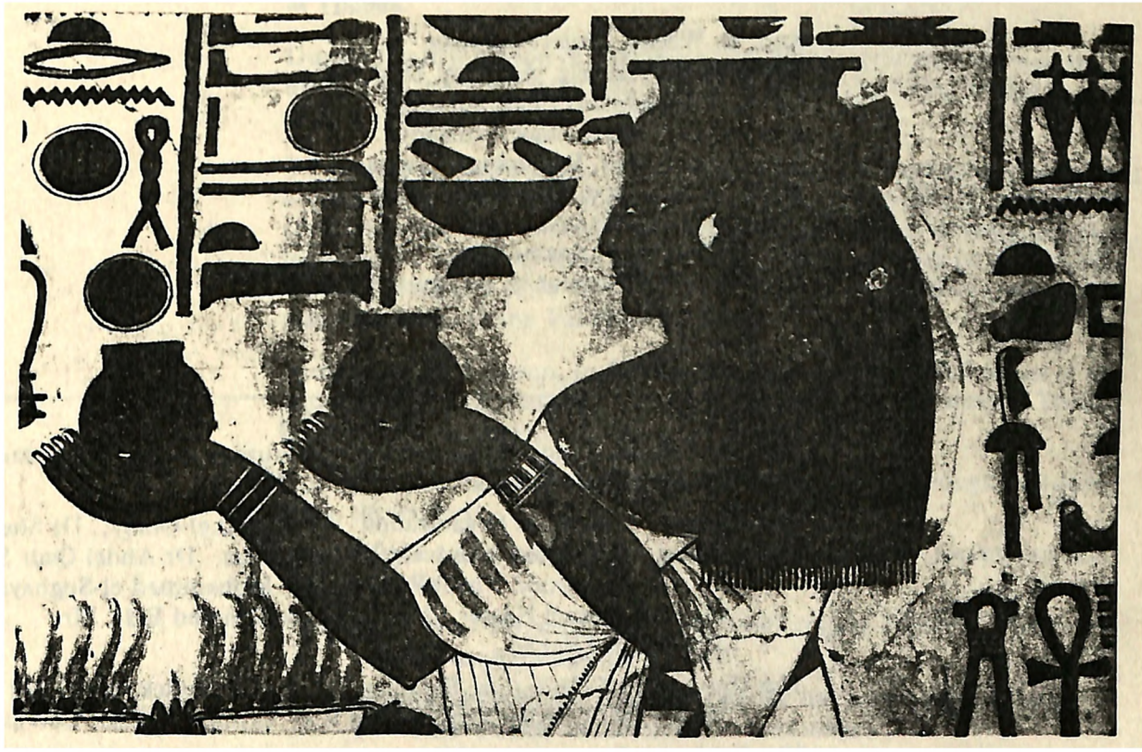
THE BERKELEY MAP

OF THE

THEBAN NECROPOLIS



REPORT OF THE
FOURTH SEASON, 1981

ACKNOWLEDGEMENTS

THE BERKELEY MAP OF THE THEBAN NECROPOLIS

is a project of the University of California, Berkeley.

and is funded by:

The National Endowment for the Humanities
The Smithsonian Institution
The American Research Center in Egypt, Inc.
The University of California
Mr Gordon Neaves
Mr Donald R. Kunz

PROJECT STAFF, 1981

Kent R. Weeks, Project Director
Catharine H. Roehrig, Assistant Director
David A. Goodman, Chief Surveyor
Joel Paulson, Egyptology Assistant
Jennifer Lormans, Egyptology Assistant
Jonathan van Lepp, Egyptology Assistant
May Trad, Toponymist
Frank T.F. Ho, Cartographer
Nagy Gafaar, Inspector of Antiquities
W. Benson Harer

OUR THANKS

go to the following individuals and their institutions for their assistance in our fourth season of work:

The Egyptian Antiquities Organization: Mr Fouad el-Oraby, Dr Shehata Adam, Dr Ali el-Kholy, Dr Victor Girgus, Dr Abdel Qadr Selim, Dr Mahmoud Abdel Razzek, Mr Mohammed el-Sughayer, Mr Mohammed Nasser, Mr Yehia Mohammed Eid, Mr Mohammed Bahha

The University of California, Berkeley: Dr Frank Norick, Mr Grant Barnes, Mr Czeslaw Grycz, Miss E.R. Taylor, Ms Jean Colvin

The California Department of Transportation: Mr George Katibah

The American Research Center in Egypt: Dr Paul Walker, Dr James Allen

The Lietz Company Towill, Inc. Chicago House Dr Lanny Bell
Roger Butler Cartography/ Graphics Miss Elizabeth Thomas

cover : Scene from chamber G in the tomb of Nefertari, Valley of the Queens (QV 66).

SUMMARY

No area of the world contains as many famous and important archaeological monuments as the West Bank at Luxor. Yet, in spite of centuries-old interest in such features as the Valley of the Kings, the Tombs of the Nobles, and scores of other monuments, there exists no accurate or complete map of the Theban Necropolis. Fewer than ten per cent of its monuments have ever been mapped and planned, and very few of these have been plotted accurately.

This project seeks to establish a survey network over the Theban Necropolis; to prepare a suitably detailed 1:500 archaeological map with 1:200 and 1:100 plans and sections of significant archaeological features; to publish these maps and plans together with more detailed records of measurements, in an accurate and permanent form, and to accompany these graphic aids with a concordance and catalogue of West Bank archaeological materials.

Such a project as this will provide a useful tool for Egyptologists; but it also will play a significant role in the preparation of long- range plans for the protection and preservation of the rapidly- deteriorating monuments at Thebes.

During the first season of the project, in 1978, a grid network was established on the West Bank and several tombs in the Valley of the Kings were planned.

During the second season, in 1979, the project obtained complete vertical aerial photographic coverage of the Necropolis. Two sets of each of two complete runs were made, two at 3,000 feet to provide stereoscopic photography for topographical maps at 1:500, and two higher runs, at 5,000 feet, for maps at a scale of 1:2,000. In addition, the project continued mapping tombs in the Valley of the Kings.

