EVALUATION OF BEACH PROFILE DATA FROM BETIO AND BAIRIKI, REPUBLIC OF KIRIBATI

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EVALUATION OF BEACH PROFILE DATA FROM

BETIO AND BAIRIKI, REPUBLIC OF KIRIBATI,

1982 - 1988

by

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Techsec

Prepared for: Committee for Co-ordination of Joint Prospecting for Mineral Resources in South Pacific Offshore Areas (CCOP /SOPAC)
Kiribati Project: KIA

• *Contributed by:* Canada, International Centre for Ocean Development (ICOD)

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SUMMARY

Seven years of beach proflle data from South Tarawa atoll, Kiribati are presented within this report. The profiles and surveys were established in 1982 to monitor beach changes on Betio and Bairiki Islands of South Tarawa near a proposed causeway between the islands. As such, there are four years (6 surveys) of data prior to causeway construction in 1986 and three years of data following construction. The data set represents the longest time series of beach surveys on an atoll in the South Pacific.

In addition to providing an unambiguous indication of shoreline stability around Betio and Bairiki, several trends are evident within the data set as follows:

- the effects of an increased percentage of westerlies in years 1982 and 1987 associated with the Southern Oscillation or EI Nino are evident in the data;
- beach changes are significantly more variable and of greater magnitude on the *lagoon shore* than on the ocean shore;
- there appears to have been an overall balance of erosion and accretion on the two islands; and
- there do not appear at the present time to be any shoreline changes that can be definitively attributed to the causeway.

Additional plots are underway at the *CCOP/SOPAC* Technical Secretariat (Techsec) that will show patterns of change at individual profiles.

It is recommended that the survey programme be continued now that sedimentation around the causeway appears to have stabilised and the effects of the last EI Nino event are two years past. Accelerated erosion appears to be occurring just east of the causeway on the ocean shore of Betio.

ACKNOWLEDGMENTS

Dr Russell Howorth of Techsec originally established the survey programme in 1982 and was personally responsible for all surveying until 1985. His forethought on documentation and programme design has been a significant factor in the overall quality of the data set.

Since 1986, the Lands and Surveys Divisions of the Ministry of Home Affairs and Decentralization has undertaken the field surveys. We are grateful to the numerous surveyors involved with the project to the Chief Land Surveyors, Ross Christie and Peter King for their supervision.

INTRODUCTION

Background

This beach profile survey programme was originally establised in 1982 under the CCOP /SOP AC Project KIA: BASELINE STUDIES OF INSHORE AREAS IN KlRIBATI FOR COASTAL DEVELOPMENT AND PROTECTION PROGRAMMES (Howorth, 1982). The project was directly supervised by Dr Russell Howorth, then at Victoria University in Wellington (Howorth, 1982; 1983; 1985).

The purpose of establishing the survey programme was to evaluate the possible impact of a causeway between the islands of Betio and Bairiki (Figure 1). The concern was that the causeway may alter sediment transport patterns in the area and indirectly affect the stability of the surrounding shorelines. In that the habitable land areas are very small and the population densities very high, the concern about coastal erosion was, and still is similarly very high. Although the programme was initially envisioned for monitoring, a delay in causeway construction allowed fours years of data (6 surveys) to be conducted prior to causeway construction thereby establishing baseline conditions.

Objectives

The primary purpose of this report is to consolidate and present all of the previously collected beach profile data. An interpretation and recommendations are also provided.

METHODS

Field Surveys

The methods used in establishing the bench marks and in the initial surveys are reported in Howorth (1982; 1983; 1985) and only briefly reported here.

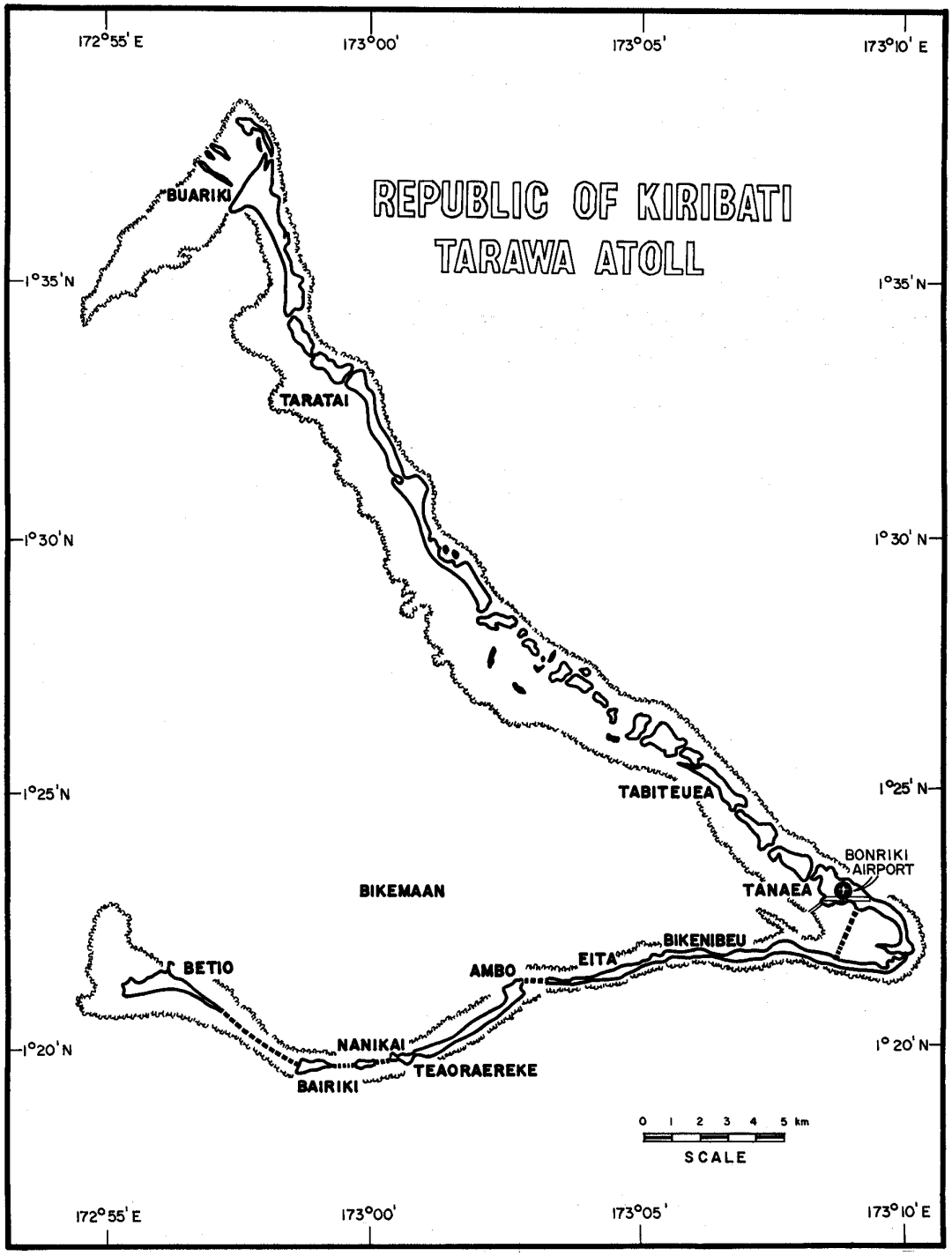


Figure 1. Tarawa Atoll showing the location of Betio and Bairiki where the beach profiles are located.

Profiles were established at more or less even intervals around each of the islands along representative shoreline segments (Figure 2). In the backshore, a permanent reference mark(s) fixed the location of the profile and provided a standard reference mark for all future surveys (i.e., the vertical and horizontal datums). An automatic level and tape were then used to measure hoizontal and vertical distances from the reference mark. All surveys were conducted within two hours of low tide to ensure that the profile was surveyed an adequate distance from the shore.

Data Reduction

The levelling data were provided by the Lands and Surveys Department for additional analysis by Techsec. The horizontal and vertical measurments are referenced to the vertical and horizontal datums to resolve elevations of the beach above mean sea level (MSL) and horizontal distance from the survey mark. As profIle data were collected over the same line each time, comparison of the elevation data indicated whether erosion or accretion had taken place. The plots shown in Figure 3 indicate moderate erosion between 1982 and 1988 along Profile BLP1 and significant accretion along Profile BLP 6 during the same period. By integrating the area between the two profiles, the total erosion or accretion volume (per unit length of beachfront) was computed (Figure 4).

This report presents the reduced survey data and the computed volumetric change (Appendix B). Plotting of the profiles is being conducted by the Data Management of Techsec. The survey data has been transferred to Lotus 123 spreadsheets to (a) simplify computations and (b) to store the data electronically.

Every attempt has been made to resolve discrepancies within the survey data. However, along 3 of the 36 profiles, loss of reference marks required a resetting of the datums; in these cases, the contiguous data set from 1982 to 1988 is broken and comprises two shorter data sets.

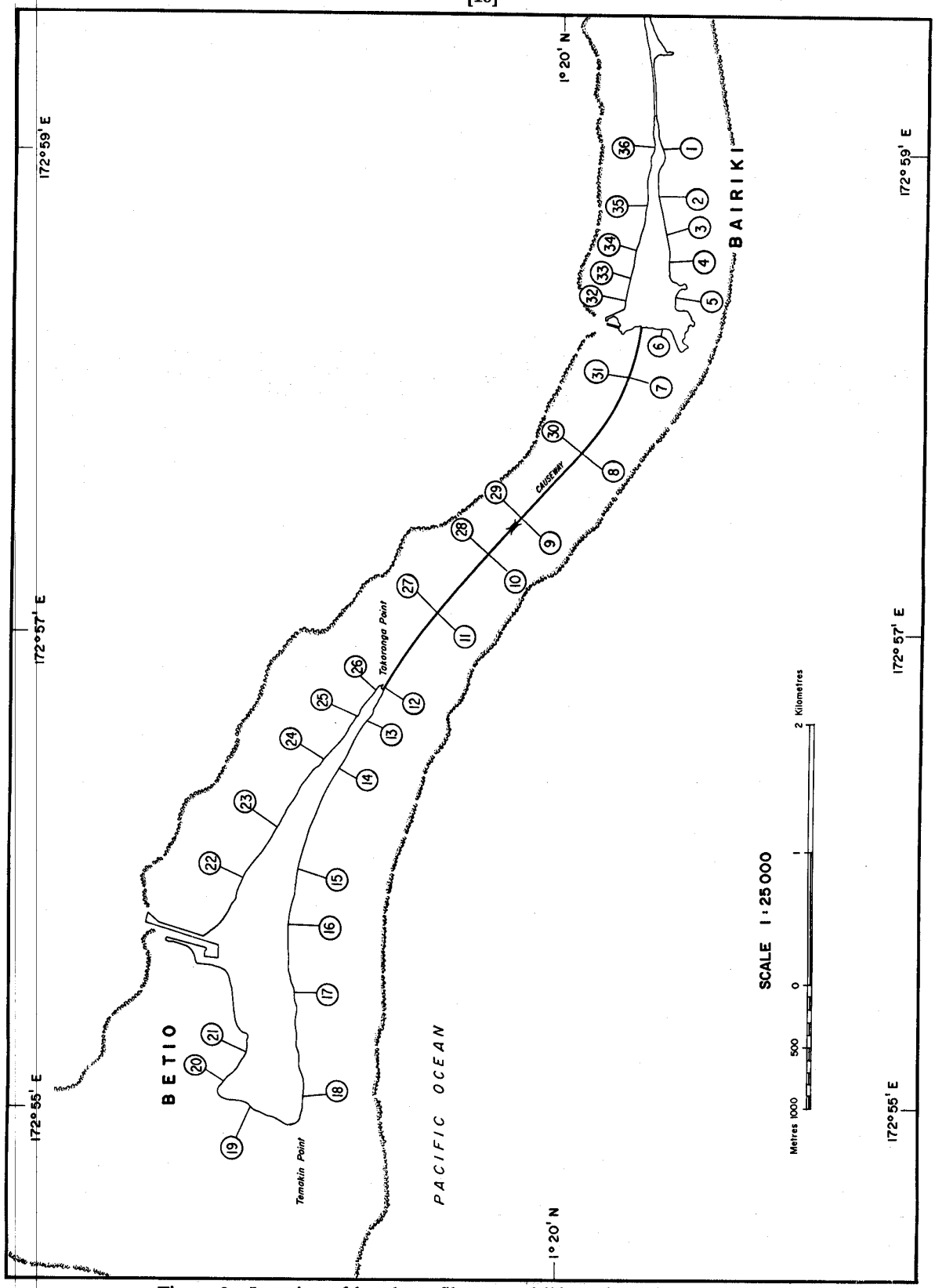


Figure 2. Location of beach profiles on Bairiki, Betio and the causeway.

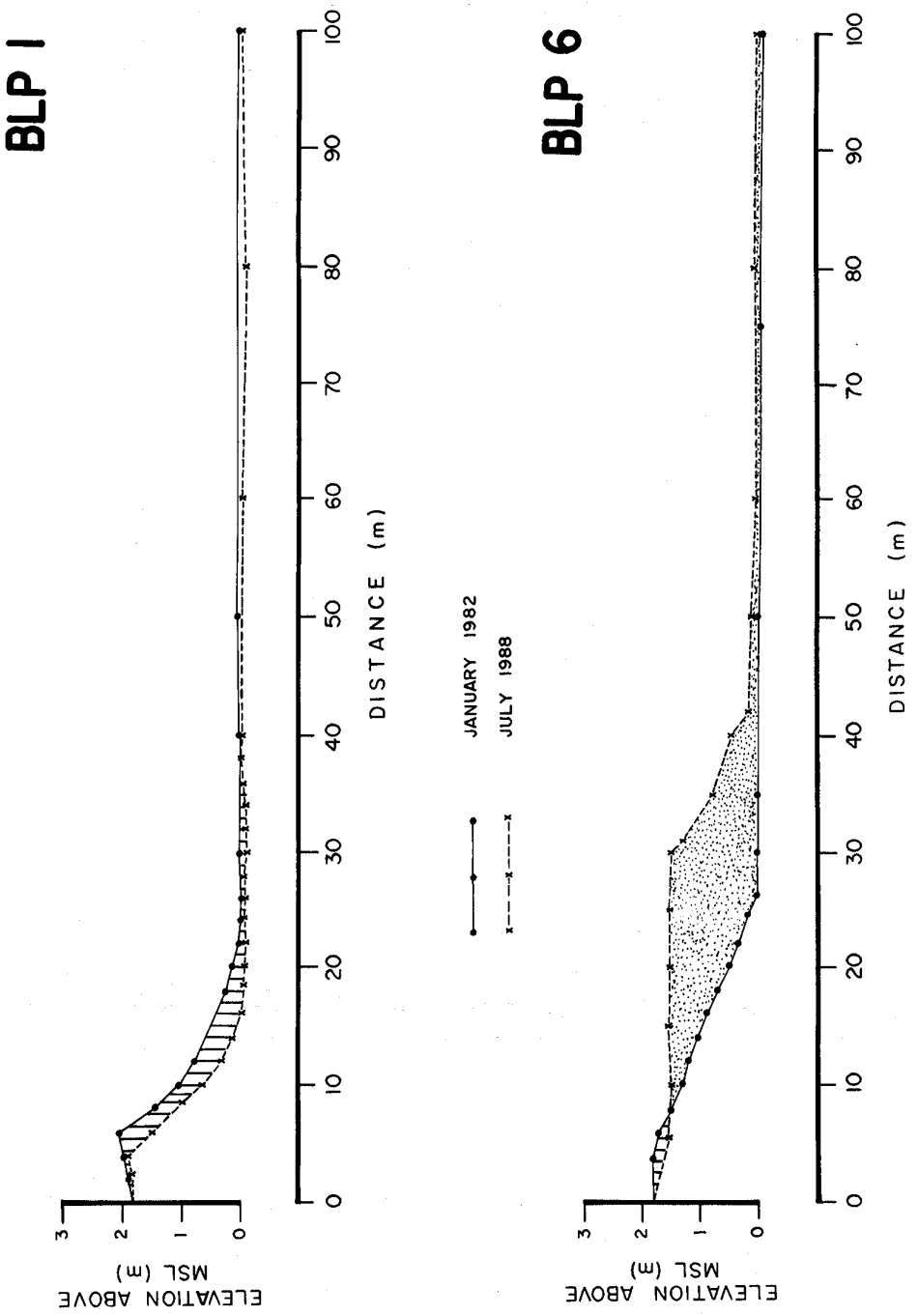


Figure 3. Comparison of profile change between January 1982 and July 1988 for (a) BLP1 and (b) BLP6.

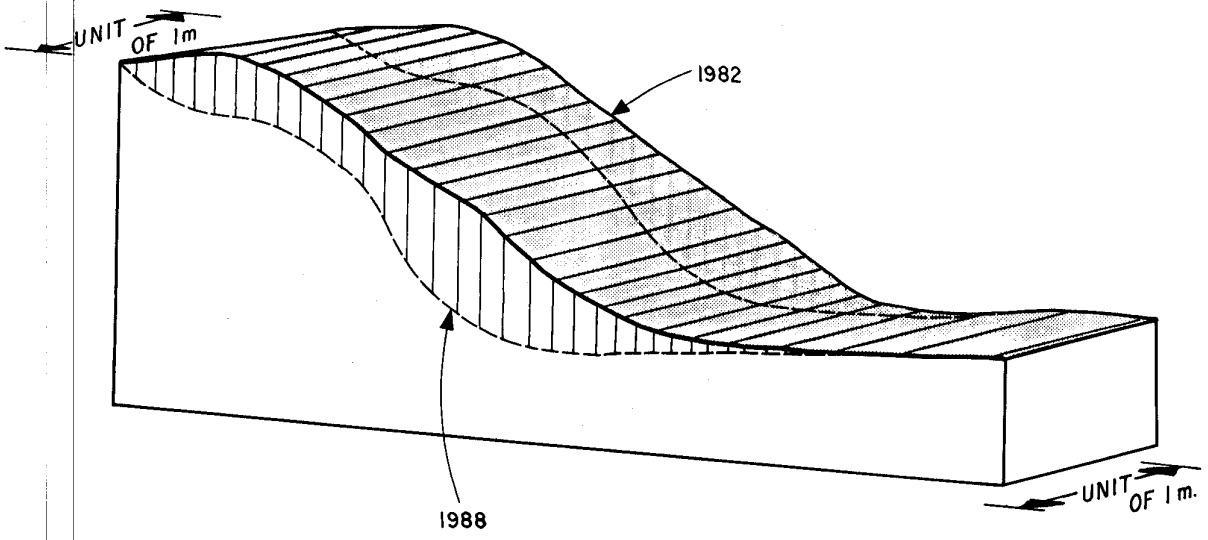


Figure 4. Schematic diagram of concept used in the volumetric change calcualtions.

RESULTS and DISCUSSION

The reduced profiles are included within Appendix B in the form of tabular data sets. Comparison of sequentially-collected profile data provides the basis for computing erosion and accretion along each profile. The volumetric difference between each subsequent profile (DIFF) and from the original profile (CUM CHANGE) is computed.

The cumulative volumetric change from the original survey of the profile to 1988 is summarised in Table 1 and plotted in Figure 5. This figure provides a clear, graphic indication of (a) the long-term trend in terms of erosion or accretion, (b) cycles of erosion and accretion over time and (c) aerial patterns of change. The data are discussed briefly in terms of the overall pattern of long-term change and changes along individual profiles.

Long-term Profile Change

Several trends are apparent in the overall data set (Figure 5). These include:

- the effect of westerlies,
- the differences between lagoon and ocean beaches,
- the overall balance of erosion versus accretion,
- the influence of the causeway construction.

Effect of Westerlies

The effect of westerlies on profile change has previously been noted by Howorth (1983). The 1982/1983 "EI Nino" or Southern Oscillation event was evident as an anomaly in most beach profIle changes. Depending on the location of the profile, both erosion and accretion anomalies were evident in the data set between mid 1982 and early 1983. Relative changes are summarised in Table 2. Interestingly, the majority of profiles showed an accretionary phase at the onset of the westerlies in late 1982, early 1983.

The trend during the 1986/1987/1988 Southern Oscillation are not so clear. Up to the point of the mid-1986 survey, most of the profiles appeared relatively stable but following that survey entered into a period of rapid change. Comparisons of change between mid-1986 and mid-1987 are summarised in Table 3 and indicate similar trends, although it is evident that the lagoon was more susceptible to erosion in 1987 than in 1988.

Comparison of the wind data between the 1982 and the 1987 Southern Oscillations would be useful for determining the causes for the difference in beach response between these two events.

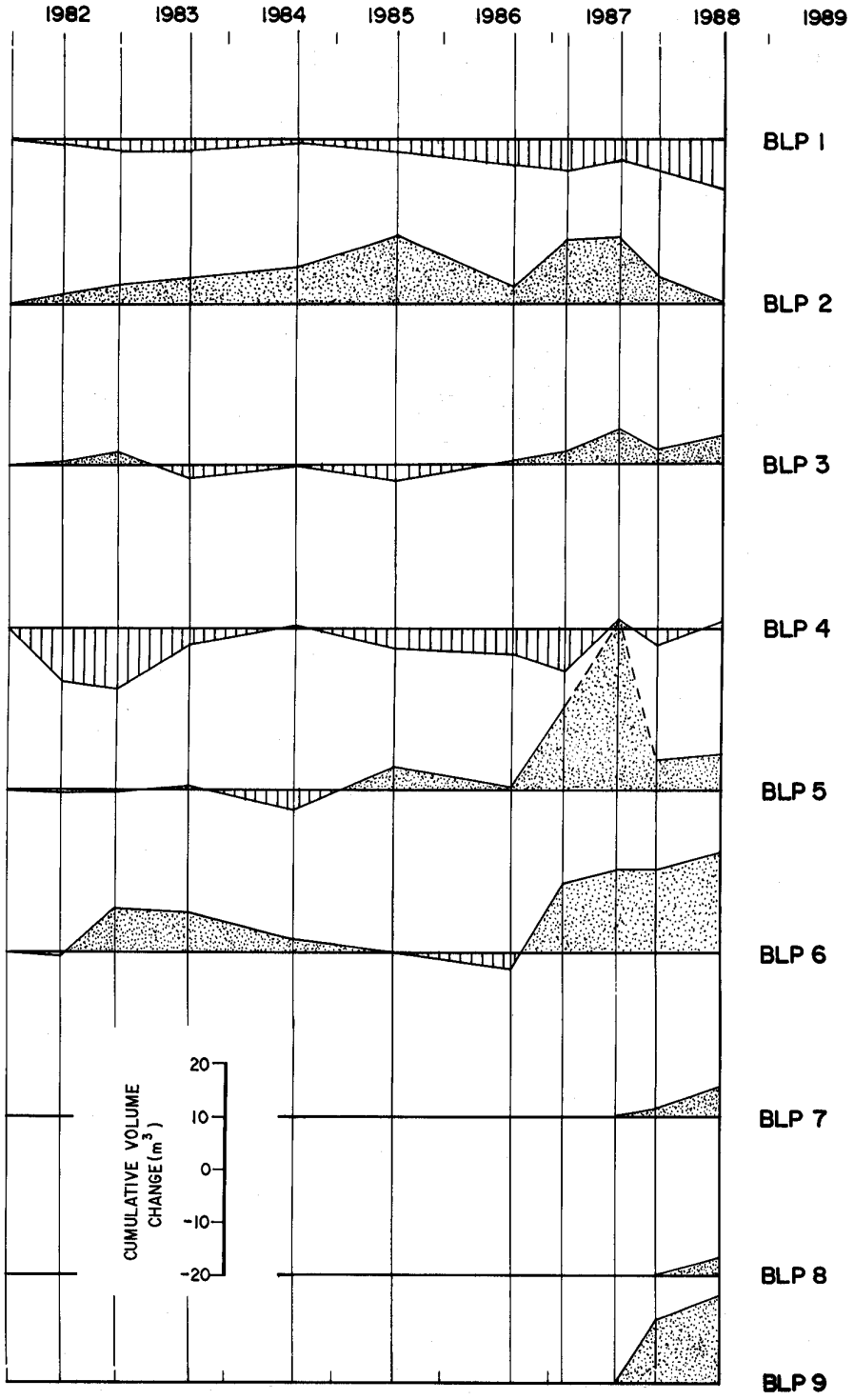
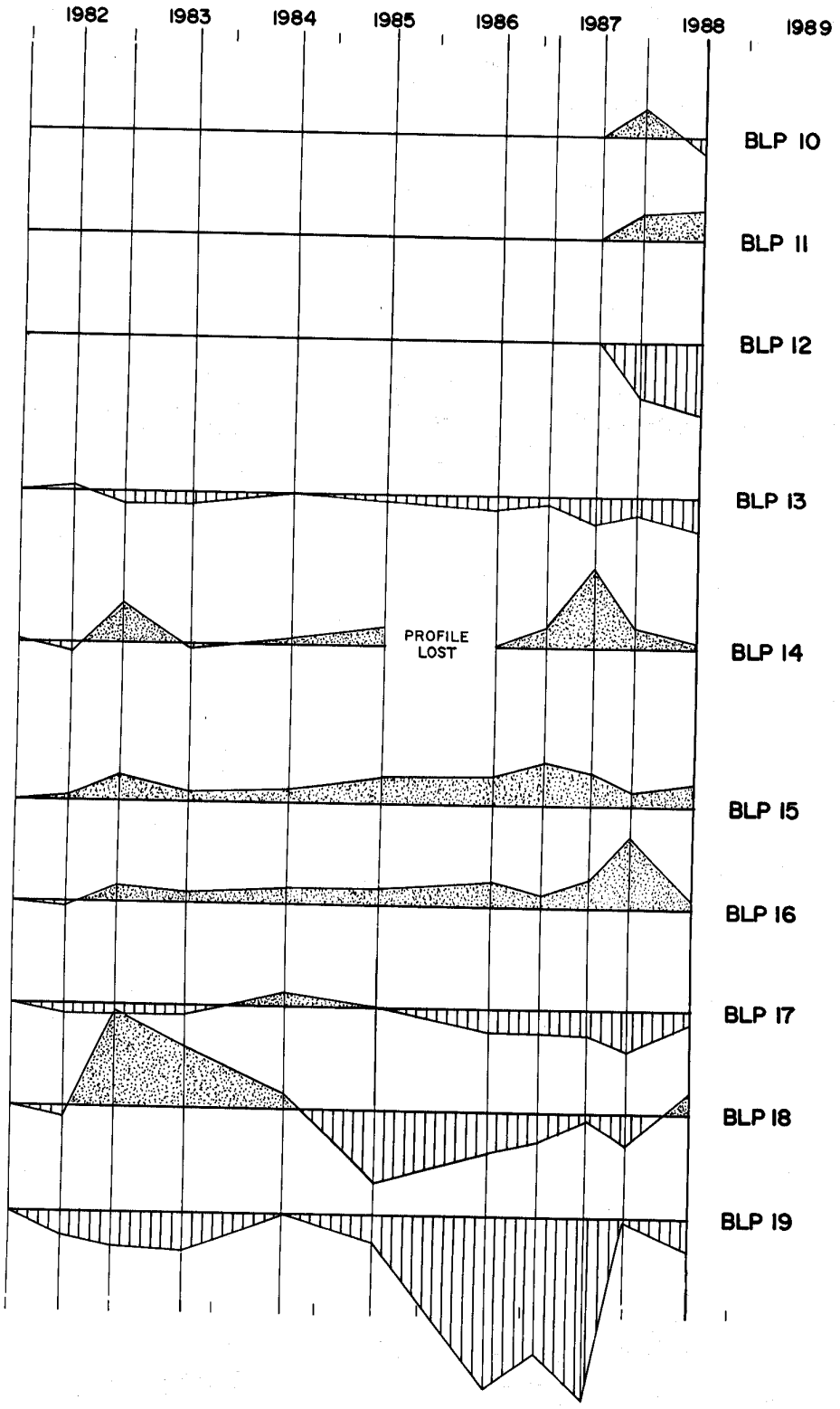


Figure 5a. Cumulative volume change of beach profiles BLP1 to BLP19, located along the ocean-side of Bairiki, the causeway and Betio.


1982
1983
1984
1985
1986
1987
1988
1989
BLP 10
BLP 11
BLP 12
BLP 13
PROFILE LOST
BLP 14
BLP 15
BLP 16
BLP 17
BLP 18
BLP 19

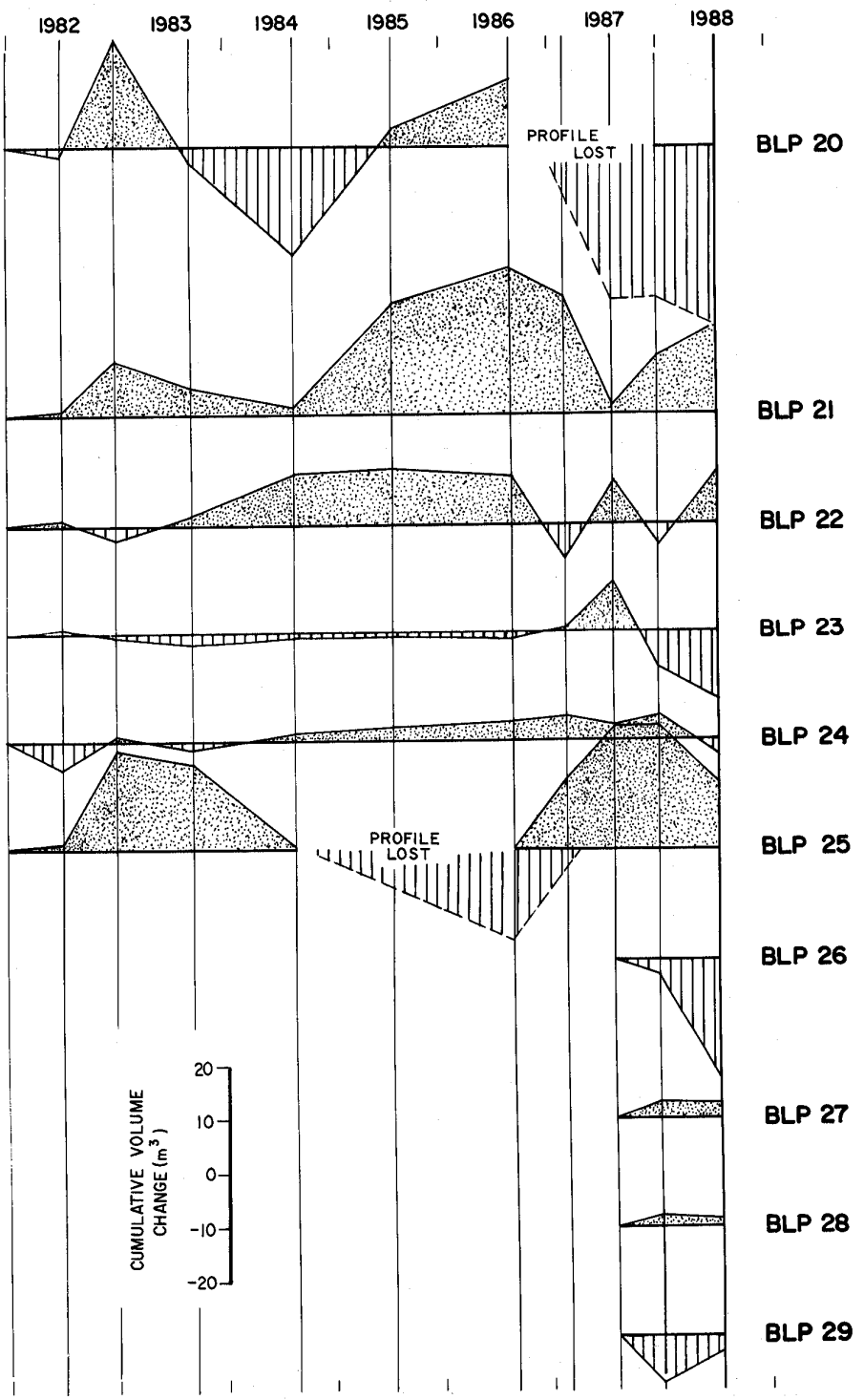


Figure 5b. Cumulative volume change of beach profiles BLP20 to BLP21, located along the lagoon-side of Betio, the causeway and Bairiki.

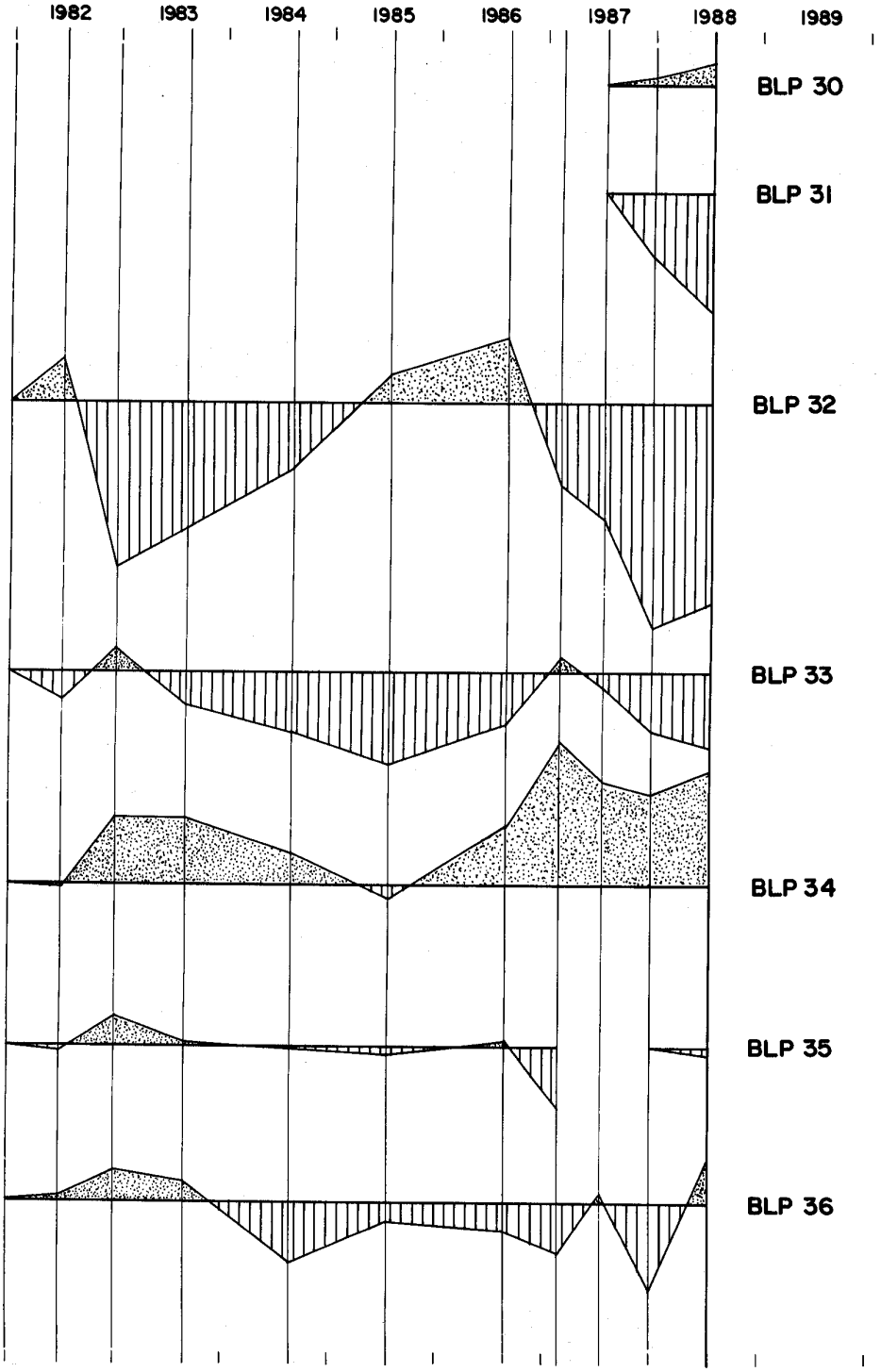

1982
1983
1984
1985
1986
1987
1988
1989
BLP 30
BLP 31
BLP 32
BLP 33
BLP 34
BLP 35
BLP 36

Table 1. Summary of Cumulative Volumetric Change from Initial Survey (m^3)

PROFILE NUMBER	JAN '82	JUN '82	JAN '83	AUG '83	AUG '84	JUL '85	AUG '86	FEB '87	JUL '87	JAN '88	JUL '88
1	0.0	-0.7	-2.4	-2.3	-0.2	-2.2	-4.6	-5.7	-3.8	-5.5	-9.3
2	0.0	1.4	3.3	4.4	6.5	12.2	3.1	11.7	12.3	5.2	0.5
3	0.0	0.1	2.2	-2.9	-0.2	-3.2	0.5	2.5	6.8	2.9	5.6
4	0.0	-9.5	-10.3	-3.2	0.2	-3.4	-4.2	-7.3	1.9	-3.0	1.1
5	0.0	-0.4	-0.3	0.4	-3.9	4.7	0.8	15.0	31.2	5.4	6.6
6	0.0	-0.5	8.1	7.4	2.7	0.2	-2.9	13.0	14.6	14.6	18.4
7									0.0	1.9	5.7
8									0.0	0.0	3.2
9									0.0	11.6	16.0
10									0.0	5.3	-3.0
11									0.0	5.3	5.4
12									0.0	-10.4	-13.6
13	0.0	0.9	-2.2	-2.2	0.0	-1.6	-3.0	-1.4	-5.5	-2.6	-6.8
14	0.0	-1.5	7.8	-0.8	1.2	4.0	0.0	4.0	16.0	4.0	1.0
15	0.0	0.9	4.8	1.5	2.6	5.0	5.1	8.0	6.1	3.0	4.5
16	0.0	-0.2	3.2	2.2	3.2	3.3	4.2	2.9	5.7	14.2	1.2
17	0.0	-1.8	-1.9	-1.9	2.8	0.1	-4.5	4.7	-4.8	-8.1	-2.4
18	0.0	-1.8	18.5	13.3	3.2	-13.9	-7.5	-5.3	-1.3	-5.9	4.6
19	0.0	-4.5	-6.4	-7.6	0.0	-4.8	-35.1	-28.5	-36.0	-0.5	-6.4
20	0.0	-1.8	-18.3	-2.3	-20.5	3.3	12.1			0.0	-4.5
21	0.0	0.9	10.0	5.2	1.2	21.0	27.7	22.7	1.4	11.3	17.1
22	0.0	1.0	-2.2	1.9	9.2	10.6	9.0	-5.6	8.2	-3.5	9.8
23	0.0	0.4	-0.2	-2.3	-0.9	-0.4	-1.1	1.1	9.6	-7.0	-12.4
24	0.0	-5.0	1.1	-1.4	1.5	2.4	3.7	4.1	2.5	4.6	-2.3
25	0.0	1.2	18.4	15.8	0.7		0.0	12.9	22.8	22.4	12.2
26									0.0	-2.9	-22.3
27									0.0	3.2	2.9
28									0.0	1.6	1.3
29									0.0	-8.4	-2.9
30									0.0	1.7	4.2
31									0.0	-12.1	-23.0
32	0.0	8.2	-30.1		-12.3	5.5	12.0	-15.7	-20.4	-41.4	-37.0
33	0.0	-4.7	-4.6	-6.2	-11.5	-17.1	-9.8	3.0	-3.3	-11.0	-14.5
34	0.0	-0.3	12.4	12.3	5.6	-2.3	11.5	26.8	18.7	17.4	20.9
35	0.0	-0.7	5.5	0.3		-1.8	0.7	-11.0		0.0	-1.7
36	0.0	0.4	6.4	4.0	-10.0	-3.8	-6.4	-9.7	1.8	-15.3	8.3

Table 2. Relative Beach Changes during the 1982 Southern Oscillation[1]

Type of Change	*Number of Profiles*	
	Ocean-Side	*Lagoon-side*
Accretion	6	7
Erosion	3	2
No Change	4	2

[1] based on relative change between mid-1982 and early 1983 surveys.

