MAYA SETTLEMENT HIERARCHY IN NORTHERN BELIZE

Norman Hammond

The truism that not all Maya sites were of equal size, complexity or past political importance was first made explicit by Morley (1937-1938, IV, Table 102; expressed visually in Morley 1946: Plate 19), who ranked sites with inscribed monuments in a hierarchy of four levels from "metropolis" through "cities" and "large towns" to "small towns." The existence of lower-order sites lacking monuments but still more than simply house-mounds was recognized in the Belize Valley survey of 1953-1956 (Willey, Bullard, Glass and Gifford 1965), where a linear hierarchy was noted, the more important centers being the more widely spaced and less common. Bullard, who had carried out the survey work in the Belize Valley, applied this notion in two dimensions in his work in northeastern Peten in 1958, and proposed a spatial hierarchy of three levels, the house-ruin, the minor ceremonial center and the major ceremonial center (Bullard 1960). House ruins were estimated to occur in clusters of 5-12 within an area of 4-9 hectares, with the clusters spaced perhaps 200 m apart, and the occasional presence of a larger structure of apparently specialized purpose. The "zone" around a minor ceremonial center was estimated to contain 50-100 house ruins over an area of about 1 km^2 where topography was not too irregular. The major ceremonial center controlled a "district" estimated as 100 km^2 of upland, together with bajo. Minor centers were distinguished from house-ruin clusters by the possession of one or more pyramidal structures, presumably temples, arranged with lower structures around 1-3 plazas; stelae, altars and ball-courts were absent and vaulted buildings occurred singly, not in compounds. Major centers were distinguished from minor both in degree, being larger and with more elaborate masonry vaulted buildings, and in kind, possessing stelae, altars, ball-courts, multi-roomed "palaces" and often more than one group of structures linked by sacbeob.

This three level hierarchy has remained the accepted model, but it is not precise enough to be used with the more sophisticated analyses of interactions between sites in an overall network which are now being carried out with the aid of locational theory and recent advances in epigraphy: if primary, secondary and tertiary ranks were recognized by the Maya (as is claimed by Marcus, 1974) or superordinate centers were extending dynastic control over subordinate, as proposed by Molloy and Rathje (1974), then we shall need to look more closely about the relative size and complexity of sites as recorded archaeologically in order to appreciate the distinctions.

It was with the aim of examing the relationship of different levels of a site hierarchy to each other and also to topography, resources and communications that the British Museum-Cambridge University Corozal Project began an area survey in northern Belize (formerly British Honduras) in 1973 (Figure 1), and this work has led us to

propose a site hierarchy of nine levels within the area. Each level is defined in fairly general terms so that the system may be more widely applicable, and a type site for each level has been contour-mapped, with a theodolite (Figure 9 is an example) and then converted to a conventional plan (Figures 2-8, 10).

The lowest levels, 1 and 2, are the single isolated house-platform and the house-compound or plazuela; the former scarcely needs definition or illustration, while the latter is basically what Bullard called a "cluster," a 2-6 platforms grouped around a patio which is often also the upper surface of a common basal platform, with more than 4 platforms in the compound being rare. Both types of site are found in isolation, forming these lowest levels of the settlement hierarchy, but also constitute in agglomeration the majority of residential structures in the settlement areas surrounding ceremonial centers; in fact lower-order site types often occur within the purlieus of the larger sites, as noted below.

Level 3 is termed the informal cluster, and is defined as an aggregation of mounds, essentially undifferentiated in size and apparent function and usually 6-12 in number, sited around a central open space lacking obvious limits. The type site for this level of the hierarchy is the Hipolito Group (Figure 2) between San Estevan and Chowacol, which consists of 9 mounds below 2 m in height, those numbered 3 and 4 being very low; Structure 1 has a small frontal stair and Structure 5 a small (and probably Late Postclassic) superimposed platform. The space roughly enclosed by Structures 1, 5, 2, 8 and 9 is too indefinite to be called a patio or plaza.

Level 4, the formal cluster differs from Level 3 in having mounds clearly differentiated in size and probably function, with the largest likely to have been shrines or elite residences, arranged round an explicit plaza with definite limits. The number of mounds is not necessarily larger than in the informal cluster, but their organization is coherent. The type site is the Martinez Group, 1 km north of the Hipolito Group (Figure 3), which has 12 structures, several of them with more than one component, around a coffin-shaped plaza divided by the low Structure 6. The two highest mounds, Structure 1 and 4, face each other across the broader northern section, and may represent the lowest level of ceremonial center elaboration (cf. Bullard 1960: 367; Flannery 1972: 38) or grandiose residences for a microlocal elite. This latter function probably applies in any case to Structures 8 and 11 which face each other across the narrower southern end of the plaza, although the multiple levels of Structure 8 are an unusual feature.

Level 5, the minimal ceremonial center, is by this title acknowledged as having a ceremonial (i.e. religious/political/economic control) function, marked archaeologically by the presence of one structure too large to be residential, together with features found in Levels 3, or 4. The major structure is usually over 5 meters in height and pyramidal in form, facing on to an open area or formally defined plaza. The type site is Santa Rita (Figure 4), which has a single pyramid some 12 meters high on the north side of a plaza enclosed by low range structures, but no adjacent plazas and no concentrated settlement (Hammond, ed., 1973: Figure 73).

Level 6 is the minor ceremonial center proper -- as Bullard described it, the small-scale version of a major center -- distinguished from Level 5 by the possession of 2 or 3 defined plazas, each containing at least one major structure, and with evidence of differentiation in plaza function, with one forming the focus of religious activity and one or two others having elite residences and/or administrative buildings. The type site is Chowacol (Figure 5), 2 km south of the San Estevan major ceremonial center, which has two raised and separated plazas on a massive common basal platform, the southern dominated by a 10 meter high pyramid, Structure 1, the northern by a "palace" substructure 35 meters long (Structure 5) with an impressive frontal stair. Sites of Level 6 seem to occur commonly in the vicinity of major ceremonial centers of Level 8 and above to service the outlying population, and at least three such, San Victor, San Luis and Platform 143 Group (Figure 6) are known within the 20-25 km^2 settlement area of Nohmul, the latter two being at a distance of 1.75 - 2 km from the main ceremonial precinct, the former 3 km further out in a detached zone beyond a band of swamps.