During the third season, in 1980, the project obtained a full series of oblique aerial photographs of all archaeologically important areas at Thebes. It completed its work in the Valley of the Kings.

During the fourth season, which ran from late March through mid-June, 1981, the project:

- mapped all accessible tombs in the Valley of the Queens and adjacent wadis;
- mapped all surface features of archaeological interest in the 3-km - square area between QV and KV;
- developed computer programming for the preparation of tomb plans, elevations, and axonometric drawings;
- extended the Necropolis-wide traverse to the southern and northern limits of the archaeologically-relevant West Bank area;
- continued its work on the toponymy of the West Bank.

PROGRESS DURING THE FOURTH SEASON

The fourth season of the Berkeley Theban Mapping Project, which began in late March and continued through mid-June, 1981, was largely devoted to work in "The Place of Beauty," known today as the Valley of the Queens (QV). Eighty tombs are known here, 41 of them corridor tombs, 39 of them pit tombs, and of these about 60 were sufficiently free of debris to be mapped. (In a great many cases, "accessibility" meant little more than that there was a tiny crawl space through the entrance. Many times, team members had to work in tomb chambers lying on their backs on piles of mummified remains and fill that came to within thirty or forty centimetres of the ceiling, all the while trying to ignore hundreds of bats and crumbling stone. Many of these tombs have not been explored in over 70 years. It is a tribute to these staff members that, in spite of all this, mapping proceeded with no reduction in the accuracy for which the BTMP has become known.)

The eighty tombs in QV have only rarely been studied. Known to the early Copts, and often used by them as dwellings, they first were described in print by Hay (who mentioned seven of them), by Wilkinson (who mentioned about thirty), Champollion (sixteen), Lepsius (fifteen), and Brugsch (twenty). It was not until the work of Schiaparelli and Ballerini, from 1903 to 1905, however, that most of the tombs were located. Little of their work in QV was ever published, but it is to them that we owe the tomb numbering system used in QV today.

The tombs in the Valley of the Queens, most of which belonged to various members of the royal families of dynasties 19 and 20, are by no means as well carved or decorated as those in KV. The corridor tombs, generally small and decorated with low relief or paint, lie along the eastern and southern slopes of the Valley; the pit tombs, mostly undecorated, lie an average of 4 to 6 metres below ground, in a stratum of poor-quality stone at the entrance to QV. These latter are the most poorly-preserved of the QV tombs and the most difficult of access. The tombs in QV are almost all in poor condition: most are in need of conservation and stabilization. The tomb of Nefertari, of course, stands as the best (or worst) example of this. Several tombs that lie directly beneath the paved road and parking area have collapsing ceilings that threaten a future disaster if tourist busses are not prohibited in the area. Several tombs already have collapsed to the point that their chambers resemble little more than natural caves. We hope that the maps and plans we are preparing will help make protective work in QV possible.

During four years of work at Thebes, the surveying techniques used by the BTMP in preparing tomb plans and sections have gradually undergone changes designed to insure more efficient and more accurate notes and drawings. With our decision last year to give computers a greater role in the preparation of plans and axonometric drawings (for reasons of accuracy and economy), we standardized those techniques in what now may be considered their final form. It is worthwhile outlining these procedures here. In our next annual report, we will discuss the role of the computer in our work and will outline the laboratory work involved in tomb planning.

> The BTMP tomb survey method consists of using azimuths (horizontal angles), zenith angles (vertical angles), and slope distances (the distance

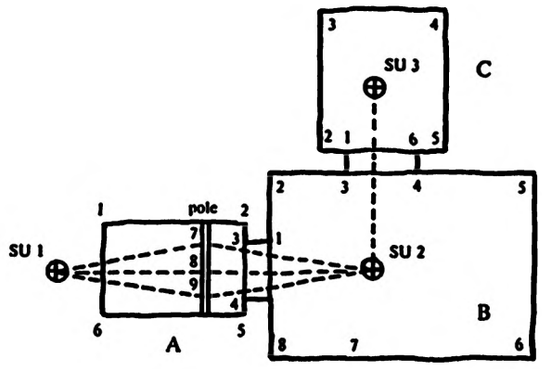


figure 1

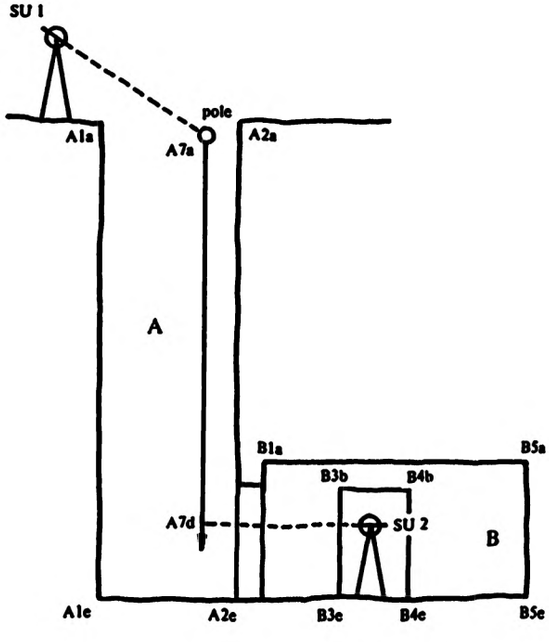


figure 2

from the theodolite to the point being measured) to define the architectural features within a chamber. These features include corners, jambs, pillars, niches, any element felt to be relevant. A rough plan and section of the chamber are drawn and each feature is numbered on the plan (see figure 1). The measurements taken to each of these features are then lettered according to their vertical position (see figure 2). Following this method of notation, a measurement taken to the ceiling at corner 2 of chamber B would be designated B2a. If the corner appeared to be well cut and no intermediate measurements were considered necessary, the next measurement would be to the floor and would be designated B2e. In this way, all "a" measurements are to the ceiling, while all "e" measurements are to the floor. The "e" azimuths and trigonometrically-derived horizontal distances are those used in drawing the basic plan of the tomb.

