face.

In this chapter I have outlined the general thesis of Norberg-Schulz: that the geographical phenomena and spatial characteristics of a region give meaning to man's existence, and that 'the notion of centre may be considered the basic element of primitive existential space'. At Redan, the otherwise flat and arid landscape is unexpectedly broken by a sandstone outcrop next to a water source. On the surface of this elevated and centralised form, innumerable circular images have been engraved. In the second part of this chapter, a representative selection of these engraved images was analysed according to the formal qualities inherent in their configurations, as defined by Arnheim. Echoing Arnheim, I contend that these geometric configurations are elementary representational concepts of how the world (inner and outer reality) is perceived and understood. These engraved images at Redan illustrate the need of humankind to comprehend the world through well-structured form. The simpler the form, the easier the comprehension.

CONCLUSION

From the onset of the research it was apparent that a range of disciplines would have to be consulted; adherence to one area of study only would impose a homogeneity on the study and restrict the interpretation of the engravings. A history of Redan, and the negotiations that were conducted over an extended period of time, was the obvious point of departure. This account included the historic development of heritage legislation, its impact on rock art conservation, and the personalities involved. The archaeological record, particularly that relating to the prehistory of the Vereeniging area, provided an essential socio-cultural context. Since the 1980s rock art research has become a specialised field of study, independent of mainstream archaeology and with its own distinct methodology. The important developments in this field were researched and critically assessed. An art historical perspective was found to be largely absent from these studies. This dictated that art history, the allied fields of art *praxis*, the psychology of art, and the philosophy of art, be researched and included in the study. The principles embodied in these disciplines were finally applied to an analysis of the rock engravings of Redan. This integrative approach proved extremely fruitful.

The history of Redan included an overview of the life of George William Stow, and his important contribution as the precursor of rock art conservation in South Africa. In his lifetime (1822-1882) Stow was deeply concerned at the rapid disappearance of rock painting and rock engravings. He became the first person to deliberately

search for sites and record as many of the images as possible. While establishing the first coal mine in Vereeniging, he continued making facsimile copies of the art, believing that this was the best way to preserve these 'memorials upon the rocks'. Of significance for the present study is his early interest in non-representational imagery and his conviction that these enigmatic images held some symbolic meaning. Unfortunately Stow did not expand on his belief in the symbolic significance of these inexplicable images, or attempt to interpret individual engravings. Inspired by Stow's commitment to the cause of rock art conservation, T.N. Leslie of Vereeniging continued searching for rock art sites in the area. He discovered several sites, and also discovered proof of Vereeniging's ancient beginnings. At his stone quarry he retrieved stone artefacts dating to the Early Stone Age, he established that Vereeniging was built on the dried-up bed of an ancient lake and he discovered a fossilised forest, exposed in the bed of the Vaal. He was instrumental in the promulgation of the first heritage legislation in South Africa in 1911; this legislation offered some form of protection to the rock engraving site that in years to come would be known as Redan.

Leslie's enthusiasm for Vereeniging's prehistoric past prompted the young civil engineer working in the Vereeniging area, Clarence van Riet Lowe, to abandon his career, and devote his life to archaeology. He soon became a major influence in the investigation, excavation and conservation of prehistoric sites in South Africa. Due to his efforts, two Stone Age sites in Vereeniging were declared historic monuments: Kliprivier Archaeological Reserve (1943) and the Van Riet Lowe

Archaeological Reserve (1944). Both these reserves were internationally recognised, and visited by delegates on several occasions. Today, they are forgotten and abandoned, and the sites have become ash heaps. As the history of Redan unfolded, it became apparent that this forgotten history, which parallels the history of Redan, should be included in the present study. Concurrently with the declaration of the Kliprivier Archaeological Reserve as a historic monument, Van Riet Lowe compiled the first comprehensive list of rock art sites in South Africa (1943). In his second listing (1952), no less than seven rock engraving sites are listed as occurring in the Vereeniging area. Due to the rapid expansion of the town and the demand for land, these sites have all disappeared with the exception of Leeukuil and Redan. While the former has been largely submerged by the Vaal, Redan owes its survival to the fact that the land on which it occurs is mining area with several sinkholes in the vicinity. During this period Van Riet Lowe invited the Abbé Breuil, then considered the world's greatest authority on rock art, to join him in several archaeological projects. In the course of the excavations at Rose Cave Cottage (1943-1946) Van Riet Lowe invited a practicing artist, Walter Battiss, to join the team in order to make facsimile copies of the rock paintings. At the time, this partnership between art and archaeology was not considered unusual.

Van Riet Lowe was succeeded by B.D. (Berry) Malan in 1956. Malan continued the conservation work that Van Riet Lowe had initiated in the Vereeniging area. He worked tirelessly to improve existing heritage legislation, and frequently acted as mediator between the Town Council and the newly-designated National Monuments

Council regarding the maintenance of the prehistoric sites in Vereeniging. During his office the engravings of Redan were recorded for the first time (Willcox & Pager 1967) and in 1971 Redan was finally declared a national monument. After Malan's death the three sites rapidly became neglected and abandoned. This pattern of neglect and reparation would be endlessly repeated. In 1978 Baby Deyzel of the local museum, became the unofficial custodian of the three prehistoric sites, maintaining and controlling visits to the sites. During this period and until Deyzel's death in 1997, an unprecedented number of interested people visited Redan.

The first democratic elections in South Africa in 1994 presaged many significant changes in Vereeniging. In 1999 the Town Council that had exercised control over Redan for almost a century, was replaced by the Lekoa Vaal Metropolitan Council. In the same year the farm on which Redan is situated, was sold to a private individual, and the previously designated National Monuments Council was replaced by the South African Heritage Resources Agency (SAHRA). In the ensuing months Redan would be visited by members of both SAHRA and the Rock Art Research Institute of the University of the Witwatersrand (RARI). Various plans were devised for its future development and maintenance, but nothing came of these plans. The site continues to be visited on an *ad hoc* basis, but the relentless cycle of neglect has set in once more. The battle that has been raging for decades between the various authorities, has ceased. An ominous silence hangs over the deserted site. The only sound is that of water pouring into the huge sinkhole immediately next to the site, a frightening reminder of the heavy toll exacted by

industrial development. Tall grass is rampant between the rocks, obscuring many of the engraved images. Like the wild animals that once roamed freely in the area, but have since disappeared, Redan's demise is imminent.

Having completed the history of Redan, the prehistory of the Vaal area was the next to be considered. Based on the calibrated dates obtained for Klipfontein and Driekopseiland in the Northern Cape, and given the remarkable similarity between these sites, it can be surmised that the engravings were executed approximately 8400 - 100 BP. This enormous time-span and the unresolved matter of authorship, necessitated the inclusion of a broad overview of both the Stone Age and the succeeding Iron Age on the southern Highveld, in the study. This survey led, inevitably, to the realisation that early cultural artefacts were indicative of the hypothetical beginnings of visual expression. A clear pattern emerged: a striving towards symmetry and geometrically-conceived form, and the progressive refinement of form beyond the level of practical utility, to an awareness of form for its own sake - 'art'. In spite of many missing parts, it can be assumed that imperceptibly, and over a period of many hundreds and thousands of years, pictorial form was discovered - the ability to mark a surface with meaningful forms. The images engraved on the rock surface at Redan with their predominantly circular configuration occupy an important position in this formal evolution. Both representational and non-representational imagery occur at Redan; an indication that the two mainstreams of visual expression developed coevally.

Although the overview of the Stone Age and the Iron Age did not offer conclusive proof of the authorship of the rock engravings of Redan, it provided an essential context for further discussions. The archaeological research conducted over several decades confirmed that the southern Highveld had been inhabited by hunter-gatherers, herders and agropastoralists. Further research also revealed that the traditional belief in an undisputed San authorship for both rock engravings and rock paintings was being questioned. A comparative study of the two art forms reveals marked stylistic disparities. Rock paintings occur in mountainous areas on the walls of caves and overhangs and the imagery is predominantly representative of animals and people; non representational imagery occurs infrequently. Redan does not conform to this pattern in any respect. At Redan the imagery is predominantly non-representational and less than four per cent of the images represent animals. These stylistic disparities indicate a non-San origin. Perhaps Stow was correct in his conviction that the dissimilar geographic distribution of the two art forms indicated two distinct and separate branches of San 'painters' and 'sculptors'. In the historical record there is frequent reference to 'herd boys' being responsible for the non-representational engravings. The historical record also attests to a strong Korana-Khoekhoe presence on the southern Highveld in the early 1800s. This suggestion of a predominantly Khoekhoe authorship for the rock engravings of Redan, was further confirmed by the recent research of Smith and Ouzman (2004). Echoing Stow, the authors argue that the geographic distribution of engravings, and the predominantly geometric imagery found at these sites, indicate a Khoekhoe herder authorship.