Level 7, the small major ceremonial center, possesses at least one pyramid over 10 meters in height and at least one ballcourt. Stone monuments would probably appear at this level, or at Level 6 sites within the ambit of major centers, in other parts of the lowlands, but northern Belize has so far yielded no definite in situ monuments (a plain stela was suggested by Bullard (1965: 14) at San Estevan; another, more probably a roof slab, by Gann and Gann (1939: 3) at Nohmul; part of a carved stela reset in Postclassic times was found at Chan Chen in 1974 (R. Sidrys, personal communication) and may have been transported from elsewhere). At this level substantial circumambient settlement begins to concentrate around the ceremonial precinct, whereas at lower levels it has been fairly diffuse. The type site, Colha, has a plaza barely large enough to hold the ballcourt and a ceremonial precinct overshadowed by hugh compounds of administrative or elite residence structures (Figure 7, groups 35 and 40), but a large and dense settlement area clearly resulting from the site's idiosyncratic status as a major flint-implement factory (Hammond, ed., 1973: 55-60, Figures 64-70).

Level 8, the medium major ceremonial center, has two or three pyramids over 10 meters in height, at least one ballcourt, several ceremonial and elite residence plazas with a differentiation into religious, other ceremonial and residential plaza functions (cf. Hammond 1972). There is a substantial circumambient settlement perhaps containing minor centers of Levels 5-6 and formal clusters of Level 4 as low-level ceremonial foci. Sites of Levels 7 and 8 are widely enough spaced to indicate that each exercises control over a number of minor centers existing also beyond the settlement area as lower-order service centers (Figure 1; cf. Hodder 1972: 897-903). The type site is San Estevan (Bullard 1965), with six plazas, three ceremonial and three residential, three major and three minor pyramids, a ballcourt and several enclosed elite-residence courts and plazuela groups adjacent to the ceremonial precinct (Figure 8). The Hipolito Group, Martinez Group and Chowacol sites all lie within the region of control of San Estevan, which from the spacing of contiguous equivalent-level centers probably covered an area of 250-325 km^2.

Level 9, the highest in this regional settlement hierarchy, is that of the regional ceremonial center; it is differentiated from Level 8 by having larger and more numerous ceremonial structures, but particularly by their division into two groups linked by a sacbe, with either or both groups including an elevated acropolis supporting further structures. The type site is Nohmul (Figures 9-10), where the eastern group includes the acropolis and ballcourt, and a second Level 9 site seems to exist on the southern boundary of our research area at El Posito, only cleared and explored for the first time in 1974, where both groups consist of acropolises but the sacbe is apparently discontinuous.

Neither of these sites is of more than medium size when compared with those of the Peten-Campeche heartland -- a smallish Peten center such as Dos Aguadas would be a Level 8 site -- and the typology outlined above would need another two or three higher levels to accommodate large sites such as Seibal and Nakum, Yaxha, and the "supersites" of Tikal, El Mirador and Calakmul. The range of site types is also of course a continuum within which any selected "threshold" feature will occur over a substantial vertical distance, quite apart from any horizontal bias resulting from the consideration of sites within a small area, and this typology merely seems to isolate apparently salient features of the increasing size and internal differentiation in order to make characterization more accurate and comparison of site status as based on archaeological data more valid. These features reflect the increasing complexity of social process operating in higher-order centers: the beginnings of collective effort on perhaps only an extended-family level documented in the common basal platform underlying many Level 2 sites (see below), the imposition of conscious planning and structural differentiation for secular or religious presitge in Level 4, the larger collective effort involved in the erection of public buildings from Level 5 upwards, with the associated skills of architectural design, quantity surveying, labor organization, quarrying and transportation of materials, the erection of masonry structures and their embellishment with stucco, sculpture and fresco, and the overall conceptual direction of such a programme. The tributary population within the realm of a Level 8 center such as San Estevan may have been around 20,000 persons, that within the settlement area alone of a Level 9 center such as Nohmul in excess of 3,000, so that an adequate pool of labor and potential craftsmen certainly existed. A single substantial house-platform such as that of Structure 139 at Nohmul, excavated in 1973-74 and found to be built up of about 10,000 locally-quarried soft limestone blocks, could be erected by six men in six weeks, allowing for two cutting stone and four carrying and placing the blocks, a rate of 6 blocks/man/hour and a 10-hour working day, so that fairly ambitious construction programs could be executed by a local population over a single season.

Such ergonomic estimates are not however the purpose of this paper, although they show how easily settlement and construction data may be translated, using explicit criteria, into an approximation of the degree of organization and labor recruitment and support required. I have merely tried to show that the settlement hierarchy in at least one corner of the Maya lowlands is more complex than present schemes allow, particularly at the lower levels, but that this complexity can be defined and divided in such a way as to provide valid intersite, and perhaps interarea, comparisons.