The letters "b" through "d" may be used to describe intermediate measurements down a wall when these are necessary to describe a vertical curve or irregularity. The letters "b" and "d" are also used at doorways: "b" to describe the top of a jamb when this meets a lintel rather than the ceiling; "d" to describe the bottom of a jamb when it meets a step rather than the floor. Letters "b", "c", and "d" are also used to designate niches and shelves.

In a tomb where the walls of a chamber are irregular or where the ceiling is vaulted, extra measurements are taken along the walls or ceiling. The horizontal locations of these measurements are numbered on the plan and then lettered according to vertical position.

This method of measurement and notation is used in the entry-way of the tomb as well as inside. The theodolite is set up over a previously established control point, the features of the entry-way are measured and a new control point or "set-up" (su) is established in the next room to be mapped. As far as possible, the set-ups are located at 90, 180, or 270 degrees from the previous set-up (and zero degrees is set at the previous set-up). We also have found it useful to have at least two measurements overlapping from one set-up to the next. For example, the "a" measurement to jambs C1 and C2 would be measured from both su2 and su3. The overlapping measurements provide a quick check for mathematical and measuring errors.

A slightly different method for setting inside control points must be used in shaft tombs because of the impossibility of sighting into a tomb chamber from an outside control point at the edge of a shaft. From the initial set-up we measure angles and distances to the upper edge of the shaft. Then three plumb bobs are hung from a well-anchored pole so that the tips of the plumb bobs are visible from inside the tomb. Angles and distances are measured to the plumb bob strings just below the pole and then careful measurements are taken from the these points to the tip of the respective plumb bob. Next, the theodolite is set up on an arbitrary point inside the tomb and measurements are taken to the plumb bob tips (one of which is used as zero degrees). The horizontal position of the arbitrary set-up may be determined by using the azimuth measurements while the vertical position of the point may be determined by using the zenith measurements. (While only two sets of measurements are absolutely necessary, we usually use a third plumb bob as a check).

If the shaft is irregular, intermediate measurements may be taken at one metre intervals. The horizontal position of each corner can be fixed by measurements from at least two plumb bob strings. If there is more than one chamber within a shaft tomb, the mapping proceeds as with any other tomb.

The procedure we are now using provides information that is easily adapted for the use of a computer and also allows for a high degree of accuracy when dealing with irregularly cut tombs. It does take a bit more time than other methods, however, because more measurements are necessary and these must be reduced trigonometrically to derive horizontal distances and elevations. Once data reduction is completed (an easy matter with modern calculators), the measurements are as easily used for a manual drawing as for a computer- generated drawing of the tomb. (A sample data form may be found on page 19 of the 1980 Annual Report).

In addition to its work in QV, the Berkeley Theban Mapping Project this season also completed a detailed examination of the terrain lying between QV and KV, an area of surveying covering about three square kilometres. The fifteen isolated and surprisingly deep pit tombs north of QV, in what Elizabeth Thomas calls Wadi Rumi(WR), Wadi Habl(WH), Gebel Rumi(GR), and the Wadi of Prnce Ahmose(WPA), were planned and sectioned. (One had a shaft over nine metres deep). All features of archaeological interest have been noted on the aerial photographs and checked on the ground, and grid coordinates have been established for each feature noted. The one hundred or so stone shrines lying on the hillside above the southern end of KV have been mapped and described, and the long, well-constructed stone staircases nearby have been surveyed. Traces of stone walls and huts in the area have been noted, and survey markers placed near them. The position of Palaeolithic sites and more recent ateliers have been checked and plotted on the photos. All this "clean-up" work will help insure that the BTMP Atlas sheets are as accurate and as complete as possible.

With the completion of work in KV, QV, and adjacent areas, the major royal necropoleis at Thebes are now ready for publication. Next season, we shall devote our field season to the extensive array of wadis between QV and the southern limits of the Theban Necropolis, and to the tombs and structures at Deir el-Medineh.

In the laboratory, the BTMP has nearly completed work on the computer programs needed to generate tomb plans and axonometric drawings and we have been studying the numerous problems of map and tomb plan publication format. (Samples of our proposed Atlas sheets were shown at the 1980 ARCE meeting in San Francisco and additional copies are available to interested parties).

A number of tests were made during the past year to help determine the most efficient means of generating the type of axonometric tomb drawings first illustrated in last year's Annual Report. Changes in the format of our field notes were followed by changes in our laboratory procedures. Among other things, they resulted in the preparation of an animated film of an axonometric drawing of the burial chamber of the tomb of Ramesses II. This film will be shown on a National Geographic Society television special in February, 1982. An axonometric drawing of the entire tomb (KV 7) is shown in the center of this report and illustrates one of the problems with which we have had to deal: the inclusion of inaccessible chambers.

In the tomb of Ramesses II, as in other tombs in the Valley of the Kings, chambers are often so heavily encumbered with mud, rubble, and debris, that it is not possible even to probe with a survey pole, much less gain access to them. Two such chambers in Ramesses II are those la-

belled Fa and Faa by Elizabeth Thomas. Because we cannot be certain of their precise form and dimensions, they are shown on our axonometric drawing in plan only. The plan we have used was one of two quite different plans that have been published. The most recent(figure 3), prepared in 1939 by Maystre and originally adhered to by Elizabeth Thomas, shows chamber Fa to have had only two columns and Faa to be equal in width to Fa. All earlier plans, however, beginning with that of Lepsius(figure 4), show Faa to be a much smaller chamber, and Fa to have had four columns. We have rejected Maystre's reconstruction in favor of Lepsius's because Maystre seems not to have had access to the two chambers, whereas Lepsius includes measurements on his tomb plan indicating that he did. (In a recent conversation, Elizabeth Thomas states that she, too, now accepts the Lepsius plan).

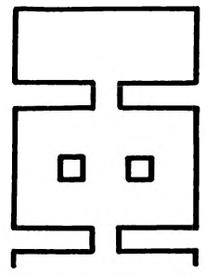


figure 3

The restoration of shelves along the walls of chamber J, the burial chamber, is based upon the following: Lepsius shows one such shelf in his plan; traces of a second shelf were visible during our work in the tomb; the plan of the chamber is otherwise so similar to those of Nefertari and Ramesses III, where such shelves are present, that it seemed necessary to assume their presence here, too.