Table 3. Relative Beach Changes during the 1987 Southern Oscillation[2]

Type of Change	*Number of Profiles*	
	Ocean-Side	*Lagoon-side*
Accretion	7	5
Erosion	1	4
No Change	5	2

[2] based on relative change between mid-1986 and mid-1987 surveys.

Comparison of Ocean and Lagoon Beach Response

A surprising result was the difference in beach response between the ocean-side and lagoonside of the islands. The lagoon beaches displayed both more frequent changes, and changes of geater magnitude, than ocean beaches. This is surprising as one usually thinks of the ocean-side beaches being subjected to much higher wave activity and as such being much more susceptible to change. Several factors may influence the greater magnitude and frequency of change on the lagoon beaches:

1. a wider reef results in more complete wave refraction on ocean beaches so that wave patterns are not as sensitive to local wind changes;

2. the ocean reef "filters" waves more effectively resulting in a smaller range in breaker heights on the ocean shore;

3. in the lagoon, waves are all locally generated and will reflect local winds; as such an increase in westerly winds produces a direct reversal in the dominant longshore drift direction with associated changes erosion/accretion patterns;

4. lagoon waves are all locally generated, therefore of shorter period; this causes a high angle wave attack that is more effective in transporting sediment alongshore. The net result is a system that is dominated by alongshore transport rather than on/offshore transport and is more dynamic.

The sensitivity to local wind patterns and its affect on longshore drift reversal are most evident at Profile BLP32, which is located immediately adjacent to the Bairiki Harbour Jetty. Under normal easterly tradewinds, sediment builds up along the east side of the jetty and accretion occurs. During westerlies, sediment is transported by longshore drift to the east and with the supply from the west blocked by the jetty, erosion occurs.

The implication is that longshore transport is much more important along the lagoon shore and considerable care must be taken in development work, particulary the construction of shore-perpendicular groins or channels that will interrupt the tranport.

Balance of Erosion and Accretion

It is not possible to simply add up the net volume change of all the profiles to develop a sediment budget of the islands. However, qualitative observations of the data indicate that of the original profiles established in 1982, excluding those where bench marks were lost, 12 showed net accretion and 8 showed net erosion. Seven of the 12 profiles set up in 1987 showed accretion and 5 showed erosion. If the the volumetric change from 1982 to 1988 is added for all the original profiles, the sum is $+6.3m^3$• These observations suggest that over the period of observation, 1982 - 1988, there has been no significant overall net loss or gain on the Betio/Bairiki sand system.

It would be possible to quantitatively estimate the sediment budget if representative lengths of shoreline were determined for each proflle

It is not possible to definitively attribute any of the beach profile changes to the causeway at the present time. This is because the Southern Oscillation that occurred in 1987 occurred at the same time as construction. The many significant changes that occurred in 1987 and 1988 could be attributed to the predominance of westerlies in 1987 and a rapid recovery period in 1988.

It is probable that profiles adjacent to the causeway will be affected first. Significant accretion at BLP6 is likely to be causeway related and probably will continue. Erosion at BLP12 and BLP13 are likely caused by the causeway and are expected to continue. Recent accretion at BLP25 may have been caused by the causeway but as normal easterlies resume erosion may remove the net accretion.

The very large changes that have occurred at BLP18, BLP19 and BLP20 appear to be normal for the western tip of the island and a result of unknown processes. It is very unlikely that recent changes in these profiles are indirectly related to causeway construction as large changes had occurred before 1987.

The relatively large changes that occurred on the lagoon-side of Bairiki (BLP32 to BLP36) occurred before causeway construction and are unlikely to be related to any change in sediment dynamics caused by the causeway.

The next two to three surveys will be critical in establishing the effect and magnitude of shoreline change that can be attributed to the causeway construction.

Description of Individual Profile Change

BLPI - this profile has undergone continuous, moderate erosion since 1982 with a net loss of about 9 m^3• Erosion rates appear to have increased during the last three years.

BLP2 - this profile has undergone a slight amount of accretion, about 0.5 m^3, since 1983 although significant accretion occurred in both 1985 and 1987 (in excess of 11 m^3).

BLP3 - this profile has undergone moderate accretion to date (+ 5.6 m^3) but has gone through cycles of erosion and accretion.

BLP4 - although this profile has shown a very slight accretion over the long term (1.1 m\ it has been dominated by two stages of erosion.

BLP5 - this profile has undergone net accretion of 6.6 m^3 with a major accretionary period in early to middle 1987. The cause of this anomaly may have been more dominant westerlies that caused movement of sediment towards the eastern end of the small bay in which the profile is located.

BLP6 - this profile has undergone significant accretion, over 18 m^3 since 1982. Prior to 1987, changes were small but a probable increase in westerlies and the construction of the causeway in 1987 caused the rapid accretion.

BLP7 - established on the causeway in 1987, this profile has undegone a small amount of accretion (5.7 m^3).

BLPS - established on the causeway in 1987, this profile has undergone a small amount of accretion (3.2 m^3).

BLP9 - located on the causeway just to the east of the channel, a significant amount of accretion has occurred (16 m^3); as accumulation of material along the causeway stabilizes, this accretion rate is expected to decrease.

BLP10 - this profile underwent initial accretion and subsequent erosion (net change -3 m^3); its location next to the channel makes it more susceptible to change.

BLP11 - established on the causeway in 1987, this profile has undergone a small amount of accretion (5.4 m^3).

BLP12 - this profile has undergone a significant amount of erosion since its establishment in 1987 (-13.6 m). It appears to be related to an overall reduction of sediment accumulation in this area as a result of causeway construction.

BLP13 - over the long-term, this profile has undergone continuous erosion with a net loss of about 7 m^3•

BLP14 - bench marks to this profile were lost in 1985, resulting in a break. The net change appears to be positive with relatively small fluctuations.

BLP15 - this profile has undergone overall accretion since 1982 of about 4.5 m^3.

BLP16 - this profile has shown small net accretion of 1.4 m^3 since 1982 although a large anomaly occurred in early 1988 possibly related to increases in westerly winds.

BLP17 - this profile has undergone net erosion (-2.4 m^3). A significant increase in erosion occurred in 1987 followed by an accretionary period.

BLP18 - the location of this profile near the southwestern tip of Betio has resulted in significant changes over time. The net change has been positive, +4.6 m^3, but significant accretion (net change of over + 18 m^3) occurred in 1982 followed by erosion until 1985 (to _ 14 m^3).

BLP19 - this profile undergoes very dynamic changes as a result of its location near the western tip of the Betio. Unlike the significant accretion between 1945 and 1982 identified by Howorth (1982), the profile data shows long-term erosion of -6.4 m^3 and up to -36 m^3•

BLP20 - this is a dynamic beach with very significant accretion and erosion occurring since 1982. Because the bench marks were lost in 1987 it is only possible to estimate the net change to mid-1986, + 13.2 m^3.

BLP21 - this profile has undergone net accretion, 17.1 m^3, with some very large scale fluctuations.

BLP22 - although this profile has undergone net accumulation (9.8 m\ a number of erosional and accretional cycles have occurred.

BLP23 - this profile was charaterised by a long period of stability between 1982 and 1987, then went into a period of accretion followed by erosion (net change -12.4 m^3).

BLP24 - this profile has been characterised by general stability although net erosion has occurred (-2.3 m^3).

BLP25 - this prof1le was initially characterised by a period of accretion before the bench marks were lost. Since 1986 the prof1le has undergone significant accretion and although erosion has occurred since 1988 the net change is still positive.

BLP26 - this prof1le has undergone signficant erosion since causeway construction (-22.3 m^3).

BLP27 - this prof1le has undergone a small amount of accretion (about 3 m^3) since it was established in 1987.

BLP28 - this prof1le has undergone a small amount of accretion (about 1.3 m^3) since it was established in 1987.

BLP29 - this prof1le has undergone a small amount of erosion (-2.9 m^3) since it was established in 1987.

BLP30 - this prof1le has undergone a small amount of accretion (about 1.3 m^3) since it was established in 1987.

BLP31 - this prof1le has undergone a significant amount of erosion since the initial survey in 1987 (-23 m^3).

BLP32 - this prof1le has undergone the largest changes of all the prof1les, varying between + 12m^3 and -42m^3. Its position immediately adjacent to the Bairiki Harbour jetty makes it particularly sensitive to changes in easterly and westerly winds. The prof1le actually underwent a period of accretion from mid 1982 until mid-1986, then a period of erosion from mid-1986 until 1988 and now appears to be in a period of accretion.

BLP33 - this prof1le has undergone a net erosion of about -15 m^3 with accretionary peaks in early 1983 and early 1987.

BLP34 - this prof1le has undergone significant accretion since 1982 with a net increase of +20.9 m^3.

BLP35 - this prof1le has been undergoing relatively small changes up to the time that bench marks were lost in 1987. Since that time, changes appear to be small with only slight erosion, -1.7 m^3.

BLP36 - this prof1le has undergone both period of accretion and periods of erosion since the original survey. A recent accretionary phase has resulted in a net accretion since 1982 of 8.3 m^3.

CONCLUSIONS

1. The beach profile programme, initially established by CCOP /SOP AC Techsec in 1982 and maintained by the Lands and Survey Department of the Kiribati government under the supervision of Techsec, has been highly successful in documenting coastal change around the islands of Betio and Bairiki on Tarawa atoll. The results are not only of direct relevance to impact assessments on these islands but also provide important background on shoreline changes for other islands in Kiribati.

2. The effect of westerlies, caused by the EI Nino or Southern Oscillation event, appears to cause the most significant shoreline changes. Lagoon-shore beaches are much more susceptible to the effects of the Southern Oscillation.

3. Surprisingly, lagoon beaches are much more dynamic than ocean-side beaches. The frequency and magnitude of change of beach profile is much greater on the lagoon shore.

4. Over the seven-year survey programme, there appears to have been approximately an overall balance of coastal erosion and accretion on the islands of Betio and Bairiki.

5. Coastal changes that have occurred since 1987 cannot be definitively attributed to causeway construction. Although it is expected that the causeway will cause some coastal change, the survey period since construction has been too short to define any consistent patterns of change. Also the 1987 Southern Oscillation event caused a significant change in many of the profiles, thus obscuring the immediate effects of the causeway.

RECOMMENDATIONS

1. The survey programme should be continued, more or less as originally established, with surveys conducted at six-month intervals. Techsec will make recommendations to Lands and Surveys on modification of survey techniques to speed-up the present survey process.

2. Techsec acquire a high resolution satellite image of the South Tarawa area to document changes in reef flat sand bodies that may have been affected by causeway construction; subtle changes in these reef flat sand bodies may cause significant change at the shoreline.

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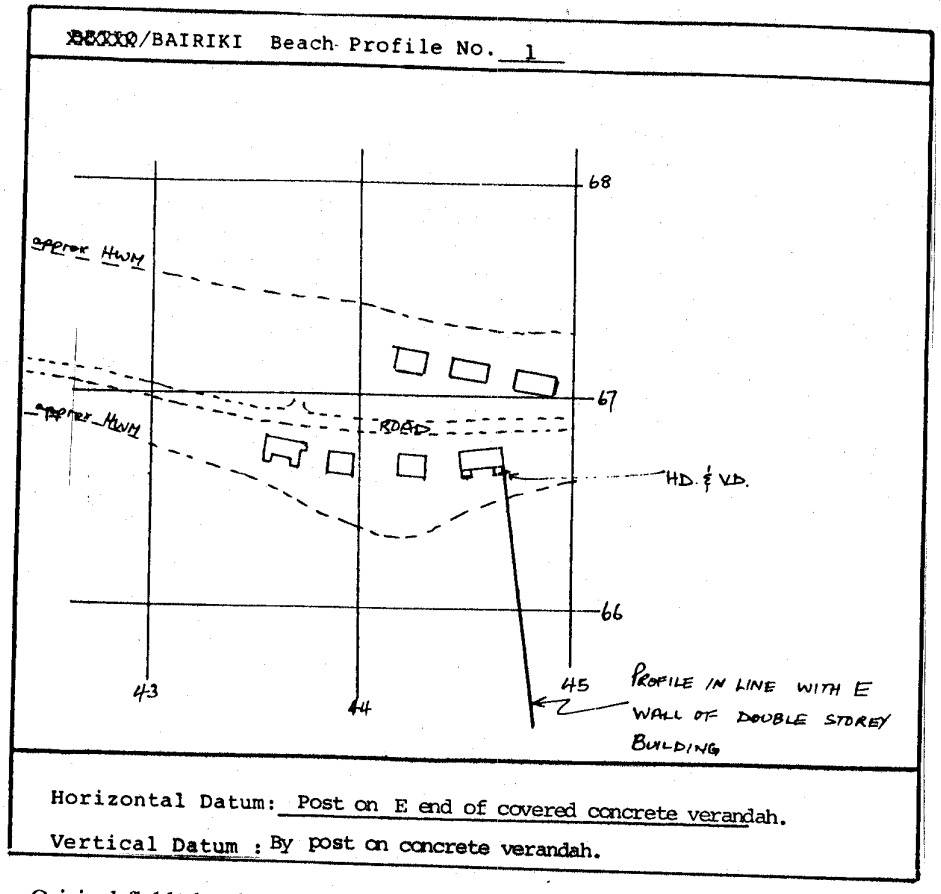
APPENDIX A

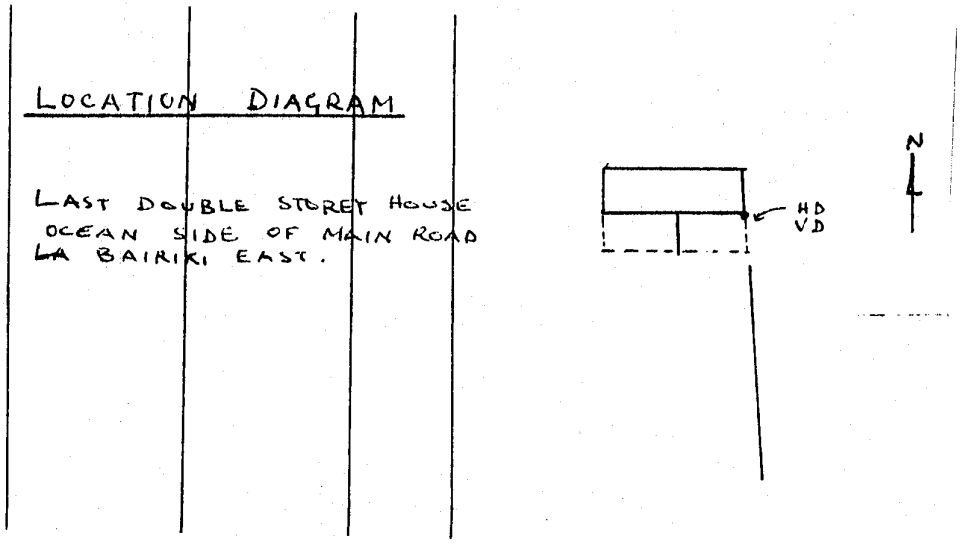
Bench Mark Descriptions and Field Sketches

Profile BLP 1 (formerly Bairiki 1)

Date	Horizontal Datum Description	Vertical Datum Description	V.D. Elevation above MSL (m) (from Howorth 1985)	Notes
Jan 1982	Post on E end of covered concrete verandah	By post on concrete verandah	1.860	
Jan 1988				Sketch indicates no change
Jul 1988				No problem with bench marks



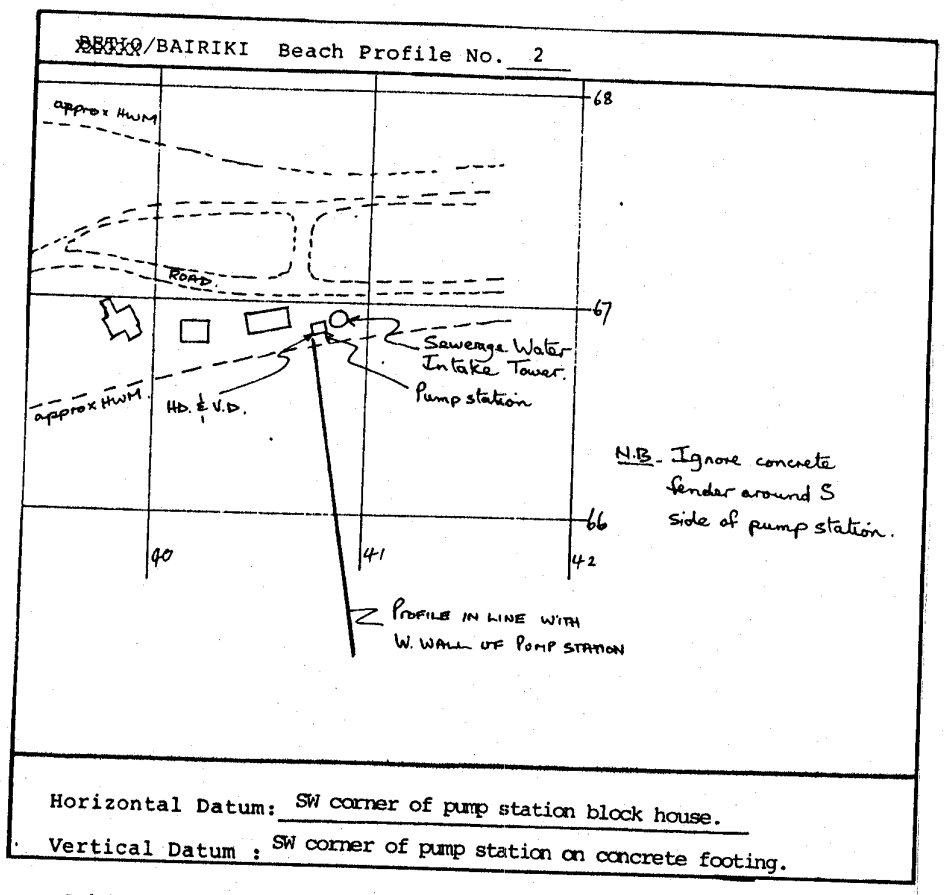
Original field sketch of bench marks at BLP 1 (formerly 1) made in January 1982 (from Howorth, 1982).



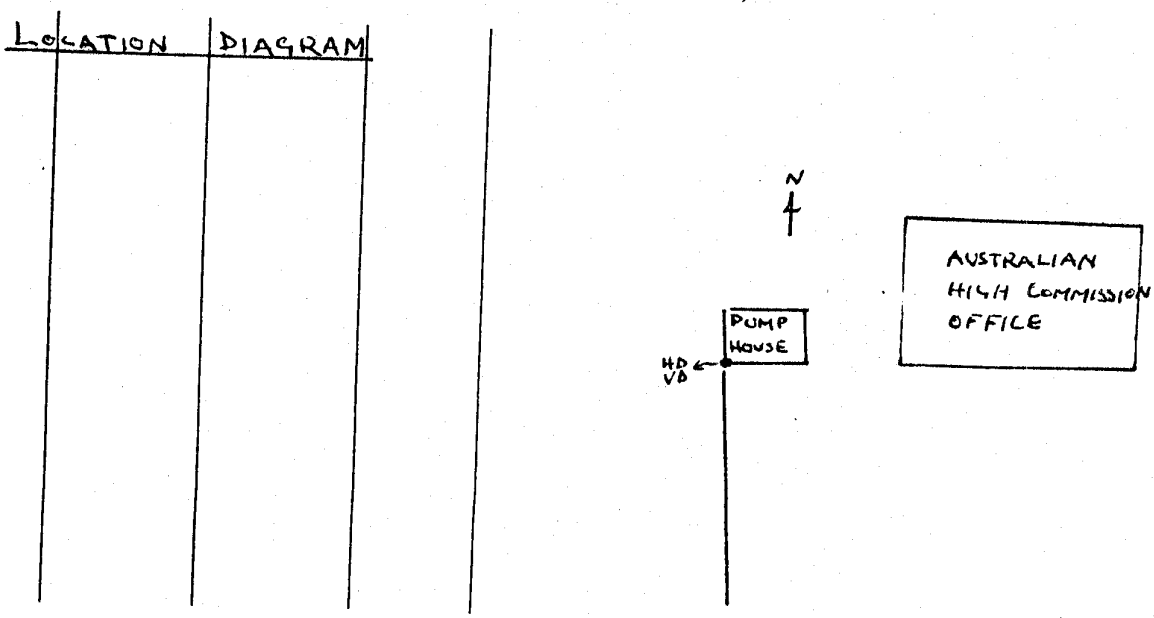
Field sketch of BLP 1 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 2 (formerly Bairiki 2)

Date	Horizontal Datum Description	Vertical Datum Description	V.D. Elevation above MSL (m) (from Howorth 1985)	Notes
Jan 1982	SW corner of pump station block	SW corner of pump station on concrete footing	2.15	
Jul 1988				Datums and date appear OK



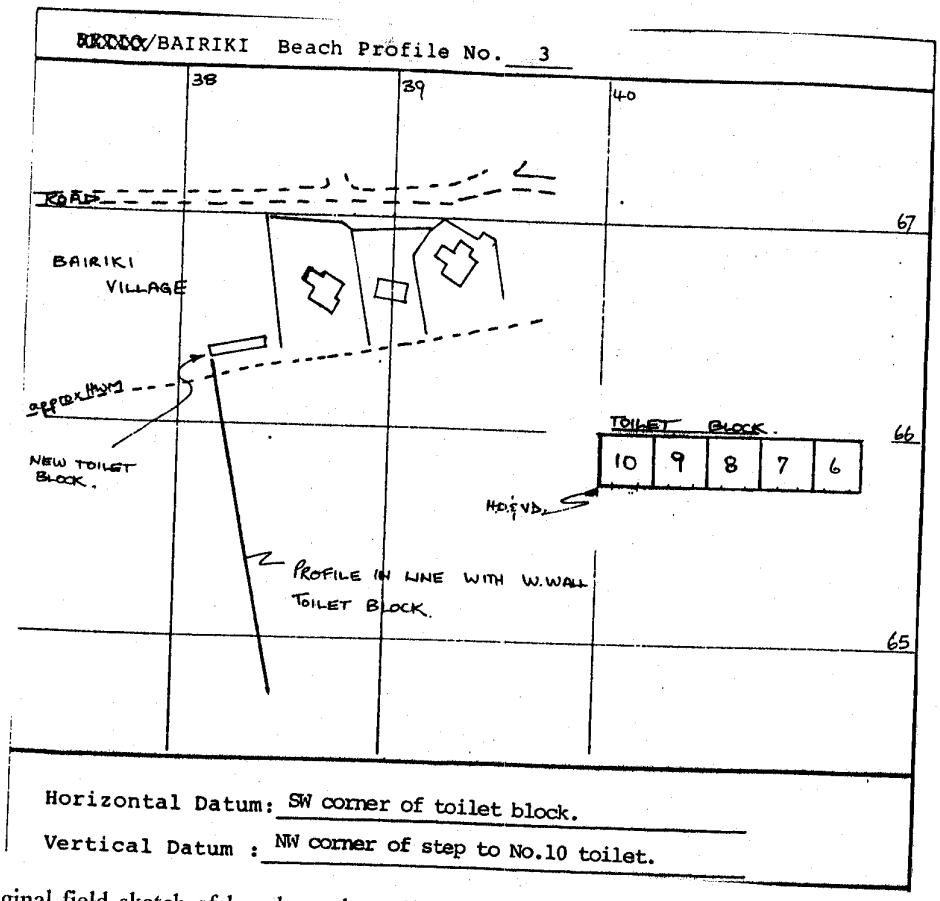
Original field sketch of bench marks at BLP 2 (formerly Bairiki 2) made in January 1982 (from Howorth, 1982).



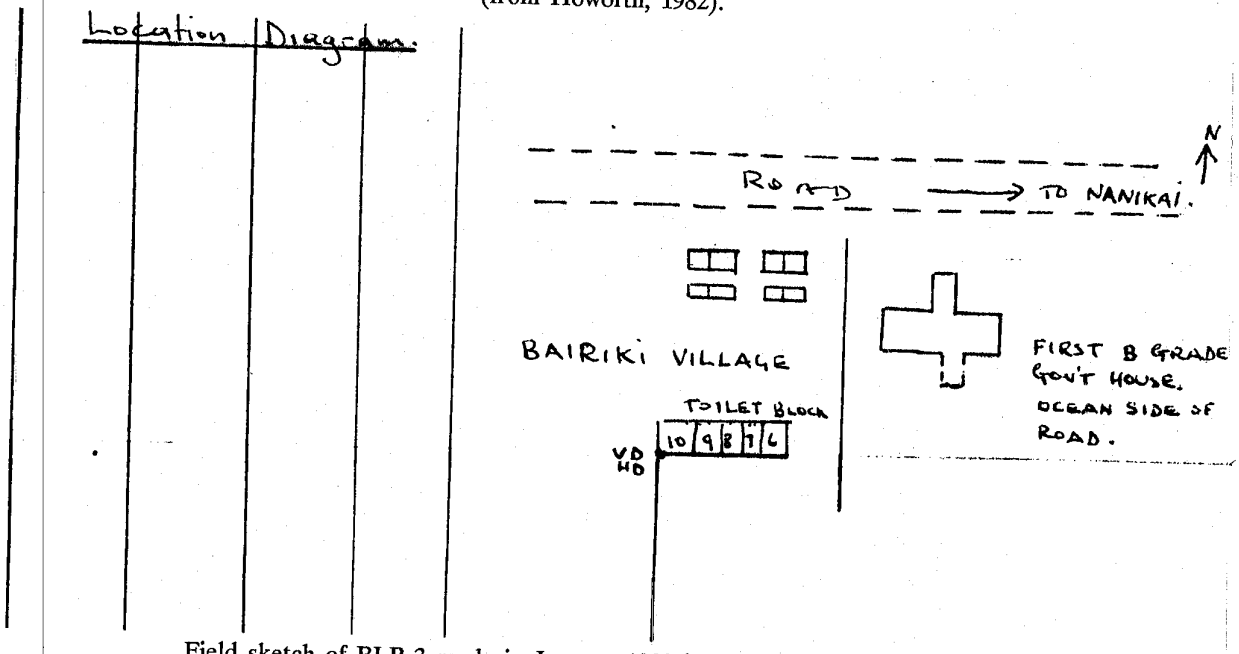
Field sketch of BLP 2 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 3 (formerly Bairiki 3)

Date	Horizontal Datum Description	Vertical Datum Description	V.D. Elevation above MSL (m) (from Howorth 1985)	Notes
Jan 1982	SW corner of toilet block	NW step of No. 10 toilet	1.91	
Jul 1988				Original bench marks still OK



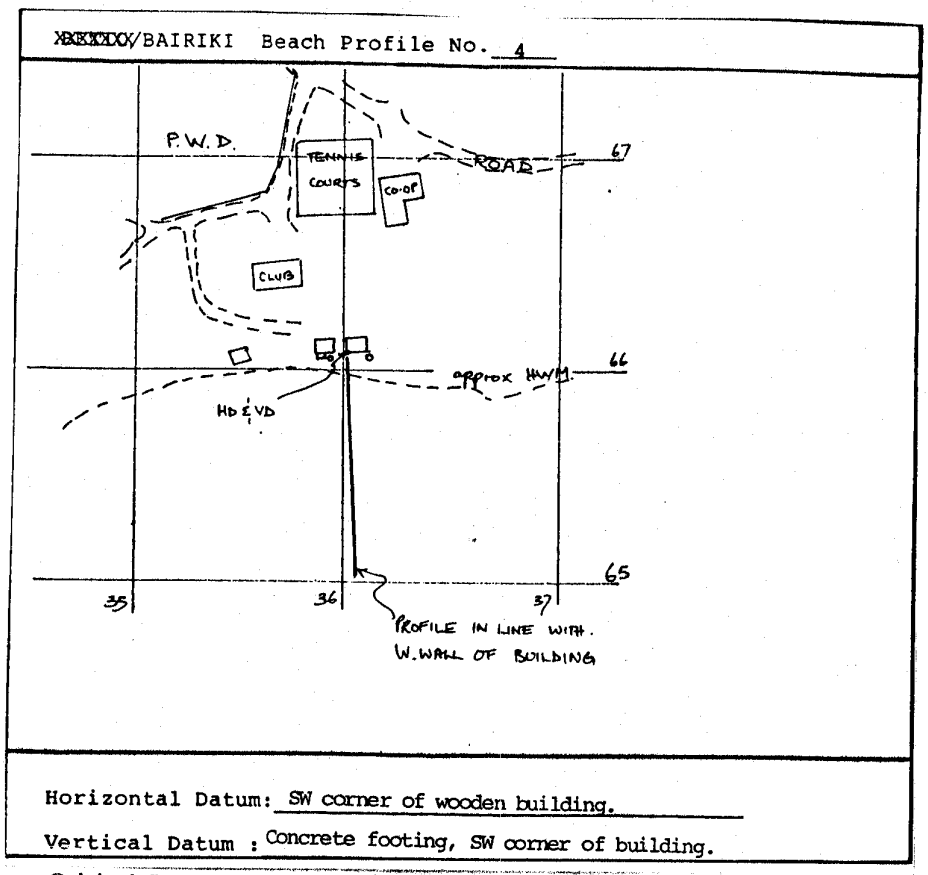
Original field sketch of bench marks at BLP 3 (formerly Bairiki 3) made in January 1982 (from Howorth, 1982).



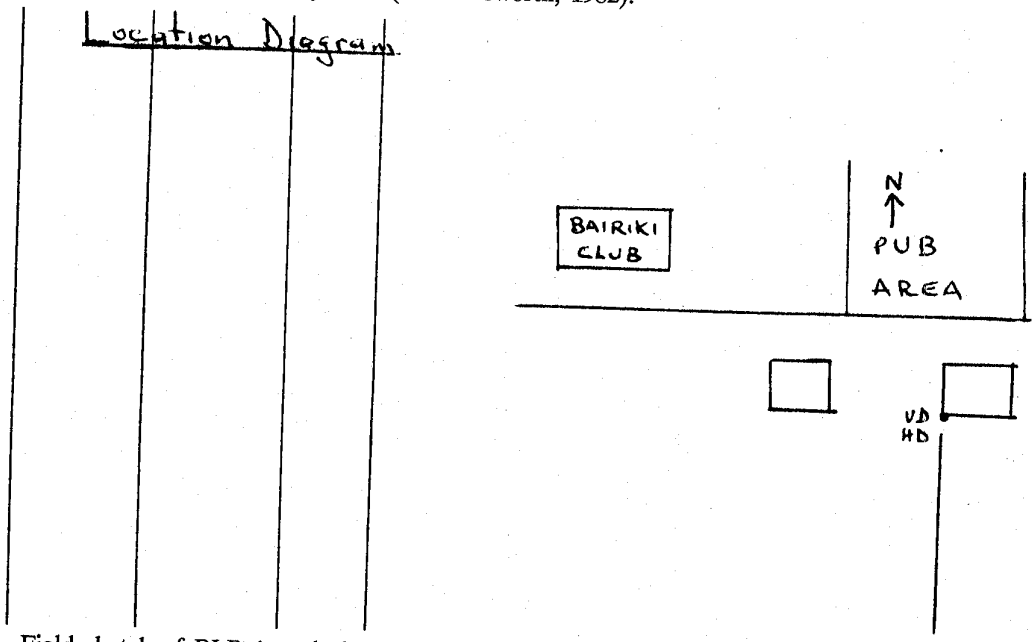
Field sketch of BLP 3 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 4 (formerly Bairiki 4)

Date	Horizontal Datum Description	Vertical Datum Description	V.D. Elevation above MSL (m) (from Howorth 1985)	Notes
Jan 1982	SW corner of wooden building	Concrete footing, SW corner of building	2.05	
Aug 1983				Vegetation growing at HWL
Jul 1988				Bench marks in good condition



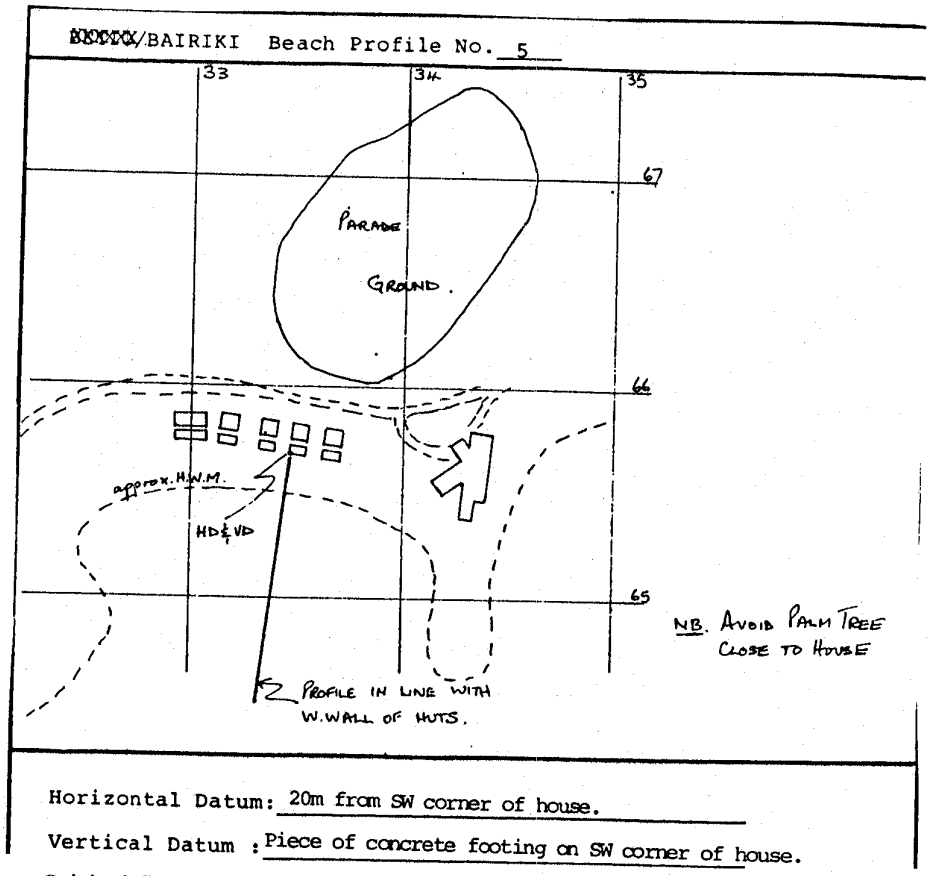
Original field sketch of bench marks at BLP 4 (formerly Bairiki 4) made in January 1982 (from Howorth, 1982).