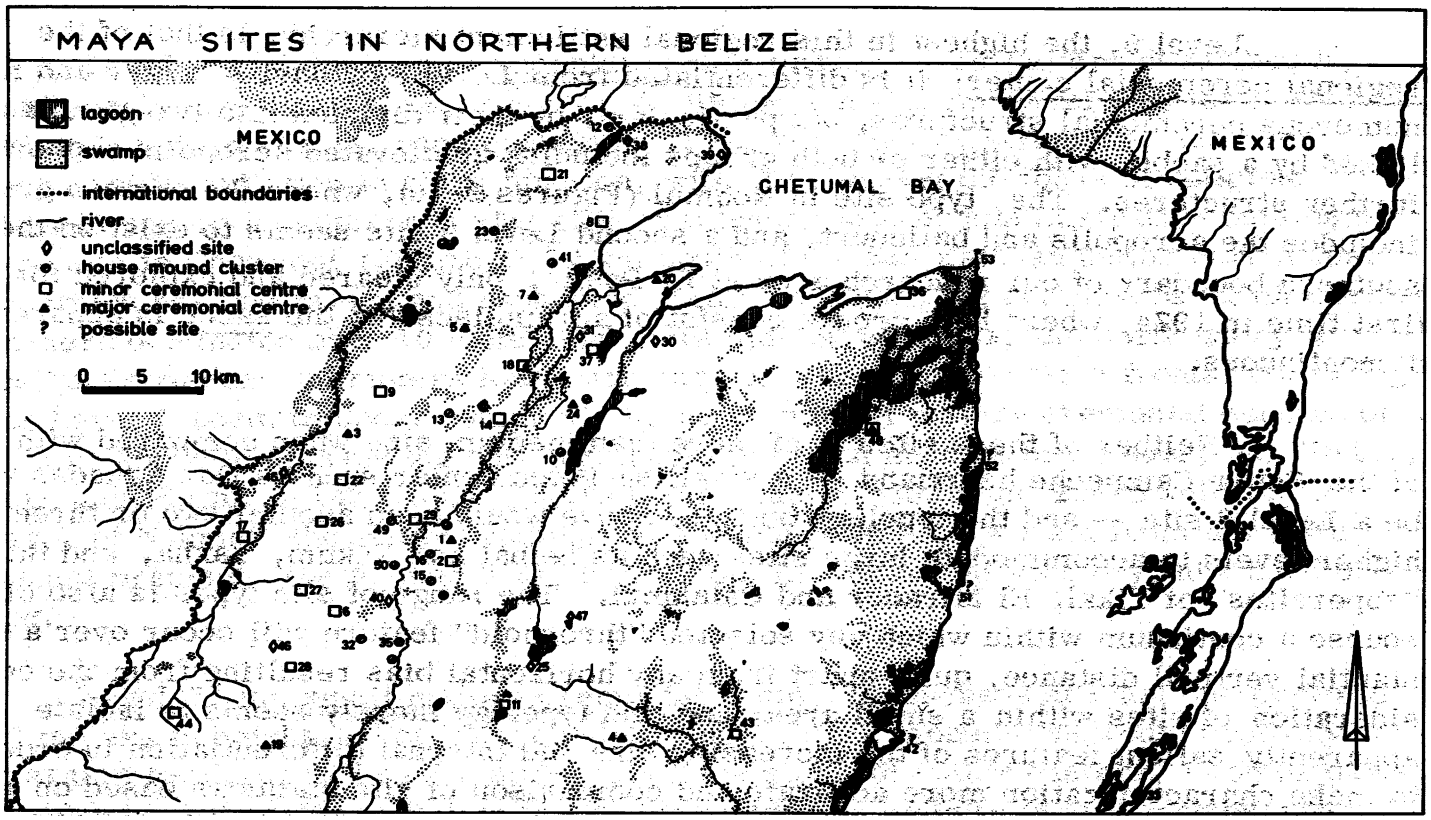

FIGURE 1: Maya Sites in Northern Belize, classified on Bullard's hierarchy (list below)

1. San Estevan
2. Chowacol
3. Nohmul
4. Colha
5. Louisville
6. Cuello
7. Avenutra
8. Santa Rita
9. San Victor
10. Progresso I
11. Kichpanha
12. Santa Elena
13. Buena Vista
14. Caledonia
15. Hipolito Group
16. Martinez Group
17. San Antonio
18. Benque Viejo [Santa Cruz]
19. El Posito
20. Cerros
21. Chan Chen
22. San Luis
23. Patchchacan
24. Progresso II
25. Honey Camp [Laguna de On]
26. San Lorenzo
27. Yo Creek
28. San Lazaro I
29. Barklog
30. Chunox
31. Pueblo Nuevo
32. Chan Pine Ridge
33. San Pedro Ambergris
34. San Juan Ambergris
35. Bound to Shine
36. Sarteneja
37. Saltillo
38. Sajomal
39. Consejo
40. Orange Walk
41. Carolina
42. Spainsh Point
43. Yakalche
44. August Pine Ridge
45. San Roman
46. San Lazaro II
47. Chiwa Lagoon
48. Shipstern
49. Mile 70
50. Indian Hill
51. High Bluff
52. Condemned Point
53. Rocky Point North

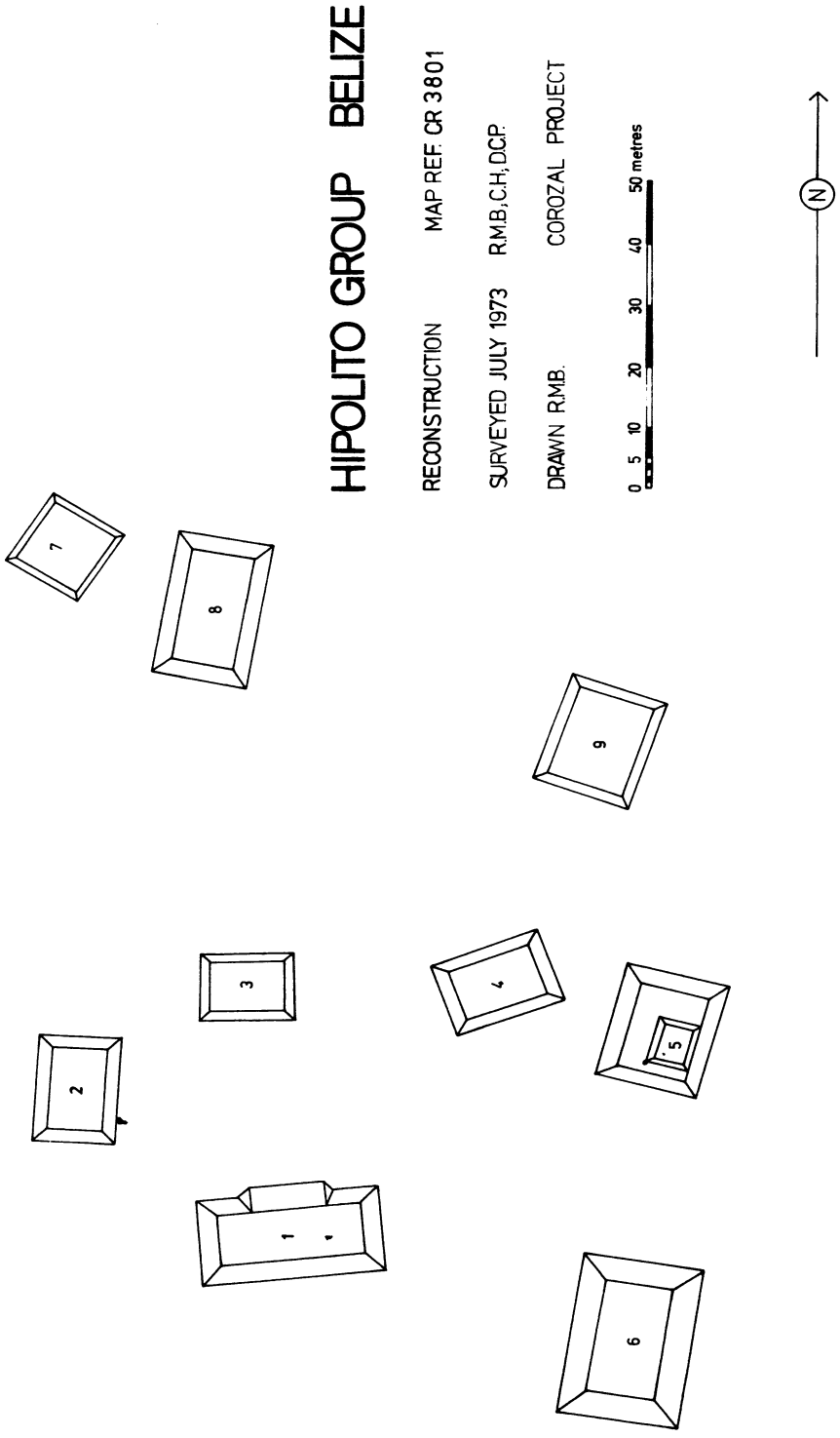

Figure 2: Plan of Hipolito Group, a Level 3 site.