The inclusion of pillars in the rear chambers, shown in all tomb plans except that of Maystre (followed by Thomas) is certain: traces are in all cases visible on the ceiling and in one case a column rises above the level of chamber fill.

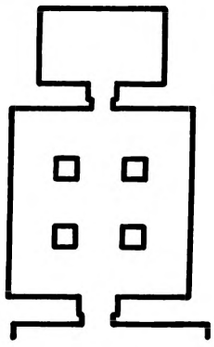
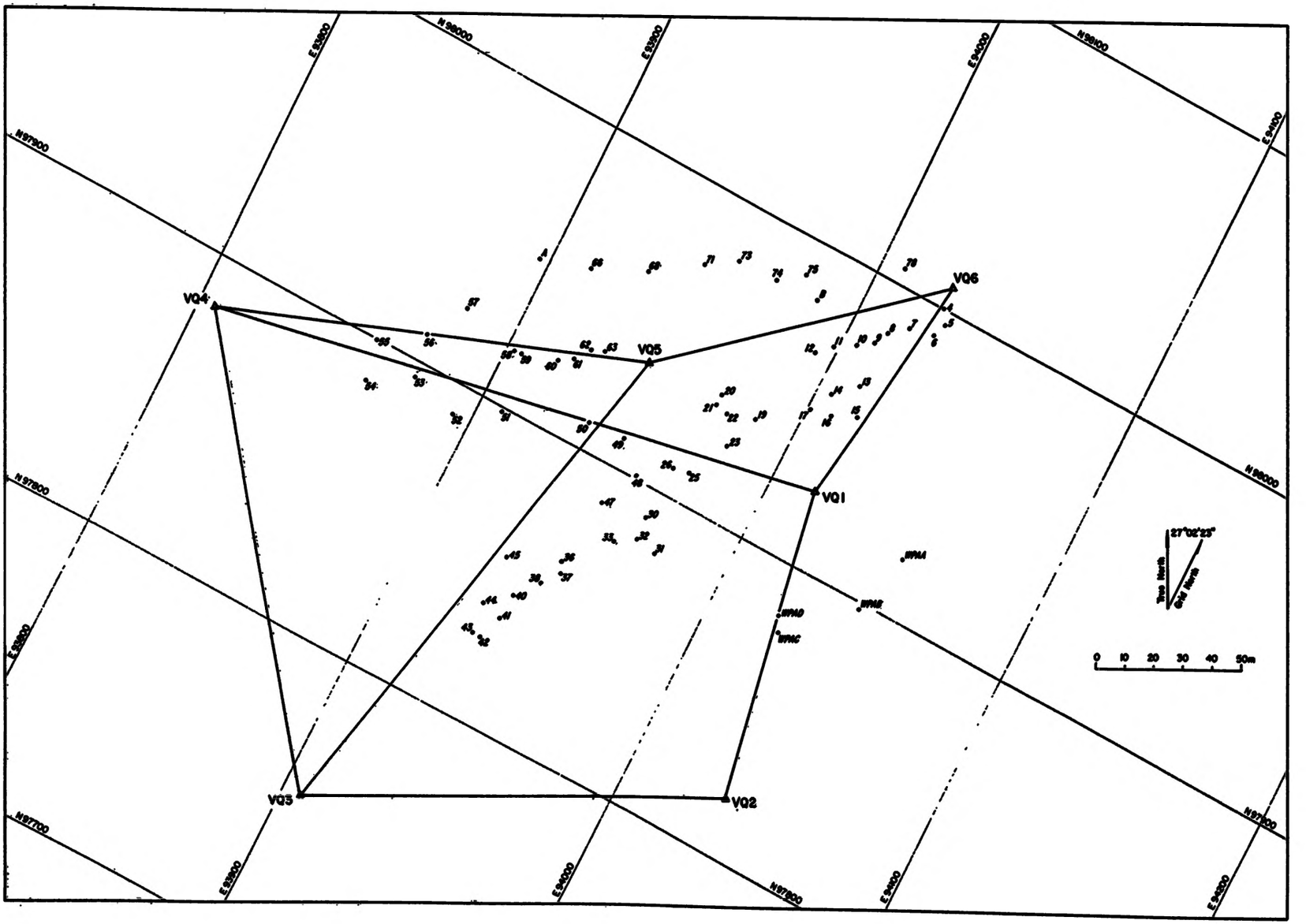