Having determined the probable authorship of the rock engravings of Redan, the burning question of their meaning remained to be answered. Although authorship can assist in this quest, ultimately it is the imagery itself which is the primary source of information. Compared to sites further north such as Driekopseiland with more than 3000 engravings, Redan is relatively small with less than 300 engravings. It was therefore comparatively easy to isolate each of these images, photograph them individually and do a comparative study of their exact configuration. An investigation of historic and existing methodological approaches, revealed that non-mimetic imagery in rock art has always been poorly understood. Researchers appear to be hampered by an inability to recognise the formal components in the imagery, and by a conviction that meaning resides only in recognisable, representational imagery. This concept of art as imitation and the search for literal meanings is entrenched in rock art research. This bias towards non-mimetic form has variously been denigrated as 'doodles', 'the beginnings of degenerate art', and unsuccessful attempts to emulate the real world. The introduction of the shamanistic approach and its concomitant neuropsychological model in the early 1980s, marked the beginning of a new era in rock art research in South Africa, and the concept of 'entoptics' offered a 'scientific' explanation for the occurrence of these inexplicable images. It soon became the preferred methodological approach for the interpretation of both representational and non-representational imagery in rock art. A close examination of this approach has revealed that is is characterised by the same bias as previous models. It has reduced non-mimetic imagery in rock art to an epiphenomenon of trance, a symptom of an altered state of consciousness, and

ultimately devoid of meaning. Its proponents admit that the meaning of 'entoptics' is obscure. The possibility of applying the shamanistic approach to the rock engravings of Redan was abandoned at an early stage of the research. The probable Khoekhoe origin of the rock engravings lent further support to this decision.

The art historical voice, absent from rock art studies since the demise of Battiss and Pager, was resurrected by the fresh, new voice of Pippa Skotnes (1991, 1994, 1996a, 1996b). Skotnes is not only a respected art historian, but also a practicing artist of repute; many of her insights relate directly to her own experience of art *praxis*. She argues persuasively that the formal properties in the rock art are consistently overlooked by researchers; and that meaning in the rock art can also be revealed through the analysis of form. Further reading (e.g. Read 1931, 1955, 1965; Panofsky (1955) 1982; Shapiro 1998) confirmed that a formalistic approach offered a critical (and as yet unexplored) framework for the analysis and interpretation of non-mimetic imagery in rock engravings. Before proceeding with this analysis, the research of Rudolph Arnheim (1956, 1966, 1970, 1986, 1988) into the psychology of art, was re-visited and re-examined. The basic tenet of his thesis is that the human mind is equipped with two cognitive procedures, intuitive perception and intellectual analysis. These two procedures are both indispensable for cognitive functioning and neither is unique to any particular type of human activity. Arnheim (1986:13) explains: 'Intuition is privileged to perceive the overall structure of configurations. Intellectual analysis serves to abstract the character of entities and events from individual contexts ...'. The co-operation between these two cognitive

procedures is demonstrated during art *praxis*: the act of painting and engraving, is a means of processing and consolidating information that has been gained. Following the *gestalt* law of striving towards the most regular and most symmetrical structure, the resulting image will probably be a simple geometric form. He writes extensively about the 'form seeking' and 'form imposing' mind and its propensity for geometric form; this is especially true of the visual expression of pre-literate societies, young children, and the abstract art of the twentieth century. He makes no qualitative distinction between these extremes, but argues that the only difference is in their degree of complexity. According to Arnheim, this preference for simple, geometric form is closely aligned to the need of mankind to become familiar with the environment. An intimate knowledge of the environment is essential for orientation, and ultimately also for survival. The entire artistic process, perceiving, analysing and 'making', assists in this orientation process. Representations of geometric form are not unsuccessful attempts at emulating the real world; they are structural equivalents of that world. This principle applies equally to the non-visible world of human experience. To illustrate this principle, Arnheim points out that the circle is the simplest shape available to the human mind: the circle is the shape most frequently used in prehistoric rock engravings; it is equally pervasive in the visual expression of young children. The remarkable similarity between the forms used by young children, and the forms that occur in non-representational rock art, have frequently been commented on, but a satisfactory answer has never been provided. Arnheim's name has been mentioned in this respect but a detailed analysis of non-mimetic imagery in rock art, according to the formalist principles he

developed, has not been attempted. Before attempting such an analysis, further confirmation was sought in the very different, but complementary field of architectural history.

Concurrently with Arnheim, but working from the premise of existential meanings in the built environment, Christian Norberg-Schulz (1971, 1975, 1979) developed a phenomenological approach to the study of architecture - the propensity of humankind to develop phenomenological, spiritual relationships with the elements in the environment. His central thesis is that the geographical phenomena and spatial characteristics of an area, and how they are perceived and experienced in the built environment, give meaning to man's existence. Norberg-Schulz (1975:preface) emphasises that architecture comprises landscapes, settlements and 'characterizing articulation', and that this has 'helped man in making his existence meaningful ...'. Norberg-Schulz points out that in early civilisations the experience of 'centre' is particularly significant in how the landscape is perceived and articulated, and that the notion of centre may be considered the basic element of primitive existential space. It was immediately obvious that the phenomenological approach of Norberg-Schulz supported Arnheim's thesis of 'visual thinking'. The formalist principles developed by Arnheim are reinforced and augmented by the deeply spiritual insights of Norberg-Schulz. Their combined insights provided a critical framework for the analysis of the rock engravings of Redan.

Numerous visits to the site, and a close analysis of a number of representative images, revealed that many of the formalist principles developed by Arnheim are demonstrated at Redan (chapter 8). A detailed analysis of the main image types and their formal properties, revealed that the form that occurs most frequently at Redan is the circle. A circle is essentially allusive; it does not always represent observed 'roundness' in the environment. Before shape becomes differentiated the circle stands for any shape or concept. This is particularly true for early art. In one particular context it may have one meaning, but in another context it can mean something very different; even in one community it could take on many meanings. At sites where one particular form prevails, such as at Redan, it is possible to suggest a collective meaning, or a constellation of meanings within a central concept. Both Arnheim and Norberg-Schulz are concerned with the phenomenological world and its role in shaping human cognition and ultimately giving meaning to life. Both emphasise the role of art *praxis* in this endeavour. Both emphasise the primacy of the circle. By marking the rock surface with innumerable circular images and exposing its inner core, the ancient engravers established and strengthened their relationship with the environment. Within this broad collective, individual images could relate to celestial phenomena, to features in the landscape, to ceremonies and belief systems. Their precise meaning will always elude us. The engraved images with their predominantly circular form are the structural equivalents of this varied human experience.