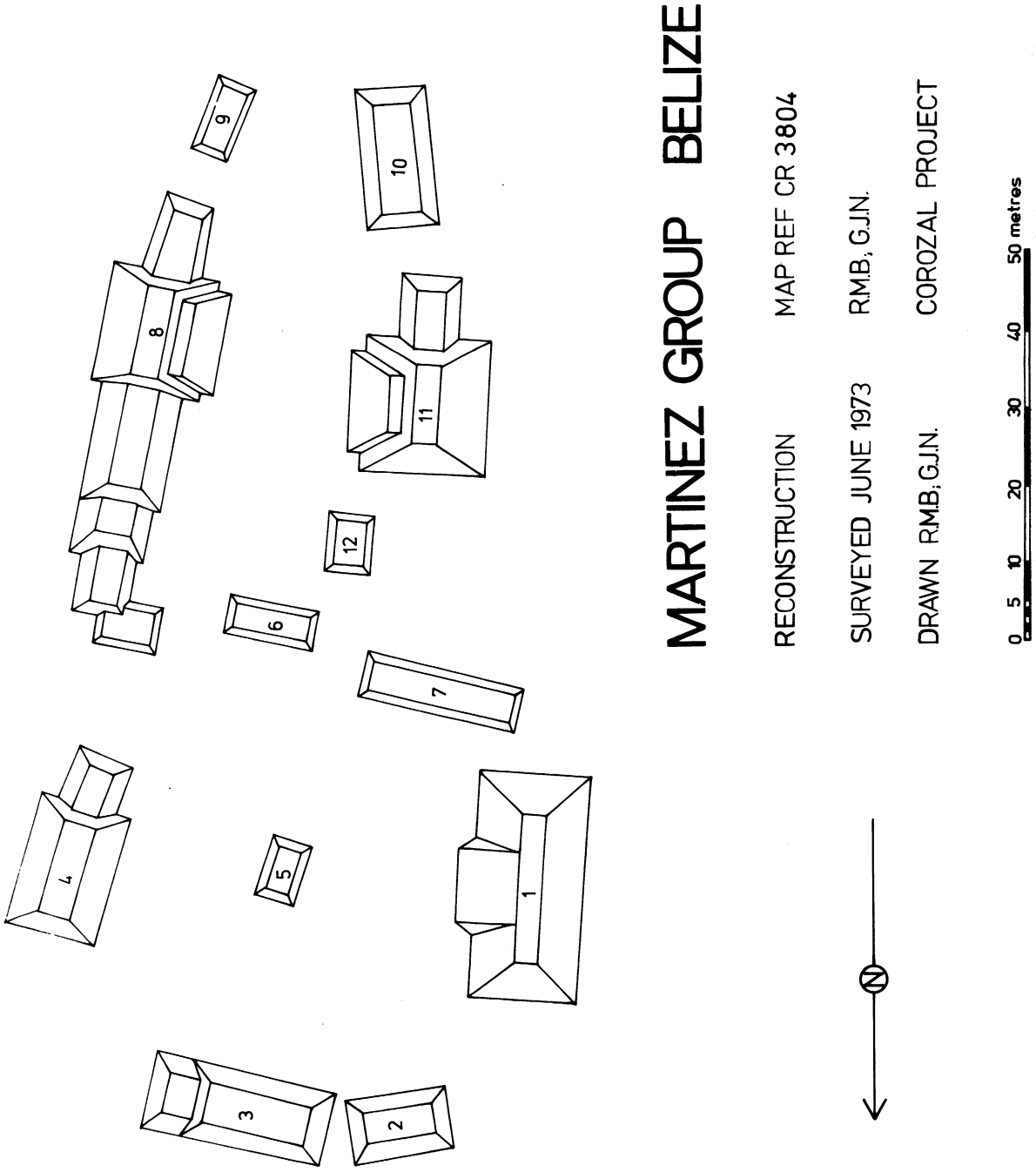

Figure 3: Plan of Martinez Group, a Level 4 site.