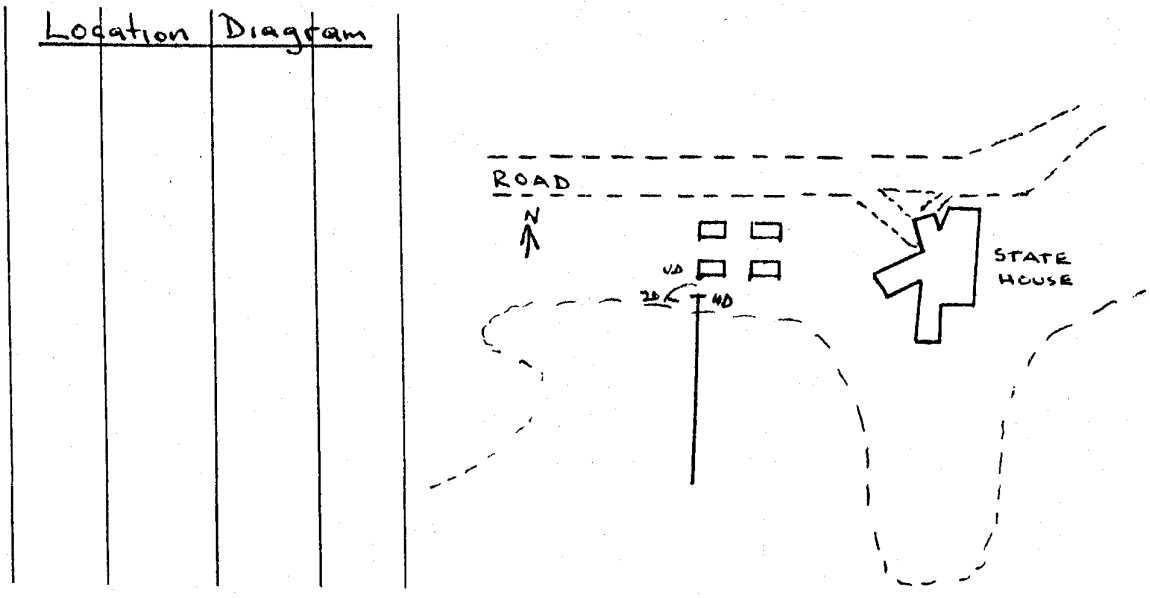
Field sketch of BLP 4 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 5 (formerly Bairiki 5)

Date	Horizontal Datum Description	Vertical Datum Description	V.D. Elevation above MSL (m) (from Howorth 1985)	Notes
Jan 1982	20 m from SW corner of house	Piece of concrete footing on SW corner of house	1.91	
Aug 1983				Vegetation growth near HWL road metal



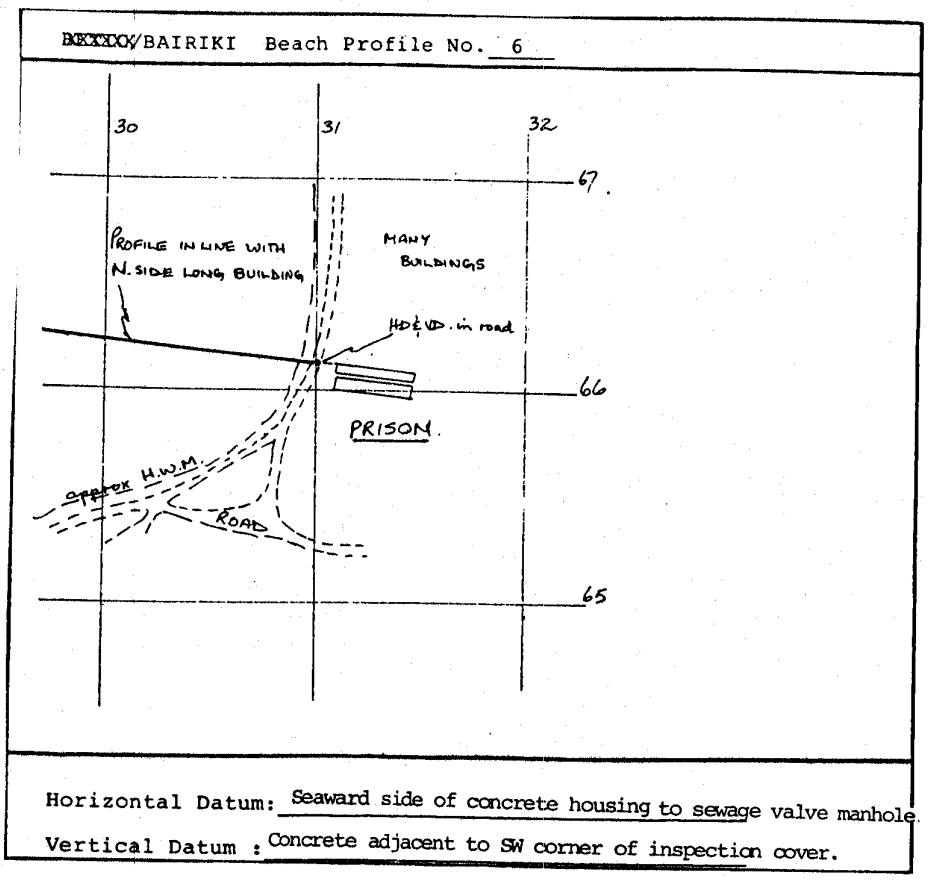
Original field sketch of bench marks at BLP 5 (formerly Bairiki 5) made in January 1982 (from Howorth, 1982).



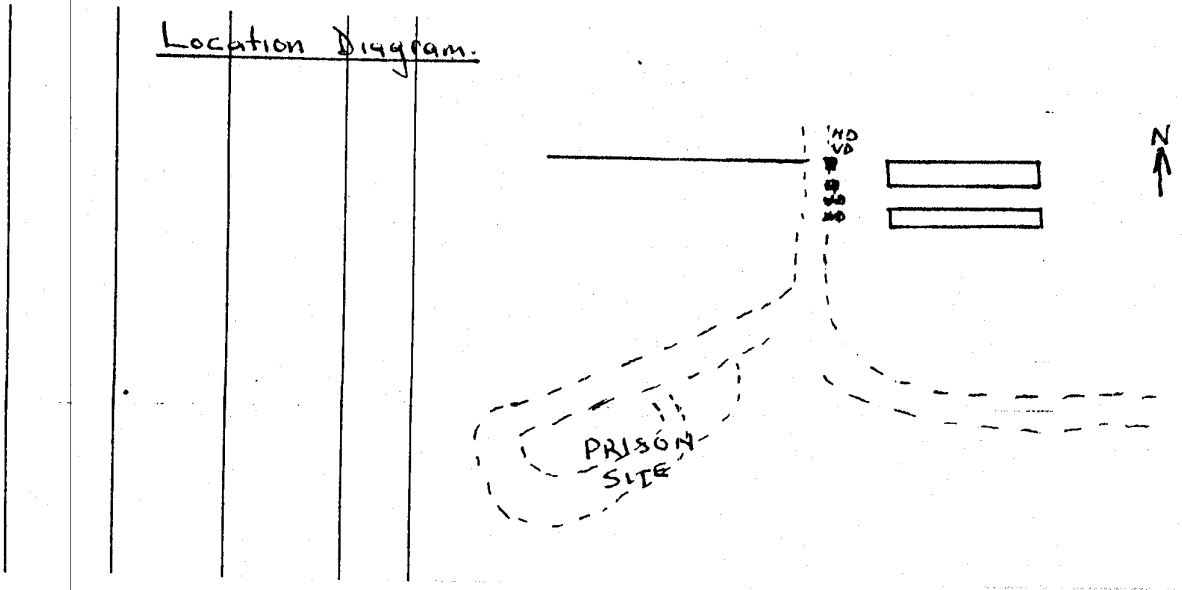
Field sketch of BLP 5 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 6 (formerly Bairiki 6)

Date	Horizontal Datum Description	Vertical Datum Description	V.D. Elevation above MSL (m) (from Howorth 1985)	Notes
Jun 1982	Seaward side of concrete housing to sewage value manhole	Concrete adjacent to SW corner of inspection cover	1.80	
Aug 1983				Concrete covered by compacted road metal



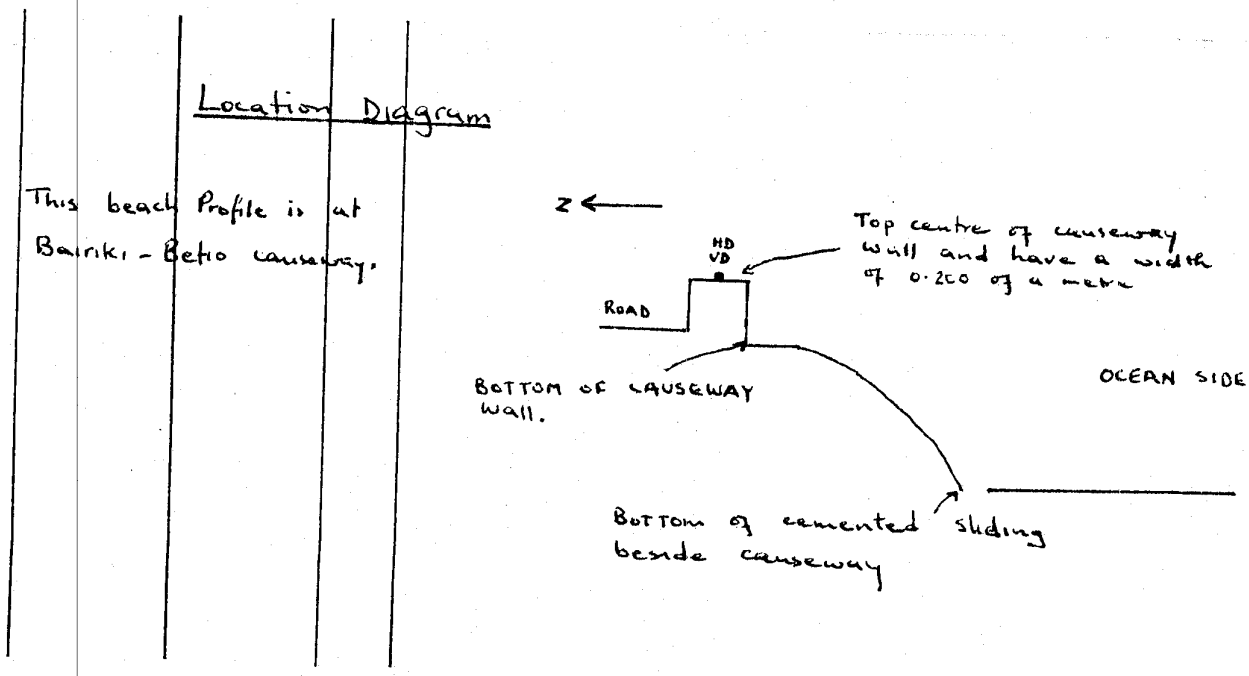
Original field sketch of bench marks at BLP 6 (formerly Bairiki 6) made in January 1982 (from Howworth, 1982).



Field sketch of BLP 6 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 7

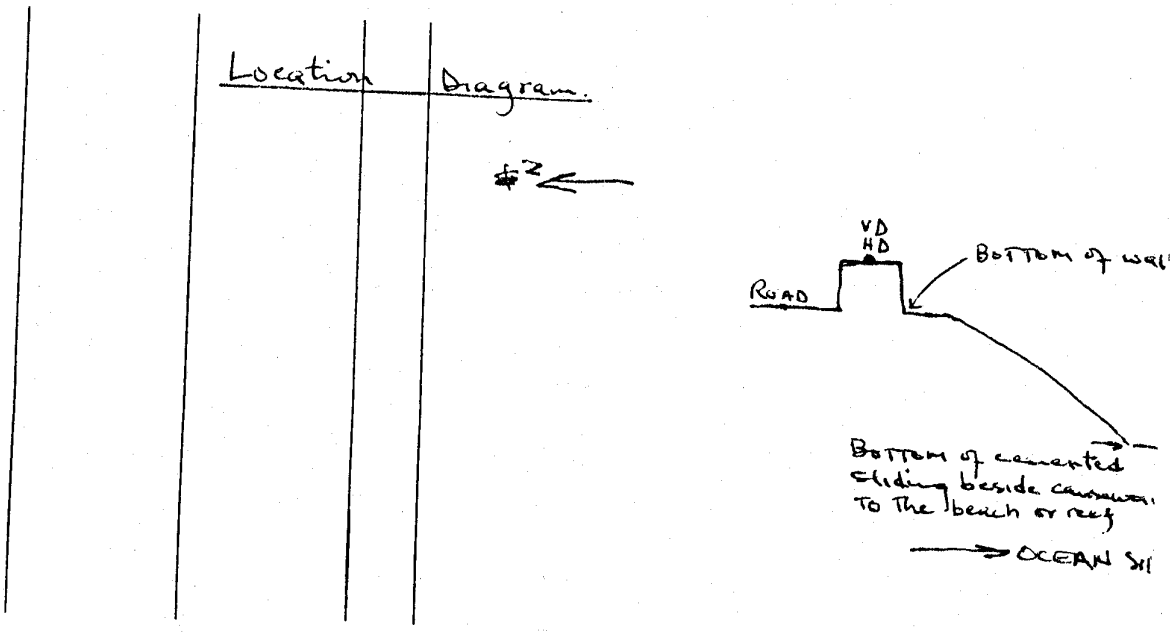
Date	Horizontal Datum Description	Vertical Datum Description	V.D Elevation above MSL (m) (from Howorth 1985)	Notes
Jun 1987	Top of centre of causeway wall at 4th hole after 31+00	Top of centre of causeway wall	2.883	



Field sketch of BLP 7 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 8

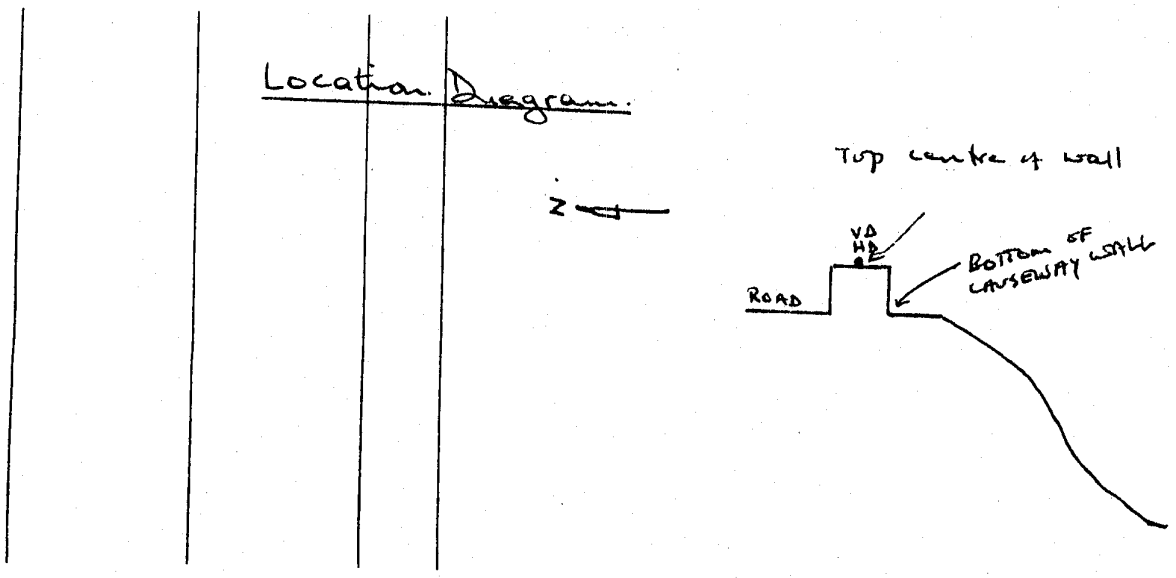
Date	Horizontal Datum Description	Vertical Datum Description	V.D Elevation above MSL (m) (from Howorth 1985)	Notes
Jun 1987	Top of centre of causeway wall at 2nd hole after 24+00	Top of centre of causeway wall	2.887	



Field sketch of BLP 8 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 9

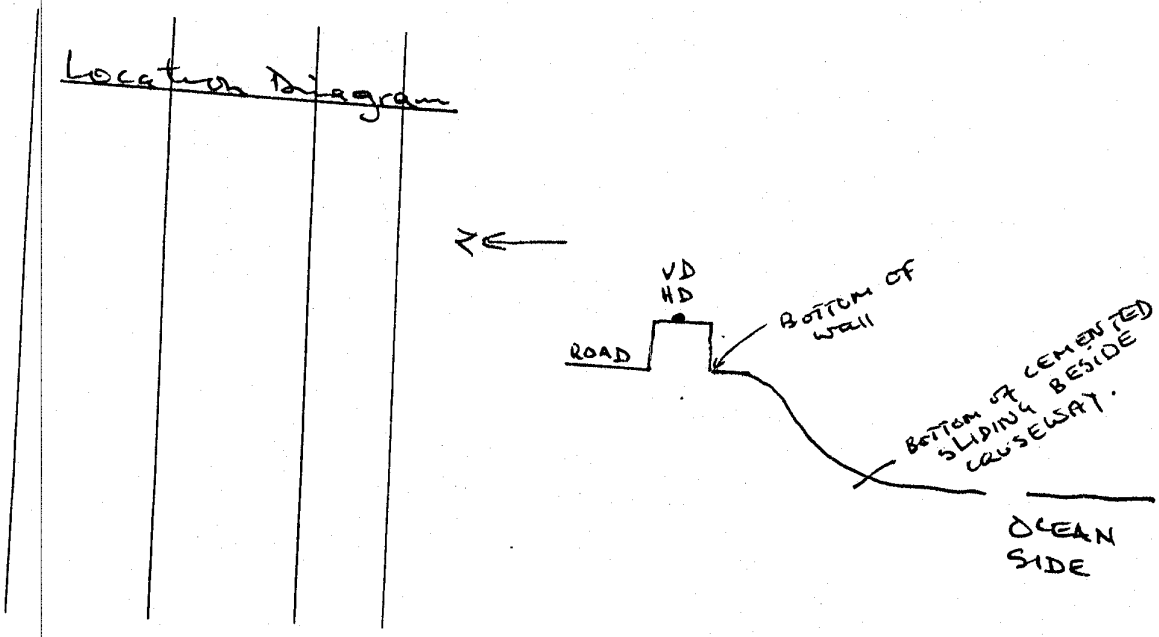
Date	Horizontal Datum Description	Vertical Datum Description	V.D Elevation above MSL (m) (from Howorth 1985)	Notes
Jun 1987	Top of centre of causeway wall at 5th hole after 16+50	Top of centre of causeway wall	3.126	



Field sketch of BLP 9 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 10

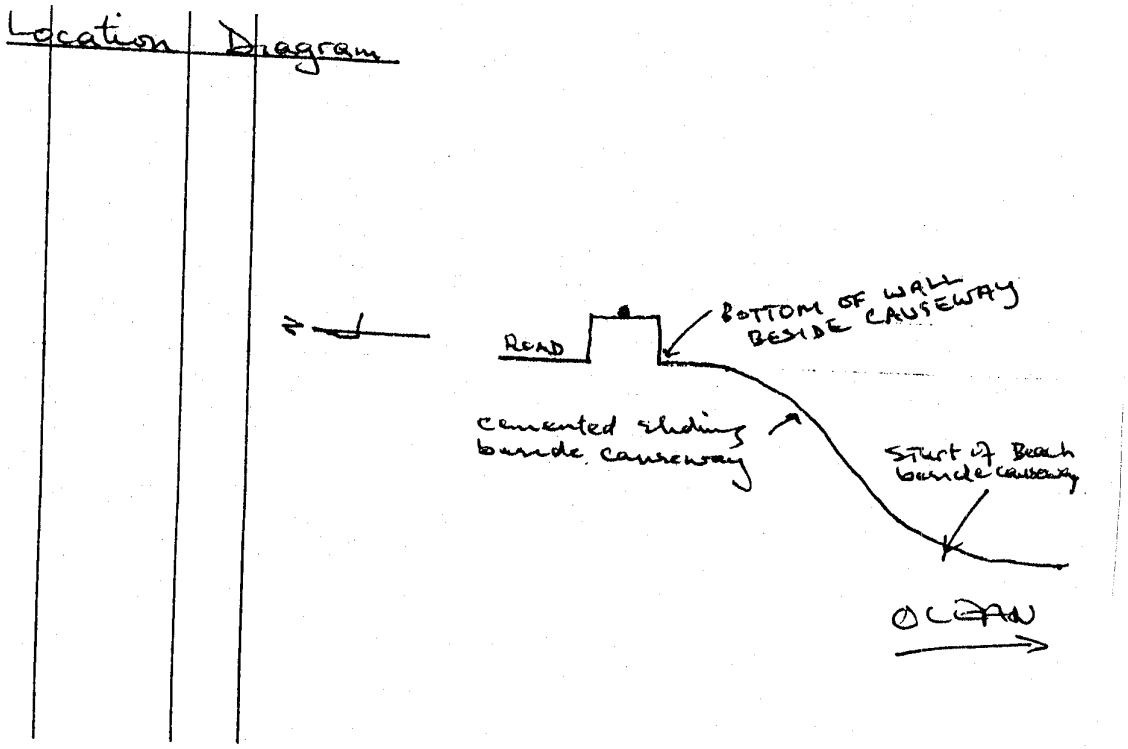
Date	Horizontal Datum Description	Vertical Datum Description	V.D. Elevation above MSL (m) (from Howorth 1985)	Notes
Jun 1987	Top of centre of causeway wall at 1st hole after 13+00	Top of centre of causeway wall	2.949	



Field sketch of BLP 10 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 11

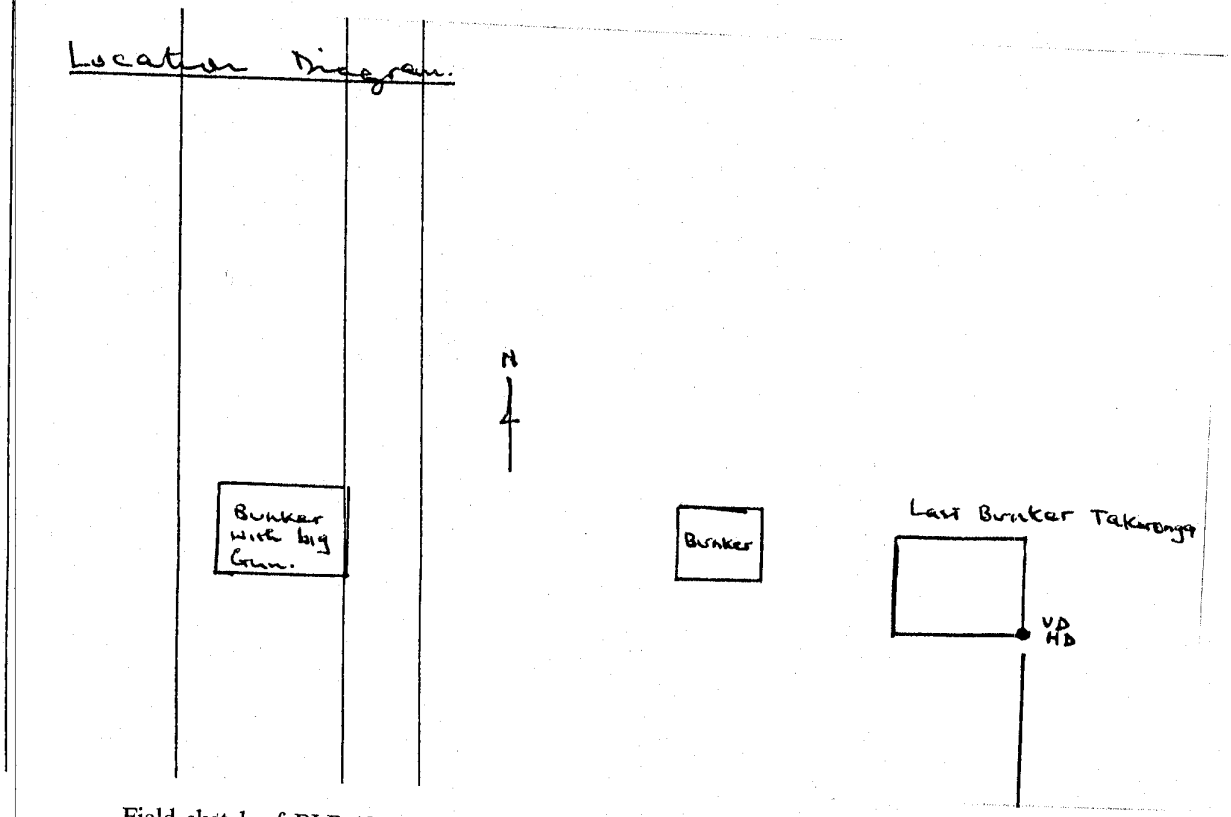
Date	Horizontal Datum Description	Vertical Datum Description	V.D. Elevation above MSL (m) (from Howorth 1985)	Notes
Jan 1989	Top of centre of causeway wall at 1st hole after 7+00	Top of centre of causeway wall	2.922	



Field sketch of BLP 11 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 12

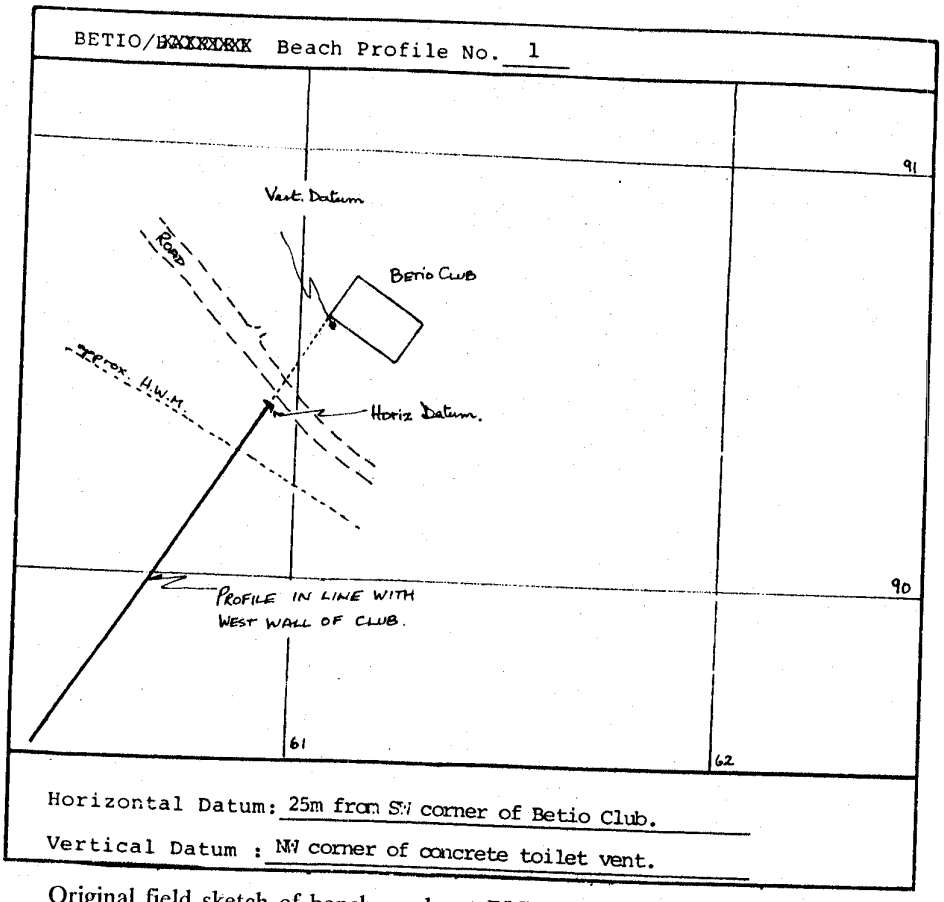
Date	Horizontal Datum Description	Vertical Datum Description	V.D. Elevation above MSL (m) (from Howorth 1985)	Notes
Jan 1987	Top of cement at SE corner of bunker	Top of cement at SE corner of bunker	2.192	



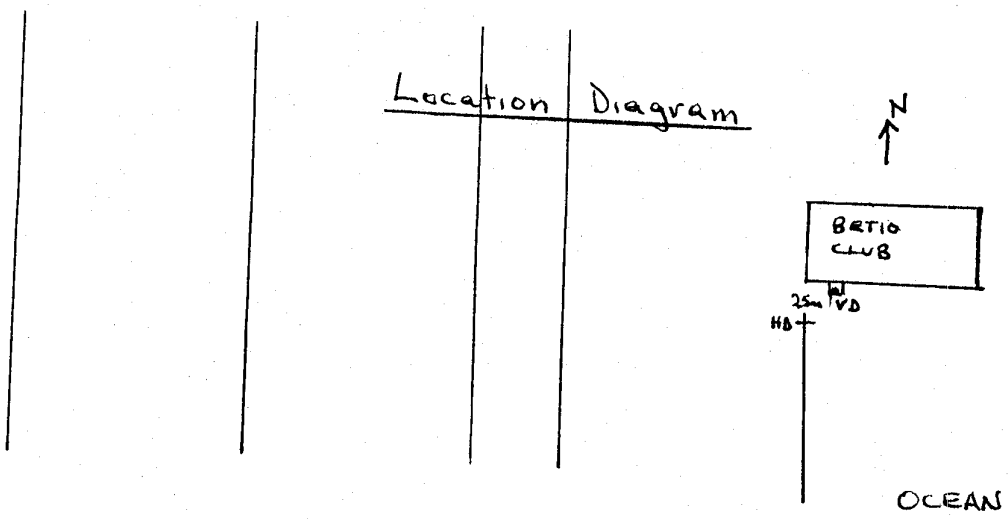
Field sketch of BLP 12 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 13 (formerly Betio 1)

Date	Horizontal Datum Description	Vertical Datum Description	V.D Elevation above MSL (m) (from Howorth 1985)	Notes
Jan 1982	25 m from SW corner of Betio Club	NW corner of concrete toilet vent	2.05	



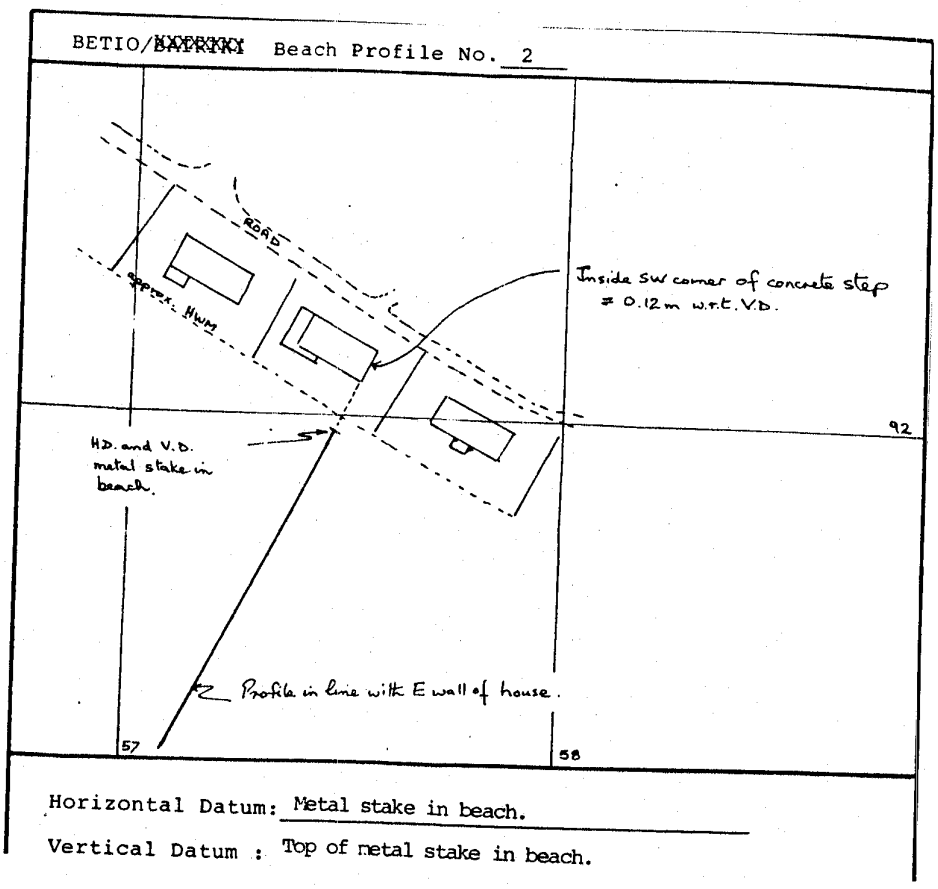
Original field sketch of bench marks at BLP 13 (formerly Betio 1) made January 1982 (from Howworth, 1982).