figure 4

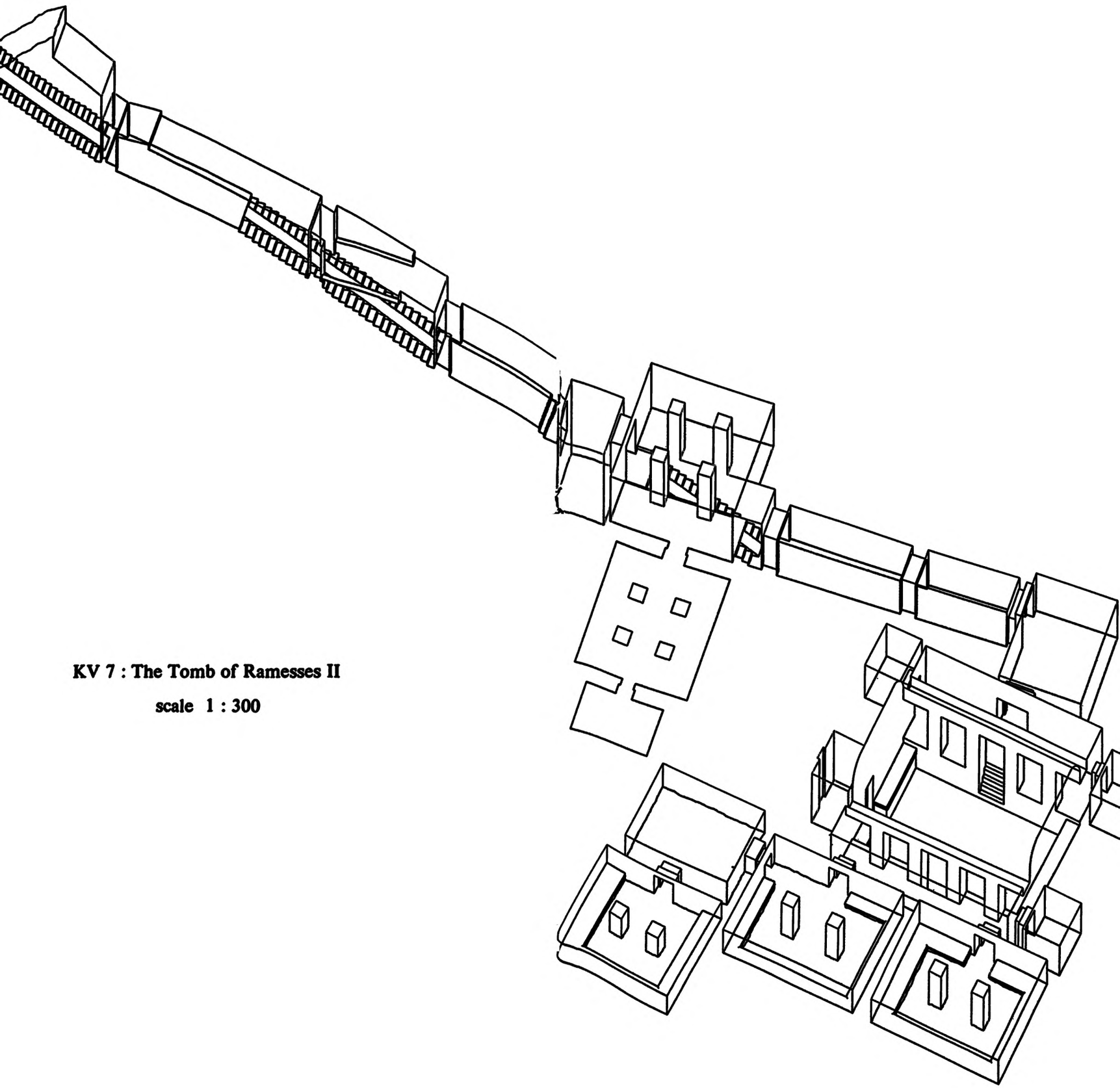
The greatest concern of the BTMP at the moment is a financial one. Dollar funding for our work from the National Endowment for the Humanities has ended, and there is the likelihood that the Smithsonian Institution's PL480 program in Egypt will terminate at the end of 1982. This means that other, almost certainly private, sources of funding must be found to insure the completion of fieldwork and the publication of our data. To meet this financial challenge, we plan to launch a major fund-raising campaign in the near future. Priority, of course, will be given to publishing in a proper and timely manner the data already gathered.

Many of our colleagues have expressed a wish that the aerial photographs taken by our project be made available for use. Our original plan was to include these in Atlas volume I. That, however, will be the last volume of the Atlas to be published. So, to avoid long delays and make these photographs available as soon as possible, we are planning to publish an 11 x 14-inch volume, *Views of Ancient Thebes*, that will contain about 75 of the most useful photographs. It will cover every archaeologically-significant part of the Theban Necropolis. We are certain that these vertical, oblique, and on- the-ground views will be of great use to Egyptologists and to those who have been entrusted with the development of the Luxor area.