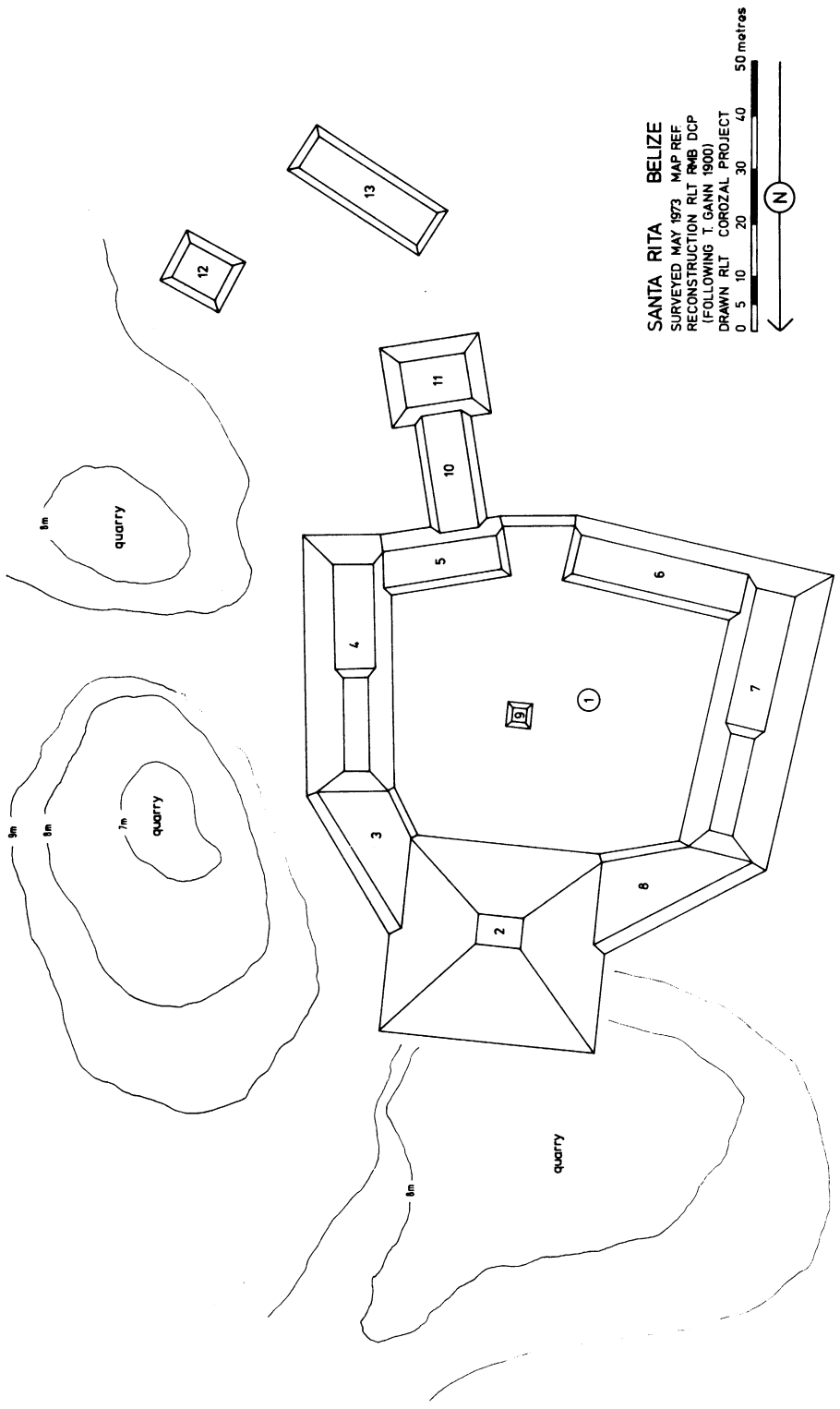

Figure 4: Plan of Santa Rita, a Level 5 site.

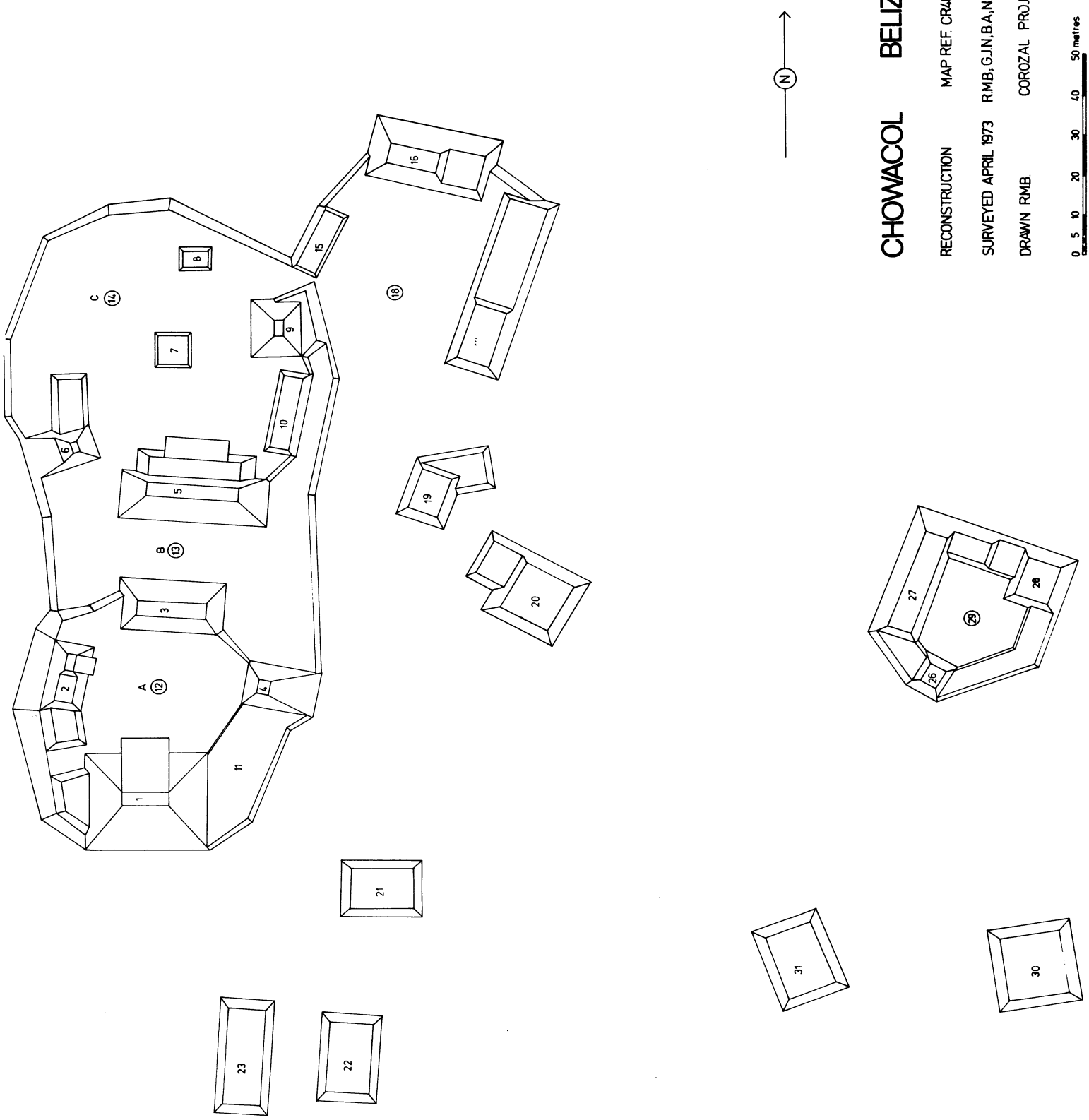

Figure 5: Plan of Chowacol, a Level 6 site.