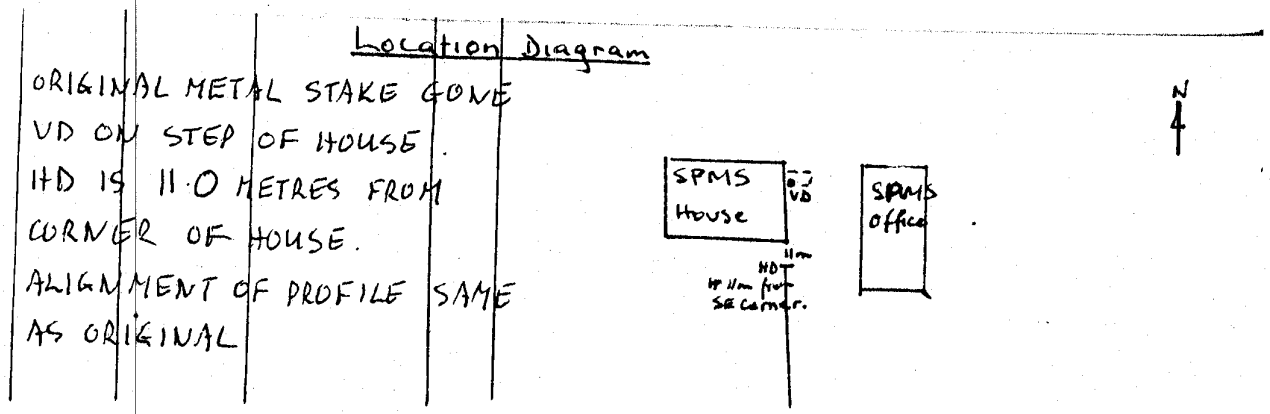
Field sketch of BLP 13 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 14 (formerly Betio 2)

Date	Horizontal Datum Description	Vertical Datum Description	V.D Elevation above MSL (m) (from Howorth 1985)	Notes
Jan 1982	Metal stake in beach	Top of metal stake in beach	1.84	
Aug 1983	11 m from SE corner of house	Top concrete doorstep on E side SPMS house	1.96 (assumed)	Original stake lost



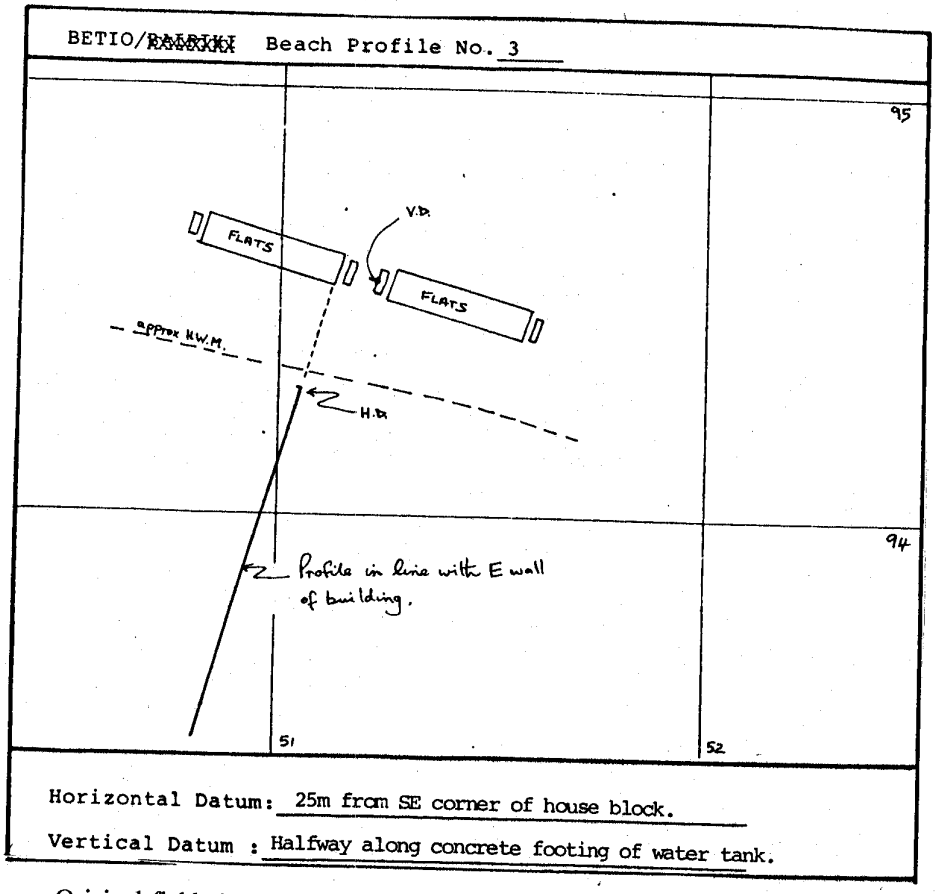
Original field sketch of bench marks at BLP 14 (formerly Betio 2) made January 1982 (from Howworth, 1982).



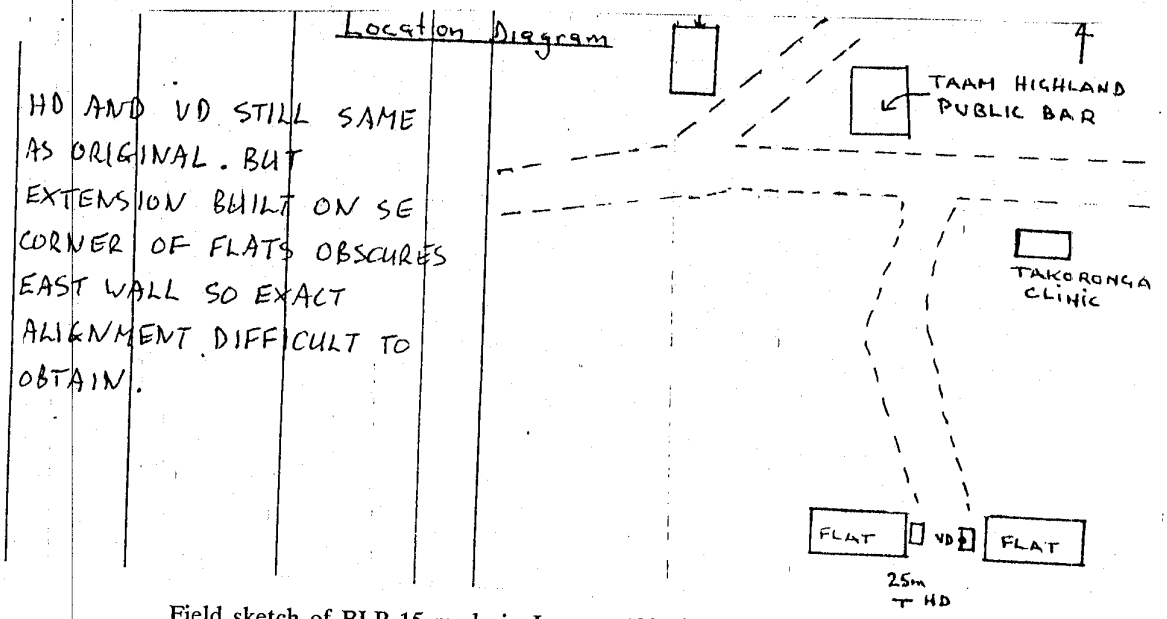
Field sketch of BLP 14 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 15 (formerly Betio 3)

Date	Horizontal Datum Description	Vertical Datum Description	V.D Elevation above MSL (m) (from Howorth 1985)	Notes
Jan 1982	25 m from SE corner of house block	Halfway along concrete footing of water tanks	2.58	
Aug 1983				Line of sight obscured by temporary buildings



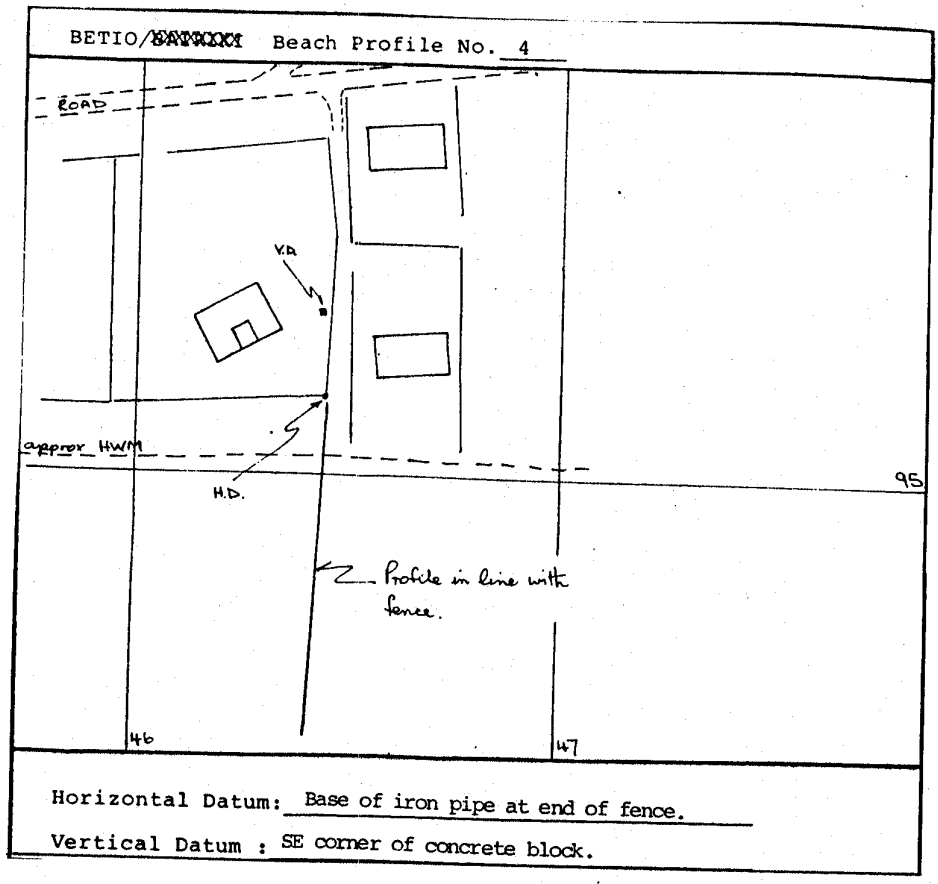
Original field sketch of bench marks at BLP 15 (formerly Betio 3) made in January 1982 (from Howworth, 1982).



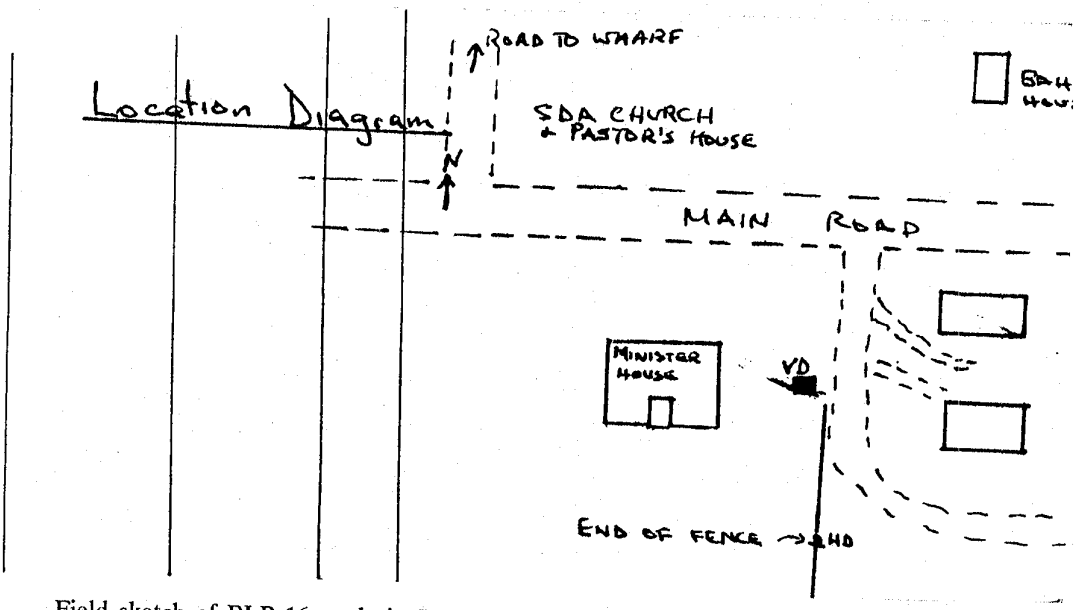
Field sketch of BLP 15 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 16 (formerly Betio 4)

Date	Horizontal Datum Description	Vertical Datum Description	V.D. Elevation above MSL (m) (from Howorth 1985)	Notes
Jan 1982	Base of iron pipe in fence	SE corner of concrete block	2.19	
Aug 1982				V.D. becoming overgrown



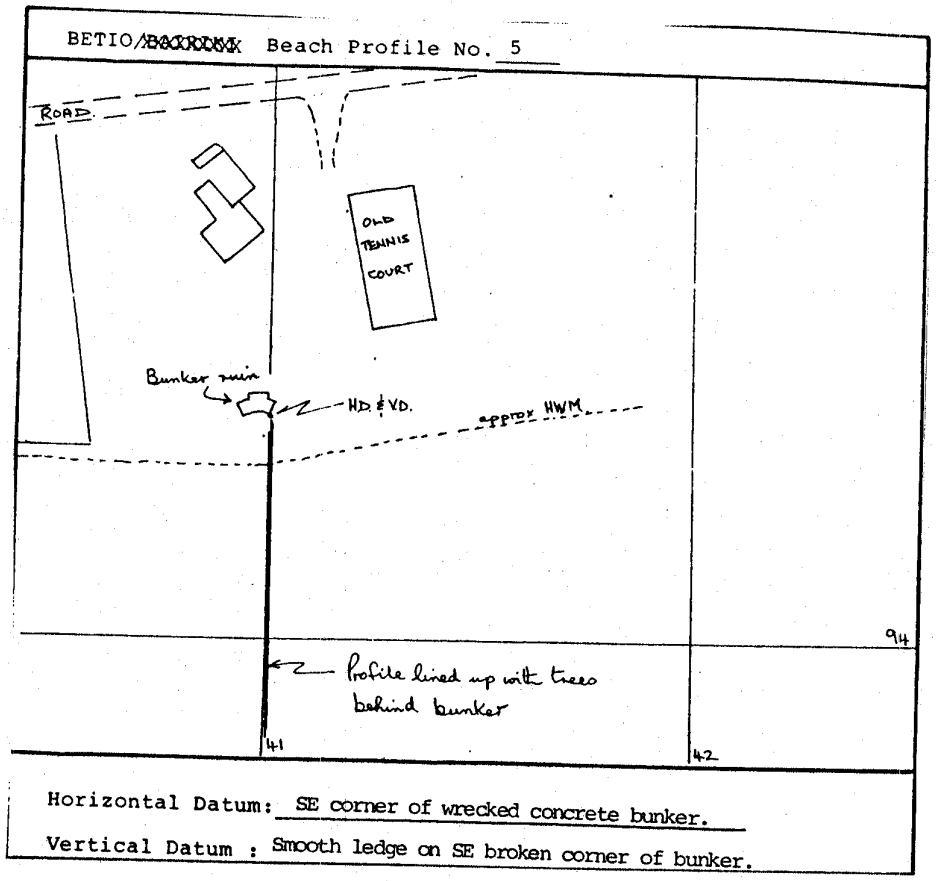
Original field sketch of banch marks at BLP 16 (formerly Betio 4) made in January 1982 (from Howworth, 1982).



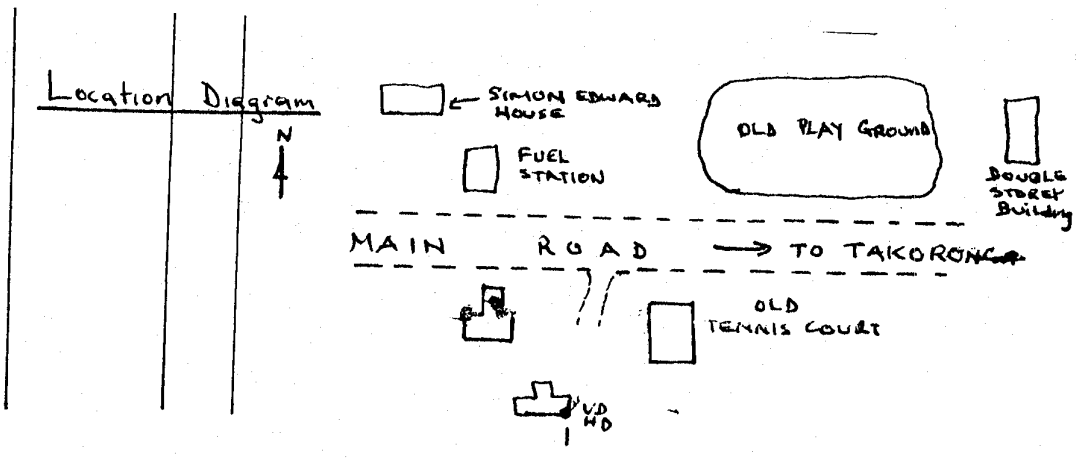
Field sketch of BLP 16 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 17 (formerly Betio 5)

Date	Horizontal Datum Description	Vertical Datum Description	V.D. Elevation above MSL (m) (from Howorth 1985)	Notes
Jan 1982	SE corner of wrecked concrete bunker	Smooth ledge on SE broken corners of bunker	2.59	
Aug 1983				Bunker becoming overgrown with vegetation



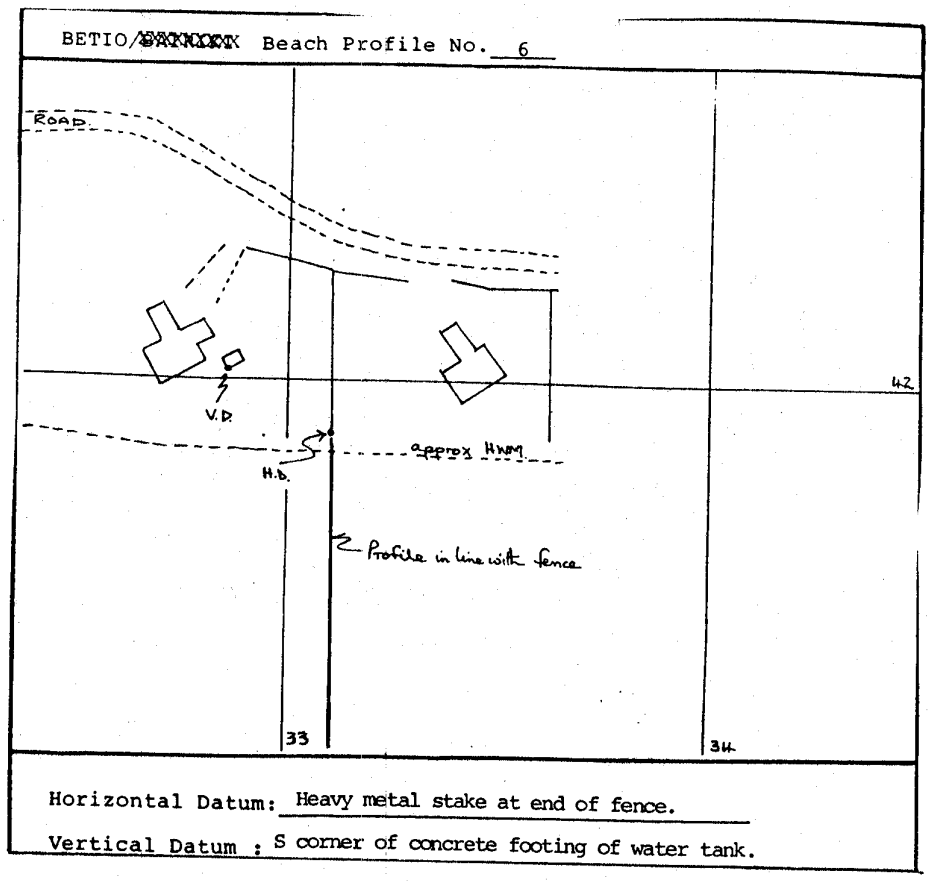
Original field sketch of bench mmarks at BLP 17 (formerly Betio 5) made in January 1982 (from Howorth, 1982).



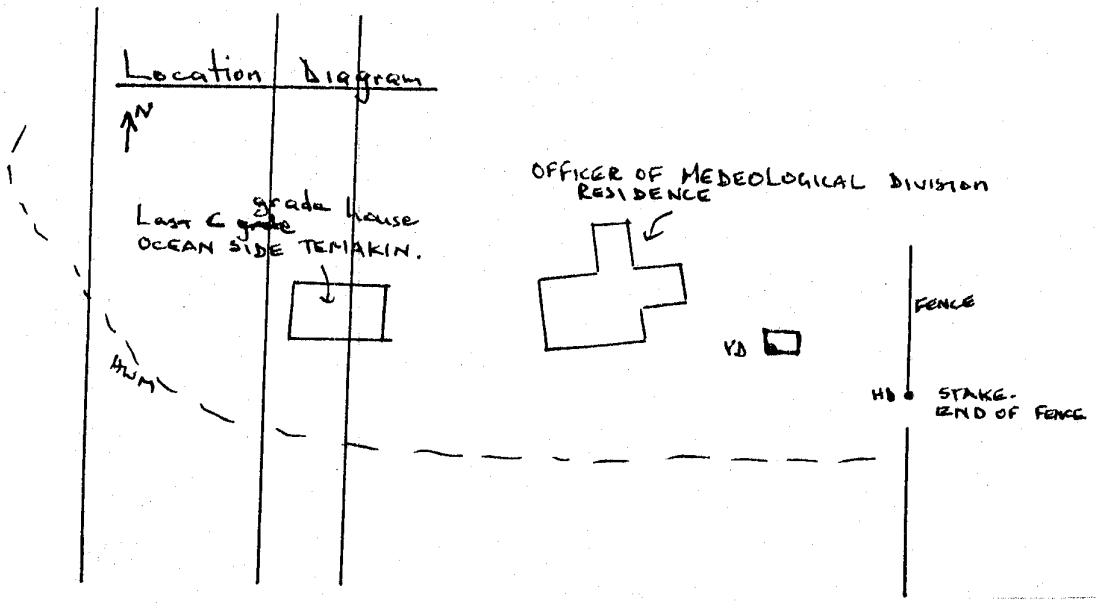
Field sketch of BLP 17 made in January 1988 by Kareti Teutaake of the Kiribati Lands and Surveys Department.

Profile BLP 18 (formerly Betio 6)

Date	Horizontal Datum Description	Vertical Datum Description	V.D. Elevation above MSL (m) (from Howorth 1985)	Notes
Jan 1982	Heavy metal stake at end of fence	S corner of concrete footing of water tank	2.67	



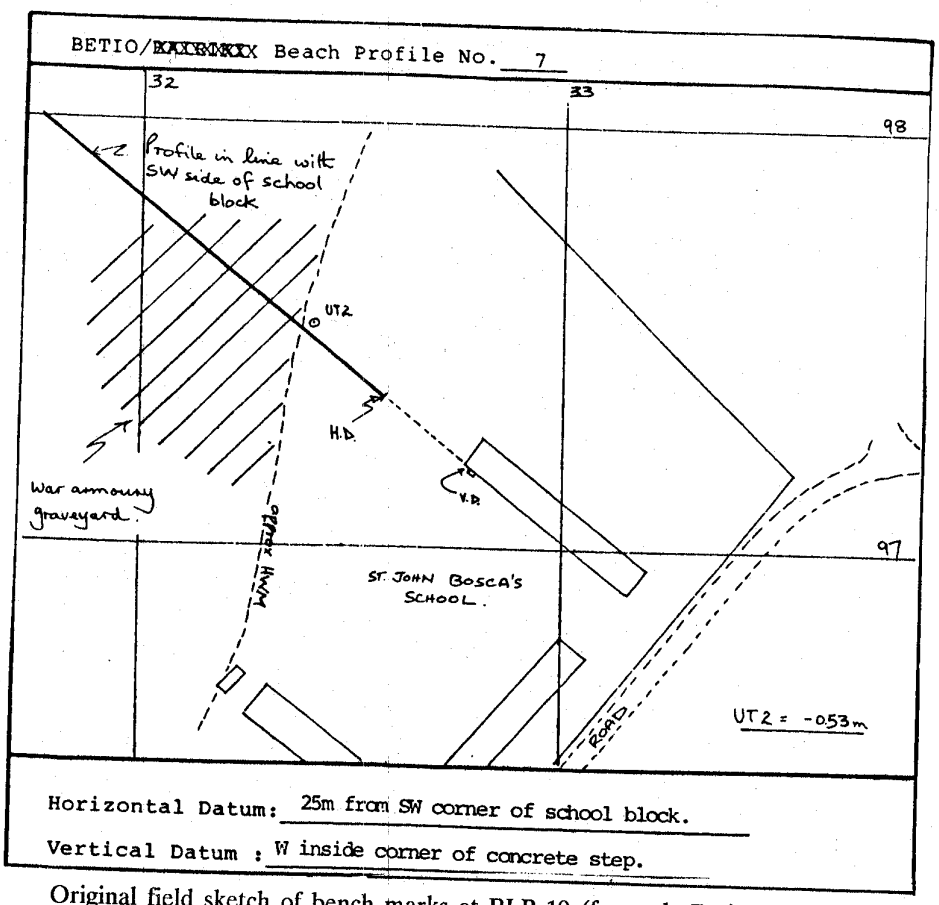
Original field sketch of bench marks at BLP 18 (formerly Betio 6) made in January 1982 (from Howworth, 1982).



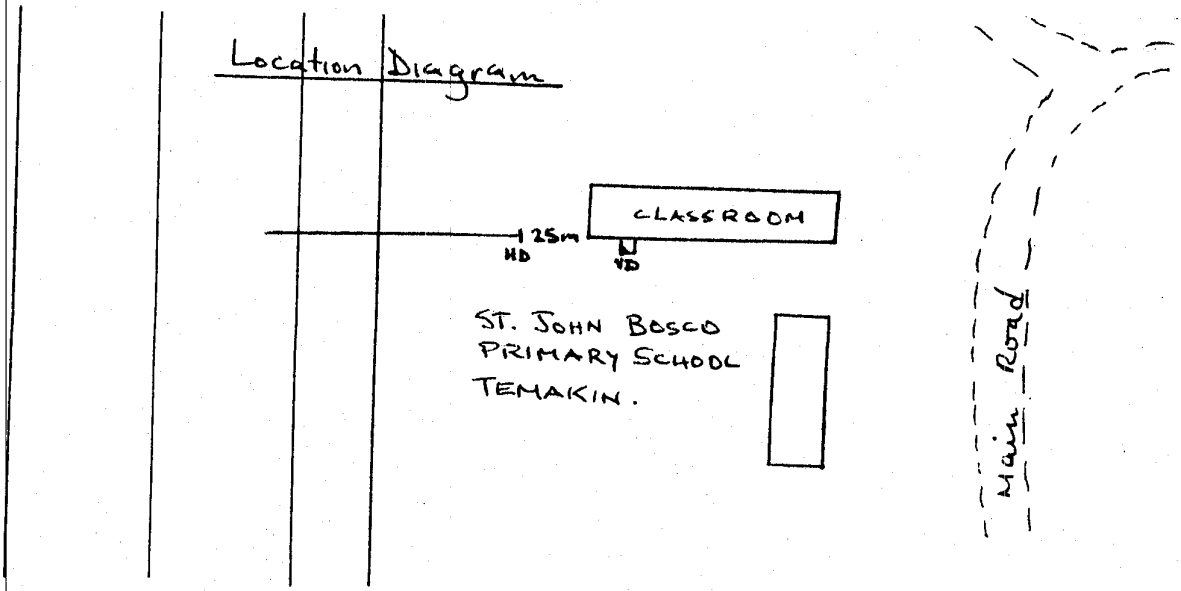
Field sketch of BLP 18 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 19 (formerly Betio 7)

Date	Horizontal Datum Description	Vertical Datum Description	V.D Elevation above MSL (m) (from Howorth 1985)	Notes
Jan 1982	25 m from SW corner of school block	W inside corner of concrete step	1.73	



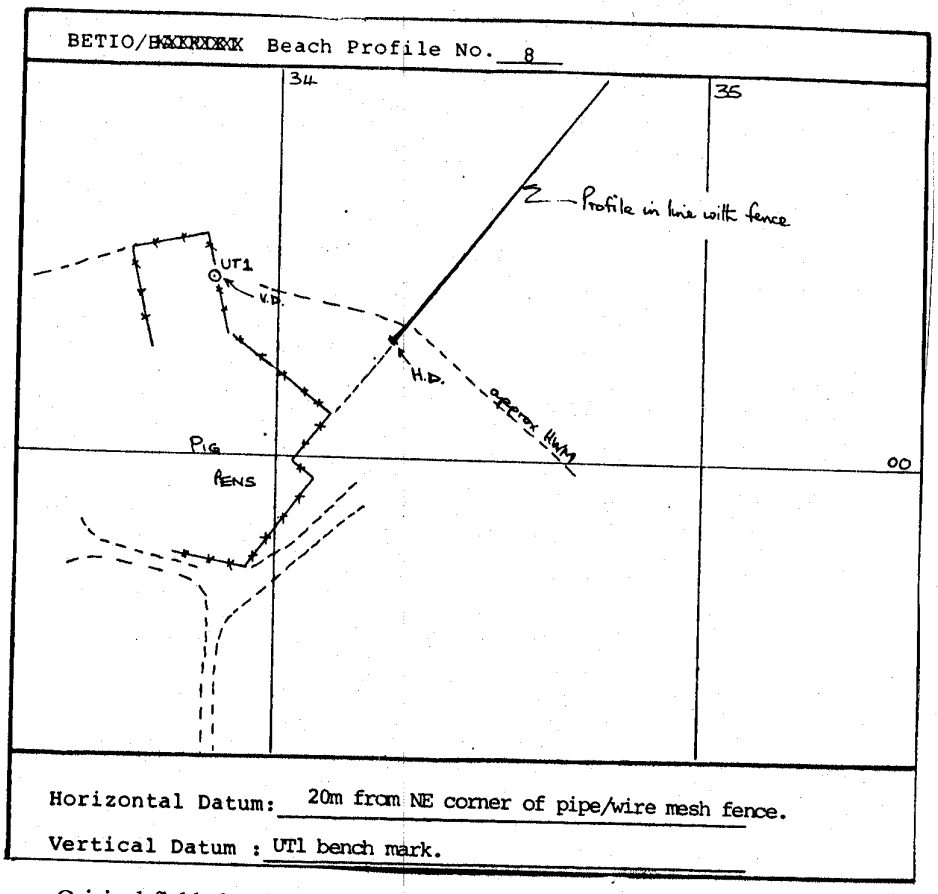
Original field sketch of bench marks at BLP 19 (formerly Betio 7) made in January 1982 (from Howworth, 1982).



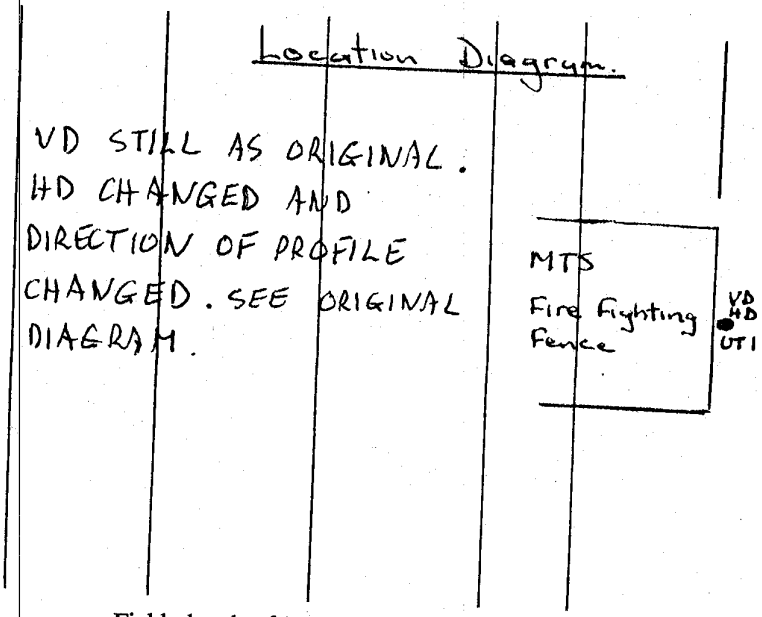
Field sketch of BLP 19 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 20 (formerly Betio 8)

Date	Horizontal Datum Description	Vertical Datum Description	V.D Elevation above MSL (m) (from Howorth 1985)	Notes
Jan 1982	20 m from NE corner of pipe/wire mesh fence	UT 1 bench mark	2.06	
Feb 1987	Fence removed - profile lost			
Jun 1987	SE corner of fence	UT 1 bench mark	2.06	
Jan 1988	NE corner of fence (see diagram)	UT1 bench mark	2.06	



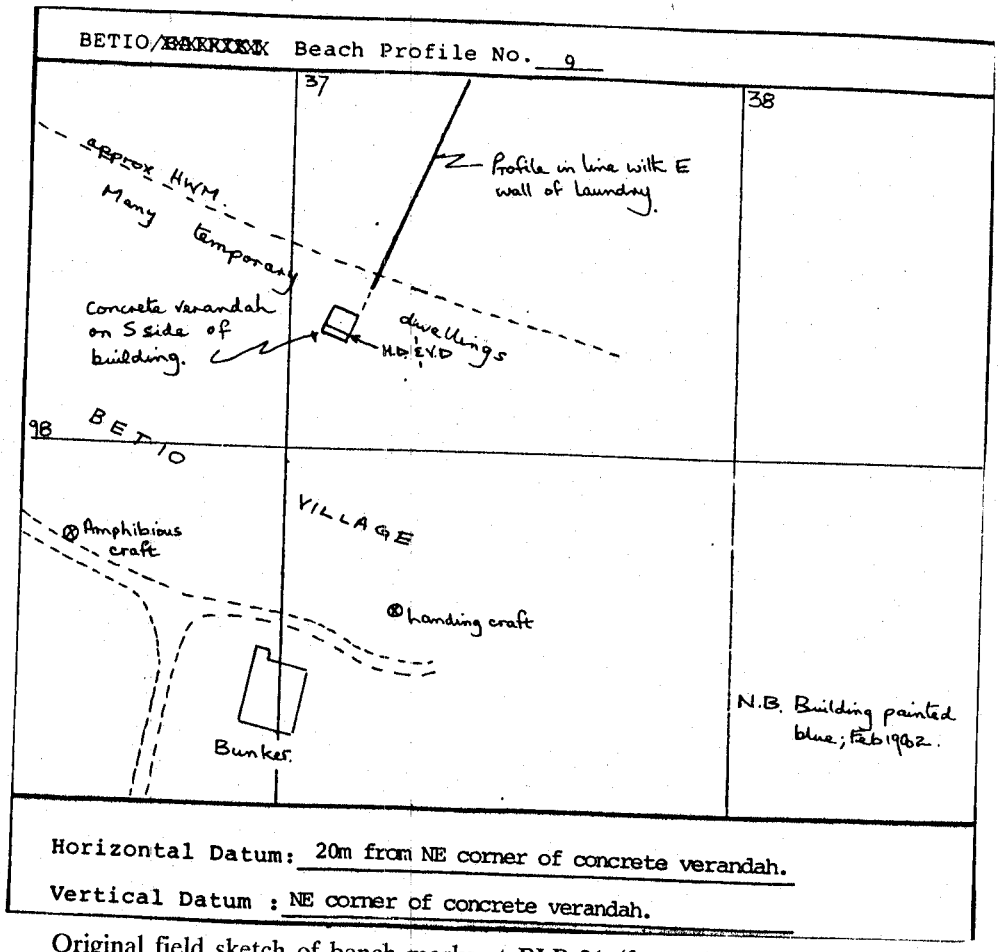
Original field sketch of bench marks at BLP 20 (formerly Betio 8) made in January 1982 (from Howworth, 1982).



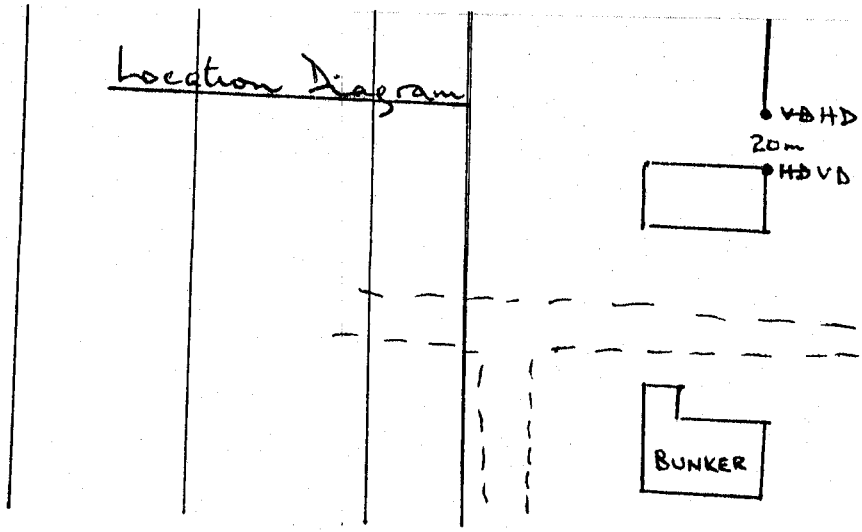
Field sketch of BLP 20 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 21 (formerly Betio 9)

Date	Horizontal Datum Description	Vertical Datum Description	V.D Elevation above MSL (m) (from Howorth 1985)	Notes
Jan 1982	20 m from NE corner of concrete verandah	NE corner of concrete verandah	2.27	
Aug 1983				Overgrown and line of sight obscured; ext. onto verandah



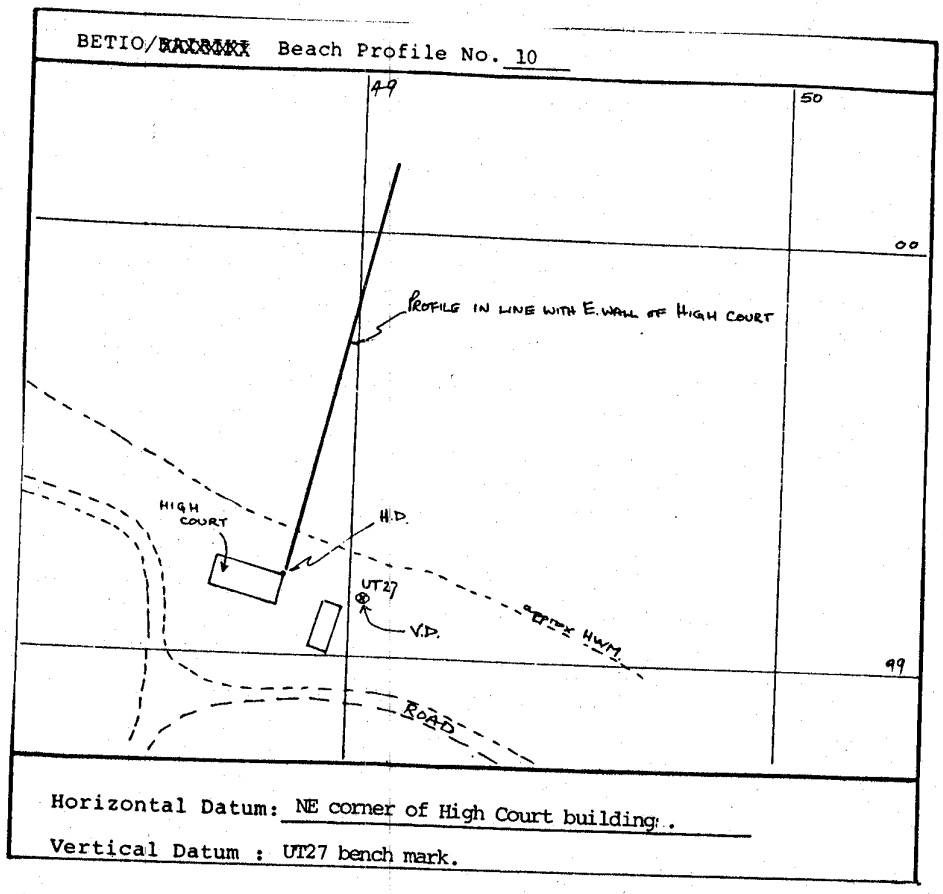
Original field sketch of bench marks at BLP 21 (formerly Betio 9) made in January 1982 (from Howworth, 1982).