Vertical Aerial Photograph of Valley of the Queens



Valley of the Queens: Position of Known Tombs



KV 7 : The Tomb of Ramesses II

scale 1 : 300

STATUS OF QV TOMB MAPPING

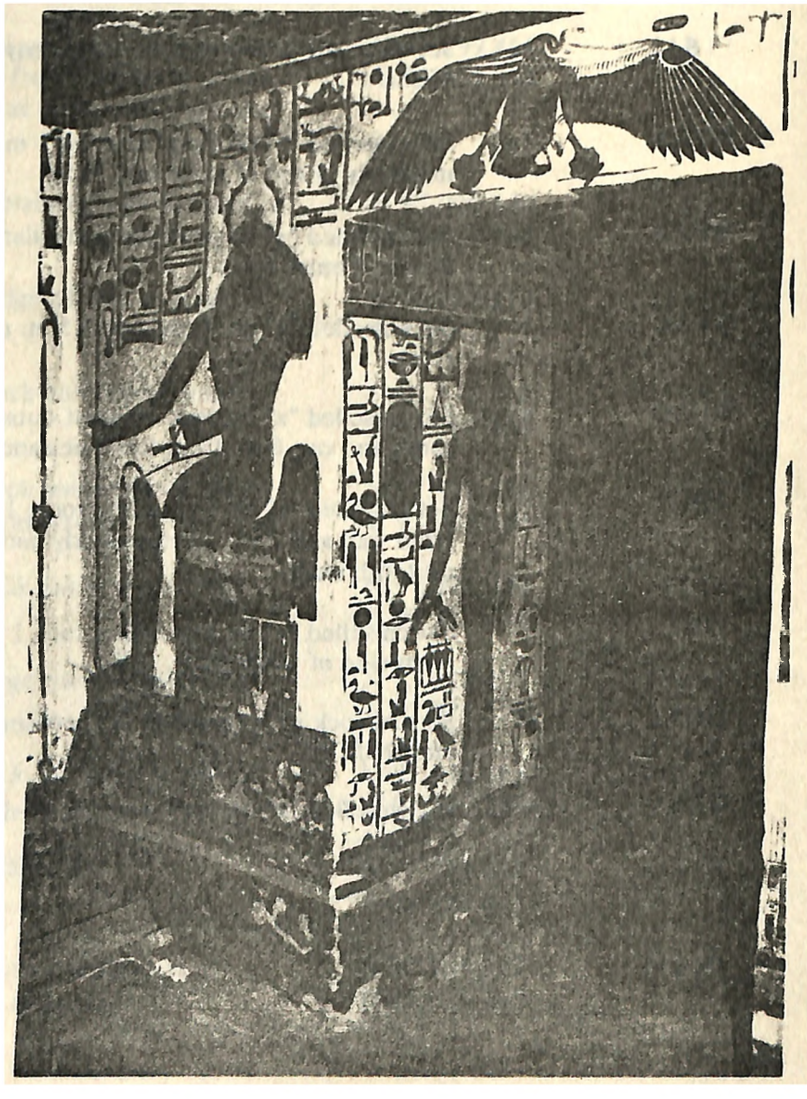
Tomb Number	Mapped	Point Description and Location	Adjusted Coordinate	Elevation
1	*	Set chiselled "x" on large rock 1.5 m. in front of tomb entrance.	N 98,009.759 E 94,086.126	106.41
4	*	Set chiselled "x" on boulder on northerly edge of shaft.	N 97,999.985 E 94,026.180	107.15
5	*	Set chiselled "x" on flat rock on northerly edge of shaft.	N 97,995.356 E 94,028.896	107.27
6	*	Set chiselled "x" on flat rock on northerly edge of shaft.	N 97,990.700 E 94,026.947	107.97
7	*	Set chiselled "x" on dark rock at northerly corner of shaft.	N 97,988.742 E 94,018.394	108.95
8	*	Set chiselled "x" on rock near northerly corner of shaft.	N 97,983.829 E 94,012.462	109.30
9	*	Set chiselled "x" on flat rock on northerly edge of shaft.	N 97,978.707 E 94,010.018	110.08
10	*	Set chiselled "x" on rock on northerly edge of shaft.	N 97,975.120 E 94,004.813	110.34
11	*	Set chiselled "x" on rock imbedded northerly of rock wall on northerly side of shaft.	N 97,970.875 E 93,998.448	109.61
12	*	Set chiselled "x" on rock on northwesterly edge of shaft.	N 97,966.454 E 93,993.768	110.99
13	*	Set chiselled "x" on flat rock northwesterly of tomb entrance.	N 97,963.423 E 94,011.990	111.28
14	*	Set chiselled "x" on flat rock on easterly edge of shaft.	N 97,956.682 E 94,004.908	111.79
15	*	Set chiselled "x" on rock imbedded northerly of shaft.	N 97,953.848 E 94,016.130	113.92
16	*	Set chiselled "x" on rock at northwesterly corner of entrance.	N 97,950.291 E 94,008.016	112.85
17	*	Set PK nail on easterly edge of shaft.	N 97,948.855 E 94,000.958	112.85
19	*	Set chiselled "x" on rock southerly of shaft.	N 97,937.233 E 93,986.256	113.79
20	*	Set chiselled "x" on rock westerly of shaft.	N 97,938.812 E 93,972.008	111.56
21	*	Set chiselled "x" on flat rock on northerly edge of shaft.	N 97,934.933 E 93,971.971	111.75

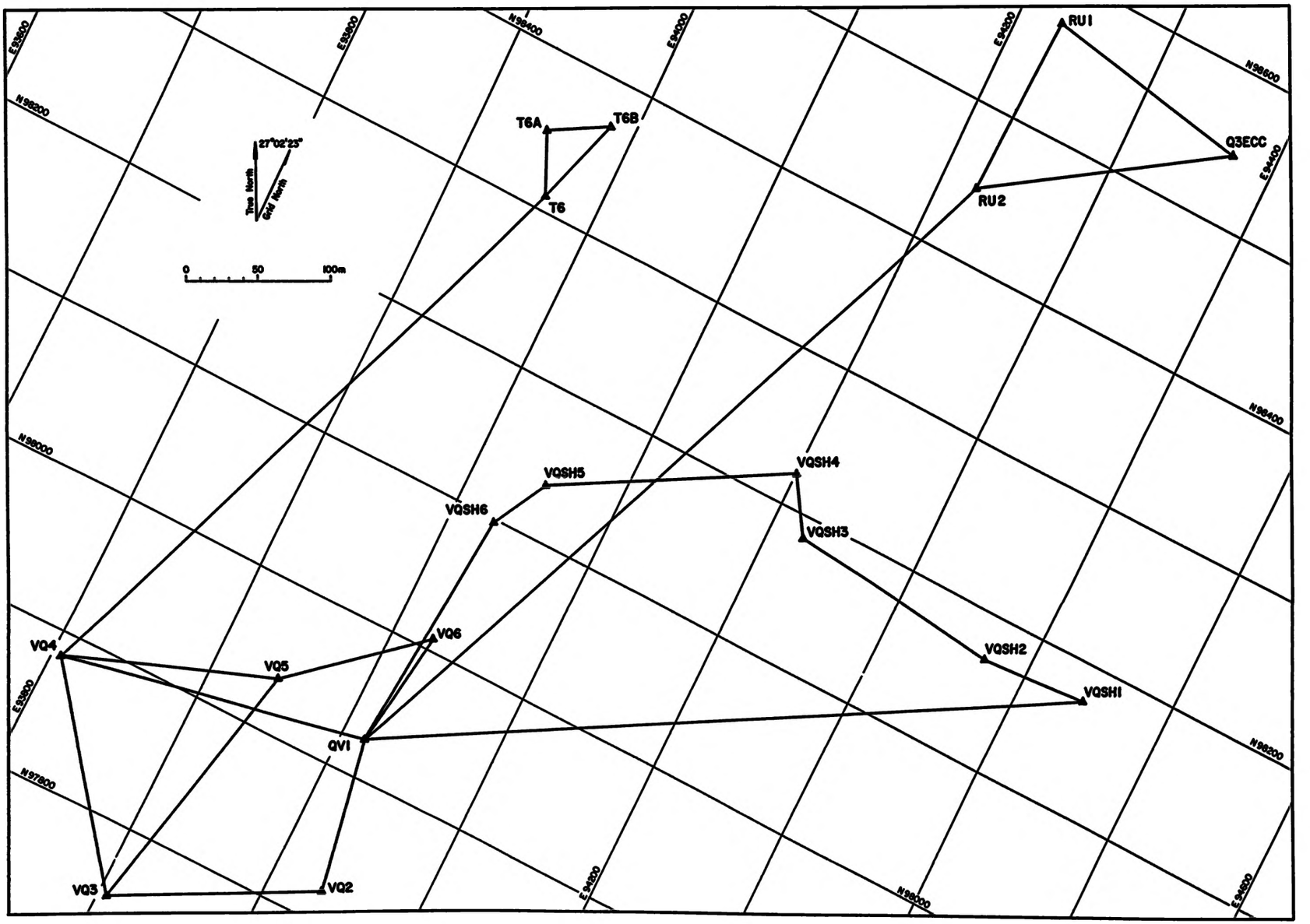
Tomb Number	Mapped	Point Description and Location	Adjusted Coordinate	Elevation
22	*	Set chiselled "x" on small rock northerly of shaft.	N 97,934.138 E 93,976.614	112.56
23	*	Set chiselled "x" on flat rock near entrance.	N 97,924.702 E 93,982.016	114.41
25	*	Set chiselled "x" on flat rock on westerly edge of shaft.	N 97,910.620 E 93,974.656	116.70
26	*	Set chiselled "x" on flat rock on westerly edge of shaft at base of talus, 1 m. northerly of northerly edge of shaft.	N 97,909.338 E 93,968.491	116.31
30	*	Set pencilled "x" on slightly protruding rock.	N 97,890.564 E 93,968.194	119.16
31	*	Set chiselled "x" on rock northerly of tomb entrance.	N 97,881.126 E 93,976.343	122.11
32		Set chiselled "x" on buried flat rock on downhill side of tomb.	N 97,882.604 E 93,968.856	120.63
33	*	Set chiselled "x" at northeasterly corner on large flat rock at top of entrance steps.	N 97,878.096 E 93,962.597	120.31
36	*	Set chiselled "x" on stone on edge of first tomb step.	N 97,863.550 E 93,949.670	119.86
37	*	Set chiselled "x" on rock protruding northerly of tomb.	N 97,859.939 E 93,951.467	121.28
38	*	Set chiselled "x" on center of top step.	N 97,854.109 E 93,947.243	120.86
40	*	Set chiselled "x" on center of westerly edge of concrete slab at top of tomb steps.	N 97,846.044 E 93,940.904	121.88
41	*	Set chiselled "x" on large rock ca. 0.9 m. from right entrance corridor wall.	N 97,836.830 E 93,940.824	123.64
42	*	Set chiselled "x" on bedrock at center of tomb entrance ramp.	N 97,828.167 E 93,937.612	125.42
43	*	Set chiselled "x" on small rock 1.1 m. from right entrance corridor wall.	N 97,828.374 E 93,934.503	126.04
44	*	Set chiselled "x" on bedrock at center of entrance corridor floor.	N 97,838.880 E 93,931.673	122.99
45	*	Set chiselled "x" on rock in dirt mound easterly of tomb entrance.	N 97,856.139 E 93,931.679	121.23
47	*	Set chiselled "x" on protruding rock at northeasterly corner of shaft.	N 97,887.842 E 93,952.868	116.99