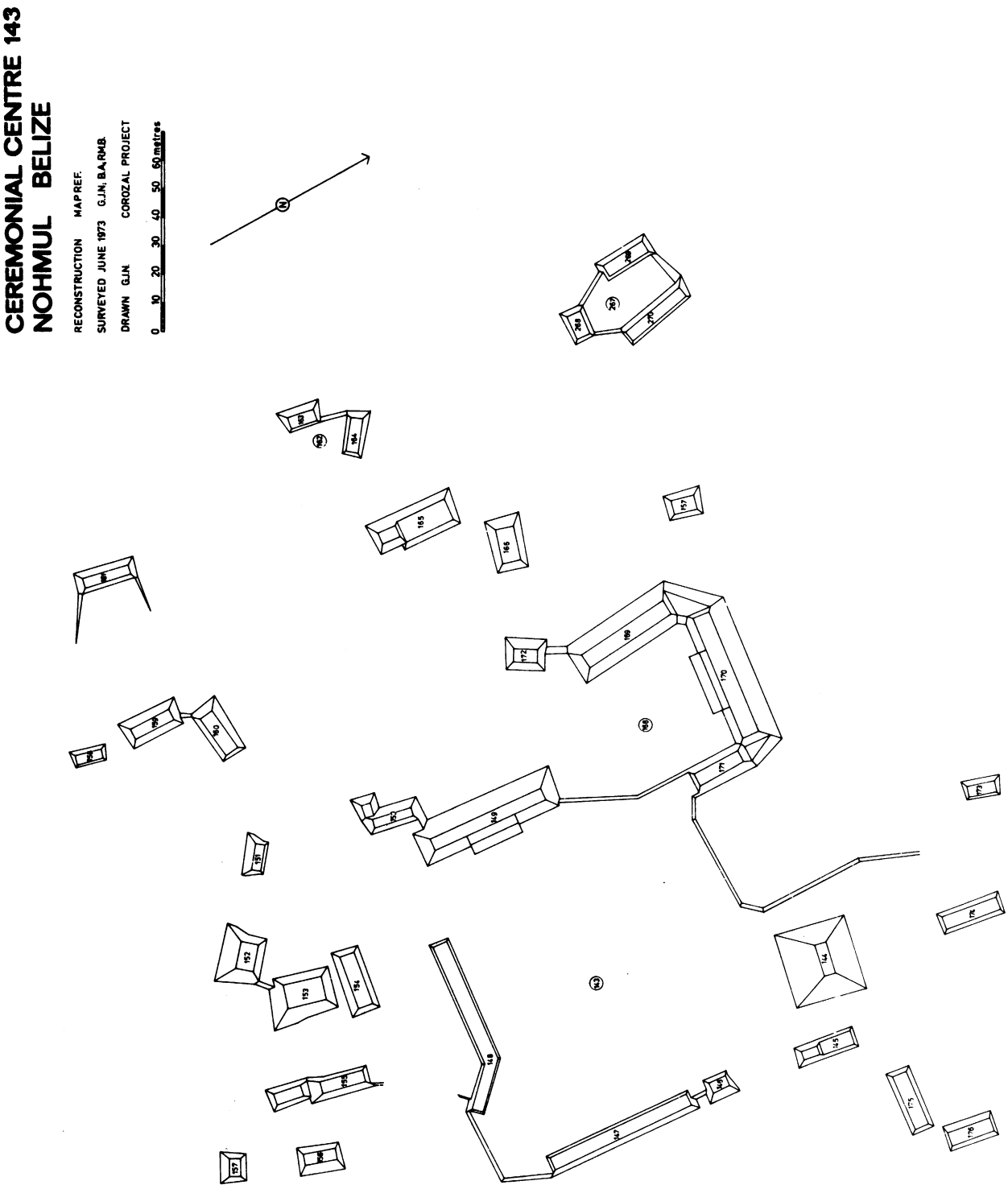

Figure 6: Plan of Platform 143 Group at Nohmul, a Level 6 site in the settlement area of a Level 9 site.

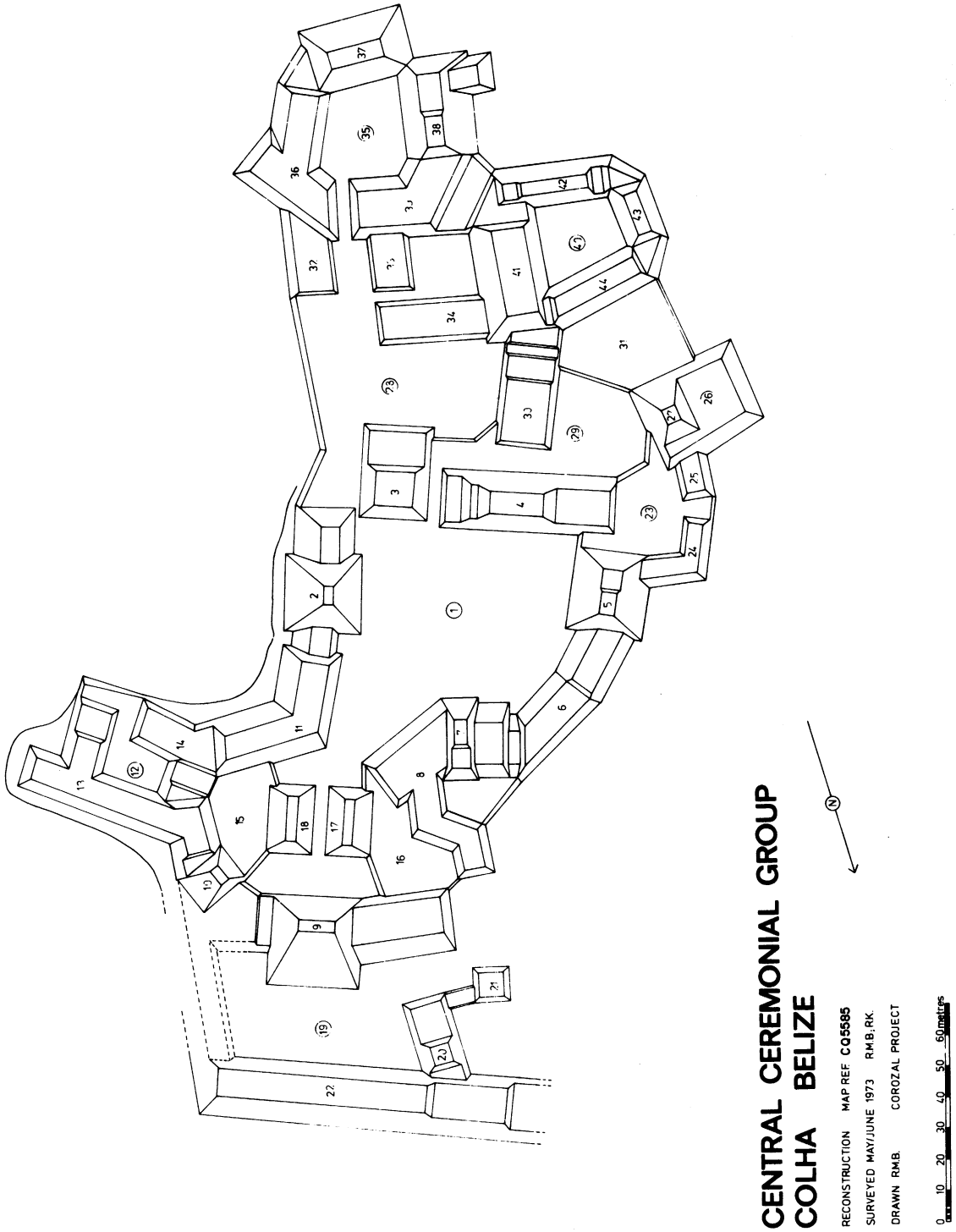

Figure 7: Plan of Colha, a Level 7 site.