It was not the purpose of this study to arrive at the 'true meaning' of the engraved images of Redan, or to 'crack the code' of non-mimetic imagery in rock art. Rather, it was a search for concepts and principles that will further our understanding and enrich our experience of the art. Visual expression is multi-dimensional: like a piece of woven cloth it has many strands. Two of these strands have been examined: a 'perceptual' strand grounded in human cognition and art *praxis;* and an 'existential' strand which functions on a more spiritual level. Undoubtedly there are more strands, each contributing to a greater understanding of the prehistoric rock engravings of Redan. When woven together, these many strands form a complete whole. The danger lies therein that if each of these strands are unravelled and dissected, the whole, the *gestalt*, will have been irrevocably destroyed; the parts do not constitute the whole. Art is also of the human heart and spirit; there is an elusive and intangible quality in artistic form that is never open to objective analysis. This quality is palpable at Redan; perhaps it should not further be tampered with. In contemplating South Africa's prehistoric rock art, the artist Walter Battiss wrote:

> There is a great beauty in this earth that is nearest to a heavenly beauty - it is the beauty of a thing that is past. It is more beautiful than the beauty of a thing that is newly complete for there is always a vague desire to add or subtract from the newly completed form. But a form that is past is safe beyond immediate interference. Time is like a glaze that protects. (Battiss 1948:234)

Figure 32. *Redan rock engraving site.*

Figure 33. *Redan rock engraving site (1988).*

Figure 34. *Redan rock engraving site with mine dump and power lines in distance.*

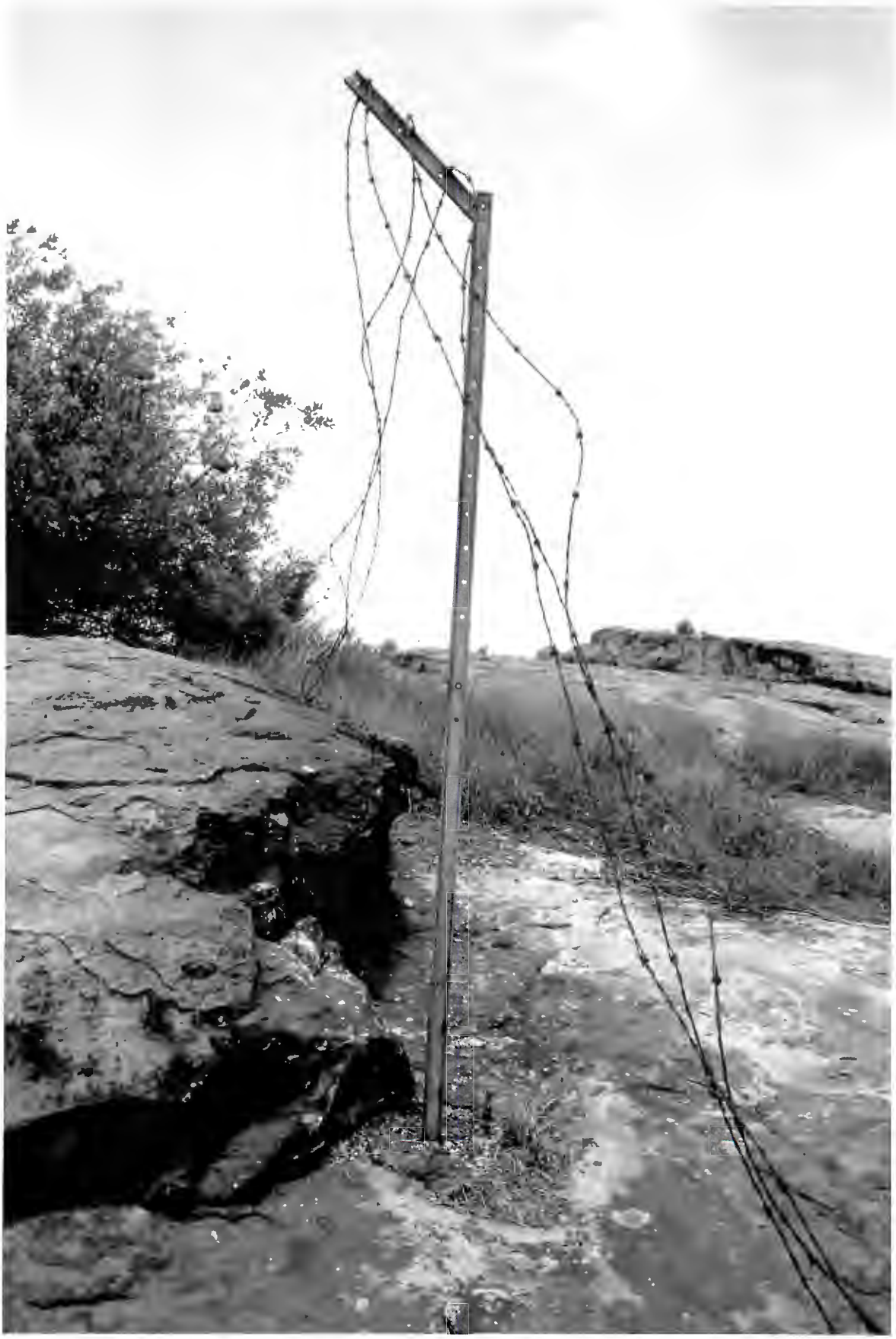

Figure 35. *Redan rock engraving site with remains of fence.*

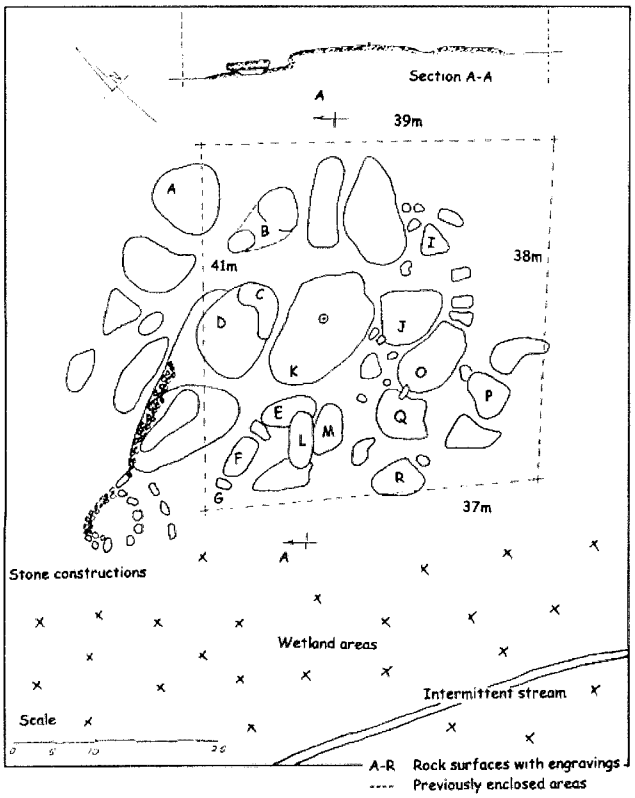

Figure 36. *Map of Redan rock engraving site showing rock surfaces with engravings, stone constructions, wetland area, and intermittent stream.*

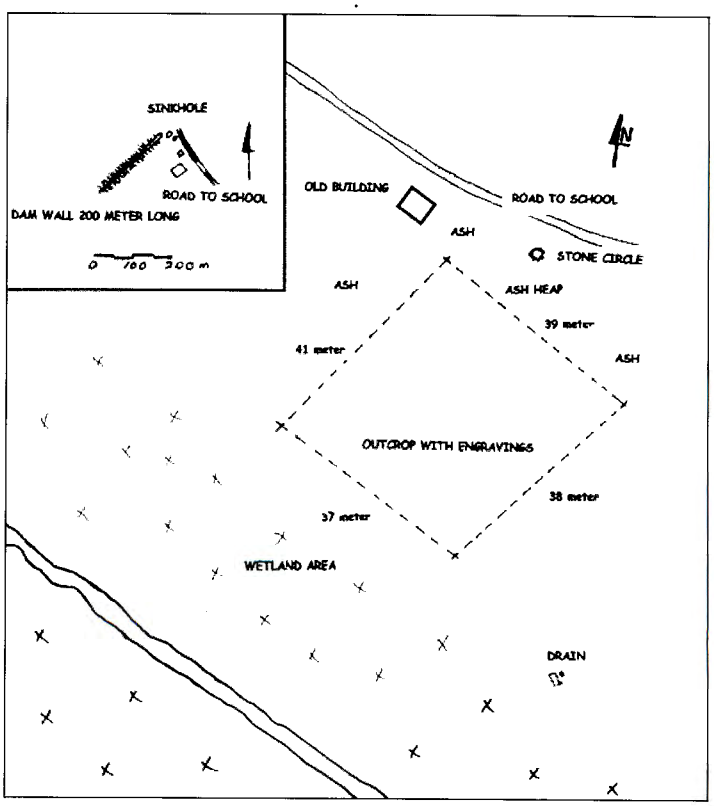

Figure 37. *Map of environs of Redan rock engraving site showing ash heaps and sinkhole.*

Figure 38. *Map of Redan showing position of individual engravings on the different rock surfaces. The black dots indicate cupules (after Willcox & Pager 1967).*