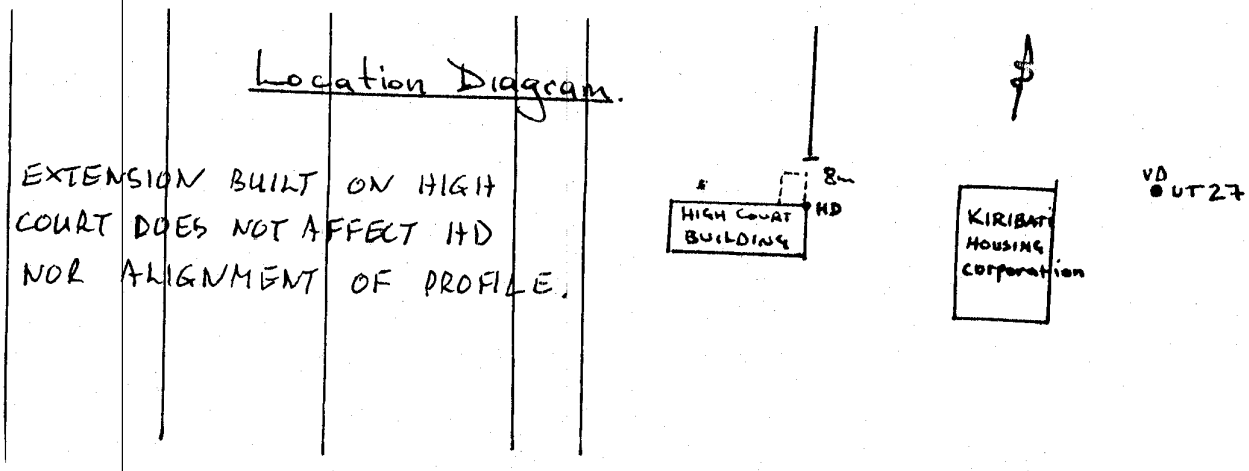
Field sketch of BLP 21 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 22 (formerly Betio 10)

Date	Horizontal Datum Description	Vertical Datum Description	V.D. Elevation above MSL (m) (from Howorth 1985)	Notes
Jan 1982	NE corner of High Court Building	VT27 BM	1.96	



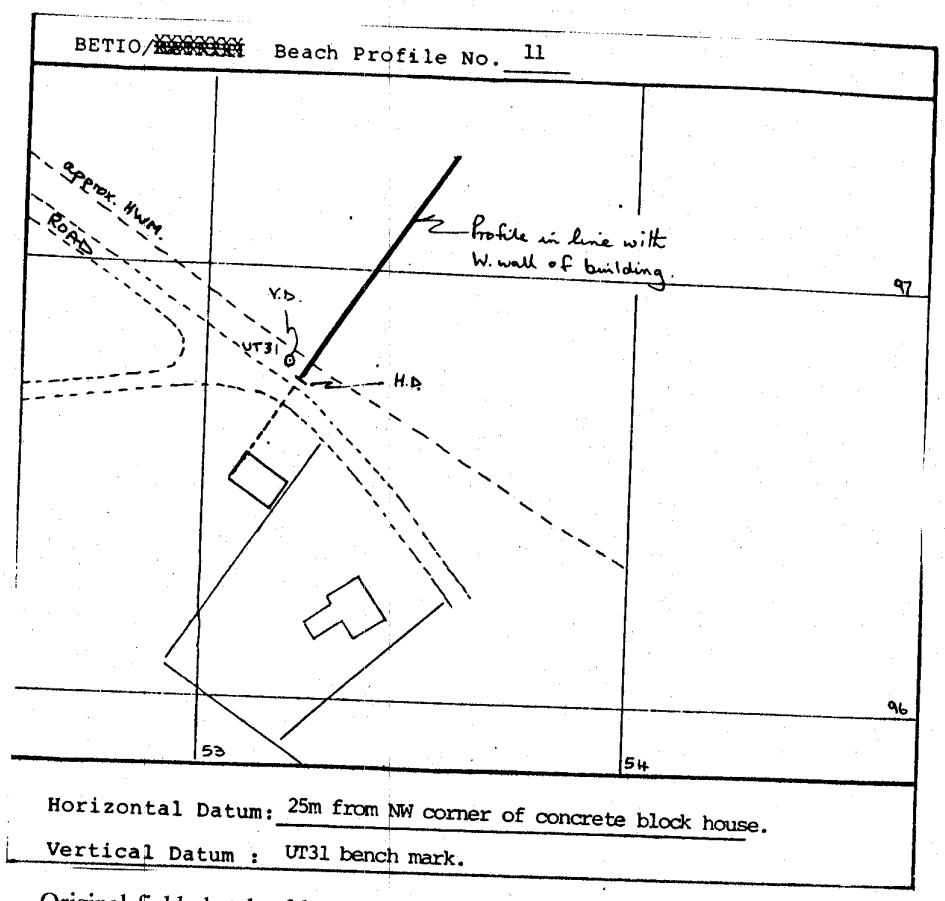
Original field sketch of bench marks at BLP 22 (formerly Betio 10) made in January 1982 (from Howworth, 1982).



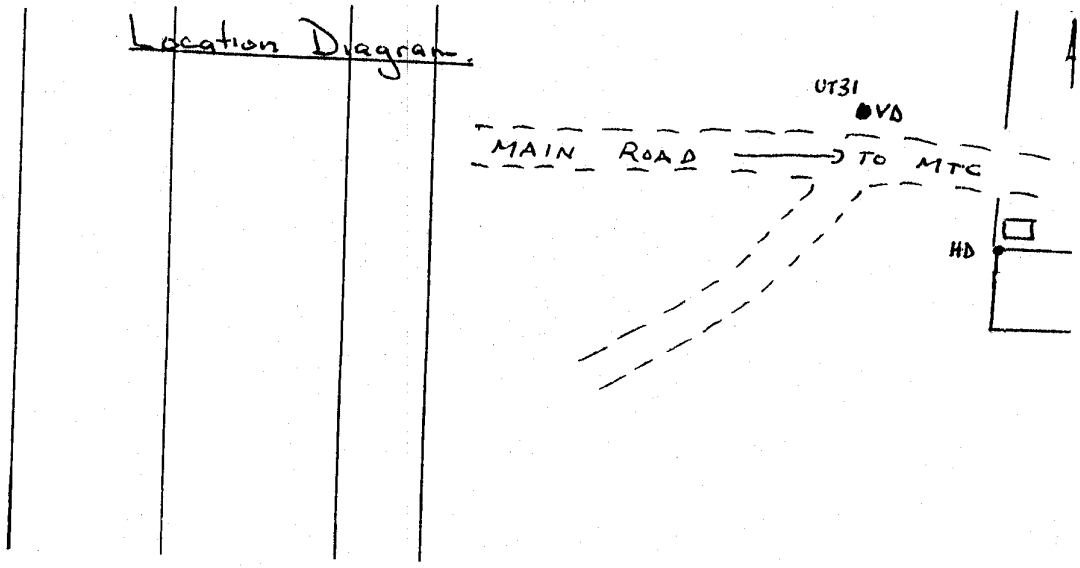
Field sketch of BLP 22 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 23 (formerly Betio 11)

Date	Horizontal Datum Description	Vertical Datum Description	V.D. Elevation above MSL (m) (from Howorth 1985)	Notes
Jan 1982	25 m from NW corner of concrete block house	UT 37 Bench mark	2.31	



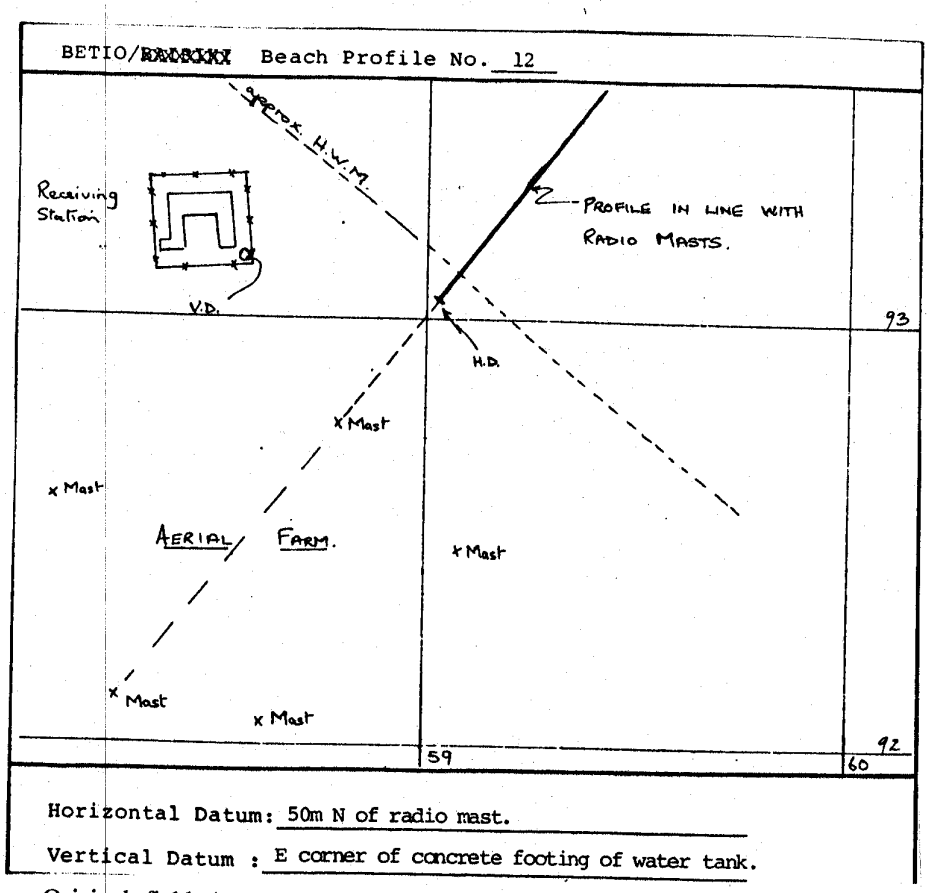
Original field sketch of bench marks at BLP 23 (formerly Betio 11) made in January 1982 (from Howorth, 1982).



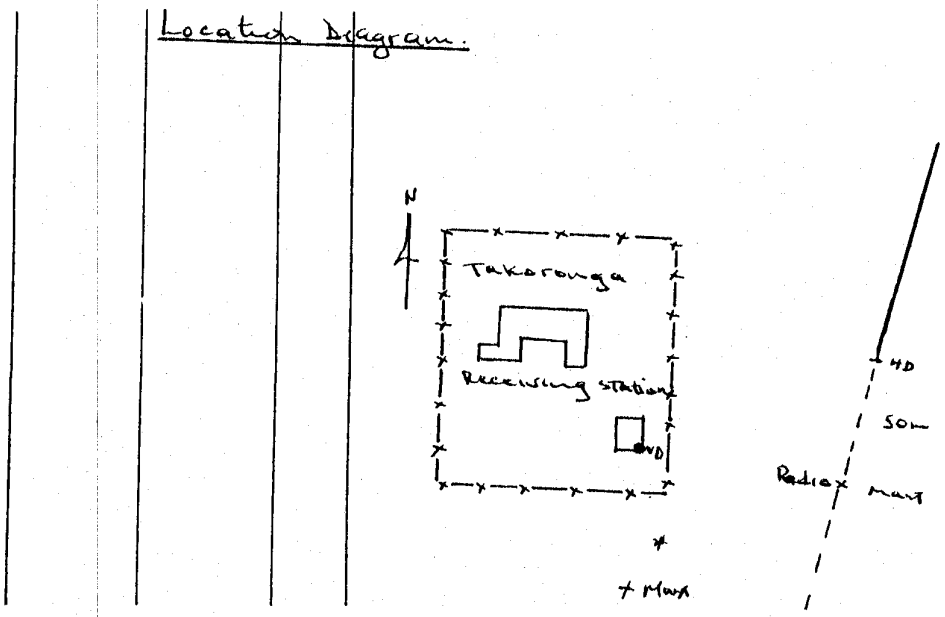
Field sketch of BLP 23 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 24 (formerly Betio 12)

Date	Horizontal Datum Description	Vertical Datum Description	V.D. Elevation above MSL (m) (from Howorth 1985)	Notes
Jan 1982	50 m north of radio mast	East corner of concrete footing of water tank	2.78	



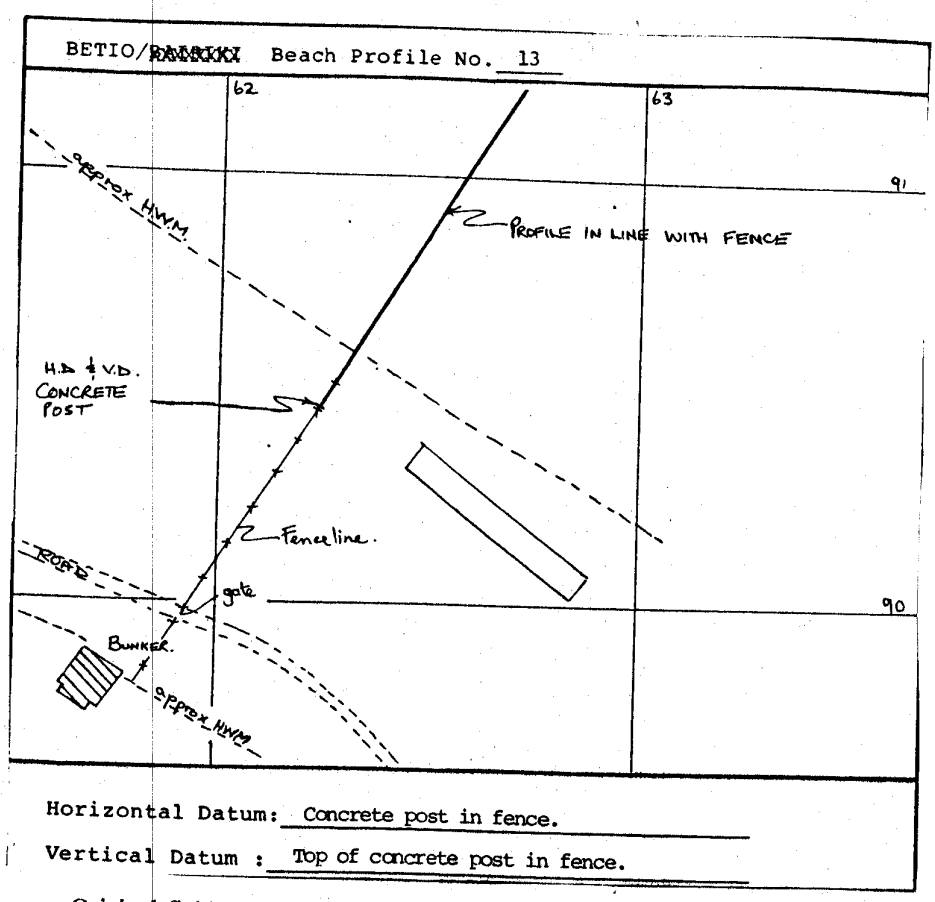
Originak field sketch of bench marks at BLP 24 (formerly/ Betio 12) made in January 1982 (from Howworth, 1982).



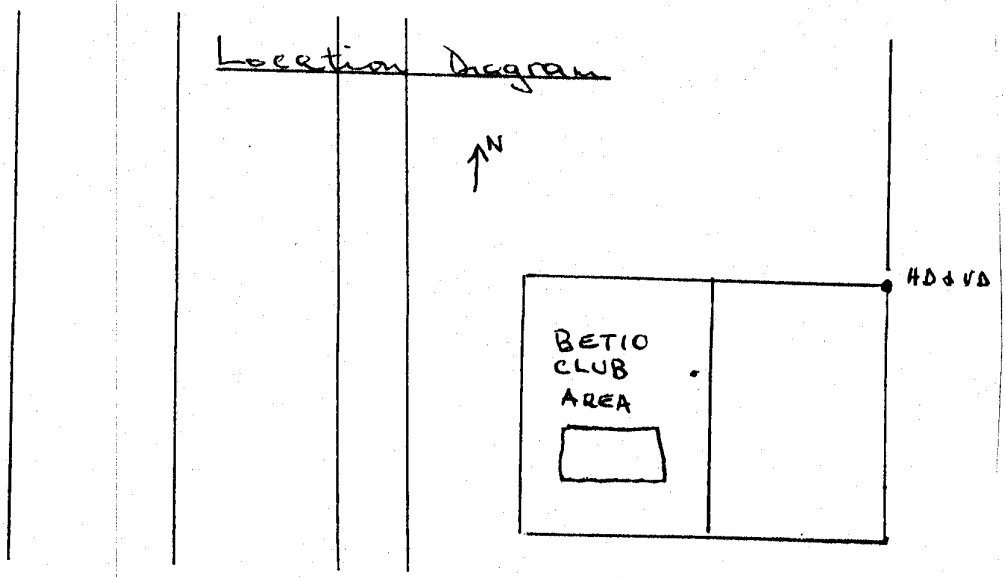
Field sketch of BLP 24 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 25 (formerly Betio 13)

Date	Horizontal Datum Description	Vertical Datum Description	V.D Elevation above MSL (m) (from Howorth 1985)	Notes
Jan 1982	Concrete post in fence	Concrete post in fence	3.22	
Aug 1982	1.37 m seamond of vertical datum, corner of fence	Corner of fence		Metal stakes in fence missing
Aug 1986	1.37 m seamond of vertical datum, corner of fence	Corner of fence	Top of concrete block at corner of fence	Profile reset
Jul 1988			resurveyed 1.993 m	



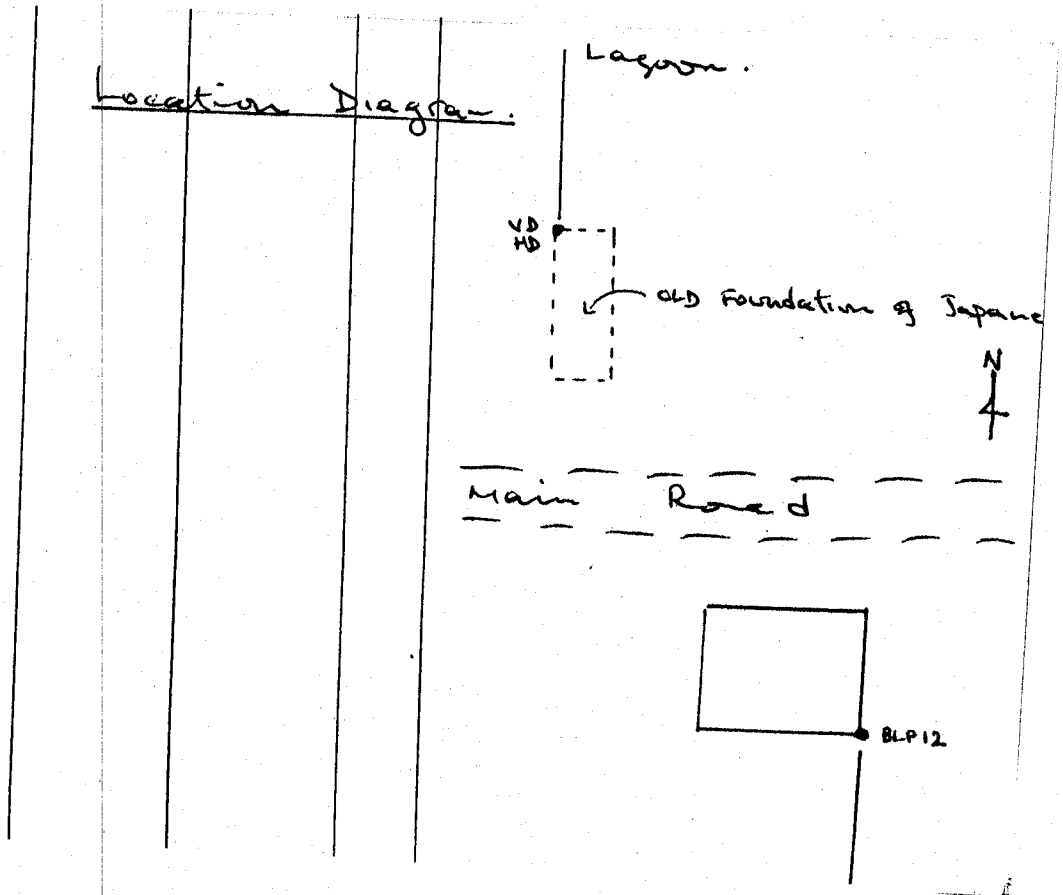
Original field sketch of bench marks at BLP 25 (from Betio 13) made in January 1982 (from Howworth, 1982).



Field sketch of BLP 25 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 26

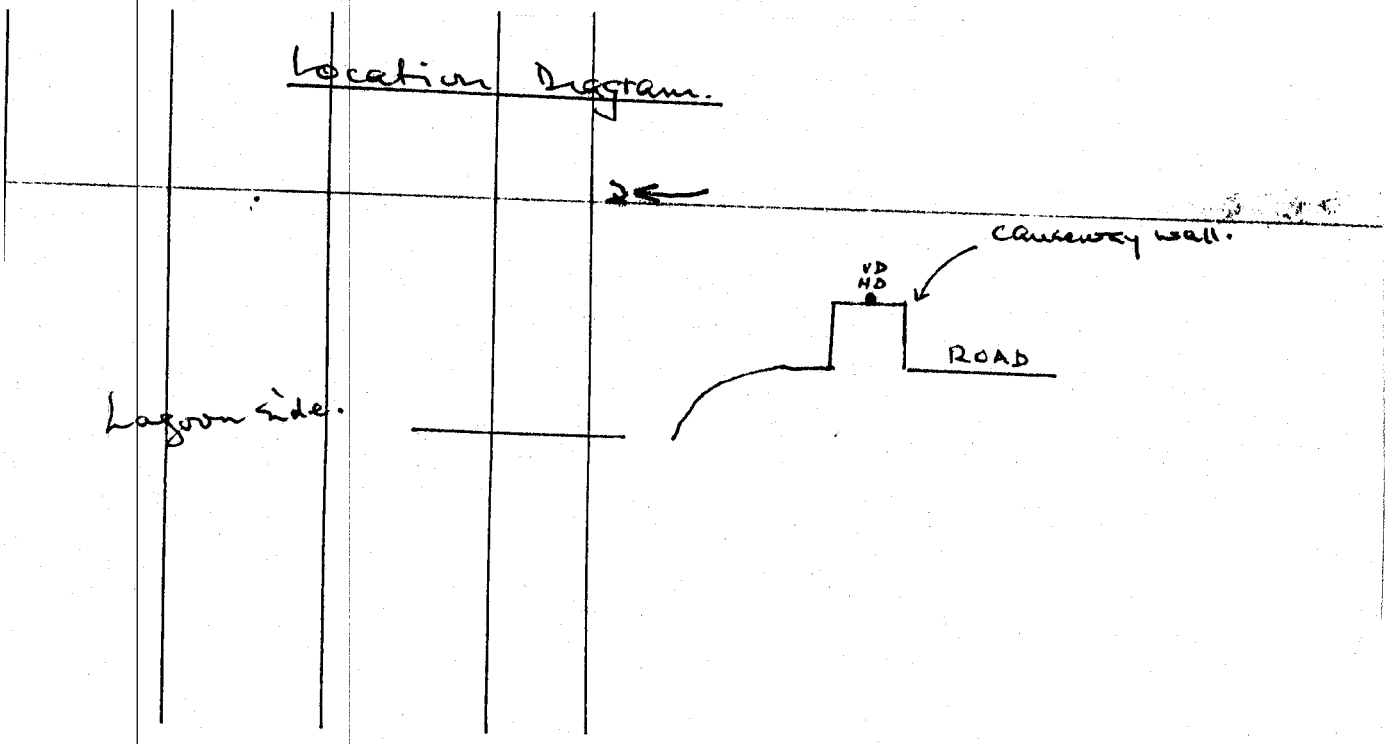
Date	Horizontal Datum Description	Vertical Datum Description	V.D Elevation above MSL (m) (from Howorth 1985)	Notes
Jun 1987	NW corner of foundations	NW corner of foundation	2.192	



Field sketch of BLP 26 made in January 1988 by Kareti Teuataake of the Kiribati Lands amd Surveys Department.

Profile BLP 27

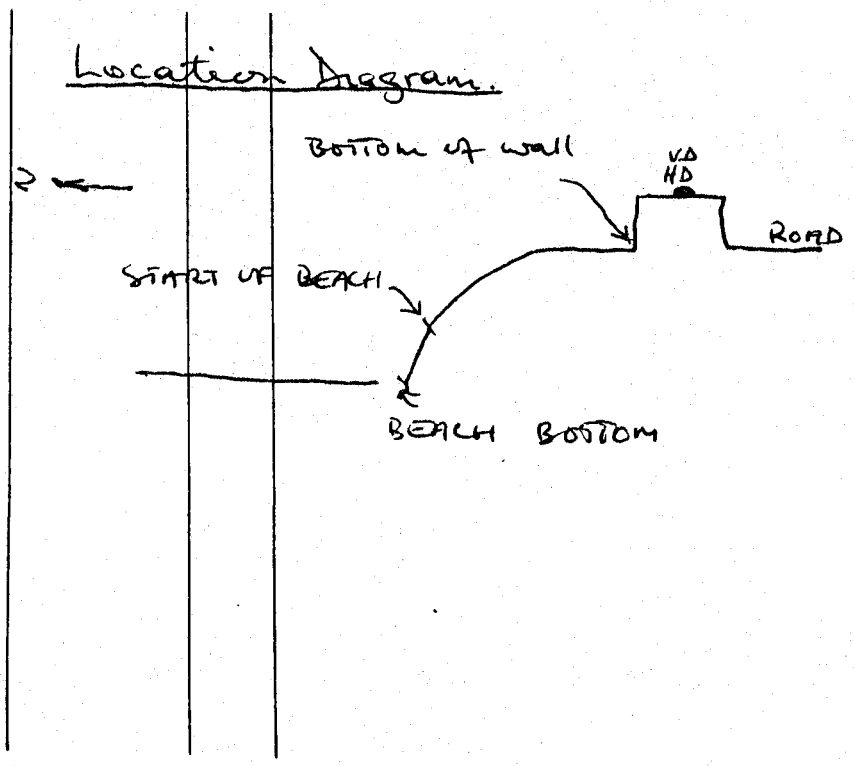
Date	Horizontal Datum Description	Vertical Datum Description	V.D Elevation above MSL (m) (from Howorth 1985)	Notes
Jun 1987	Top centre of causeway wall (lagoon side) at 1st hole after 7+00	Top centre of causeway wall	2.909	



Field sketch of BLP 27 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 28

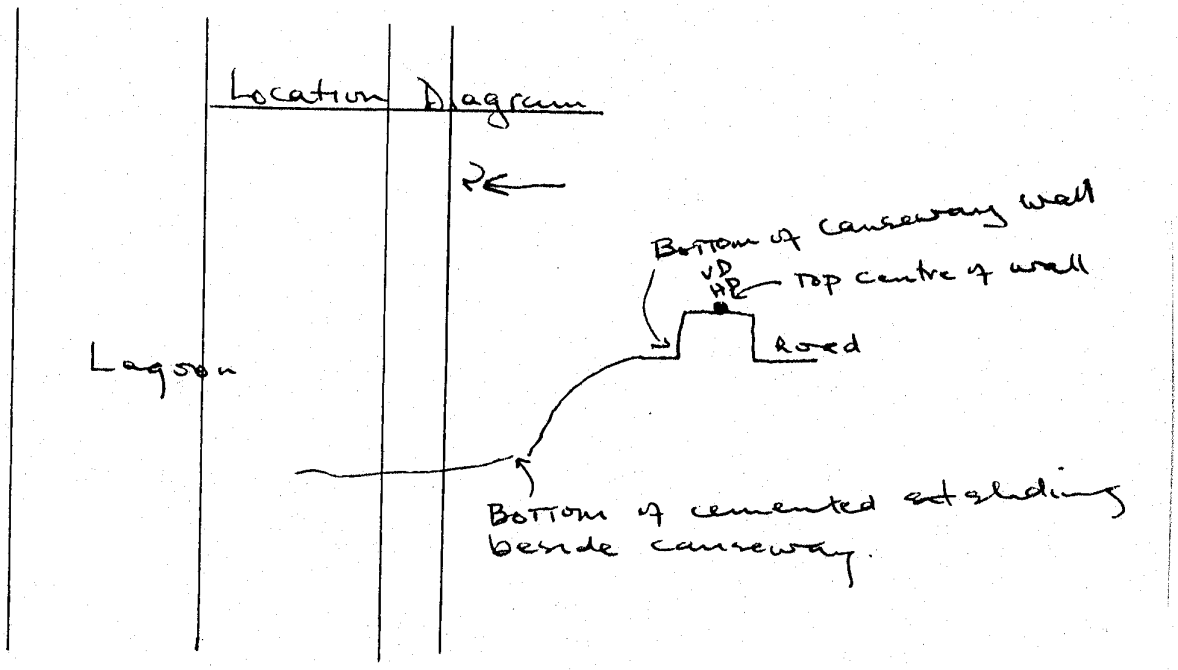
Date	Horizontal Datum Description	Vertical Datum Description	V.D Elevation above MSL (m) (from Howorth 1985)	Notes
Jun 1987	Top centre of causeway wall (lagoon side) at 1st hole after 13+00	Top centre of causeway wall	2.918	



Field sketch of BLP 28 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 29

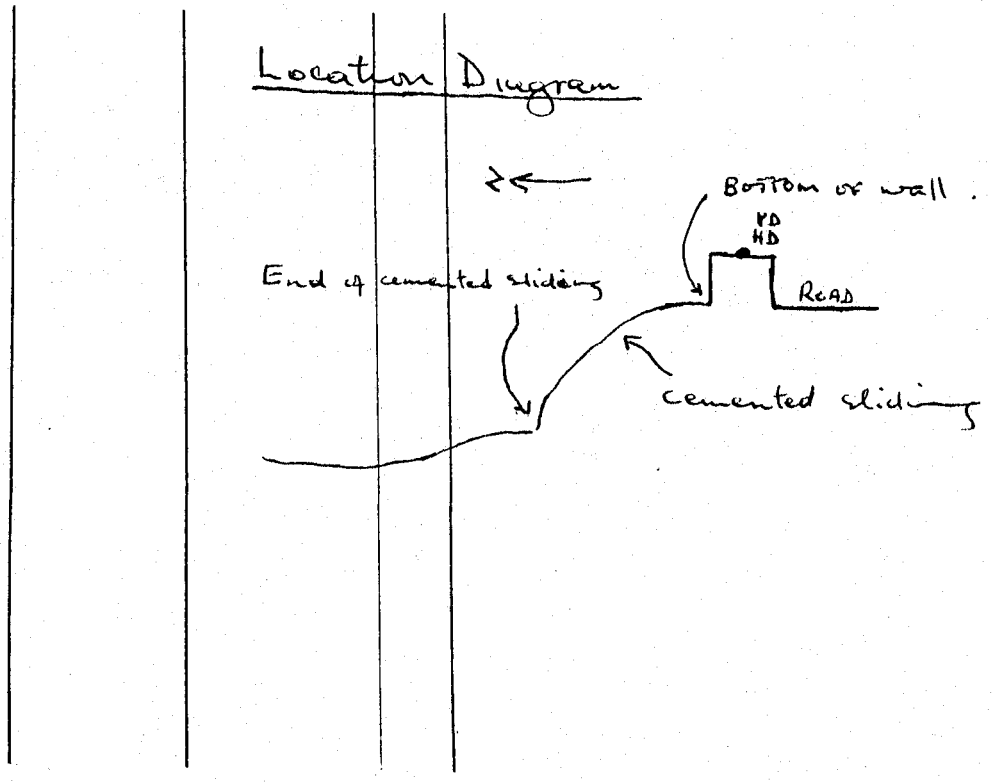
Date	Horizontal Datum Description	Vertical Datum Description	V.D. Elevation above MSL (m) (from Howorth 1985)	Notes
Jun 1982	Top centre of causeway wall (lagoon side) at 5th hole after 16+50	Top centre of causeway wall	3.196	



Field sketch of BLP 29 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 30

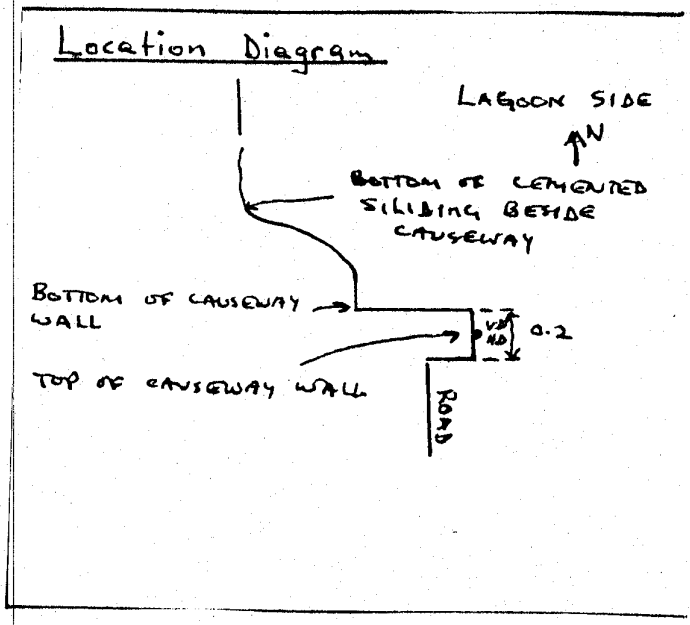
Date	Horizontal Datum Description	Vertical Datum Description	V.D. Elevation above MSL (m) (from Howorth 1985)	Notes
Jun 1987	Top centre of causeway wall (lagoon side) at 2nd hole after 24+00	Top centre of causeway wall	2.872	