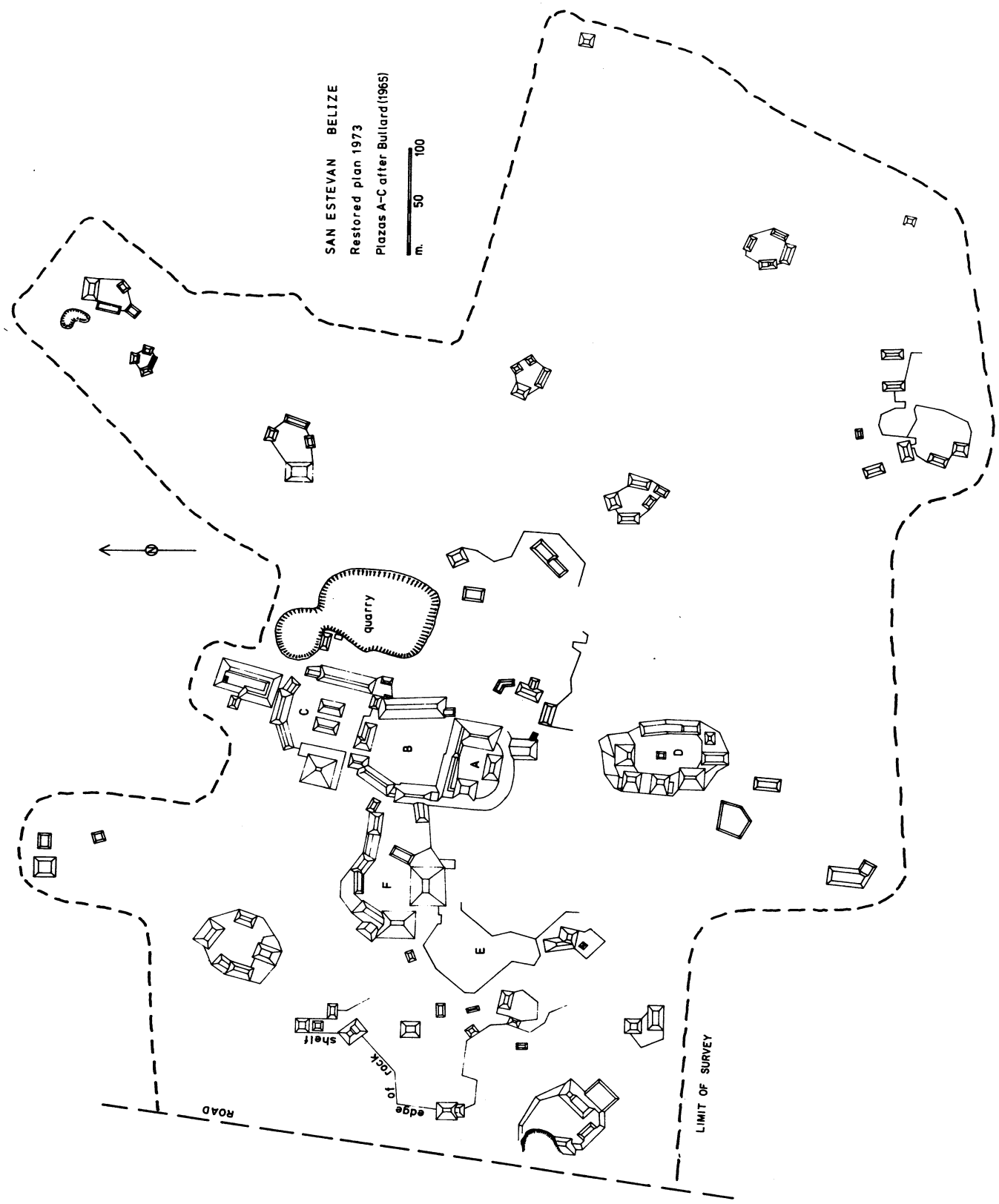

Figure 8: Plan of San Estevan, a Level 8 site.

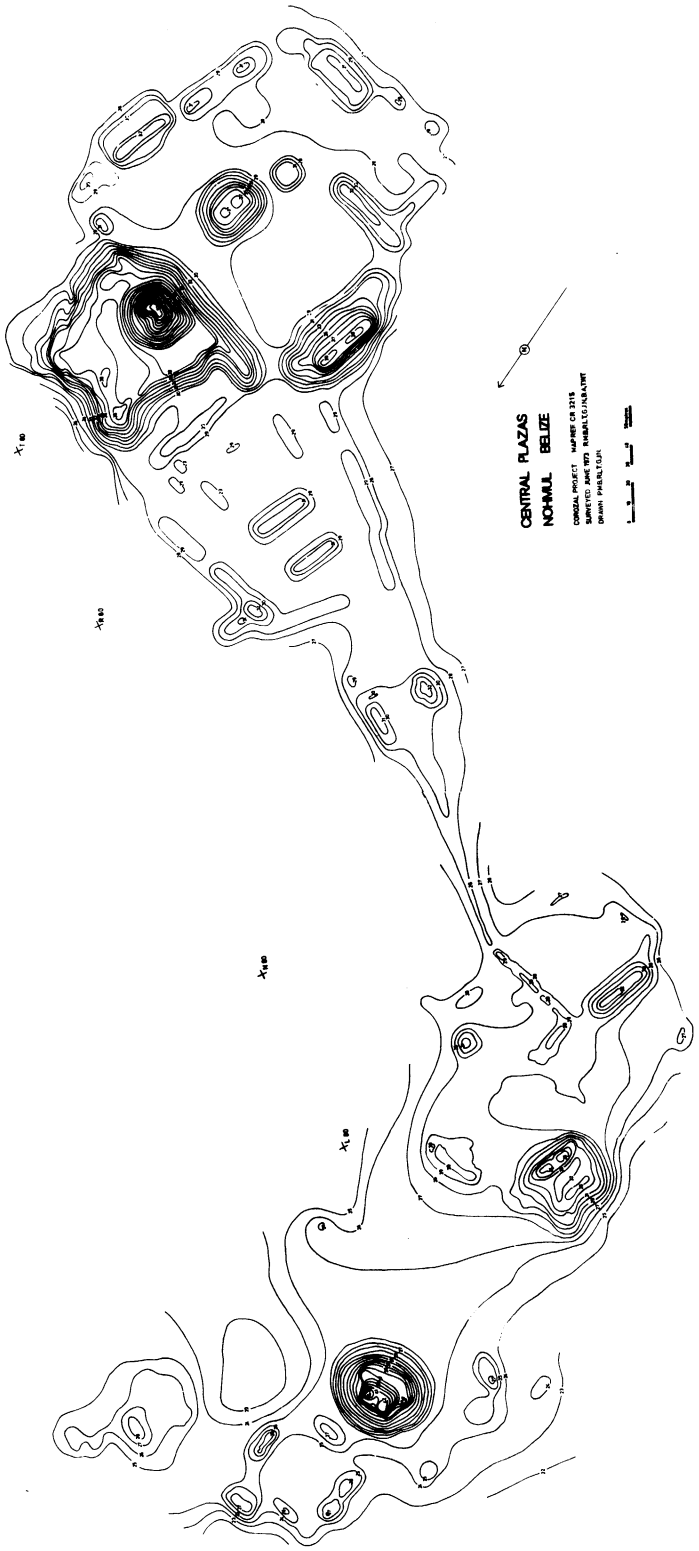

Figure 9: Contour plan of the center of Nohmul, a Level 9 site.