Tomb Number	Mapped	Point Description and Location	Adjusted Coordinate	Elevation
48	*	Set chiselled "x" on flat rock on westerly edge of shaft.	N 97,900.908 E 93,959.088	115.33
49		Set chiselled "x" on rock easterly of entrance and rock wall and ca. 0.8 m. easterly of top tomb step.	N 97,909.849 E 93,948.727	114.99
50	*	Set chiselled "x" on rock wall northerly of tomb entrance.	N 97,909.114 E 93,935.849	113.74
51	*	Set chiselled "x" on top wall in front of tomb.	N 97,898.930 E 93,907.905	116.39
52	*	Set chiselled "x" on protruding rock 5.2 m. from tomb gate in entrance path.	N 97,889.621 E 93,893.480	115.98
53	*	Set chiselled "x" on rock 1.4 m. in from face of wall along tomb walkway.	N 97,894.450 E 93,876.629	115.21
54		Set PK nail on entrance floor 1.3 m. from left wall.	N 97,886.014 E 93,862.260	117.88
55	*	Set 30 mm. pipe flush on approximate axis line of tomb, 2.5 m. from northerly retaining wall of enclosure at bottom of four concrete steps.	N 97,899.465 E 93,859.378	117.17
56	*	Set chiselled "x" on retaining wall in front of tomb.	N 97,909.340 E 93,873.746	116.73
57	*	Set chiselled "x" on edge of wall in front of tomb.	N 97,923.219 E 93,881.759	117.67
58	*	Set chiselled "x" on rock easterly of tomb entrance.	N 97,918.412 E 93,902.403	114.88
59	*	Set chiselled "x" on rock southerly of southerly wall around tomb entrance.	N 97,918.643 E 93,905.140	114.68
60	*	Set chiselled "x" on rock easterly of tomb entrance.	N 97,922.609 E 93,917.098	113.88
61	*	Set chiselled "x" on large rock in northerly wall at tomb entrance.	N 97,925.575 E 93,921.698	114.15
62	*	Set chiselled "x" on rock on easterly side of tomb entrance.	N 97,930.765 E 93,925.281	113.76
63	*	Set chiselled "x" on small rock.	N 97,933.677 E 93,929.615	113.89
66	*	Set chiselled "x" on southeasterly part of concrete landing at top of stairs.	N 97,954.807 E 93,913.365	115.60