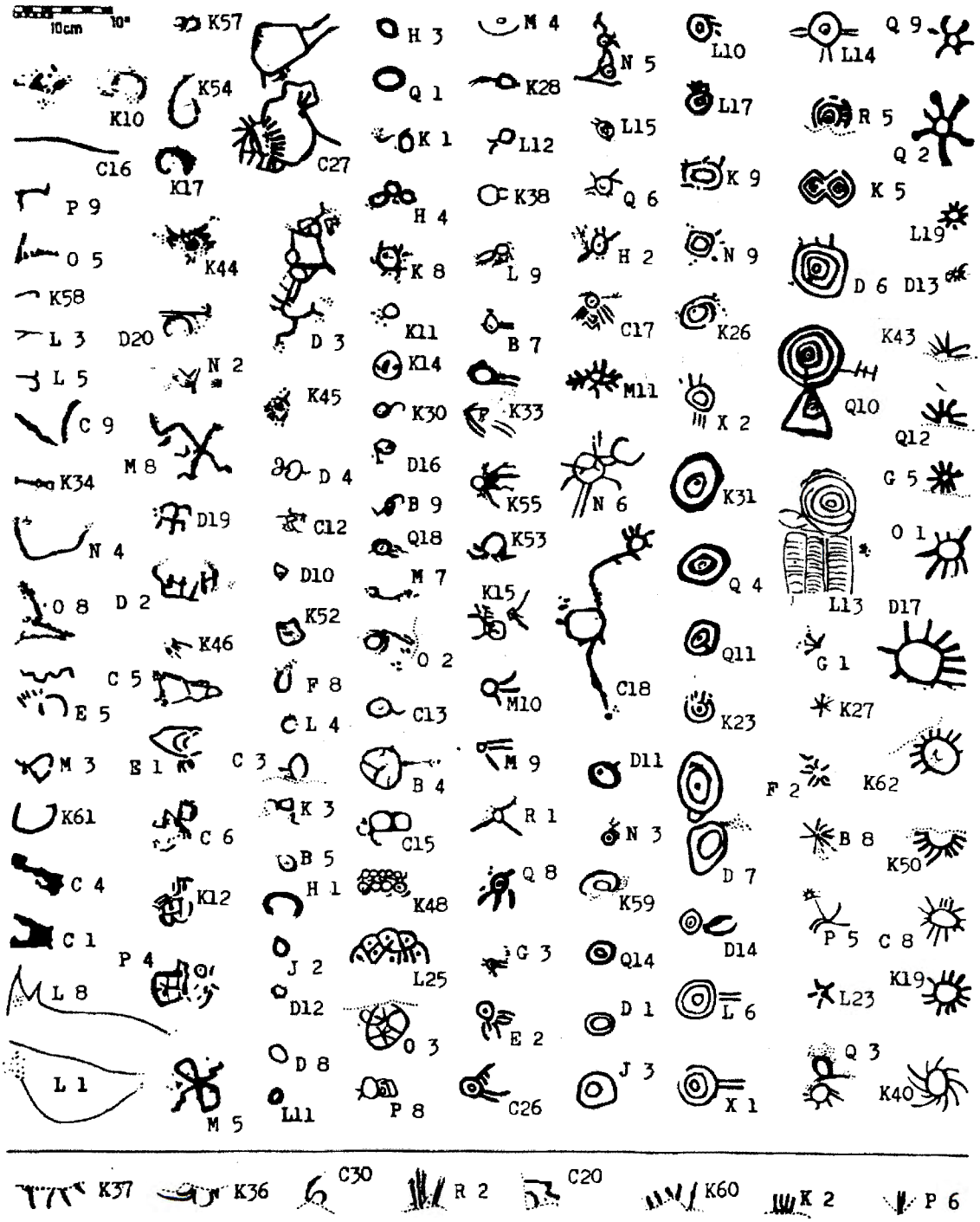

Figure 39. *Measured drawings of the rock engravings of Redan. (after Willcox & Pager 1967).*

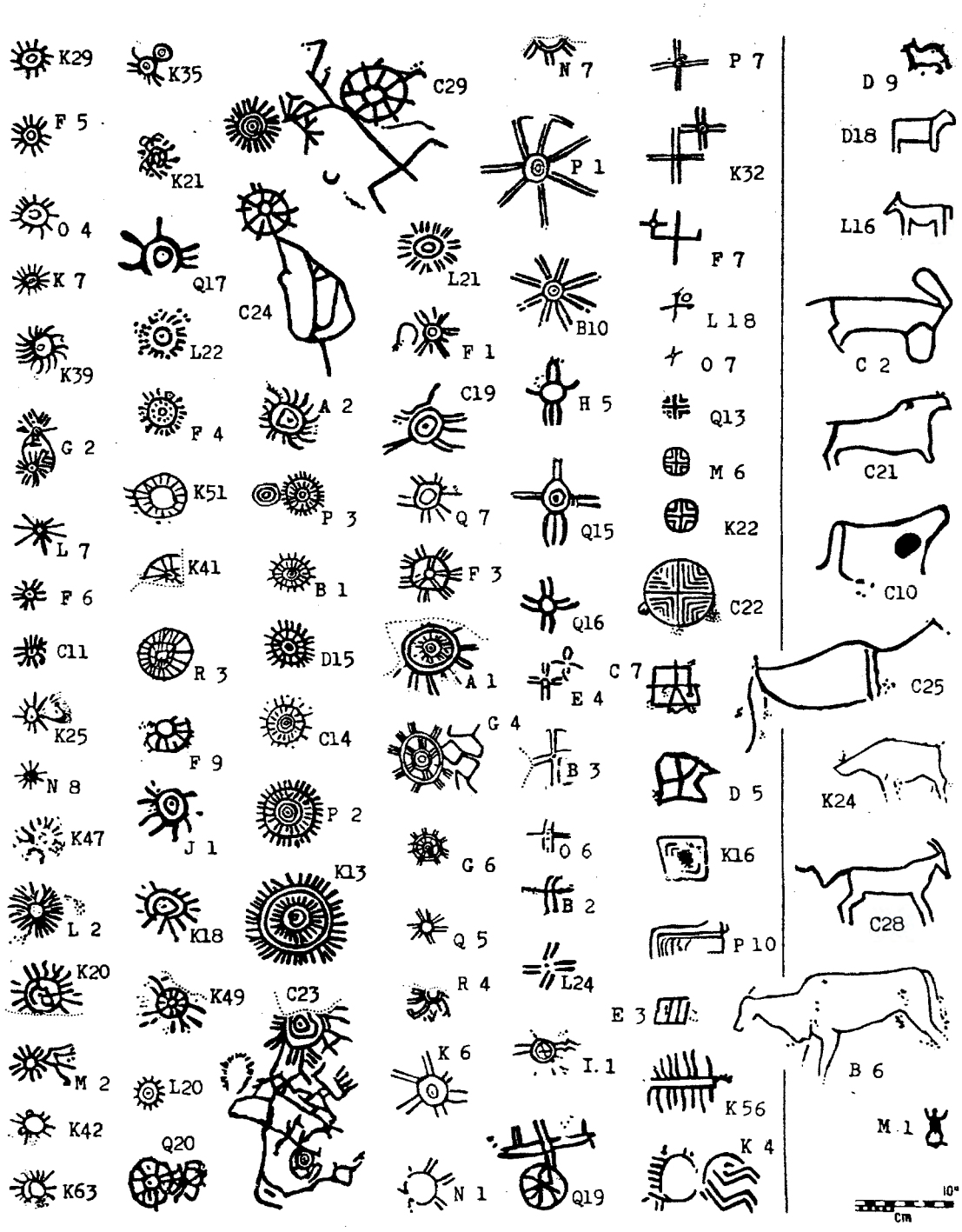

Figure 40. *Measured drawings of the rock engravings of Redan (after Willcox & Pager 1967).*