Field sketch of BLP 30 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 31

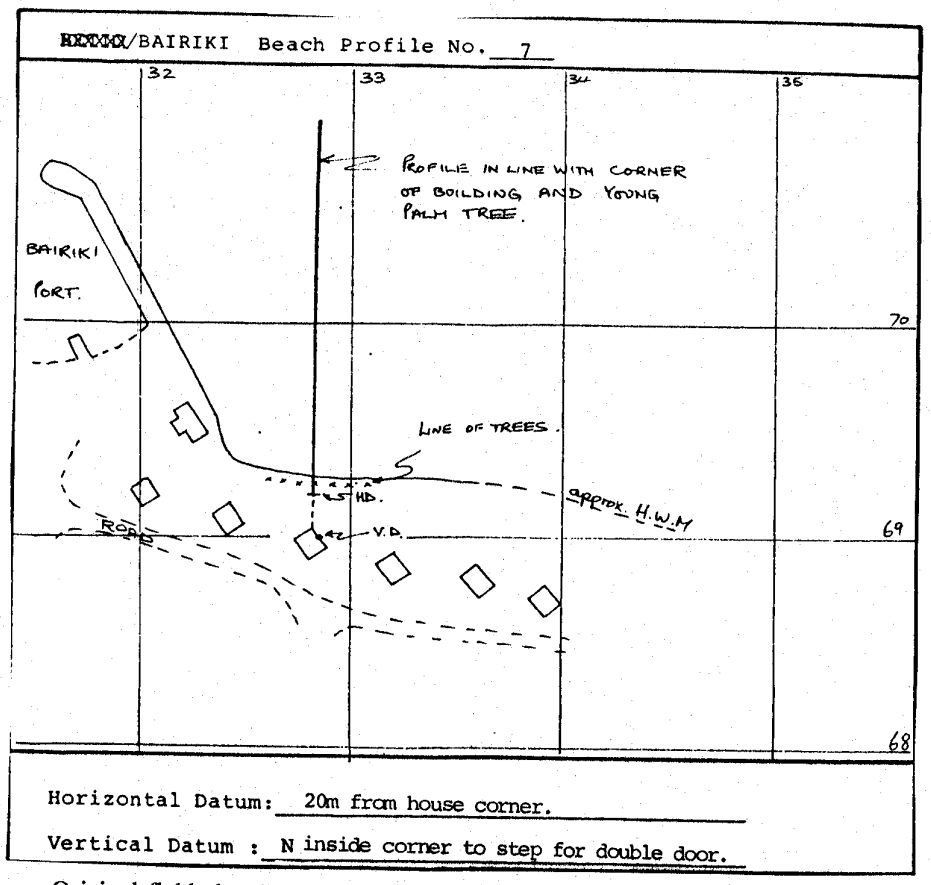
Date	Horizontal Datum Description	Vertical Datum Description	V.D. Elevation above MSL (m) (from Howorth 1985)	Notes
Jun 1987	Top centre of causeway wall (lagoon side) at 4th hole after 31+00	Top centre of causeway wall	2.884	



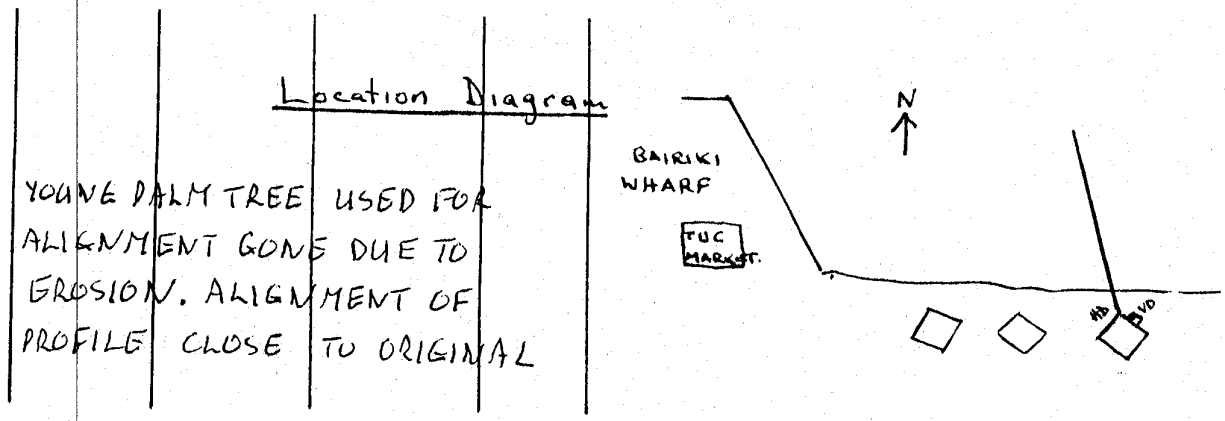
Field sketch of BLP 31 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 32 (formerly Bairiki 7)

Date	Horizontal Datum Description	Vertical Datum Description	V.D Elevation above MSL (m) (from Howorth 1985)	Notes
Jun 1982	20 m from house corner	Northern inside corner to step for double door	2.03	
Aug 1983				Galion wall in 1982 now buried



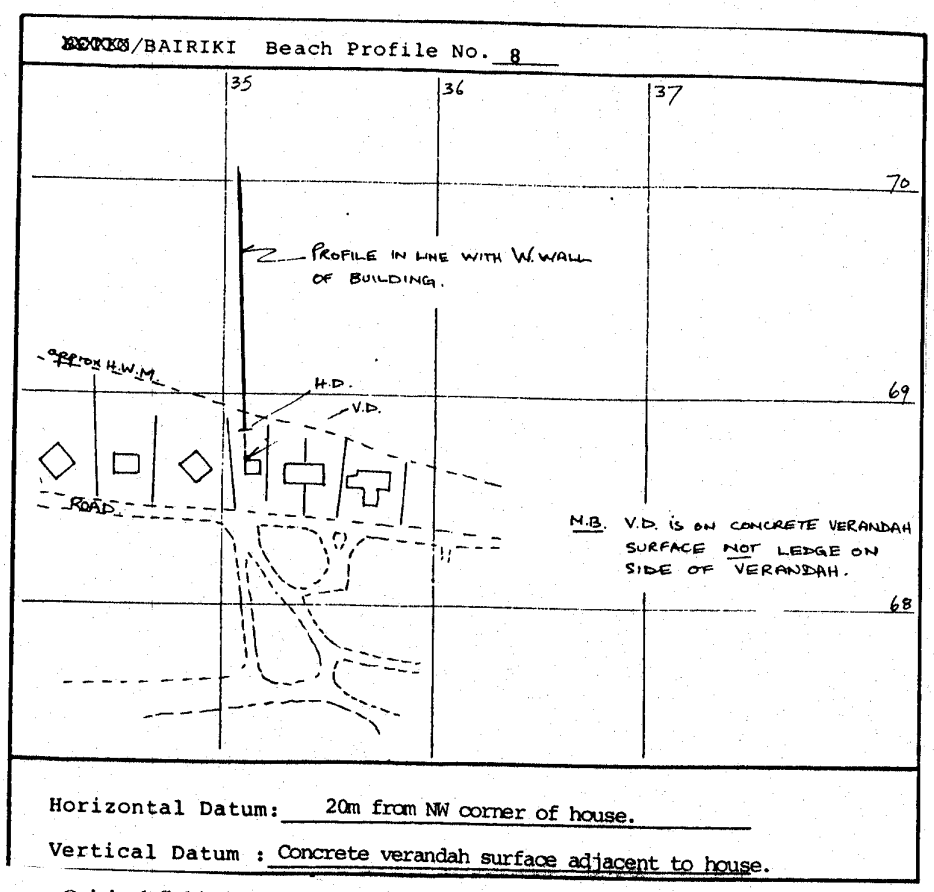
Original field sketch of bench marks at BLP 32 (formerly Bairiki 7) made in January 1982 (from Howorth, 1982).



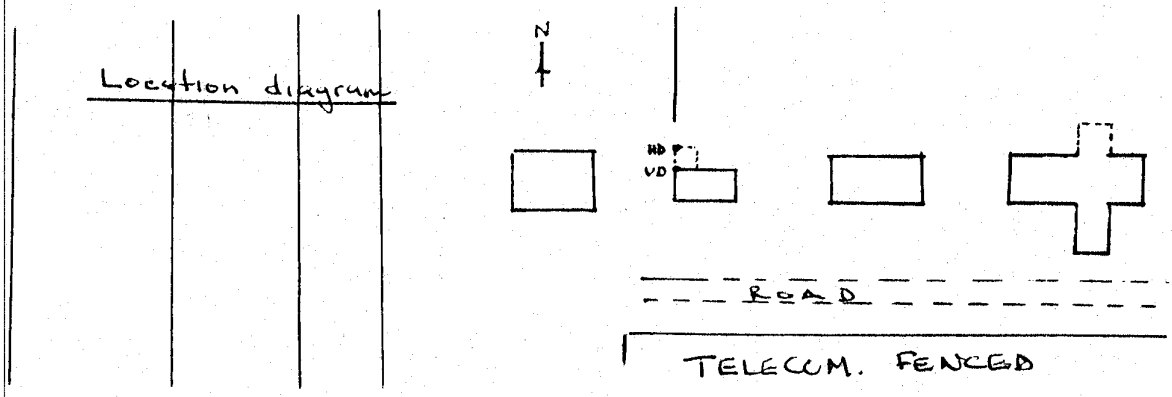
Field sketch of BLP 32 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 33 (formerly Bairiki 8)

Date	Horizontal Datum Description	Vertical Datum Description	V.D Elevation above MSL (m) (from Howorth 1985)	Notes
Jun 1982	20 m from NW corner of house	Concrete verandah surface adjacent to house	2.52	



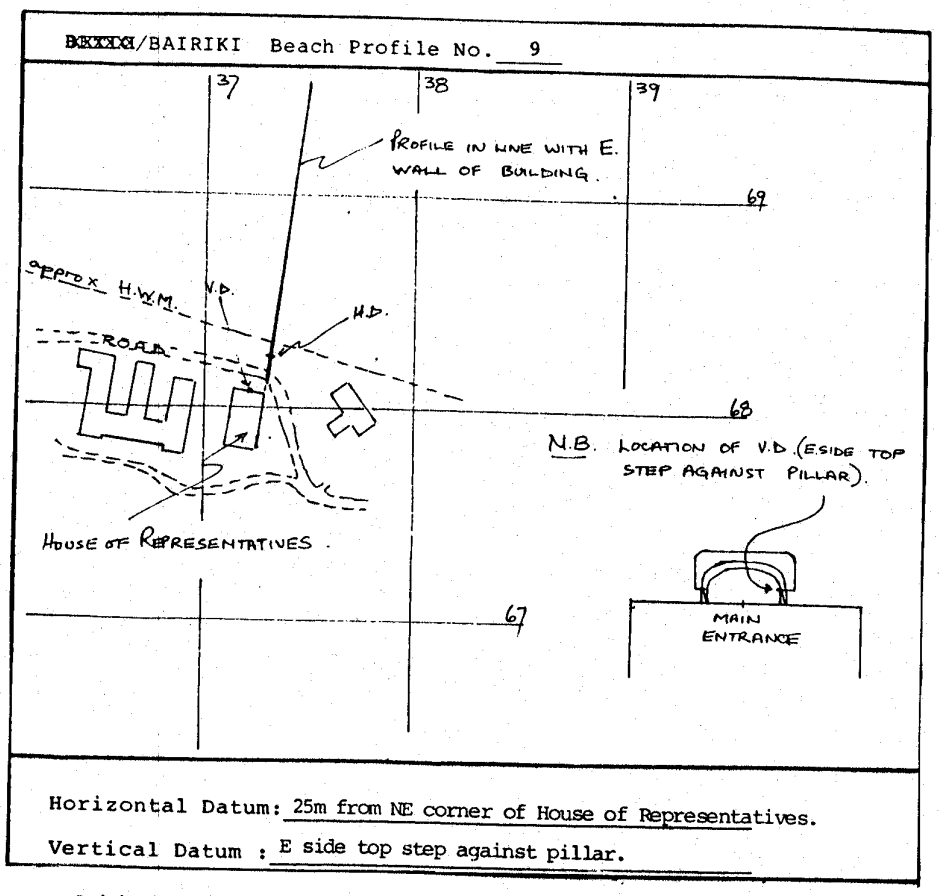
Original field sketch of bench marks at BLP 33 (formerly Bairiki 8) made in January 1982 (from Howworth, 1982).



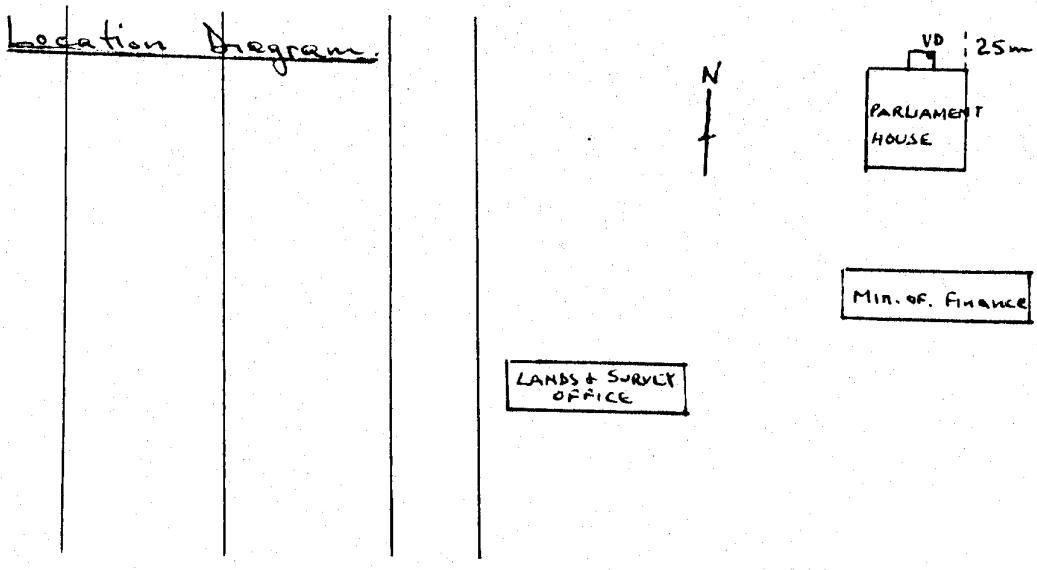
Field sketch of BLP 33 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 34 (formerly Bairiki 9)

Date	Horizontal Datum Description	Vertical Datum Description	V.D Elevation above MSL (m) (from Howorth 1985)	Notes
Jan 1982	25 m from NE corner of house of representatives	E side top step against pillar	2.56	



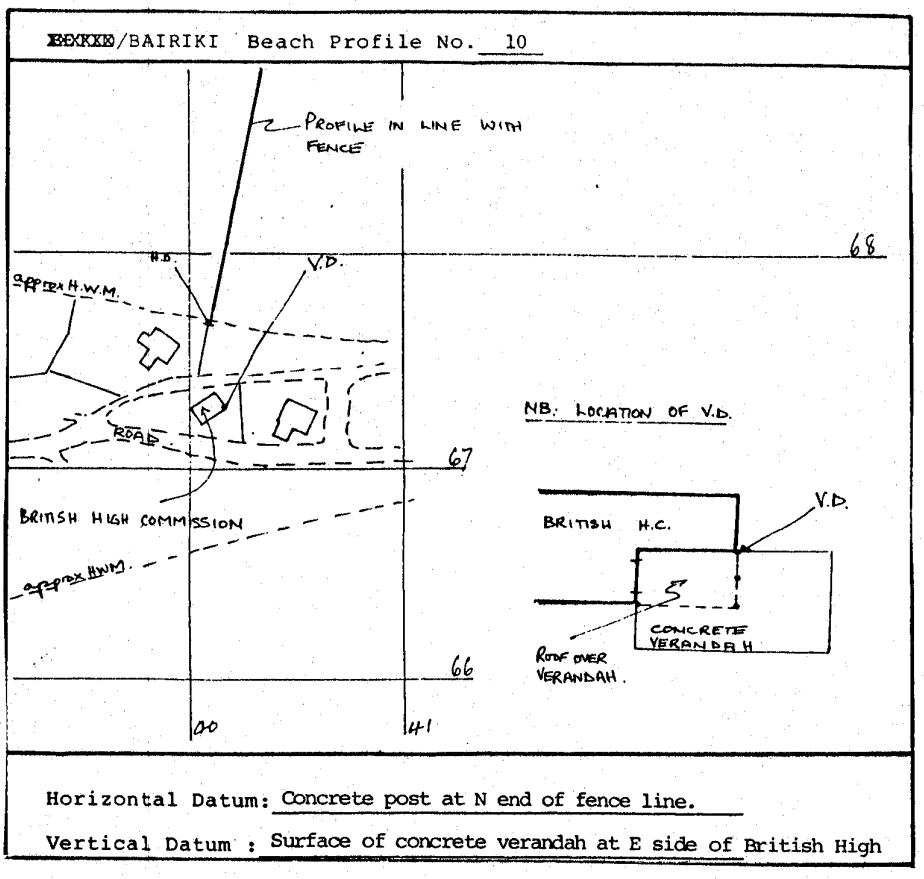
Original field sketch of bench marks at BLP 34 (formerly Bairiki 9) made in January 1982 (from Howorth, 1982).



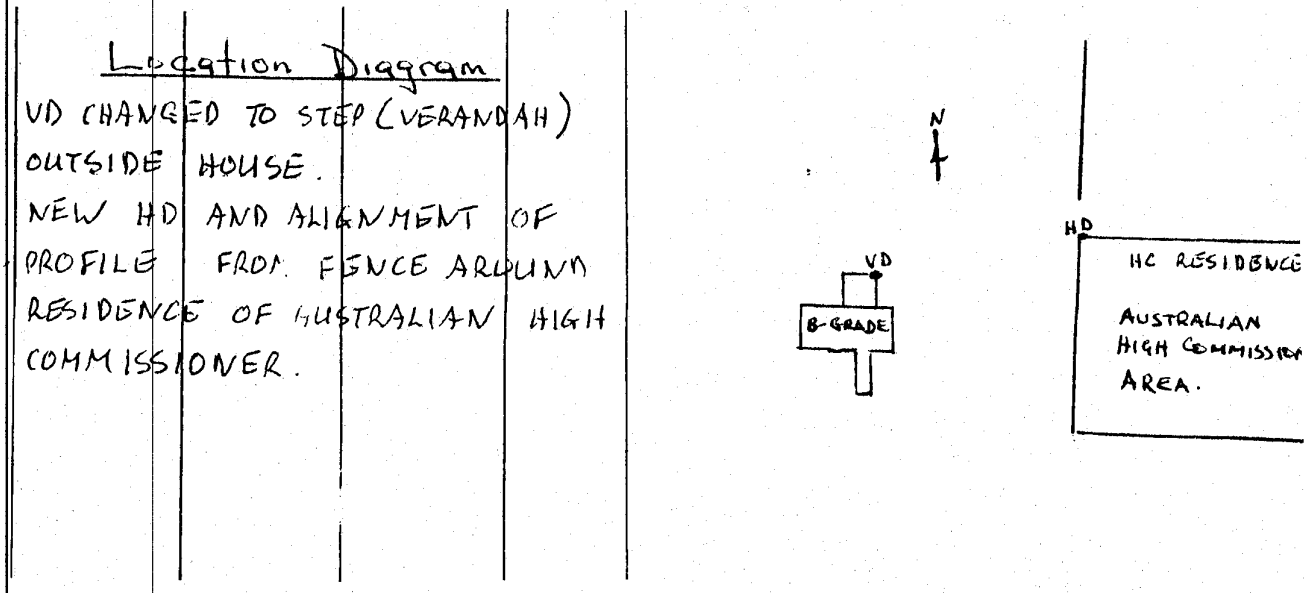
Field sketch of BLP 34 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 35 (formerly Bairki 10)

Date	Horizontal Datum Description	Vertical Datum Description	V.D Elevation above MSL (m) (from Howorth 1985)	Notes
Jan 1982	Concrete post at N end of fence line	Surface of concrete verandah at E side of British High Commission	2.16	
Aug 1983	Same	Concrete verandah by door of house to west of profile	2.10	No vertical datum established as a result of fence construction
Aug 1987	New horizontal datum and alignment of profile from fence around Australian High Commissioner's House	Same	Same	



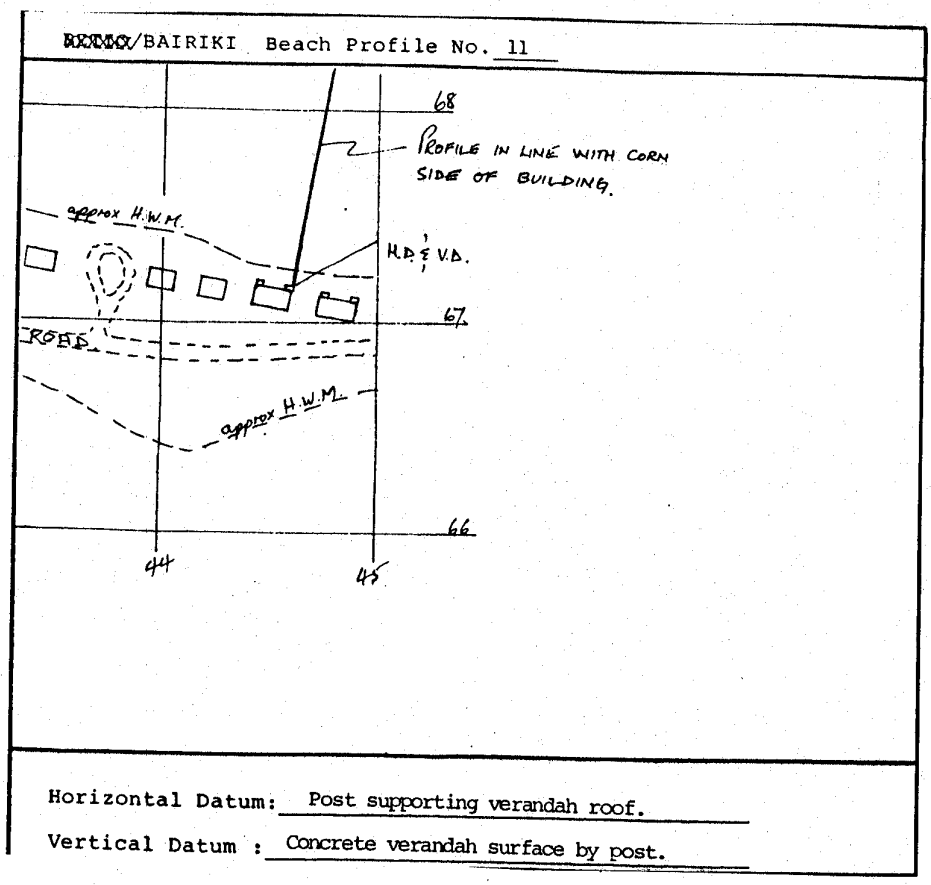
Original field sketch of bench marks at BLP 35 (formerly Bairiki 10) made in January 1982 (from Howorth, 1982).



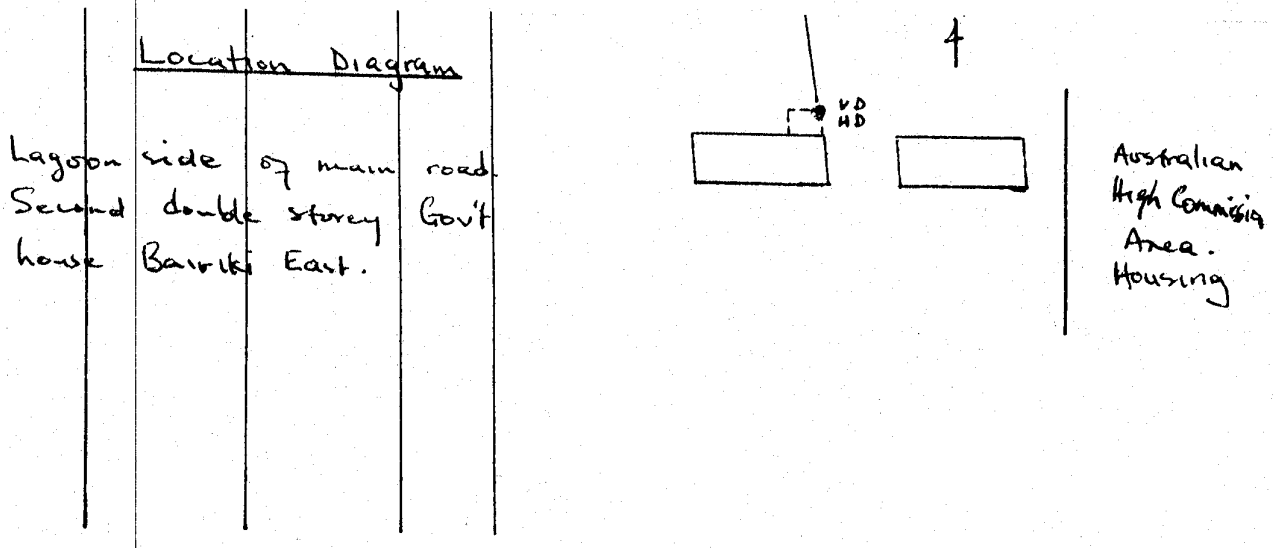
Field sketch of BLP 35 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

Profile BLP 36 (formerly Bairiki 11)

Date	Horizontal Datum Description	Vertical Datum Description	V.D. Elevation above MSL (m) (from Howorth 1985)	Notes
Jan 1982	Post supporting verandah roof	Concrete verandah surface by post	1.60	



Original field sketch of bench marks at BLP 36 (formerly Bairiki 11) made in January 1982 (from Howworth, 1982).

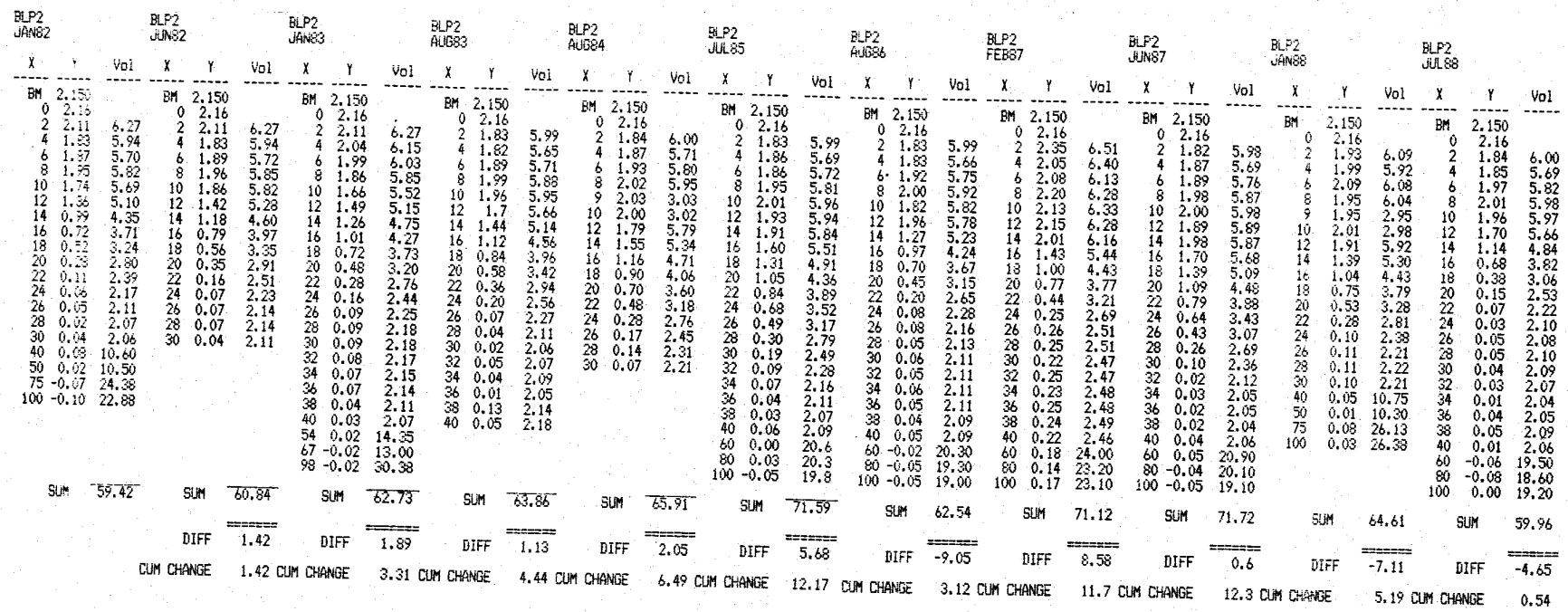


Field sketch of BLP 36 made in January 1988 by Kareti Teuataake of the Kiribati Lands and Surveys Department.

APPENDIX B

Tables of the Profile Data and
Volumetric Change Calculations

BLP1 JAN82			BLP1 JUN82			BLP1 JAN83			BLP1 AUG83			BLP1 AUG84			BLP1 JUL85			BLP1 AUG86			BLP1 FEB87			BLP1 JUN87			BLP1 JAN88			BLP1 JUL88		
X	Y	Vol.	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	1.860		BM	1.860		BM	1.860		BM	1.860		BM	1.860		BM	1.860		BM	1.860		BM	1.860		BM	1.860		BM	1.860		BM	1.860	
0	1.81		0	1.81		0	1.81		0	1.81		0	1.86		0	1.81		0	1.81		0	1.81		0	1.81		0	1.81		0		
2	1.93	5.74	2	1.93	5.74	2	1.93	5.74	2	1.93	5.74	2	1.96	5.82	2	1.90	5.71	2	1.97	5.78	2	1.97	5.78	2	2.02	5.83	2	1.84	5.65	2	1.87	3.87
4	2.00	5.93	4	2.01	5.94	4	2.01	5.94	4	2.00	5.93	4	2.03	5.99	4	2.02	5.92	4	2.03	6.00	4	2.01	5.98	4	2.11	6.13	4	1.96	5.80	4	1.91	5.78
6	2.06	6.06	6	2.06	6.07	6	2.11	6.12	6	2.01	6.01	5	2.07	3.05	6	1.82	5.84	6	1.51	5.54	6	1.29	5.30	6	1.52	5.63	6	1.96	5.92	6	1.52	5.43
8	1.44	5.50	8	1.39	5.45	8	1.21	5.32	8	1.21	5.22	6	2.05	3.67	8	1.28	5.10	8	1.13	4.64	8	0.86	4.15	8	1.08	4.60	7	1.42	2.69	8	0.99	4.51
10	1.09	4.53	10	1.08	4.47	10	0.76	3.97	10	0.91	4.12	7	1.50	2.22	10	0.97	4.25	10	0.85	3.98	10	0.63	3.49	10	0.74	3.82	8	1.16	2.29	10	0.67	3.66
12	0.79	3.88	12	0.78	3.86	12	0.36	3.12	12	0.65	3.56	8	1.37	1.22	12	0.73	3.70	12	0.62	3.47	12	1.28	3.91	12	0.57	3.31	10	0.75	3.91	12	0.35	3.02
14	0.60	3.39	14	0.57	3.35	14	0.32	2.68	14	0.47	3.12	8	1.27	1.16	14	0.52	3.25	14	0.37	2.99	14	0.20	3.48	14	0.39	2.96	12	0.53	3.28	14	0.15	2.50
16	0.42	3.02	16	0.34	2.91	16	0.29	2.61	16	0.25	2.72	10	1.01	4.28	16	0.26	2.78	16	0.18	2.55	16	0.10	2.30	16	0.23	2.62	14	0.27	2.80	16	0.02	2.17
18	0.24	2.66	18	0.22	2.56	18	0.22	2.51	18	0.18	2.43	12	0.76	3.77	18	0.12	2.38	18	0.08	2.26	18	-0.04	2.06	18	0.13	2.36	16	0.10	2.37	18	-0.03	1.99
20	0.15	2.39	20	0.11	2.33	20	0.16	2.38	20	0.10	2.28	14	0.58	3.34	20	0.05	2.17	20	-0.02	2.06	20	-0.07	1.89	20	0.06	2.19	18	0.01	2.11	20	-0.07	1.90
22	0.06	2.21	22	0.05	2.16	22	0.10	2.26	22	0.02	2.12	16	0.38	2.96	22	0.02	2.07	22	-0.02	1.96	22	-0.07	1.86	22	0.07	2.13	20	-0.07	1.94	22	-0.10	1.83
24	0.02	2.08	24	0.00	2.05	24	0.06	2.16	24	-0.01	2.01	18	0.23	2.61	24	0.01	2.03	24	-0.04	1.94	24	-0.05	1.88	24	0.00	2.07	22	-0.09	1.84	24	-0.06	1.84
26	0.00	2.02	26	-0.03	1.97	26	0.04	2.10	26	-0.04	1.95	20	0.14	2.37	26	-0.01	2.00	26	-0.04	1.92	26	-0.07	1.88	26	-0.04	1.96	24	-0.10	1.81	26	-0.06	1.88
28	0.00	2.00	28	-0.03	1.94	28	0.02	2.06	28	-0.02	1.94	22	0.11	2.25	28	0.00	1.99	28	-0.07	1.89	28	-0.05	1.88	28	0.03	1.99	26	-0.07	1.83	28	-0.07	1.87
30	0.00	2.00	30	-0.04	1.93	30	0.01	2.03	30	-0.01	1.97	24	0.06	2.17	30	0.01	2.01	30	-0.07	1.86	30	-0.05	1.90	30	0.00	2.03	28	-0.07	1.86	30	-0.10	1.83
40	0.01	10.05				32	-0.01	2.00	32	-0.04	1.95	26	0.03	2.09	32	0.04	2.05	32	-0.07	1.86	32	-0.09	1.86	32	0.00	2.00	30	-0.09	1.84	32	-0.11	1.79
50	0.05	10.30				34	-0.03	1.96	34	-0.05	1.91	30	0.07	4.20	34	0.06	2.10	34	-0.03	1.90	34	-0.08	1.83	34	-0.01	1.99	40	-0.01	9.50	34	-0.10	1.79
75	0.03	26.00				36	-0.01	1.96	36	-0.09	1.86	40	0.06	10.65	36	0.05	2.11	36	0.06	2.03	36	-0.08	1.84	36	-0.01	1.98	50	0.03	10.10	36	-0.07	1.83
100	0.03	25.75				38	-0.01	1.98	38	-0.05	1.86	50	0.07	10.65	38	0.04	2.09	38	0.09	2.15	38	-0.05	1.87	38	-0.02	1.97	75	0.00	25.38	38	-0.01	1.92
						40	-0.01	1.98	40	-0.05	1.90	75	0.05	26.50	40	0.07	2.11	40	0.09	2.18	40	-0.02	1.93	40	-0.02	1.96	100	0.00	25.00	40	-0.04	1.95
						42	0.02	2.01				100	0.06	26.38	60	0.07	21.40	60	0.09	21.80	60	0.10	20.80	60	-0.02	19.60				60	-0.07	18.90
						53	0.09	11.61							60	-0.01	0.00	80	0.03		80	0.06	21.60	80	0.06	20.40				80	-0.13	18.06
						66	0.06	13.98							100	-0.01	39.60	100	0.02		100	0.02	20.80	100	0.03	20.90				100	-0.03	18.40
	SUM	53.41		SUM	52.73		SUM	51.00		SUM	51.12		SUM	53.17		SUM	51.20		SUM	48.84		SUM	47.74		SUM	49.63		SUM	47.94		SUM	44.08
Comparison 0 to 30m				DIFF	-0.68		DIFF	-1.73		DIFF	0.12		DIFF	2.05		DIFF	-1.97		DIFF	-2.36		DIFF	-1.10		DIFF	1.89		DIFF	-1.69		DIFF	-3.86
				CUMULATIVE CHANGE	-0.68		CUMULATIVE CHANGE	-2.41		CUMULATIVE CHANGE	-2.29		CUMULATIVE CHANGE	-0.24		CUMULATIVE CHANGE	-2.21		CUMULATIVE CHANGE	-4.57		CUMULATIVE CHANGE	-5.67		CUMULATIVE CHANGE	-3.78		CUMULATIVE CHANGE	-5.47		CUMULATIVE CHANGE	-9.33