Tomb Number	Mapped	Point Description and Location	Adjusted Coordinate	Elevation
68	*	Set chiselled "x" on top step of tomb stairs, 0.7 m. from left wall.	N 97,962.976 E 93,930.619	115.97
71	*	Set PK nail in entrance corridor along line of far edge of 3 stones and 0.43 m. from right edge of left stone.	N 97,974.254 E 93,947.045	114.22
73	*	Set chiselled "x" in entrance corridor 0.64 m. from right wall.	N 97,981.029 E 93,957.137	113.93
74	*	Set 30 mm. pipe flush in approximate center of entrance corridor, 4.28 m. from stone on left and 4.63 m. from stone on right.	N 97,981.341 E 93,971.091	112.88
75	*	Set chiselled "x" on large rock 1.33 m. from left wall and 1.43 m. from right wall.	N 97,987.736 E 93,979.198	111.73
78	*	Set chiselled "x" on flat rock at easterly edge of shaft.	N 98,005.265 E 94,008.101	108.67
A (80)	*	Set chiselled "x" on stone in first step at center of entrance corridor.	N 97,949.515 E 93,896.736	117.24
B	*	Set chiselled "x" on rock northwesterly of shaft.	N 97,982.482 E 93,986.378	109.07
WPAA	*	Set chiselled "x" on flush flat rock 1 m. northerly of top of ramp into tomb.	N 97,919.358 E 94,051.572	110.57
WPAB	*	Set chiselled "x" on protruding angular rock at top of entry ramp.	N 97,897.570 E 94,045.860	115.66
WPAC	*	Set chiselled "x" on flush rock 1.5 m. outside tomb.	N 97,877.796 E 94,025.508	128.36
WPAD	*	Set chiselled "x" on rock on shelf outside tomb and ca. 6 m. from tomb entrance.	N 97,883.129 E 94,023.215	127.66
GR1	*	Set chiselled "x" on protruding rock, 1 m. in from wall and 2 m. northwesterly corner of pit tomb shaft.	N 98,502.788 E 94,248.606	197.35
GR2	*	Set chiselled "x" on protruding rock 1 m. out from side of tomb shaft.	N 98,550.394 E 94,192.242	197.60
GR3	*	Set flat rock with chiselled "x" between wall and shaft.	N 98,572.318 E 94,175.403	198.89
WRA	*	Set chiselled "x" on rock westerly of shaft.	N 98,233.743 E 94,154.559	119.47

Tomb Number	Mapped	Point Description and Location	Adjusted Coordinate	Elevation
WRD	*	Set chiselled "x" on protruding rock 1 m. from northeasterly corner of shaft; built rock cairn ca. 1 m. northeasterly.	N 98,233.115 E 94,178.280	125.90
WRG	*	Set chiselled "x" on lower (northeasterly) side of protruding rock, 1.5 m. from northwesterly corner of tomb shaft. Built cairn 1 m. northerly.	N 98,251.337 E 94,176.174	125.45
WRI	*	Set chiselled "x" on small protruding rock, 1 m. from northwesterly corner of tomb shaft. Built cairn ca. 1 m. northerly.	N 98,257.376 E 94,179.896	126.58
WRH		Set chiselled "x" on side knob of large rock at northwesterly corner of tomb shaft.	N 98,252.319 E 94,185.169	128.09
WHC	*	Set chiselled "x" on knob of protruding rock, 1 m. northwesterly of tomb shaft.	N 98,367.120 E 93,909.301	180.73
WHD	*	Set flat rock with chiselled "x" ca. 1 m. westerly of tomb shaft.	N 98,355.038 E 93,906.100	178.43





Valley of the Queens and Adjacent Area: Extension of Main Traverse

QV SURVEY MONUMENTS

Point Reference	Point Description and Location	Adjusted Coordinate	Elevation
VQ 1	Set aluminum disk at northerly toe of buttress ridge of Valley of Queens, ca. 27 m. south of tomb 15 control point.	N 97,926.310 E 94,014.548	117.56
VQ 2	Set chiselled "x" on protruding rock at top of southerly wall of Valley of Queens near intersection of VQ 1 buttress ridge, ca. 2 m. easterly of large rock outcrop.	N 97,820.791 E 94,034.696	154.29
VQ 3	Set chiselled "x" on protruding rock at top of southerly wall of Valley of Queens near intersection of small canyon that contains tombs 20 through 49, ca. 3 m. from edge of bluff.	N 97,752.977 E 93,905.942	159.91
VQ 4	Set chiselled "x" on knob of protruding rock ca. 20 m. above tomb 55.	N 97,883.673 E 93,805.557	135.54
VQ 5	Set PK nail in pavement at intersection to tomb 66, ca. 2 m. southerly of southerly side of steel light pole at end of rock wall.	N 97,936.504 E 93,945.475	112.47
VQ 6	Set PK nail in pavement 1 m. from steel light pole.	N 98,007.610 E 94,025.770	106.91
VQSH 1	Set chiselled "x" on large boulder to right of entrance to shrine area on main path between Valley of Queens and Deir el-medineh.	N 98,173.855 E 94,440.780	120.32
VQSH 2	Set chiselled "x" on flat rock flush in ground below two tombs that are 75 m. southwesterly of VQSH 1. Built rock cairn 1 m. uphill.	N 98,168.951 E 94,369.401	114.42
VQSH 3	Set chiselled "x" on protruding rock along path up ridge. Built rock cairn 1.5 m. uphill.	N 98,184.664 E 94,221.528	126.55
VQSH 4	Set chiselled "x" on protruding rock on ridge ca. 40 m. southeasterly of pit tombs. Built rock cairn 1 m. westerly.	N 98,221.824 E 94,198.868	133.99
VQSH 5	Set chiselled "x" on red brick northeasterly of Coptic ruins. Built rock cairn beside point.	N 98,137.048 E 94,049.001	126.02
VQSH 6	Set chiselled "x" on red brick southwesterly of Coptic ruins. Built rock cairn beside point.	N 98,098.488 E 94,027.967	125.18
RU 1	Set chiselled "x" on knob of protruding rock at southwesterly end of ridge southeasterly of Wadi Rumi. Built rock cairn beside point.	N 98,568.725 E 94,227.642	200.55

Point Reference	Point Description and Location	Adjusted Coordinate	Elevation
RU 2	Set chiselled "x" on protruding rock to left of path along the northeasterly slope of Wadi Rumi. Small rock retaining wall ca. 1 m. below point.	N 98,445.578 E 94,223.503	197.57
T 6 A	Set chiselled "x" on protruding rock at southwesterly end of "saddle" northerly of point T 6 . Built rock cairn beside point.	N 98,348.997 E 93,945.354	192.96
T 6 B	Set chiselled "x" on protruding rock at northeasterly end of "saddle" northerly of point T 6. Built rock cairn beside point.	N 98,370.313 E 93,982.821	192.20