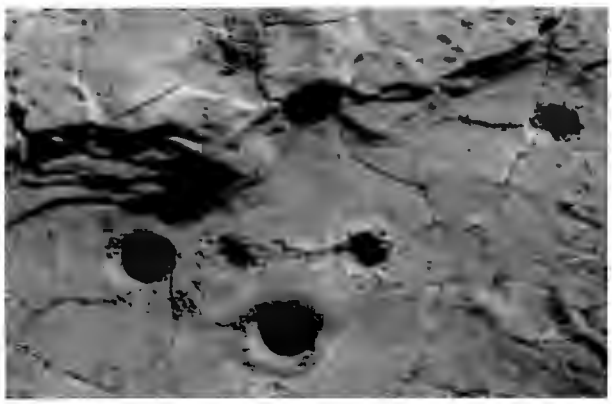

Figure 41. *Cupules (1988).*

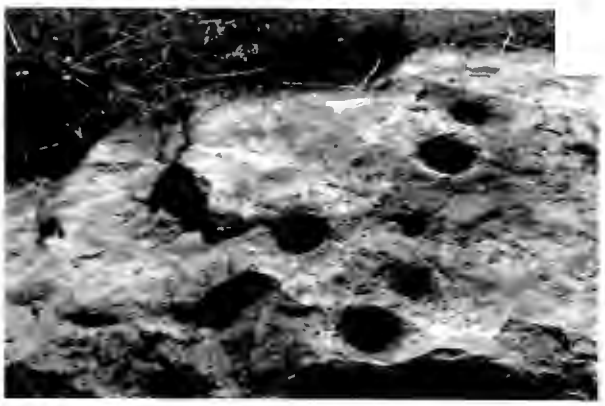

Figure 42. *Cupules (1988).*

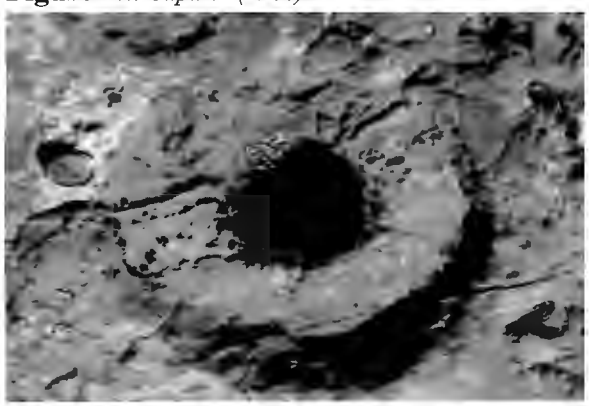

Figure 43. *Large hole (1988).*

Figure 44. *Grooves.*

Figure 45. *Attempt to remove rock.*

Figure 46. *Contemporary graffiti in vicinity of site.*

Figure 47. *Exfoliating rock surface, Redan.*

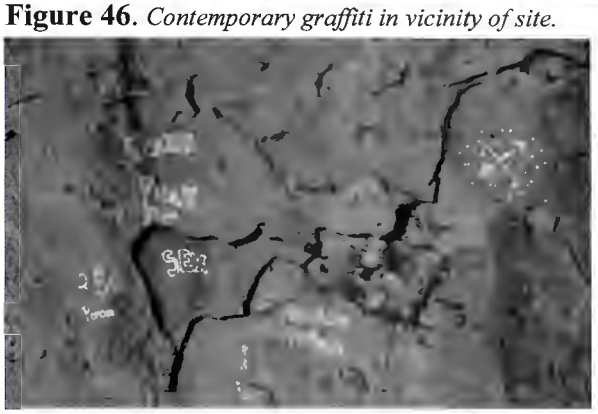

Figure 48. *Exfoliating rock surface with contemporary graffiti, Redan.*

Figure 49. *Elephant, Leeukuil.*

Figure 50. *C21 Lion, Redan.*

Figure 51. *L16. Antelope or mammal ? Redan.*

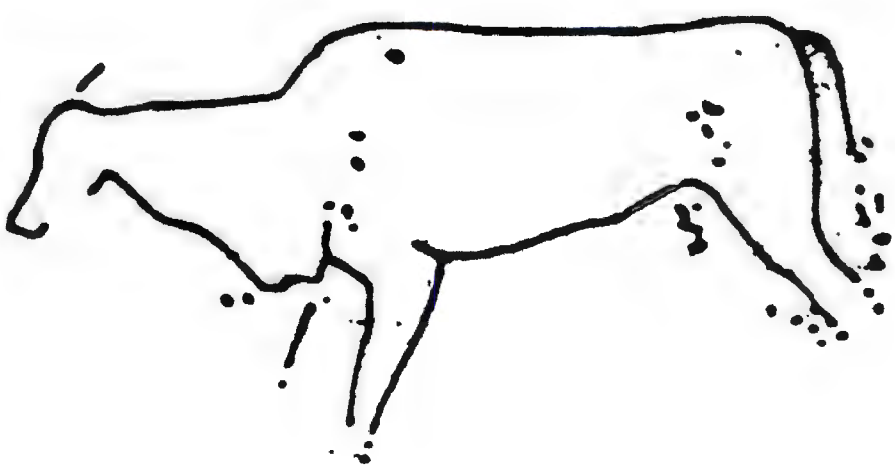

Figure 52. *B6. Eland, Redan (after Willcox & Pager 1967). Entire engraving removed after 1967.*