BLP2 JAN82			BLP2 JUN82			BLP2 JAN83			BLP2 AUG83			BLP2 AUG84			BLP2 JUL85			BLP2 AUG86			BLP2 FEB87			BLP2 JUN87			BLP2 JAN88			BLP2 JUL88		
X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	2.150		BM	2.150		BM	2.150		BM	2.150		BM	2.150		BM	2.150		BM	2.150		BM	2.150		BM	2.150		BM	2.150		BM	2.150	
0	2.16		0	2.16		0	2.16		0	2.16		0	2.16		0	2.16		0	2.16		0	2.16		0	2.16		0	2.16		0	2.16	
2	2.11	6.27	2	2.11	6.27	2	2.11	6.27	2	1.83	5.99	2	1.84	6.00	2	1.83	5.99	2	1.83	5.99	2	2.35	6.51	2	1.82	5.98	2	1.93	6.09	2	1.84	6.00
4	1.83	5.94	4	1.83	5.94	4	2.04	6.15	4	1.82	5.65	4	1.87	5.71	4	1.86	5.69	4	1.83	5.66	4	2.05	6.40	4	1.87	5.69	4	1.99	5.92	4	1.85	5.69
6	1.87	5.70	6	1.89	5.72	6	1.99	6.03	6	1.89	5.71	6	1.93	5.80	6	1.86	5.72	6	1.92	5.75	6	2.08	6.13	6	1.89	5.76	6	2.09	6.08	6	1.97	5.82
8	1.95	5.82	8	1.96	5.85	8	1.86	5.85	8	1.99	5.88	8	2.02	5.95	8	1.95	5.81	8	2.00	5.92	8	2.20	6.28	8	1.98	5.87	8	1.95	6.04	8	2.01	5.98
10	1.74	5.69	10	1.86	5.82	10	1.66	5.52	10	1.96	5.95	9	2.03	3.03	10	2.01	5.96	10	1.82	5.82	10	2.13	6.33	10	2.00	5.98	9	1.95	2.95	10	1.96	5.97
12	1.36	5.10	12	1.42	5.28	12	1.49	5.15	12	1.7	5.66	10	2.00	3.02	12	1.93	5.94	12	1.96	5.78	12	2.15	6.28	12	1.89	5.89	10	2.01	2.98	12	1.70	5.66
14	0.99	4.35	14	1.18	4.60	14	1.26	4.75	14	1.44	5.14	12	1.79	5.79	14	1.91	5.84	14	1.27	5.23	14	2.01	6.16	14	1.98	5.87	12	1.91	5.92	14	1.14	4.84
16	0.72	3.71	16	0.79	3.97	16	1.01	4.27	16	1.12	4.56	14	1.55	5.34	16	1.60	5.51	16	0.97	4.24	16	1.43	5.44	16	1.70	5.68	14	1.39	5.30	16	0.68	3.82
18	0.52	3.24	18	0.56	3.35	18	0.72	3.73	18	0.84	3.96	16	1.16	4.71	18	1.31	4.91	18	0.70	3.67	18	1.00	4.43	18	1.39	5.09	16	1.04	4.43	18	0.38	3.06
20	0.28	2.80	20	0.35	2.91	20	0.48	3.20	20	0.58	3.42	18	0.90	4.06	20	1.05	4.36	20	0.45	3.15	20	0.77	3.77	20	1.09	4.48	18	0.75	3.79	20	0.15	2.53
22	0.11	2.39	22	0.16	2.51	22	0.28	2.76	22	0.36	2.94	20	0.70	3.60	22	0.84	3.89	22	0.20	2.65	22	0.44	3.21	22	0.79	3.88	20	0.53	3.28	22	0.07	2.22
24	0.06	2.17	24	0.07	2.23	24	0.16	2.44	24	0.20	2.56	22	0.48	3.18	24	0.68	3.52	24	0.08	2.28	24	0.25	2.69	24	0.64	3.43	22	0.28	2.81	24	0.03	2.10
26	0.05	2.11	26	0.07	2.14	26	0.09	2.25	26	0.07	2.27	24	0.28	2.76	26	0.49	3.17	26	0.08	2.16	26	0.26	2.51	26	0.43	3.07	24	0.10	2.38	26	0.05	2.08
28	0.02	2.07	28	0.07	2.14	28	0.09	2.18	28	0.04	2.11	26	0.17	2.45	28	0.30	2.79	28	0.05	2.13	28	0.25	2.51	28	0.26	2.69	26	0.11	2.21	28	0.05	2.10
30	0.04	2.06	30	0.04	2.11	30	0.09	2.18	30	0.02	2.06	28	0.14	2.31	30	0.19	2.49	30	0.06	2.11	30	0.22	2.47	30	0.10	2.36	28	0.11	2.22	30	0.04	2.09
40	0.09	10.60				32	0.08	2.17	32	0.05	2.07	30	0.07	2.21	32	0.09	2.28	32	0.05	2.11	32	0.25	2.47	32	0.02	2.12	30	0.10	2.21	32	0.03	2.07
50	0.02	10.50				34	0.07	2.15	34	0.04	2.09				34	0.07	2.16	34	0.06	2.11	34	0.23	2.48	34	0.03	2.05	40	0.05	10.75	34	0.01	2.04
75	-0.07	24.38				36	0.07	2.14	36	0.01	2.05				36	0.04	2.11	36	0.05	2.11	36	0.25	2.48	36	0.02	2.05	50	0.01	10.30	36	0.04	2.05
100	-0.10	22.88				38	0.04	2.11	38	0.13	2.14				38	0.03	2.07	38	0.04	2.09	38	0.24	2.49	38	0.02	2.04	75	0.08	26.13	38	0.05	2.09
						40	0.03	2.07	40	0.05	2.18				40	0.06	2.09	40	0.05	2.09	40	0.22	2.46	40	0.04	2.06	100	0.03	26.38	40	0.01	2.06
						54	0.02	14.35							60	0.00	20.6	60	-0.02	20.30	60	0.18	24.00	60	0.05	20.90				60	-0.06	19.50
						67	-0.02	13.00							80	0.03	20.3	80	-0.05	19.30	80	0.14	23.20	80	-0.04	20.10				80	-0.08	18.60
						98	-0.02	30.38							100	-0.05	19.8	100	-0.05	19.00	100	0.17	23.10	100	-0.05	19.10				100	0.00	19.20
SUM	59.42		SUM	60.84		SUM	62.73		SUM	63.86		SUM	65.91		SUM	71.59		SUM	62.54		SUM	71.12		SUM	71.72		SUM	64.61		SUM	59.96	
			DIFF	1.42		DIFF	1.89		DIFF	1.13		DIFF	2.05		DIFF	5.68		DIFF	-9.05		DIFF	8.58		DIFF	0.6		DIFF	-7.11		DIFF	-4.65	
			CUM CHANGE	1.42		CUM CHANGE	3.31		CUM CHANGE	4.44		CUM CHANGE	6.49		CUM CHANGE	12.17		CUM CHANGE	3.12		CUM CHANGE	11.7		CUM CHANGE	12.3		CUM CHANGE	5.19		CUM CHANGE	0.54	

BLP3 JAN82			BLP3 JUN82			BLP3 JAN83			BLP3 AUG83			BLP3 AUG84			BLP3 JUL85			BLP3 AUG86			BLP3 FEB87			BLP3 JUN87			BLP3 JAN88			BPL3 JUN88		
X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	1.910		BM	1.910		BM	1.910		BM	1.910		BM	1.910		BM	1.910		BM	1.910		BM	1.910		BM	1.910		BM	1.910		BM	1.910	
0	1.97		0	1.97		0	1.97		0	1.97		0	1.92		0	1.92		0	1.92		0	1.92		0	1.92		0	1.92		0	1.92	
2	1.94	5.91	2	1.97	5.94	2	1.86	5.83	2	1.97	5.94	6	1.91	17.49	2	1.96	5.88	2	1.89	5.81	2	1.93	5.85	2	1.95	5.87	2	1.95	5.87	3	1.88	8.70
4	1.94	5.88	4	1.94	5.91	4	1.84	5.70	4	1.97	5.94	8	1.77	5.68	4	1.94	5.90	4	1.87	5.76	4	1.93	5.86	4	1.89	5.84	4	1.89	5.84	5	1.93	5.81
6	1.97	5.91	6	2.00	5.94	6	1.84	5.68	6	1.94	5.91	10	1.50	5.27	6	1.84	5.78	6	1.91	5.78	6	1.90	5.83	6	1.93	5.82	6	1.90	5.79	11	1.75	17.04
8	1.88	5.85	8	1.85	5.85	8	1.81	5.65	8	1.71	5.65	12	1.22	4.72	8	1.54	5.38	8	1.88	5.79	8	1.92	5.82	8	1.89	5.82	8	1.88	5.78	16	0.98	11.83
10	1.57	5.45	10	1.47	5.32	10	1.66	5.47	10	0.14	3.85	14	0.92	4.14	10	1.14	4.68	10	1.66	5.54	10	1.90	5.82	10	1.89	5.78	10	1.80	5.68	20	0.84	7.64
12	1.24	4.81	12	1.16	4.63	12	1.48	5.14	12	1.05	3.19	16	0.71	3.63	12	0.92	4.06	12	1.33	4.99	12	1.52	5.42	12	2.73	6.62	12	1.43	5.23	23	0.26	4.65
14	0.96	4.20	14	0.90	4.06	14	1.21	4.69	14	0.90	3.95	18	0.48	3.19	14	0.73	3.65	14	1.06	4.39	14	1.14	4.66	14	1.32	6.05	14	1.17	4.60	30	0.10	8.26
16	0.72	3.68	16	0.68	3.53	16	0.98	4.19	16	0.67	3.57	20	0.22	2.70	16	0.56	3.29	16	0.79	3.85	16	0.85	3.99	16	0.97	4.29	16	0.97	4.14	35	0.10	5.50
18	0.51	3.23	18	0.51	3.19	18	0.71	3.69	18	0.45	3.12	22	0.11	2.33	18	0.29	2.85	18	0.54	3.33	18	0.51	3.36	18	0.77	3.74	18	0.66	3.63	40	0.13	5.58
20	0.27	2.78	20	0.31	2.82	20	0.26	2.97	20	0.27	2.72	24	0.13	2.24	20	0.13	2.42	20	0.23	2.77	20	0.22	2.73	20	0.50	3.27	20	0.47	3.13			
22	0.07	2.34	22	0.06	2.37	22	0.20	2.46	22	0.18	2.45	26	0.10	2.23	22	0.16	2.29	22	0.10	2.33	22	0.15	2.37	22	0.26	2.76	22	0.22	2.69			
24	0.04	2.11	24	0.10	2.16	24	0.14	2.34	24	0.13	2.31	28	0.11	2.21	24	0.15	2.31	24	0.06	2.16	24	0.08	2.23	24	0.18	2.44	24	0.10	2.32			
26	0.05	2.09	26	0.16	2.26	26	0.13	2.27	26	0.13	2.26	30	0.14	2.25	26	0.10	2.25	26	0.06	2.12	26	0.14	2.22	26	0.14	2.32	26	0.05	2.15			
28	0.00	2.05	28	0.10	2.26	28	0.11	2.24	28	0.14	2.27	40	0.01	10.75	28	0.10	2.20	28	0.06	2.12	28	0.17	2.31	28	0.10	2.24	28	0.10	2.15			
30	0.02	2.02	30	0.07	2.17	30	0.11	2.22	30	0.10	2.24	50	-0.01	10.00	30	0.10	2.20	30	0.04	2.10	30	0.17	2.34	30	0.12	2.22	30	0.14	2.24			
40	0.02	10.20				32	0.10	2.21	32	0.07	2.17	75	-0.02	24.63	32	0.12	2.22	32	0.07	2.11	32	0.15	2.32	32	0.12	2.24	40	0.12	11.30			
50	0.06	10.40				34	0.09	2.19	34	0.08	2.15	100	0.02	25.00	34	0.14	2.26	34	0.15	2.22	34	0.12	2.27	34	0.18	2.30	50	0.07	10.95			
75	-0.04	25.25				36	0.07	2.16	36	0.08	2.16				36	0.16	2.30	36	0.14	2.29	36	0.11	2.23	36	0.16	2.34	75	-0.03	25.50			
100	-0.05	23.88				38	0.06	2.13	38	0.03	2.11				38	0.16	2.32	38	0.16	2.30	38	0.08	2.19	38	0.14	2.30	100	-0.30	20.88			
						40	0.04	2.10	40	0.01	2.04				40	0.15	2.31	40	0.16	2.32	40	0.07	2.15	40	0.13	2.27						
						40	0.04	0.00							60	0.09	22.40	60	-0.03	21.30	60	0.03	21.00	60	0.08	22.10						
						45	0.08	5.30							80	-0.02	20.70	80	-0.03	19.40	80	-0.04	19.90	80	-0.07	20.10						
						52	0.11	7.67							100	0.03	20.10	100	-0.12	18.50	100	-0.06	19.00	100	-0.11	18.20						
	SUM	58.3		SUM	58.5		SUM	60.5		SUM	55.4		SUM	58.1		SUM	55.1		SUM	58.8		SUM	60.8		SUM	65.1		SUM	61.2		SUM	63.9
Comparison of 0 to 30m				DIF	0.1		DIF	2.1		DIF	-5.2		DIF	2.7		DIF	-2.9		DIF	3.7		DIF	2.0		DIF	4.3		DIF	-3.8		DIF	2.7
				CUM DIF	0.1		CUM DIF	2.2		CUM DIF	-2.9		CUM DIF	-0.2		CUM DIF	-3.2		CUM DIF	0.5		CUM DIF	2.5		CUM DIF	6.8		CUM DIF	2.9		CUM DIF	5.6

BLP4 JAN82			BLP4 JUN82			BLP4 JAN83			BLP4 AUG83			BLP4 AUG84			BLP4 JUL85			BLP4 AUG86			BLP4 FEB87			BLP4 JUN87			BLP4 JAN88			BLP4 JUN88		
X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	2.050		BM	2.050		BM	2.050		BM	2.050		BM	2.050		BM	2.050		BM	2.050		BM	2.050		BM	2.050		BM	2.050		BM	2.050	
0	2.03		0	2.03		0	2.03		0	2.03		0	2.05		0	2.05		0	2.05		0	2.05		0	2.05		0	2.05		0	2.05	1.044
2	2.03	6.06	2	2.03	6.06	2	2.03	6.06	2	2.01	6.04	10	2.02	30.35	12	2.03	36.48	2	1.99	6.04	2	1.99	6.04	2	2.03	6.08	10	2.00	30.25	3	2.05	9.15
4	2.04	6.07	4	2.04	6.07	4	2.04	6.07	4	2.00	6.01	12	2.04	6.06	14	1.98	6.01	4	2.04	6.03	4	2.02	6.01	4	2.06	6.09	12	1.99	5.99	5	2.04	6.09
6	2.05	6.09	6	2.05	6.09	6	2.05	6.09	6	2.01	6.01	14	2.02	6.06	16	1.83	5.81	6	2.01	6.05	6	2.03	6.05	6	2.04	6.10	14	2.00	5.99	10	2.01	15.13
8	2.06	6.11	8	2.06	6.11	8	2.06	6.11	8	1.99	6.00	16	1.98	6.00	18	1.33	5.16	8	2.01	6.02	8	1.99	6.02	8	2.03	6.07	16	1.84	5.84	15	2.03	15.10
10	2.12	6.18	10	2.09	6.15	10	2.07	6.13	10	2.03	6.02	18	1.66	5.64	20	1.04	4.37	10	2.00	6.01	10	2.04	6.03	10	2.02	6.05	18	1.54	5.38	17	1.42	5.45
12	2.08	6.20	12	2.04	6.13	12	2.07	6.14	12	2.01	6.04	20	1.27	4.93	22	0.83	3.87	12	1.97	5.97	12	2.01	6.05	12	2.01	6.03	20	1.19	4.73	22	1.19	11.53
14	2.04	6.12	14	2.01	6.05	14	1.98	6.05	14	1.96	5.97	22	0.96	4.23	24	0.63	3.46	14	1.87	5.84	14	1.89	5.90	14	1.95	5.96	22	0.87	4.06	26	0.74	7.86
16	2.01	6.05	16	1.86	5.87	16	1.89	5.87	16	1.84	5.80	24	0.79	3.75	26	0.44	3.07	16	1.73	5.60	16	1.64	5.53	16	1.88	5.83	24	0.64	3.51	32	0.17	8.73
18	1.48	5.49	18	1.53	5.39	18	1.51	5.4	18	1.49	5.33	26	0.60	3.39	28	0.19	2.63	18	1.32	5.05	18	1.20	4.84	18	1.82	5.70	26	0.40	3.04	40	0.06	8.92
20	1.16	4.64	20	1.22	4.75	20	1.12	4.63	20	1.11	4.60	28	0.38	2.98	30	0.06	2.25	20	1.11	4.43	20	0.82	4.02	20	1.61	5.43	28	0.19	2.59	50	0.04	10.50
22	0.99	4.15	22	0.98	4.20	22	0.82	3.94	22	0.87	3.98	30	0.22	2.60	32	0.03	2.09	22	0.87	3.98	22	0.52	3.34	22	1.26	4.87	30	0.05	2.24	70	0.07	21.10
24	0.73	3.72	24	0.71	3.69	24	0.68	3.5	24	0.63	3.50	32	0.10	2.32	34	0.02	2.05	24	0.65	3.52	24	0.27	2.79	24	0.87	4.13	32	0.01	2.06			
26	0.53	3.26	26	0.56	3.27	26	0.46	3.14	26	0.42	3.05	34	0.09	2.19	36	0.03	2.05	26	0.38	3.03	26	0.11	2.38	26	0.66	3.53	34	0.01	2.02			
28	0.35	2.88	28	0.29	2.85	28	0.25	2.71	28	0.28	2.70	36	0.08	2.17	38	0.03	2.06	28	0.14	2.52	28	0.00	2.11	28	0.46	3.12	36	0.02	2.03			
30	0.15	2.50	30	0.15	2.44	30	0.16	2.41	30	0.12	2.40	38	0.11	2.19	40	0.04	2.07	30	0.03	2.17	30	0.03	2.03	30	0.25	2.71	38	0.03	2.05			
40	0.11	11.30	32	0.05	2.20	32	0.09	2.25	32	0.02	2.14	40	0.09	2.20	50	0.06	10.50	32	0.04	2.07	32	0.02	2.05	32	0.15	2.40	40	0.01	2.04			
50	0.07	10.90	34	0.02	2.07	34	0.09	2.18	34	0.01	2.03	50	0.11	11.00	75	0.15	27.63	34	0.04	2.08	34	0.04	2.06	34	0.09	2.24	50	0.02	10.15			
75	0.08	26.88	36	0.02	2.04	36	0.09	2.18	36	-0.01	2.00	75	0.13	28.00	100	0.08	27.88	36	0.05	2.09	36	0.04	2.08	36	0.06	2.15	75	0.03	25.63			
100	0.02	26.25	38	0.03	2.05	38	0.09	2.18	38	0.01	2.00	100	0.06	27.38				38	0.01	2.06	38	0.05	2.09	38	0.06	2.12	100	0.02	25.63			
			40	0.02	2.05	40	0.09	2.18	40	0.02	2.03							40	0.04	2.05	40	0.04	2.09	40	0.06	2.12						
						69	0.11	31.9										60	0.11	21.50	60	0.08	21.20	60	0.09	21.50						
						95	0.11	28.86										80	0.11	22.20	80	0.08	21.60	80	0.08	21.70						
																		100	-0.01	21.00	100	0.08	21.60	100	0.07	21.50						
	SUM	86.82		SUM	77.32		SUM	76.5		SUM	83.65		SUM	87.06		SUM	83.43		SUM	82.61		SUM	79.51		SUM	88.73		SUM	83.82		SUM	87.95
				DIFF	-9.5		DIFF	-0.82		DIFF	7.15		DIFF	3.41		DIFF	-3.63		DIFF	-0.82		DIFF	-3.1		DIFF	9.22		DIFF	-4.91		DIFF	4.13
				CUM CHANGE	-9.5		CUM CHANGE	-10.32		CUM CHANGE	-3.17		CUM CHANGE	0.24		CUM CHANGE	-3.39		CUM CHANGE	-4.21		CUM CHANGE	-7.31		CUM CHANGE	1.91		CUM CHANGE	-3		CUM CHANGE	1.13

BLP5 JAN82			BLP5 JUN82			BLP5 JAN83			BLP5 AUG83			BLP5 AUG84			BLP5 JUL85			BLP5 AUG86			BLP5 FEB87			BLP5 JUN87			BLP5 JAN88			BLP5 JUN88		
X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	1.910		BM	1.910		BM	1.910		BM	1.910		BM	1.910		BM	1.910		BM	1.910		BM	1.910		BM	1.910		BM	1.910		BM	1.910	
0	1.92		0	1.90		0	1.90		0	1.93		0	1.99		0	1.99		0	1.99		0	1.99		0	1.99		0	2.05		0	1.99	
2	1.95	5.87	2	2.00	5.90	8	1.90	23.20	2	2.03	5.96	2	2.11	6.10	1	1.95	2.97	2	2.04	6.03	2	1.97	5.96	2	1.90	5.89	2	2.03	6.08	10	2.18	30.85
4	2.04	5.99	4	2.10	6.10	10	1.66	5.56	4	2.01	6.04	4	2.09	6.20	3	2.08	6.03	4	2.10	6.14	4	1.50	5.47	4	1.92	5.82	4	1.93	5.96	13	1.53	8.57
6	2.11	6.15	6	2.11	6.21	12	1.31	4.97	6	2.09	6.10	6	1.98	6.07	5	2.09	6.17	6	2.10	6.20	6	1.70	5.20	6	1.93	5.85	6	2.08	6.01	18	0.79	10.80
8	1.89	6.00	8	1.91	6.02	14	0.99	4.30	8	1.95	6.04	7	1.85	2.92	10	1.62	14.28	8	2.11	6.21	8	1.57	5.27	8	1.94	5.87	7	2.11	3.10	25	0.05	9.94
10	1.57	5.46	10	1.41	5.32	16	0.78	3.77	10	1.62	5.57	8	1.60	2.73	20	0.59	21.05	10	1.73	5.84	10	1.54	5.11	10	1.97	5.91	8	2.11	3.11	30	-0.02	5.08
12	1.22	4.79	12	1.19	4.60	18	0.56	3.34	12	1.26	4.88	9	1.42	2.51	30	-0.01	12.90	12	1.32	5.05	12	0.89	4.43	12	1.99	5.96	9	2.09	3.10	40	-0.09	9.45
14	0.91	4.13	14	1.02	4.21	20	0.29	2.85	14	1.07	4.33	11	1.09	4.51	55	-0.05	24.25	14	1.01	4.33	14	1.09	3.98	14	2.01	6.00	11	2.17	6.26	50	-0.03	9.40
16	0.69	3.60	16	0.69	3.71	22	0.08	2.37	16	0.71	3.78	13	0.82	3.91	80	-0.05	23.75	16	0.80	3.81	16	1.39	4.48	16	2.04	6.05	13	1.65	5.82	70	-0.03	19.40
18	0.52	3.21	18	0.51	3.20	24	0.03	2.11	18	0.53	3.24	15	0.63	3.45				18	0.59	3.39	18	1.17	4.56	18	2.03	6.07	15	1.19	4.84	90	-0.08	18.90
20	0.34	2.86	20	0.28	2.79	26	0.01	2.04	20	0.36	2.89	17	0.49	3.12				20	0.19	2.78	20	1.37	4.54	20	1.94	5.97	17	0.88	4.07			
22	0.11	2.45	22	0.09	2.37	28	-0.02	1.99	22	0.10	2.46	19	0.25	2.74				22	-0.06	2.13	22	1.33	4.70	22	2.00	5.94	19	0.65	3.53			
24	0.04	2.15	24	0.03	2.12	30	-0.05	1.93	24	-0.04	2.06	21	0.01	2.26				24	-0.03	1.91	24	1.50	4.83	24	2.09	6.09	21	0.47	3.12			
26	0.05	2.09	26	0.00	2.03	32	-0.08	1.87	26	-0.01	1.95	23	-0.06	1.95				26	-0.06	1.91	26	1.49	4.99	26	2.10	6.19	23	0.16	2.63			
28	-0.01	2.04	28	-0.09	1.91	34	-0.06	1.86	28	-0.09	1.90	25	-0.10	1.84				28	-0.08	1.86	28	1.56	5.05	28	2.11	6.21	25	-0.08	2.08			
30	-0.10	1.89	30	-0.07	1.84	36	-0.07	1.87	30	-0.04	1.87	30	-0.10	4.50				30	-0.05	1.87	30	1.56	5.12	30	1.90	6.01	30	-0.15	4.43			
40	-0.10	9.00				38	-0.05	1.88	32	-0.10	1.86	40	-0.10	9.00				32	-0.09	1.86	32	1.56	5.12	32	1.44	5.34	40	-0.17	8.40			
50	-0.13	8.85				40	-0.04	1.91	34	-0.08	1.82	55	-0.02	14.10				34	-0.04	1.87	34	1.54	5.10	34	1.04	4.48	50	0.22	10.25			
75	-0.16	21.38				52	-0.09	11.22	36	-0.08	1.84	80	-0.02	24.50				36	-0.06	1.90	36	1.57	5.11	36	0.74	3.78	75	-0.34	23.50			
100	-0.16	21.00				72	-0.15	17.60	38	-0.09	1.83							38	-0.10	1.84	38	1.50	5.07	38	0.58	3.32	100	-0.65	12.63			
						96	-0.09	22.20	40	-0.01	1.90							40	-0.12	1.78	40	1.59	5.09	40	0.35	2.93						
																		60	-0.16	17.20	60	1.49	50.80	60	-0.16	21.90						
																		80	-0.10	17.40	80	1.67	51.60	80	-0.17	16.70						
																		100	-0.14	17.60	100	1.49	51.60	100	-0.23	16.00						
	SUM	58.68		SUM	58.33		SUM	58.43		SUM	59.07		SUM	54.8		SUM	63.395		SUM	59.46		SUM	73.69		SUM	89.83		SUM	64.13		SUM	65.23
				DIFF	-0.35		DIFF	0.1		DIFF	0.64		DIFF	-4.27		DIFF	8.595		DIFF	-3.935		DIFF	14.23		DIFF	16.14		DIFF	-25.7		DIFF	1.1
				CUM CHANGE	-0.35		CUM CHANGE	-0.25		CUM CHANGE	0.39		CUM CHANGE	-3.88		CUM CHANGE	4.715		CUM CHANGE	0.78		CUM CHANGE	15.01		CUM CHANGE	31.15		CUM CHANGE	5.45		CUM CHANGE	6.55

BLP6 JAN82

X	Y	Vol
BM	1.800	
0	1.81	
4	1.77	11.16
6	1.71	5.48
8	1.51	5.22
10	1.37	4.88
12	1.23	4.60
14	1.05	4.28
16	0.86	3.91
18	0.68	3.54
20	0.52	3.20
22	0.36	2.88
24	0.17	2.53
26	0.05	2.22
28	0.03	2.08
30	0.02	2.05
35	0.02	5.10
50	0.01	15.23
75	-0.02	24.88
100	-0.08	23.75

SUM 58.0

BLP6 JUN82

X	Y	Vol
BM	1.800	
0	1.81	
2	1.74	5.55
4	1.73	5.47
6	1.78	5.51
8	1.50	5.28
10	1.41	4.91
12	1.22	4.63
14	1.11	4.33
16	0.83	3.94
18	0.65	3.48
20	0.51	3.16
22	0.23	2.74
24	0.05	2.28
26	0.06	2.11
28	0.02	2.08
30	0.01	2.03

SUM 57.5
DIFF -0.5
CUM CHANGE -0.5

BLP6 JAN83

X	Y	Vol
BM	1.800	
0	1.81	
2	1.76	5.57
4	1.71	5.47
6	1.66	5.37
8	1.61	5.27
10	1.56	5.17
12	1.54	5.10
14	1.49	5.03
16	1.41	4.90
18	1.28	4.69
20	1.08	4.36
22	0.86	3.94
24	0.61	3.47
26	0.41	3.02
28	0.18	2.59
30	0.04	2.22
32	0.04	2.08
34	0.04	2.08
36	0.02	2.06
38	0.01	2.03
40	0.01	2.02
70	-0.02	29.85
100	-0.06	28.80

SUM 66.2
DIFF 8.7
CUM CHANGE 8.1

BLP6 AUG83

X	Y	Vol
BM	1.800	
0	1.81	
2	1.86	5.67
4	1.82	5.68
6	1.75	5.57
8	1.59	5.34
10	1.59	5.18
12	1.46	5.05
14	1.36	4.82
16	1.33	4.69
18	1.29	4.62
20	0.97	4.26
22	0.78	3.75
24	0.53	3.31
26	0.36	2.89
28	0.13	2.49
30	-0.03	2.10
32	-0.05	1.92
34	-0.07	1.88
36	-0.07	1.86
38	-0.08	1.85
40	-0.10	1.82

SUM 65.4
DIFF -0.8
CUM CHANGE 7.4

BLP6 AUG84

X	Y	Vol
BM	1.800	
0	1.80	
2	1.86	5.66
3	1.82	2.84
5	1.74	5.56
7	1.64	5.38
9	1.65	5.29
11	1.46	5.11
13	1.36	4.82
15	1.34	4.70
17	0.92	4.26
19	0.72	3.64
21	0.55	3.27
23	0.42	2.97
25	0.26	2.68
27	0.09	2.35
29	0.07	2.16
35	0.03	6.30
50	0.01	15.30
75	-0.03	24.75
100	-0.08	23.63

SUM 60.7
DIFF -4.7
CUM CHANGE 2.7

BLP6 JUL85

X	Y	Vol
BM	1.800	
0	1.80	
2	1.80	5.60
3	1.77	2.79
5	1.75	5.52
7	1.66	5.41
9	1.52	5.18
11	1.43	4.95
13	1.29	4.72
15	0.99	4.28
17	0.77	3.76
19	0.76	3.53
21	0.46	3.22
23	0.25	2.71
25	0.17	2.42
27	0.02	2.19
29	-0.04	1.98
35	-0.06	5.70
50	-0.08	13.95
75	-0.10	22.75
100	-0.13	22.13

SUM 58.3
DIFF -2.4
CUM CHANGE 0.2

BLP6 AUG86

X	Y	Vol
BM	1.800	
0	1.80	
2	1.87	5.67
4	1.85	5.72
6	1.67	5.52
8	1.62	5.29
10	1.38	5.00
12	1.26	4.64
14	0.95	4.21
16	0.72	3.67
18	0.39	3.11
20	0.13	2.52
22	-0.02	2.11
24	-0.04	1.94
26	-0.03	1.93
28	-0.07	1.90
30	-0.06	1.87
32	-0.08	1.86
34	-0.08	1.84
36	-0.11	1.81
38	-0.09	1.80
40	-0.09	1.82
60	-0.07	18.40
80	-0.17	17.60
100	-0.11	17.20

SUM 55.1
DIFF -3.2
CUM CHANGE -2.9

BLP6 FEB87

X	Y	Vol
BM	1.800	
0	1.80	
2	1.83	5.63
4	1.82	5.65
6	1.58	5.40
8	1.59	5.17
10	1.40	4.99
12	1.47	4.87
14	1.50	4.97
16	1.60	5.10
18	1.61	5.21
20	1.42	5.03
22	1.12	4.54
24	0.93	4.05
26	0.76	3.69
28	0.76	3.52
30	0.49	3.25
32	0.59	3.08
34	0.22	2.81
36	0.02	2.24
38	-0.17	1.85
40	-0.14	1.69
60	-0.16	17.00
80	-0.19	16.50
100	-0.13	16.80

SUM 71.1
DIFF 16.0
CUM CHANGE 13.0

BLP6 JUN87

X	Y	Vol
BM	1.800	
0	1.80	
2	1.85	5.65
4	1.81	5.66
6	1.74	5.55
8	1.61	5.35
10	1.60	5.21
12	1.44	5.04
14	1.33	4.77
16	1.08	4.41
18	1.00	4.08
20	1.08	4.08
22	1.16	4.24
24	1.42	4.58
26	1.49	4.91
28	1.27	4.76
30	1.05	4.32
32	0.82	3.87
34	0.64	3.46
36	0.44	3.08
38	0.32	2.76
40	0.15	2.47
60	-0.07	20.80
80	-0.07	18.60
100	-0.04	18.90

SUM 72.6
DIFF 1.5
CUM CHANGE 14.6

BLP6 JAN88

X	Y	Vol
BM	1.800	
0	1.80	
2	1.82	5.62
3	1.82	2.82
5	1.77	5.59
7	1.67	5.44
9	1.57	5.24
11	1.43	5.00
13	1.41	4.84
15	1.15	4.56
17	1.13	4.28
19	1.26	4.39
21	1.40	4.66
23	1.55	4.95
25	1.57	5.12
27	1.54	5.11
29	1.51	5.05
35	0.75	12.78
39	0.13	5.76
40	0.06	1.10
50	0.03	10.45
75	-0.16	23.38
100	-0.06	22.25

SUM 72.7
DIFF 0.1
CUM CHANGE 14.6

BLP6 JUL88

X	Y	Vol
BM	1.800	
0	1.80	
5	1.55	13.38
10	1.50	12.63
15	1.53	12.58
20	1.52	12.63
25	1.55	12.68
30	1.47	12.55
31	1.29	2.38
35	0.75	8.08
40	0.47	8.05
42	0.16	2.63
50	0.10	9.04
60	0.02	10.60
80	0.04	20.60
100	0.03	20.70

SUM 76.4
DIFF 3.8
CUM CHANGE 18.4

BLP7 JUN87			BLP7 JAN88			BLP7 JUL88		
X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	2.883		BM	2.883		BM	2.883	
0	2.88		0	2.88		0	2.88	
2	1.47	6.35	0	2.23	0.36	0.18	2.23	0.64
4	0.20	3.67	1	2.16	1.60	0.98	2.17	2.56
6	-0.21	1.99	4	0.01	7.09	2.28	1.28	3.54
8	-0.30	1.49	6	0.04	2.05	4.08	0.14	3.08
10	-0.41	1.29	8	-0.10	1.94	6.08	-0.08	2.06
12	-0.43	1.16	10	-0.18	1.72	8.08	-0.15	1.77
14	-0.46	1.11	12	-0.33	1.49	10.08	-0.21	1.64
16	-0.48	1.06	14	-0.44	1.23	12.08	-0.26	1.53
18	-0.57	0.95	16	-0.49	1.07	14.08	-0.32	1.42
20	-0.59	0.84	18	-0.58	0.93	16.08	-0.40	1.26
22	-0.63	0.78	20	-0.66	0.76	18.08	-0.43	1.17
24	-0.67	0.70	22	-0.67	0.67	20.08	-0.51	1.06
26	-0.67	0.66	24	-0.73	0.60	30.08	-0.50	4.95
28	-0.71	0.62	26	-0.75	0.52	35.08	-0.51	2.48
30	-0.71	0.58	28	-0.76	0.49	40.08	-0.61	2.20
32	-0.73	0.56	30	-0.78	0.46			
34	-0.74	0.53	40	-0.81	2.05			
36	-0.74	0.52	50	-0.84	1.75			
38	-0.75	0.51	75	-0.87	3.63			
40	-0.76	0.49	100	-0.92	2.63			
60	-0.82	4.20						
80	-0.85	3.30						
100	-0.87	2.80						
	SUM	15.84		SUM	17.73		SUM	21.56
				DIFF	1.89		DIFF	3.82
Comparison 6 to 40m				CUM CHANGE	1.89		CUM	5.72

BLP8 JUN87			BLP8 JAN88			BLP8 JUL88		
X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	2.887		BM	2.887		BM	2.887	
0	2.89		0.0	2.89		0	2.89	0.64
2	1.46	6.35	0.1	2.26	0.36	0.18	2.26	0.64
4	0.35	3.81	0.9	2.12	2.55	0.9	2.12	2.30
6	0.06	2.41	2.2	1.38	3.58	2.1	1.38	3.30
8	-0.19	1.87	4.6	0.05	4.12	3.4	0.57	2.57
10	-0.28	1.53	6.6	-0.06	1.99	5.4	0.26	2.83
12	-0.33	1.39	8.6	-0.15	1.79	8.4	-0.22	3.06
14	-0.39	1.28	10.0	-0.18	1.17	10.4	-0.27	1.51
16	-0.42	1.19	12.0	-0.26	1.56	12.4	-0.34	1.39
18	-0.47	1.11	14.0	-0.33	1.41	14.4	-0.39	1.27
20	-0.55	0.98	16.0	-0.37	1.30	16.4	-0:45	1.16
22	-0.59	0.86	18.0	-0.47	1.16	18.4	-0.52	1.03
24	-0.62	0.79	20.0	-0.52	1.01	20.4	-0.56	0.92
26	-0.64	0.74	22.0	-0.56	0.92	30.4	-0.56	4.40
28	-0.66	0.7	24.0	-0.60	0.84	40.4	-0.60	4.20
30	-0.66	0.68	26.0	-0.63	0.77			
32	-0.67	0.67	28.0	-0.63	0.74			
34	-0.68	0.65	30.0	-0.65	0.72			
36	-0.71	0.61	40.0	-0.71	3.20			
38	-0.72	0.57	50.0	-0.78	2.55			
40	-0.71	0.57	75.0	-0.80	5.25			
60	-0.75	5.4	100.0	-0.82	4.75			
80	-0.79	4.6						
100	-0.75	4.6						
SUM	18.6		SUM	18.6		SUM	21.8	
			DIFF	.0		DIFF	3.2	
			CUM CHANGE	.0		CUM CHANGE	3.2	