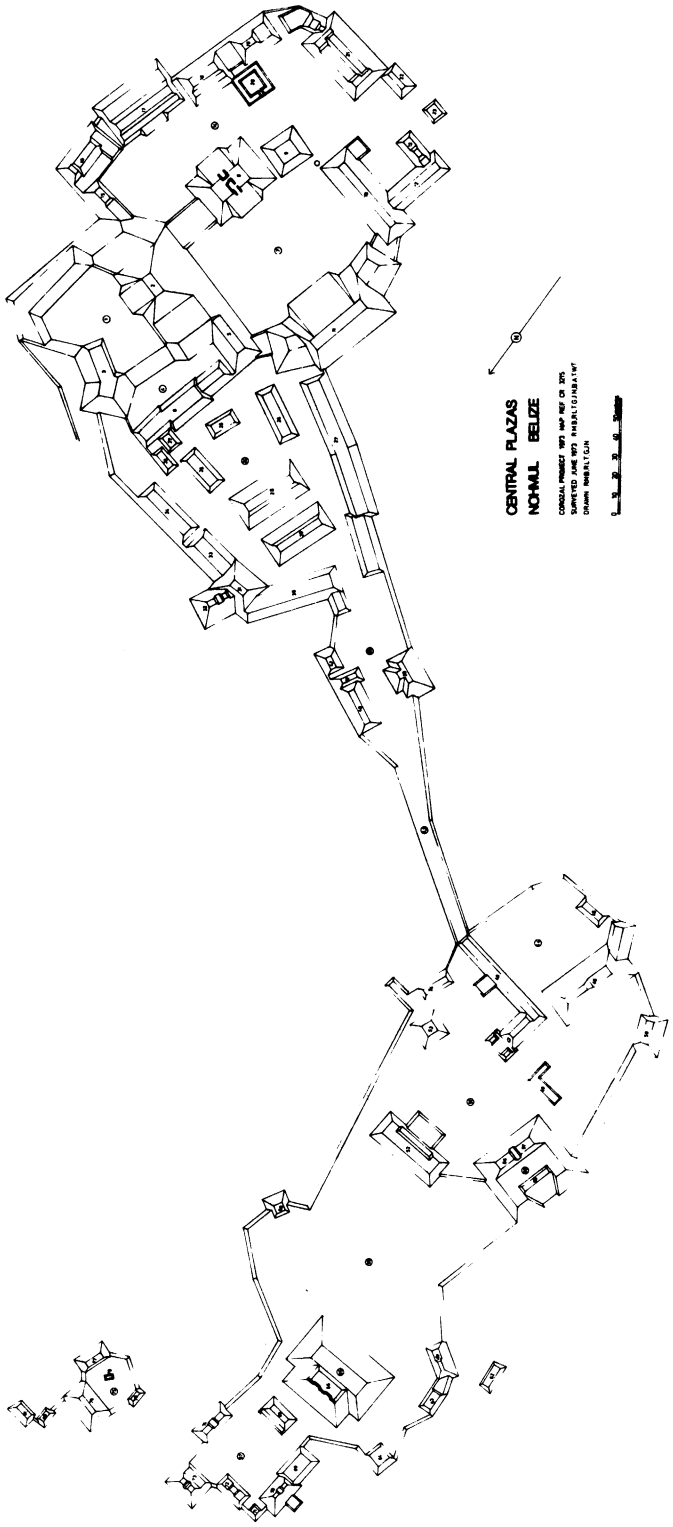

Figure 10: Conventional plan of the center of Nohmul, adapted from Figure 9; Figures 2-8 were similarly adapted.

REFERENCES

Bullard, W.R., Jr.

1960 Maya Settlement Pattern in Northeast Peten, Guatemala. American Antiquity 25: 355-372.

1965 Stratigraphic Excavations at San Estevan, Northern British Honduras. Occasional Papers of the Royal Ontario Museum of Art and Archaeology No. 9. Toronto.

Flannery, K. V.

1972 The Origins of the Village as a Settlement Type in Mesoamerica and the Near East: A Comparative Study. In: Man, Settlement and Urbanism, P.J. Ucko, R. Tringham and G.W. Dimbleby, ed., Pp. 23-53. Gerald Duckworth, London.

Gann, Thomas and Mary Gann

1939 Archaeological Investigations in the Corozal District of British Honduras. Bureau of American Ethnology Bulletin 123: 1-56. Washington, D.C.

Hammond, N.

1972 Locational models and the site of Lubaantun: a Classic Maya Centre. In: Models in Archaeology, ed. by D.L. Clarke, pp. 757-800. Methuen, London.

1973 Editor. British Museum-Cambridge University Corbzal Project, 1973 Interim Report. Centre of Latin American Studies, Cambridge University.

Hodder, I.

1972 Locational models and the study of Roman-British settlement. In: Models in Archaeology, ed. by D.L. Clarke, pp. 886-909. Methuen, London.

Marcus, J.

1974 On the "Square" Model of Maya Territorial Organization (with M. Romanov and N. Hammond). Science 183: 876-877.

Molloy, J.P. and W.L. Rathje

1974 Sexploitation Among the Late Classic Maya. In: Mesoamerican Archaeology: New Approaches, ed. by N. Hammond, pp. 431-444. University of Texas Press, Austin.

Morley, S.G.
1937-8 The Inscriptions of Peten. CIW Publication 437. Washington, D.C.

1946 The Ancient Maya. Stanford University Press, Palo Alto.

Willey, G.R., W.R. Bullard, Jr., J.B. Glass and J.C. Gifford
1965 Prehistoric Maya Settlements in the Belize Valley. Papers of the Peabody Museum, Harvard University, 54. Cambridge.

Acknowledgment: The plans used here are the result of surveys carried out in 1973 by the British Museum-Cambridge University Corozal Project, funded by these institutions and the British Academy, and working under a permit granted by the Government of Belize through the Minister for Trade and Industry, the Hon. A.A. Hunter, and the Archaeological Commissioner, Mr. Joseph O. Palacio. The mapping was directed by Richard M. Bryant and executed by him and Basilio Ah, Graeme Noble and Rob Thallon, with assistance from other project staff.