Figure 53a. *Hartebeest, Redan*

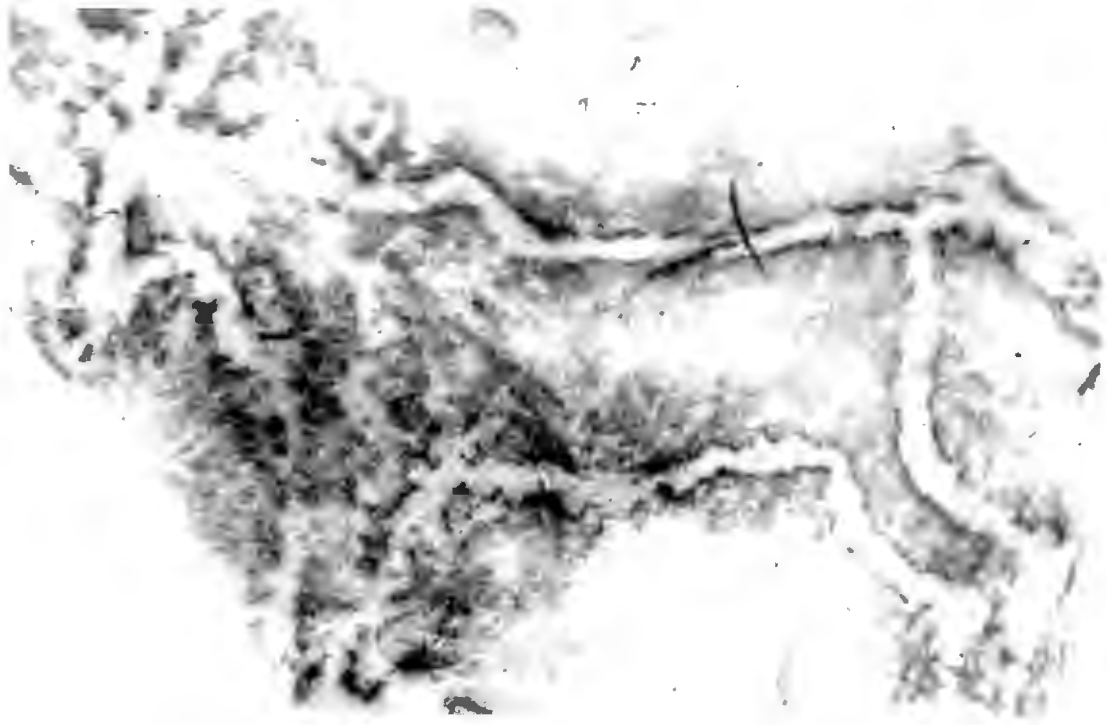

Figure 53b. *Hartebeest, Redan (rubbing 1988).*

Figure 54a. *K5 Mask.*

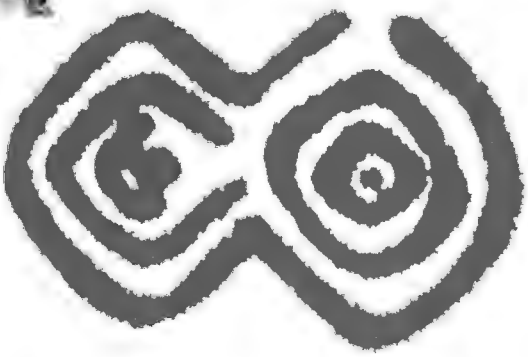

Figure 54b. *K5 Mask (after Willcox & Pager 1967).*

Figure 54c. *Mask (rubbing 1988).*

Figure 55a. *K13*

Figure 55b. *K13.(rubbing 1988)*

Figure 56. *L10*

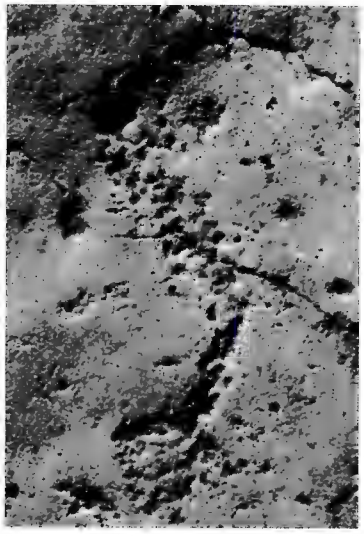

Figure 57. *M7*

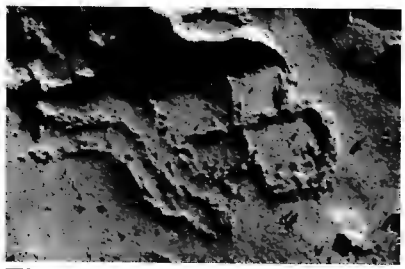

Figure 58. *K12.*

Figure 59. *F8.*

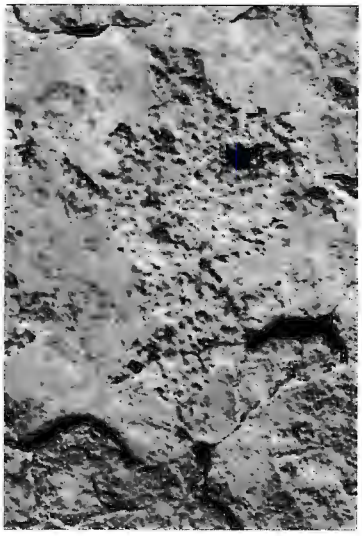

Figure 60. *K44.*

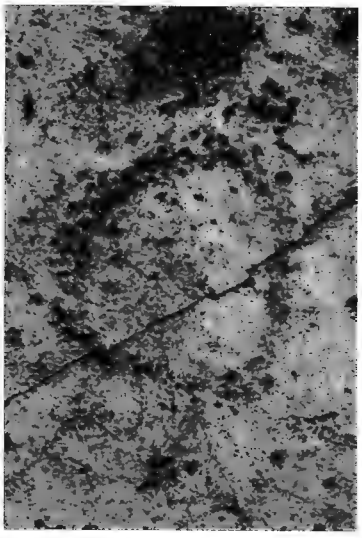

Figure 61. *X20.*

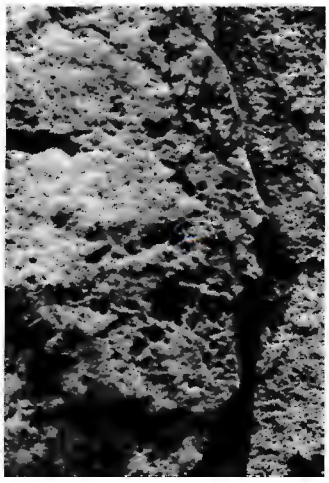

Figure 62. *K43.*

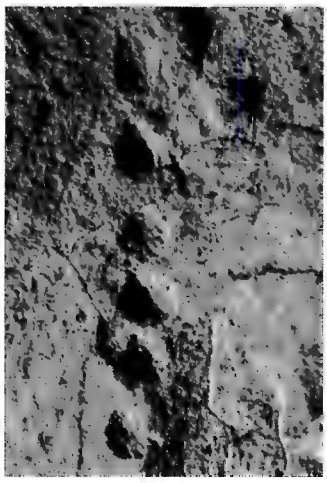

Figure 63. *DX8.*

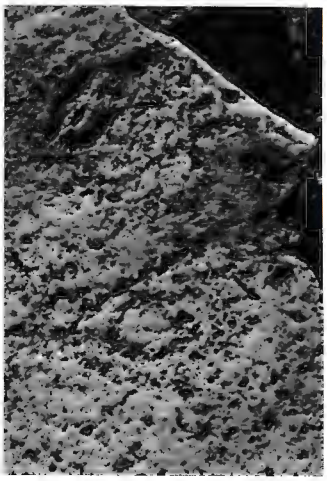

Figure 64. *K26.*

Figure 65. *N9.*

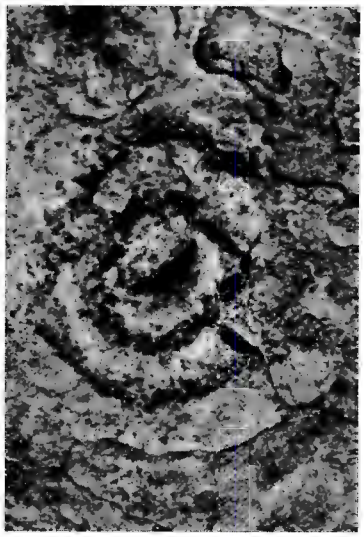

Figure 66. *Q11.*

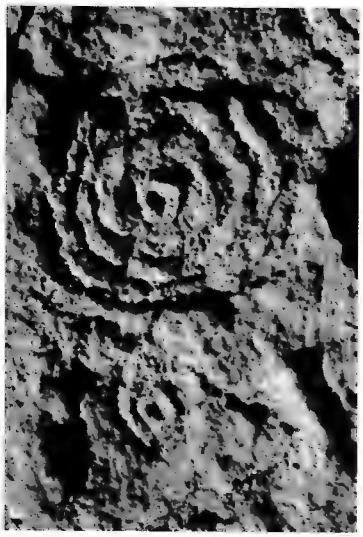

Figure 67a. *Q10.*

Figure 68. *D6.*

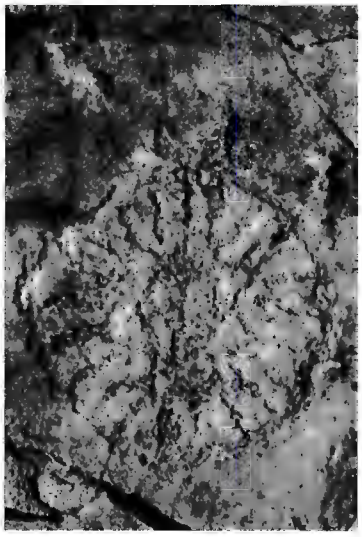

Figure 69. *R3.*

Figure 70. *X2.*

Figure 71. *L2. .*

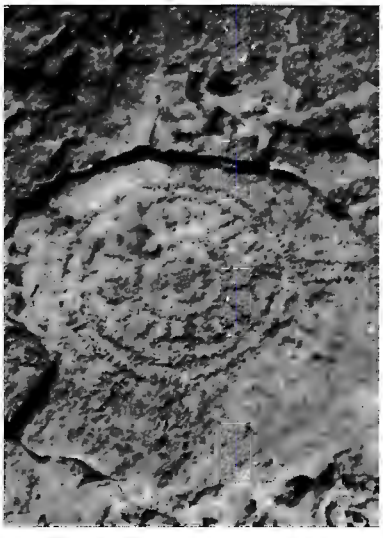

Figure 72. *A1.*

Figure 73a. *B10.*

Figure 67b. *Q10.*

Figure 73b.*B10*.

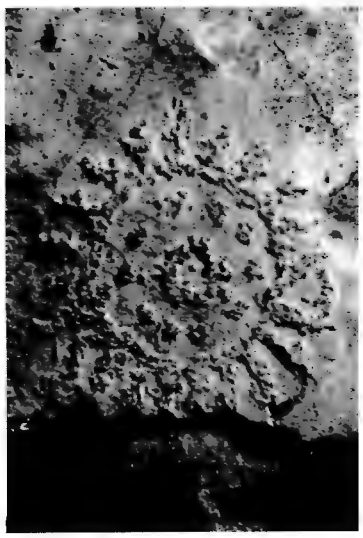

Figure 74. *F4.*

Figure 75. *F5.*

Figure 76. *F3.*

Figure 77. *K7.*

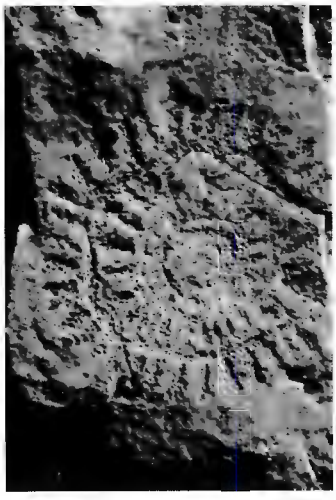

Figure 78. *P2.*

Figure 79a. *M6.*

Figure 80a. *C22.*

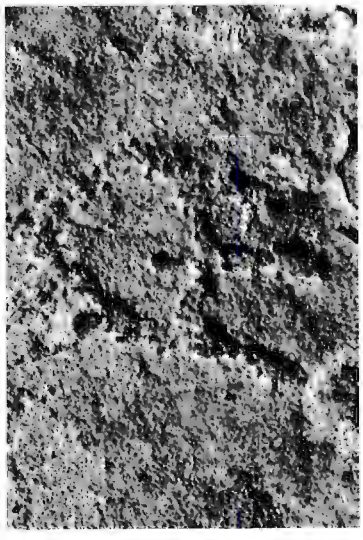

Figure 81. *DX31.*

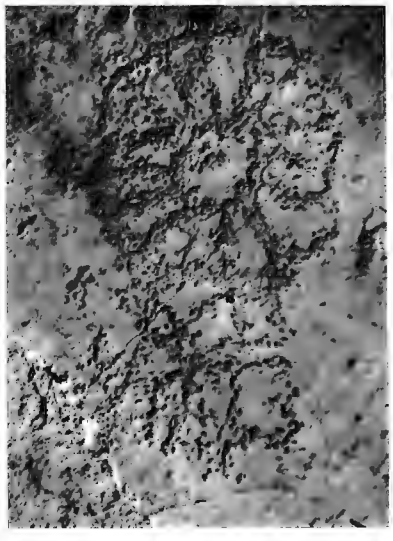

Figure 82. *Q20.*

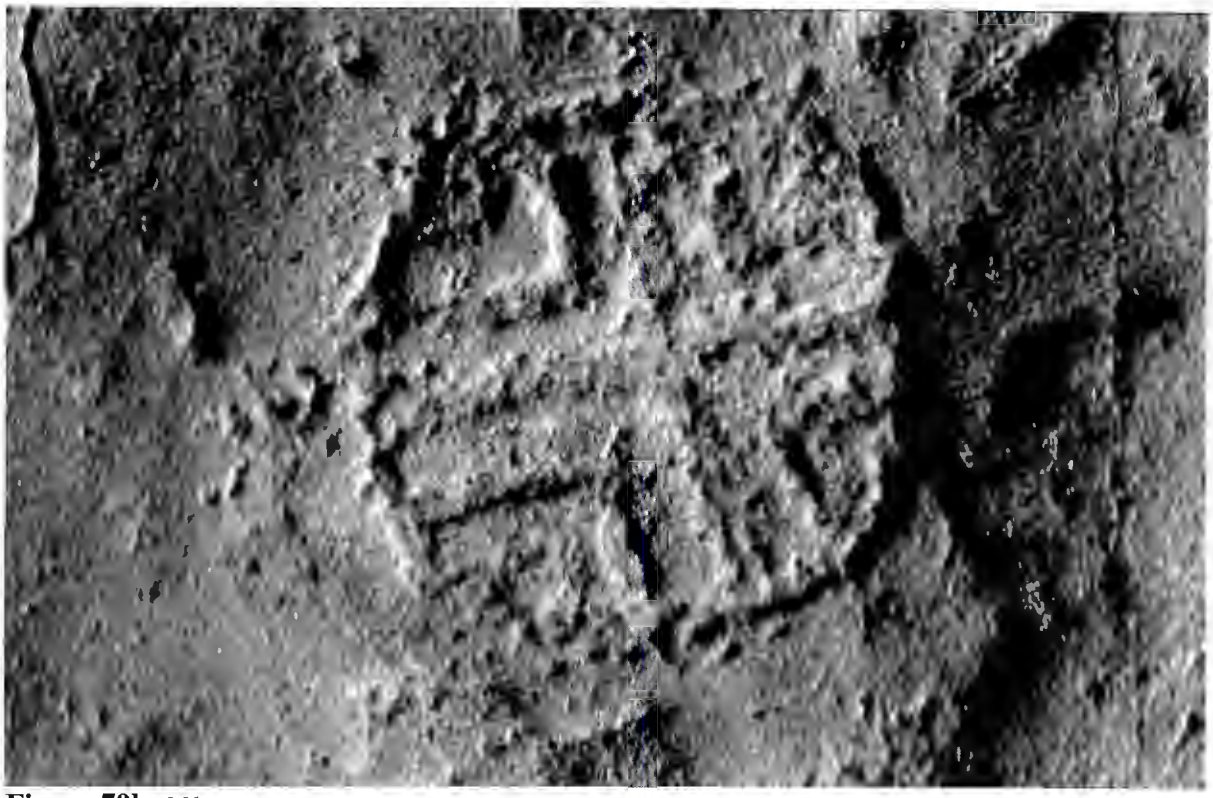

Figure 79b. *M6.*

Figure 80b. *C22*

Figure 83. *C15.*

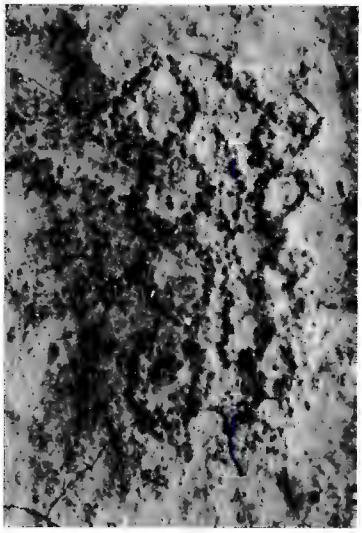

Figure 84. *K48.*

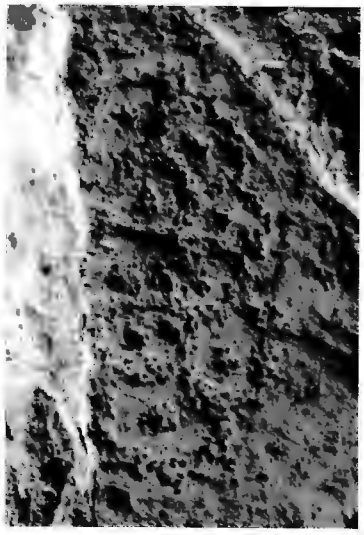

Figure 85. *L25.*

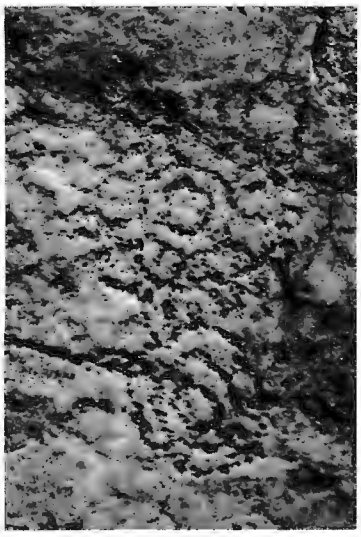

Figure 86. *P3.*

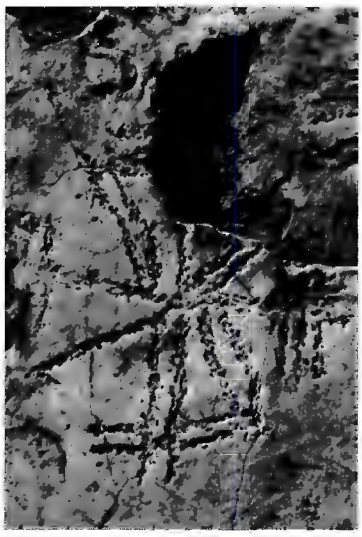

Figure 87. *X16.*

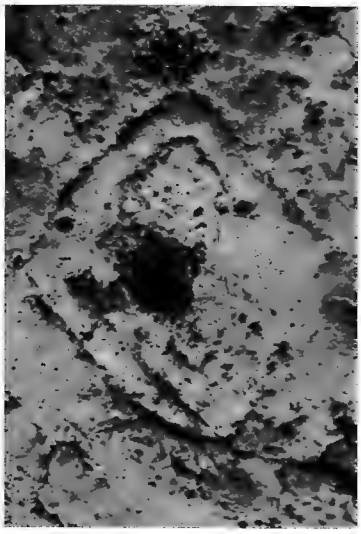

Figure 88a. *K16.*

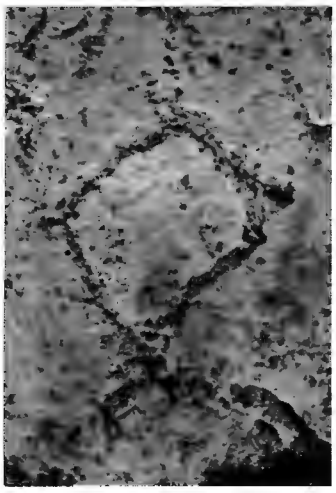

Figure 89. *X21.*

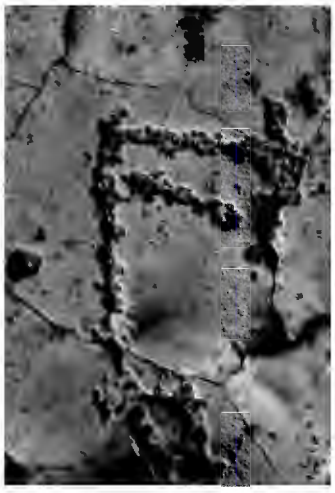

Figure 90. *X17.*

Figure 91a. *C7.*

Figure 88b. *K16.*

Figure 91b. *C7.*

Figure 92. *C17.*

Figure 93. *P10.*

Figure 94. *G1.*

Figure 95. *K56.*

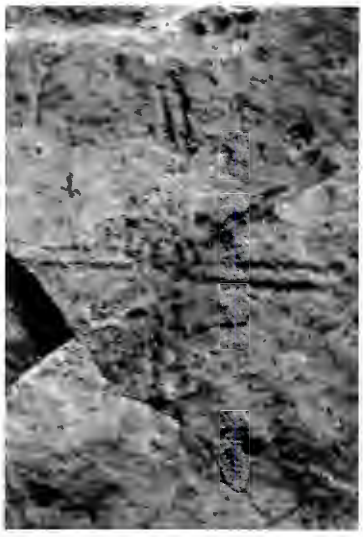

Figure 96. *P7.*

Figure 97. *O6.*

Figure 98. *F7.*

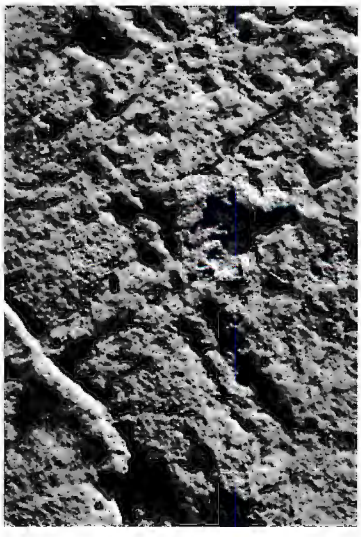

Figure 99. *K32.*

Figure 100. *L13.*

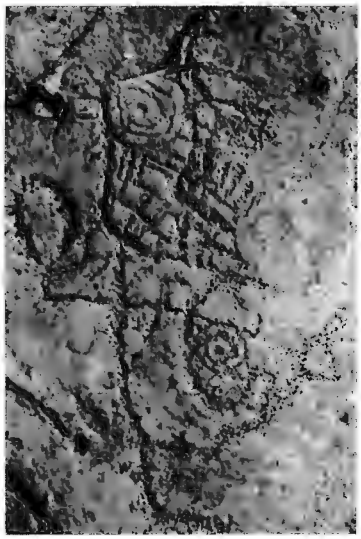

Figure 101. *C23.*

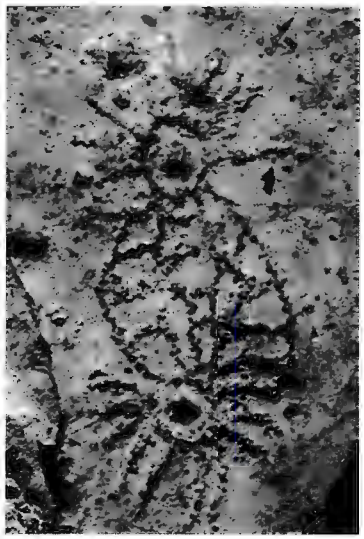

Figure 102. *G2.*

Figure 103. *K4.*

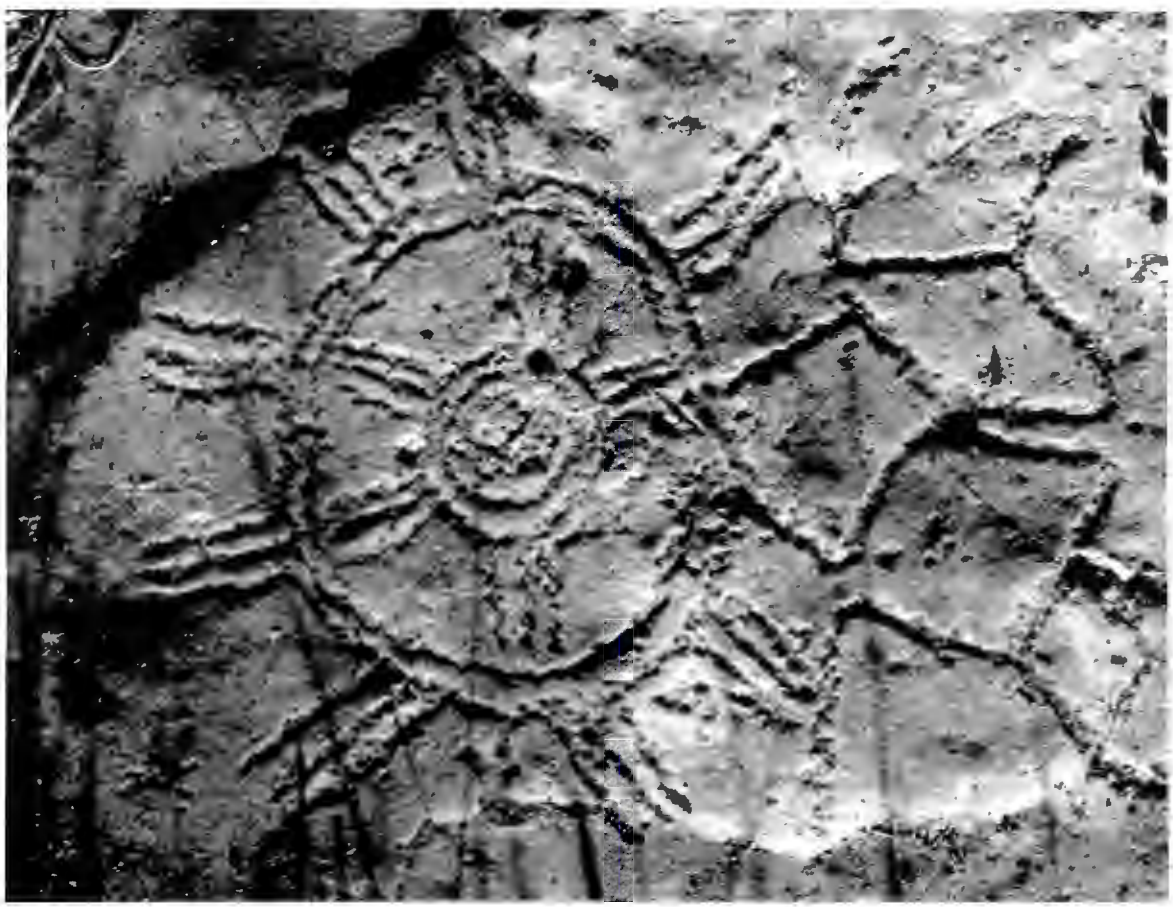

Figure 104. *G4.*