Comparison from 6 to 40m

BLP9 JUN87			BLP9 JAN88			BLP9 JUN88		
X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	3.126		BM	3.126		BM	3.126	
0	3.13		0.0	3.13		0.0	3.13	
2	2.22	7.35	0.1	2.51	0.38	0.2	2.50	0.69
4	0.93	5.15	2.0	2.17	6.35	0.8	2.48	2.16
6	0.62	3.55	4.0	1.68	5.85	1.0	2.35	0.68
8	0.37	2.99	6.0	1.41	5.09	2.0	2.25	3.30
10	0.12	2.49	8.0	1.17	4.58	3.0	2.04	3.15
12	-0.1	2.02	10.0	0.93	4.10	5.0	1.84	5.88
14	-0.34	1.56	12.0	0.65	3.58	7.0	1.75	5.59
16	-0.46	1.20	14.0	0.43	3.08	9.0	1.54	5.29
18	-0.54	1.00	16.0	0.22	2.65	11.0	1.32	4.86
20	-0.6	0.86	18.0	-0.02	2.20	13.0	1.07	4.39
22	-0.64	0.76	20.0	-0.23	1.75	15.0	0.75	3.82
24	-0.67	0.69	21.0	-0.39	0.69	17.0	0.43	3.18
26	-0.65	0.68	23.0	-0.53	1.08	19.0	0.17	2.60
28	-0.67	0.68	25.0	-0.65	0.82	22.0	-0.36	2.72
30	-0.66	0.67	27.0	-0.70	0.65	24.0	-0.56	1.08
32	-0.66	0.68	29.0	-0.73	0.57	26.0	-0.73	0.71
34	-0.68	0.66	30.0	-0.75	0.26	28.0	-0.72	0.55
36	-0.68	0.64	40.0	-0.78	2.35	30.0	-0.72	0.56
38	-0.71	0.61	50.0	-0.81	2.05			
40	-0.72	0.57	75.0	-0.77	5.25			
60	-0.76	5.20	100.0	-0.81	5.25			
80	-0.8	4.40						
100	-0.84	3.60						
		31.65	SUM		43.29	SUM		47.67
Comparison range 2-30m			DIFF		11.64	DIFF		4.374
			CUM CHANGE		11.64	CUM CHANGE		16.02

BLP10 JUN87			BLP10 JAN88			BLP10 JUL88		
X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	2.949		BM	2.949		BM	2.949	
0.0	2.95		0	2.95		0	2.95	
0.1	0.41	0.27	0.1	2.27	0.36	2	0.35	5.30
2.0	0.09	2.38	0.9	2.17	2.58	4	0.06	2.41
4.0	-0.12	1.97	4.7	0.22	8.34	6	-0.11	1.95
6.0	-0.26	1.62	6.0	0.13	1.53	8	-0.23	1.66
8.0	-0.32	1.42	6.7	0.09	0.78	10	-0.33	1.44
10.0	-0.41	1.27	8.0	0.04	1.38	12	-0.44	1.23
12.0	-0.45	1.14	10.0	-0.09	1.95	14	-0.47	1.09
14.0	-0.49	1.06	12.0	-0.19	1.72	20	-0.6	2.79
16.0	-0.54	0.97	14.0	-0.28	1.53	40	-0.72	6.80
18.0	-0.55	0.91	16.0	-0.37	1.35	60	-0.77	5.10
20.0	-0.57	0.88	18.0	-0.44	1.19	80	-0.77	4.60
22.0	-0.60	0.83	20.0	-0.51	1.05	100	-0.78	4.50
24.0	-0.59	0.81	22.0	-0.55	0.94			
26.0	-0.61	0.80	24.0	-0.58	0.87			
28.0	-0.62	0.77	26.0	-0.59	0.83			
30.0	-0.64	0.74	28.0	-0.61	0.80			
32.0	-0.65	0.71	30.0	-0.62	0.77			
34.0	-0.65	0.70	50.0	-0.70	6.80			
36.0	-0.66	0.69	70.0	-0.66	6.40			
38.0	-0.67	0.67	100.0	-0.70	9.60			
40.0	-0.67	0.66						
60.0	-0.69	6.40						
80.0	-0.73	5.80						
100.0	-0.74	5.30						
SUM		34.15	SUM		39.489	SUM		31.16
Comparison 6-100m			DIFF		5.339	DIFF		-8.329
			CUM CHANGE		5.339	CUM CHANGE		-2.99

BLP11 JUN87			BLP11 JAN88			BLP11 JUL88		
X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	2.922		BM	2.922		BM	2.922	
0.0	2.92		0.0	2.92		0.0	2.92	
0.1	0.80	0.29	0.1	2.26	0.36	0.1	2.27	0.43
2.0	0.57	3.20	0.9	2.21	2.59	0.9	2.24	2.54
4.0	0.30	2.87	2.8	1.12	5.06	2.9	1.61	5.85
6.0	0.06	2.36	4.0	1.01	2.48	3.6	1.16	1.67
8.0	-0.21	1.85	4.8	0.84	1.54	5.6	0.94	4.10
10.0	-0.34	1.45	6.8	0.62	3.46	7.6	0.76	3.70
12.0	-0.40	1.26	8.8	0.38	3.00	9.6	0.54	3.30
14.0	-0.48	1.12	10.8	0.15	2.53	11.6	0.32	2.86
16.0	-0.53	0.99	11.6	0.07	0.89	13.6	0.08	2.40
18.0	-0.55	0.92	13.6	-0.07	2.00	16.6	-0.29	2.69
20.0	-0.58	0.87	15.6	-0.28	1.65	18.6	-0.43	1.28
22.0	-0.56	0.86	17.6	-0.44	1.28	20.6	-0.53	1.04
24.0	-0.56	0.88	19.6	-0.57	0.99	22.6	-0.61	0.86
26.0	-0.53	0.91	21.6	-0.56	0.87	25.0	-0.69	0.84
28.0	-0.55	0.92	23.0	-0.58	0.60	30.0	-0.72	1.48
30.0	-0.54	0.91	25.0	-0.57	0.85	40.0	-0.82	2.30
32.0	-0.54	0.92	30.0	-0.58	2.13			
34.0	-0.51	0.95	40.0	-0.58	4.20			
36.0	-0.49	1.00	50.0	-0.58	4.20			
38.0	-0.48	1.03	75.0	-0.58	10.50			
40.0	-0.47	1.05	100.0	-0.58	10.50			
60.0	-0.48	10.50						
80.0	-0.54	9.80						
100.0	-0.51	9.50						
SUM		23.1	SUM		28.5	SUM		28.5
						DIFF		.0
Comparison 4 to 40m			DIFF		5.3			
			CUM CHANGE		5.3	CUM CHANGE		5.4

BLP12 JUN87			BLP12 JAN88			BLP12 JUL88		
X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	2.192		BM	2.192		BM	2.192	
0.0	2.19		0.0	2.19		0	2.19	
2.0	2.01	6.20	2.0	1.99	6.18	2	2.13	6.32
4.0	1.94	5.95	4.0	1.91	5.90	4	1.58	5.71
6.0	1.89	5.83	6.0	1.19	5.10	6	1.07	4.65
8.0	1.86	5.75	8.0	0.92	4.11	8	0.69	3.76
10.0	1.40	5.26	10.0	0.67	3.59	10	0.39	3.08
12.0	1.02	4.42	12.0	0.46	3.13	12	0.15	2.54
14.0	0.68	3.70	14.0	0.23	2.69	14	-0.07	2.08
16.0	0.43	3.11	16.0	-0.04	2.19	16	-0.18	1.75
18.0	0.16	2.59	18.0	-0.19	1.77	18	-0.24	1.58
20.0	-0.03	2.13	20.0	-0.27	1.54	20	-0.34	1.42
22.0	-0.13	1.84	22.0	-0.27	1.46	22	-0.28	1.38
24.0	-0.21	1.66	24.0	-0.29	1.44	24	-0.30	1.42
26.0	-0.24	1.55	26.0	-0.29	1.42	26	-0.33	1.37
28.0	-0.25	1.51	28.0	-0.29	1.42	28	-0.32	1.35
30.0	-0.26	1.49	30.0	-0.37	1.34	30	-0.34	1.34
32.0	-0.26	1.48	50.0	-0.38	12.50	32	-0.34	1.32
34.0	-0.28	1.46	75.0	-0.39	15.38	34	-0.36	1.30
36.0	-0.28	1.44	100.0	-0.39	15.25	36	-0.35	1.29
38.0	-0.32	1.40				38	-0.36	1.29
40.0	-0.33	1.35				40	-0.40	1.24
60.0	-0.33	13.40				60	-0.42	11.80
80.0	-0.38	12.90				80	-0.38	12.00
100.0	-0.34	12.80				100	-0.39	12.30
SUM		75.49	SUM		65.115	SUM		61.85
Comparison 10 to 100m			DIFF		-10.37	DIFF		-3.265
			CUM CHANGE		-10.37	CUM CHANGE		-13.64

BLP13 JAN82

X	Y	Vol
BM	2.050	
0	2.05	
2	1.77	5.82
4	1.45	5.22
6	1.11	4.56
8	0.78	3.89
10	0.53	3.31
12	0.33	2.86
14	0.07	2.40
16	-0.05	2.02
18	-0.15	1.80
20	-0.24	1.61
22	-0.29	1.47
24	-0.34	1.37
26	-0.36	1.30
28	-0.37	1.27
30	-0.37	1.26
35	-0.39	3.10
45	-0.39	6.10
60	-0.36	9.38
80	-0.36	12.80
100	-0.33	13.10
SUM		40.16

Comparison 0 to 30m

BLP13 JUN82

X	Y	Vol
BM	2.050	
0	2.05	
2	1.86	5.91
4	1.44	5.30
6	1.18	4.62
8	0.83	4.01
10	0.63	3.46
12	0.35	2.98
14	0.12	2.47
16	-0.04	2.08
18	-0.15	1.81
20	-0.20	1.65
22	-0.27	1.53
24	-0.32	1.41
26	-0.33	1.35
28	-0.38	1.29
30	-0.38	1.24
SUM		41.1
DIFF		0.9
CUM CHANGE		0.9

BLP13 JAN83

X	Y	Vol
BM	2.050	
0	2.05	
2	1.61	5.66
4	1.26	4.87
6	0.89	4.15
8	0.58	3.47
10	0.36	2.94
12	0.18	2.54
14	0.00	2.18
16	-0.09	1.91
18	-0.19	1.72
20	-0.24	1.57
22	-0.26	1.50
24	-0.29	1.45
26	-0.32	1.39
28	-0.34	1.34
30	-0.36	1.30
32	-0.36	1.28
34	-0.36	1.28
36	-0.36	1.28
38	-0.36	1.28
40	-0.36	1.28
62	-0.32	14.52
81	-0.35	12.64
97	-0.29	10.88
SUM		38.0
DIFF		-3.1
CUM CHANGE		-2.2

BLP13 AUG83

X	Y	Vol
BM	2.050	
0	2.05	
2	1.58	5.63
4	1.27	4.65
6	0.93	4.20
8	0.63	3.56
10	0.42	3.05
12	0.24	2.66
14	0.04	2.28
16	-0.13	1.91
18	-0.25	1.62
20	-0.28	1.47
22	-0.34	1.38
24	-0.34	1.32
26	-0.34	1.32
28	-0.31	1.35
30	-0.36	1.33
SUM		37.93
DIFF		-0.06
CUM CHANGE		-2.23

BLP13 AUG84

X	Y	Vol
BM	2.050	
0	2.05	
1	2.06	1.53
1	2.01	1.52
2	1.81	2.91
3	1.74	1.39
3	1.59	1.33
5	1.19	4.78
7	0.92	4.11
9	0.66	3.58
11	0.46	3.12
13	0.27	2.73
14	0.19	1.23
15	0.11	1.15
16	0.02	1.07
18	-0.19	1.83
20	-0.33	1.48
25	-0.38	3.23
30	-0.36	3.15
35	-0.35	3.23
45	-0.39	6.30
60	-0.35	9.45
80	-0.34	13.10
100	-0.33	13.30
SUM		40.1
DIFF		2.2
CUM CHANGE		.0

BLP13 JUL85

X	Y	Vol
BM	2.050	
0	2.05	
2	1.48	5.53
4	1.20	4.68
8	0.63	7.66
10	0.42	3.05
12	0.18	2.60
14	0.01	2.19
16	-0.12	1.89
18	-0.22	1.66
20	-0.27	1.51
22	-0.32	1.41
24	-0.36	1.32
26	-0.37	1.27
28	-0.37	1.26
30	-0.36	1.27
32	-0.37	1.27
34	-0.38	1.25
36	-0.38	1.24
38	-0.38	1.24
40	-0.38	1.24
60	-0.36	12.60
80	-0.32	13.20
100	-0.34	13.40
SUM		38.6
DIFF		-1.6
CUM CHANGE		-1.6

BLP13 AUG86

X	Y	Vol
BM	2.050	
0	2.05	
2	1.56	5.61
4	1.17	4.73
6	0.88	4.05
8	0.61	3.49
10	0.39	3.00
12	0.18	2.57
14	-0.02	2.16
16	-0.14	1.84
18	-0.21	1.65
20	-0.28	1.51
22	-0.34	1.38
24	-0.35	1.31
26	-0.38	1.27
28	-0.34	1.28
30	-0.37	1.29
32	-0.37	1.26
34	-0.34	1.29
36	-0.34	1.32
38	-0.34	1.32
40	-0.33	1.33
60	-0.33	13.40
80	-0.26	14.10
100	-0.26	14.80
SUM		37.1
DIFF		-1.4
CUM CHANGE		-3.0

BLP13 FEB87

X	Y	Vol
BM	2.050	
0	2.05	
2	1.82	5.87
4	1.35	5.17
6	1.01	4.36
8	0.71	3.72
10	0.48	3.19
12	0.25	2.73
14	0.00	2.25
16	-0.14	1.86
18	-0.21	1.65
20	-0.28	1.51
22	-0.33	1.39
24	-0.37	1.30
26	-0.37	1.26
28	-0.38	1.25
30	-0.39	1.23
32	-0.39	1.22
34	-0.41	1.20
36	-0.39	1.20
38	-0.39	1.22
40	-0.37	1.24
60	-0.36	12.70
80	-0.36	12.80
100	-0.34	13.00
SUM		38.7
DIFF		1.6
CUM CHANGE		-1.4

BLP13 JUN87

X	Y	Vol
BM	2.050	
0	1.73	
1	1.62	2.68
2	1.48	2.55
3	1.34	2.41
5	0.99	4.33
7	0.68	3.67
9	0.47	3.15
11	0.25	2.72
13	0.04	2.29
15	-0.14	1.90
30	-0.31	11.63
35	-0.37	3.30
55	-0.37	12.60
75	-0.37	12.60
SUM		34.6
DIFF		-4.1
CUM CHANGE		-5.5

BLP13 JAN88

X	Y	Vol
BM	2.050	
0.0	2.05	
0.5	2.00	1.51
1.0	1.99	1.50
1.5	2.00	1.50
2.0	2.01	1.50
2.5	1.97	1.50
3.0	1.96	1.48
5.0	1.88	5.84
6.0	1.85	2.87
7.0	1.53	2.69
9.0	0.65	4.18
11.0	0.35	3.00
13.0	0.48	2.83
14.0	0.35	1.42
15.0	0.22	1.29
16.0	0.11	1.17
17.0	0.01	1.06
18.0	-0.11	0.95
20.0	-0.25	1.64
25.0	-1.28	1.18
30.0	-1.32	-1.50
35.0	-1.30	-1.55
45.0	-1.31	-3.05
60.0	-1.28	-4.43
SUM		37.6
DIFF		2.9
CUM CHANGE		-2.6

BLP13 JUL88

X	Y	Vol
BM	2.050	
0	2.05	
2	1.78	5.83
4	1.17	4.95
6	0.74	3.91
8	0.44	3.18
10	-0.09	2.35
12	-0.12	1.79
14	-0.27	1.61
16	-0.34	1.39
18	-0.39	1.27
20	-0.40	1.21
22	-0.41	1.19
24	-0.42	1.17
26	-0.43	1.15
28	-0.42	1.15
30	-0.40	1.18
32	-0.41	1.19
34	-0.41	1.18
36	-0.44	1.15
38	-0.43	1.13
40	-0.42	1.15
60	-0.36	12.20
80	-0.36	12.80
100	-0.36	12.80
SUM		33.3
DIFF		-4.3
CUM CHANGE		-6.8

BLP14 JAN82			BLP14 JUN82			BLP14 JAN83			BLP14 AUG83			BLP14 AUG84			BLP14 JUL85			BLP14 AUG86			BLP14 FEB87			BLP14 JUN87			BLP14 JAN88			BLP14 JUN88		
X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	1.840		BM	1.840		BM	1.840		BM	1.840		BM	1.840		BM	1.840		BM	1.840		BM	1.840		BM	1.840		BM	1.840		BM	1.840	
0	2.00		0	1.90		0	1.86		0	1.72		0	1.78		0	1.78		0	1.84		0	1.84		0	1.84		0	1.84		0	1.84	0.752
2	2.11	6.11	2	2.02	5.92	2	1.91	5.77	2	1.84	5.56	2	1.82	5.60	11	1.93	31.41	2	0.74	4.58	2	1.03	4.87	1	1.93	2.92	1	1.13	2.49	2	0.95	4.79
4	2.11	6.22	4	2.04	6.06	4	1.98	5.89	4	1.97	5.81	4	1.98	5.80	13	1.62	5.55	4	0.44	3.18	4	0.82	3.85	3	1.90	5.83	2	0.96	2.05	4	0.57	3.52
6	2.26	6.37	6	2.13	6.17	6	2.11	6.09	6	1.99	5.96	6	2.04	6.02	17	0.93	9.10	6	0.20	2.64	8	0.21	6.06	5	1.57	5.47	3	0.81	1.89	6	0.25	2.82
8	2.03	6.29	8	1.96	6.09	8	2.06	6.17	8	1.99	5.98	8	2.00	6.04	19	0.61	3.54	8	-0.01	2.19	10	-0.01	2.20	7	1.25	4.82	4	0.72	0.88	8	0.03	2.28
10	1.52	5.55	10	1.47	5.43	10	1.84	5.90	10	1.93	5.92	9	1.81	2.91	21	0.33	2.94	10	-0.22	1.77	12	-0.22	1.77	9	0.90	4.15	4	0.63	0.84	10	-0.21	1.82
12	1.25	4.77	12	1.17	4.64	12	1.41	5.25	12	1.25	5.18	10	1.67	2.74	23	0.07	2.40	12	-0.36	1.42	14	-0.41	1.37	11	0.49	3.39	5	0.56	0.80	12	-0.41	1.38
14	0.91	4.16	14	0.86	4.03	14	1.11	4.52	14	0.95	4.20	11	1.58	2.63	25	-0.15	1.92	14	-0.51	1.13	16	-0.53	1.06	13	0.23	2.72	5	0.48	0.76	14	-0.53	1.06
16	0.54	3.45	16	0.53	3.39	16	0.81	3.92	16	0.68	3.63	12	1.45	2.52	27	-0.29	1.56	16	-0.62	0.87	18	-0.65	0.82	15	0.02	2.25	6	0.36	1.42	16	-0.63	0.84
18	0.29	2.83	18	0.31	2.84	18	0.66	3.47	18	0.38	3.06	13	1.29	2.37	29	-0.40	1.31	18	-0.65	0.73	20	-0.70	0.65	17	-0.20	1.82	8	0.13	2.49	18	-0.71	0.66
20	0.06	2.35	20	0.09	2.40	20	0.41	3.07	20	0.17	2.55	15	0.95	4.24	31	-0.48	1.12	20	-0.69	0.66	22	-0.73	0.57	19	-0.44	1.36	10	-0.12	2.01	20	-0.74	0.55
22	-0.15	1.91	22	-0.15	1.94	22	0.23	2.64	22	-0.05	2.12	17	0.68	3.63	33	-0.55	0.97	22	-0.73	0.58	24	-0.74	0.53	21	-0.56	1.00	12	-0.29	1.59	24	-0.76	1.00
24	-0.26	1.59	24	-0.26	1.59	24	0.06	2.29	24	-0.22	1.73	19	0.41	3.09	35	-0.59	0.86	24	-0.88	0.39	26	-0.74	0.52	23	-0.65	0.79	13	-0.42	0.65	30	-0.71	1.59
26	-0.32	1.42	26	-0.33	1.41	26	0.01	2.07	26	-0.36	1.42	21	0.20	2.61	36	-0.60	0.41	26	-0.74	0.38	28	-0.74	0.52	25	-0.71	0.64	15	-0.58	1.00	36	-0.68	1.83
28	-0.42	1.26	28	-0.41	1.26	28	-0.04	1.97	28	-0.48	1.16	23	0.00	2.20	38	-0.60	0.80	28	-0.73	0.53	30	-0.70	0.56	27	-0.76	0.53	17	-0.66	0.76	40	-0.69	1.26
30	-0.46	1.12	30	-0.45	1.14	30	-0.11	1.85	30	-0.49	1.03	25	-0.19	1.81	40	-0.60	0.80	30	-0.72	0.55	32	-0.69	0.61	29	-0.81	0.43	19	-0.71	0.63	100	-0.69	18.60
35	-0.47	2.68	32	-0.49	1.06	32	-0.17	1.72	32	-0.55	0.96	27	-0.34	1.47	50	-0.54	4.30	32	-0.69	0.59	34	-0.69	0.62	40	-0.77	2.31	21	-0.74	0.55			
40	-0.47	2.65	34	-0.52	0.99	34	-0.22	1.61	34	-0.53	0.92	29	-0.47	1.19	60	-0.56	4.50	34	-0.68	0.63	36	-0.71	0.60	49	-0.73	2.25	23	-0.75	0.51			
50	-0.47	5.30	36	-0.54	0.94	36	-0.29	1.49	36	-0.55	0.92	30	-0.50	0.52	75	-0.64	6.00	36	-0.67	0.65	38	-0.67	0.62	69	-0.77	5.00	25	-0.73	0.52			
75	-0.53	12.50	38	-0.52	0.94	38	-0.29	1.42	38	-0.55	0.90	35	-0.56	2.35	90	-0.60	5.70	38	-0.67	0.66	40	-0.69	0.64	89	-0.77	4.60	30	-0.68	1.48			
100	-0.56	11.38	40	-0.52	0.96	40	-0.29	1.42	40	-0.53	0.92	40	-0.55	2.22				40	-0.70	0.63	60	-0.69	6.20				35	-0.66	1.65			
						52	-0.3	8.46				50	-0.53	4.60				60	-0.68	6.20	80	-0.73	5.80				40	-0.66	1.70			
						64	-0.29	8.46				75	-0.60	10.88				80	-0.77	5.50	100	-0.71	5.60				50	-0.65	3.45			
						82	-0.23	13.32				100	-0.63	9.63				100	-0.74	4.90							75	-0.69	8.25			
						95	-0.33	9.36																			100	-0.73	7.25			
SUM	60.7		SUM	59.2		SUM	68.5		SUM	59.9		SUM	61.9		SUM	64.7		SUM	24.8		SUM	28.4		SUM	40.4		SUM	26.6		SUM	25.4	
Comparison 0 to 40m			DIFF	-1.5		DIFF	9.3		DIFF	-8.6		DIFF	2.0		DIFF	2.7		DIFF	-39.9		DIFF	3.7		DIFF	12.0		DIFF	-13.8		DIFF	-1.2	
			CUM CHANGE	-1.5		CUM CHANGE	7.8		CUM CHANGE	-0.8		CUM CHANGE	1.2		CUM CHANGE	4.0		CUM CHANGE	-36.0		CUM CHANGE	-32.3		CUM CHANGE	-20.3		CUM CHANGE	-34.1		CUM CHANGE	-35.3	

BLP15 JAN82			BLP15 JUN82			BLP15 JAN83			BLP15 AUG83			BLP15 AUG84			BLP15 JUL85			BLP15 AUG86			BLP15 FEB87			BLP15 JUN87			BLP15 JAN88			BLP15 JUL88		
X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	2.580		BM	2.580		BM	2.580		BM	2.580		BM	2.580		BM	2.580		BM	2.580		BM	2.580		BM	2.580		BM	2.580		BM	2.580	
0	1.99		0	2.00		0	2.00		0	1.91		0	2.07		0	1.91		0	1.67		0	2.58		0	1.99		0	2.58		0	2.58	
2	1.99	5.98	2	2.04	6.04	4	2.14	12.28	2	2.01	5.92	1	2.08	3.08	2	2.07	5.98	2	1.99	5.66	2	2.05	6.63	2	1.97	5.96	2	1.95	6.53	2	2.06	6.64
4	2.02	6.01	4	2.02	6.06	6	1.98	6.12	4	2.02	6.03	2	2.03	3.06	6	1.95	12.04	4	2.01	6.00	4	2.05	6.10	4	1.88	5.85	4	1.99	5.94	4	2.03	6.09
6	1.75	5.77	6	1.88	5.90	8	1.68	5.66	6	1.89	5.91	3	2.06	3.05	8	1.99	5.94	6	2.00	6.01	6	2.01	6.06	6	1.92	5.80	6	1.90	5.89	6	2.04	6.07
8	1.44	5.19	8	1.43	5.31	10	1.28	4.96	8	1.49	5.38	4	2.05	1.53	10	1.32	5.31	8	1.95	5.95	8	2.06	6.07	8	1.98	5.90	8	1.80	5.70	8	1.84	5.88
10	1.02	4.46	10	1.15	4.58	12	0.93	4.21	10	1.15	4.64	4	2.05	1.53	12	0.90	4.22	10	1.62	5.57	10	1.83	5.89	10	1.66	5.64	10	1.28	5.08	10	1.44	5.28
12	0.72	3.74	12	0.72	3.87	14	0.66	3.59	12	0.75	3.90	5	2.02	1.52	14	0.59	3.49	12	0.83	4.45	12	1.26	5.09	12	1.21	4.87	12	0.85	4.13	12	0.93	4.37
14	0.38	3.10	14	0.41	3.13	16	0.36	3.02	14	0.47	3.22	5	1.97	1.50	16	0.36	2.95	14	0.45	3.28	14	0.79	4.05	14	0.82	4.03	14	0.52	3.37	14	0.57	3.50
16	0.11	2.49	16	0.17	2.58	18	0.13	2.49	16	0.24	2.71	6	1.96	1.48	18	0.14	2.50	16	0.17	2.62	16	0.46	3.25	16	0.46	3.28	16	0.28	2.80	16	0.28	2.85
18	-0.07	2.04	18	-0.06	2.11	20	-0.06	2.07	18	0.01	2.25	6	1.91	1.47	20	0.08	2.22	18	0.29	2.46	18	0.18	2.64	18	0.24	2.70	18	0.09	2.37	19	-0.04	3.36
20	-0.17	1.76	20	-0.18	1.76	22	-0.14	1.80	20	-0.13	1.88	7	1.83	2.87	22	-0.18	1.90	20	0.07	2.36	20	-0.06	2.12	20	0.01	2.25	20	-0.10	1.99	21	-0.23	1.73
22	-0.26	1.57	22	-0.25	1.57	24	-0.22	1.64	22	-0.24	1.63	8	1.63	2.73	24	-0.24	1.58	22	-0.08	1.99	22	-0.18	1.76	22	-0.18	1.83	22	-0.29	1.61	23	-0.32	1.45
24	-0.35	1.39	24	-0.32	1.43	26	-0.26	1.52	24	-0.33	1.43	10	1.20	4.83	26	-0.28	1.47	24	-0.20	1.72	24	-0.27	1.55	24	-0.29	1.53	24	-0.35	1.36	27	-0.32	2.72
26	-0.32	1.33	26	-0.34	1.34	28	-0.28	1.46	26	-0.35	1.32	12	0.88	4.08	28	-0.29	1.42	26	-0.26	1.54	26	-0.29	1.44	26	-0.35	1.36	26	-0.38	1.27	30	-0.38	1.95
28	-0.35	1.33	28	-0.34	1.32	30	-0.31	1.41	28	-0.31	1.34	14	0.63	3.51	30	-0.29	1.42	28	-0.30	1.44	28	-0.29	1.42	28	-0.36	1.29	28	-0.40	1.22	31	-0.39	0.62
30	-0.38	1.27	30	-0.36	1.30				30	-0.33	1.36	15	0.46	1.55	32	-0.25	1.46	30	-0.30	1.44	30	-0.37	1.34	30	-0.36	1.28	30	-0.43	1.17	35	-0.30	2.62
40	-0.29	6.65										16	0.35	1.41	34	-0.31	1.44	30	-0.26	1.44	32	-0.31	1.32	50	-0.30	13.40	40	-0.28	6.45	40	-0.30	3.50
50	-0.29	7.10										17	0.24	1.30	36	-0.23	1.46	32	-0.29	1.45	34	-0.24	1.45	70	-0.38	13.20	50	-0.35	6.85			
75	-0.35	17.00										18	0.14	1.19	38	-0.24	1.53	34	-0.31	1.40	36	-0.21	1.55				75	-0.40	15.63			
100	-0.32	16.63										19	0.03	1.09	40	-0.23	1.53	36	-0.21	1.48	38	-0.22	1.57				100	-0.40	15.00			
												20	-0.02	1.01	60	-0.19	15.80	38	-0.26	1.53	40	-0.23	1.55									
												22	-0.15	1.83	80	-0.26	15.50	40	-0.23	1.51												
												24	-0.25	1.60	100	-0.29	14.30	60	-0.18	15.90	60	-0.18	15.90									
												26	-0.30	1.45				80	-0.29	15.30	80	-0.18	16.40									
												30	-0.26	2.88				100	-0.27	14.40	100	-0.40	14.20									
												40	-0.21	7.65																		
												50	-0.18	8.05																		
												75	-0.19	20.38																		
												100	-0.25	19.50																		
SUM		47.4	SUM		48.3	SUM		52.2	SUM		48.9				SUM		52.4	SUM		52.5	SUM		55.4	SUM		53.6	SUM		50.4	SUM		51.9
Comparison of 0 to 30m			DIFF		0.9	DIFF		3.9	DIFF		-3.3	SUM		51.5	DIFF		0.9	DIFF		0.1	DIFF		2.9	DIFF		-1.8	DIFF		-3.1	DIFF		1.5
			CUM CHANGE		0.9	CUM CHANGE		4.8	CUM CHANGE		1.5	DIFF		2.6	CUM CHANGE		5.0	CUM CHANGE		5.1	CUM CHANGE		8.0	CUM CHANGE		6.1	CUM CHANGE		3.0	CUM CHANGE		4.5

BLP16 JAN82			BLP16 JUN82			BLP16 JAN83			BLP16 AUG83			BLP16 AUG84			BLP16 JUL85			BLP16 JUL86			BLP16 FEB87			BLP16 JUN87			BLP16 JAN88			BLP16 JUL88		
X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	2.190		BM	2.190		BM	2.190		BM	2.190		BM	2.190		BM	2.190		BM	2.190		BM	2.190		BM	2.190		BM	2.190		BM	2.190	
0	1.91		0	1.95		0	1.95		0	1.95		0	1.97		0	1.97		0	1.97		0	2.19		0	2.19		0	1.95		0	1.95	
2	2.00	5.91	2	2.00	5.95	8	2.13	24.32	2	2.01	5.96	2	2.01	5.98	2	2.01	5.98	2	2.01	5.98	2	1.98	6.17	2	2.01	6.20	2	1.83	5.78	2	2.02	5.97
4	2.06	6.06	4	2.03	6.03	10	2.13	6.26	4	2.02	6.03	4	1.98	5.99	4	1.99	6.00	4	2.02	6.03	4	2.00	5.98	4	2.03	6.04	4	1.90	5.73	4	2.03	6.05
6	2.03	6.09	6	1.98	6.01	12	1.97	6.10	6	2.01	6.03	6	2.05	6.03	6	2.03	6.02	6	2.01	6.03	6	2.02	6.02	6	2.04	6.07	6	1.93	5.83	6	2.04	6.07
8	2.09	6.12	8	2.10	6.08	14	1.64	5.61	8	2.12	6.13	8	2.10	6.15	8	2.07	6.10	6	2.03	6.02	8	2.00	6.02	8	2.05	6.09	8	2.01	5.94	8	2.05	6.09
10	2.06	6.15	10	2.09	6.19	16	1.31	4.95	10	2.17	6.29	10	2.18	6.28	10	2.17	6.24	8	2.05	6.06	10	1.89	5.89	10	1.94	5.99	10	2.01	6.02	10	2.00	6.05
12	1.82	5.88	12	1.79	5.88	18	0.86	4.17	12	1.94	6.11	11	2.23	3.21	12	2.03	6.20	10	2.08	6.13	12	1.87	5.76	12	1.97	5.91	12	2.00	6.01	12	1.97	5.97
14	1.41	5.23	14	1.42	5.21	20	0.49	3.35	14	1.52	5.46	12	2.14	1.59	14	1.72	5.75	12	2.01	6.09	14	1.87	5.74	14	1.85	5.82	14	1.94	5.94	14	1.71	5.68
16	1.00	4.41	16	1.00	4.42	22	0.28	2.77	16	1.18	4.70	12	1.97	1.53	16	1.27	4.99	14	1.76	5.77	16	1.41	5.28	16	1.55	5.40	16	1.93	5.87	16	1.33	5.64
18	0.79	3.79	18	0.68	3.68	24	0.11	2.39	18	0.81	3.99	13	1.93	1.48	18	0.88	4.15	16	1.33	5.09	18	0.94	4.35	18	1.13	4.68	18	1.91	5.84	18	0.85	4.18
20	0.42	3.21	20	0.38	3.06	26	-0.06	2.05	20	0.49	3.30	13	1.91	1.46	20	0.58	3.46	18	1.01	4.34	20	0.61	3.55	20	0.79	3.92	20	1.76	5.67	20	0.51	3.36
22	0.06	2.48	22	0.14	2.52	28	-0.15	1.79	22	0.29	2.78	15	1.38	5.29	22	0.34	2.92	20	0.68	3.69	22	0.33	2.94	22	0.50	3.29	22	1.27	5.03	22	0.18	2.69
24	-0.06	2.00	24	-0.06	2.08	30	-0.14	1.71	24	0.05	2.34	17	1.02	4.40	24	0.12	2.46	22	0.43	3.11	24	0.06	2.39	24	0.25	2.75	24	0.84	4.11	24	-0.12	2.06
26	-0.18	1.76	26	-0.19	1.75	32	-0.14	1.72	26	-0.12	1.93	18	0.88	1.95	26	-0.10	2.02	24	0.17	2.60	26	-0.11	1.95	26	0.04	2.29	26	0.57	3.41	26	-0.27	1.61
28	-0.22	1.60	28	-0.22	1.59	34	-0.14	1.72	28	-0.13	1.75	19	0.76	1.82	28	-0.19	1.71	26	-0.05	2.12	28	-0.25	1.64	28	-0.14	1.90	28	0.30	2.87	28	-0.35	1.38
30	-0.19	1.59	30	-0.17	1.61	36	-0.14	1.72	30	-0.20	1.67	20	0.60	1.68	30	-0.23	1.58	28	-0.14	1.81	30	-0.29	1.46	30	-0.25	1.61	30	0.09	2.39	30	-0.34	1.31
40	-0.15	8.30				38	-0.14	1.72	32	-0.23	1.57	21	0.45	1.53	32	-0.25	1.52	30	-0.24	1.62	32	-0.27	1.44	32	-0.24	1.51	32	-0.13	1.96	34	-0.39	2.54
50	-0.22	8.15				40	-0.14	1.72	34	-0.26	1.51	22	0.31	1.38	34	-0.26	1.49	32	-0.25	1.51	34	-0.24	1.49	34	-0.22	1.54	34	-0.26	1.61			
75	-0.34	18.00				48	-0.31	6.20	36	-0.18	1.56	23	0.22	1.27	36	-0.20	1.54	34	-0.23	1.52	36	-0.18	1.58	36	-0.20	1.58	36	-0.34	1.40			
100	-0.40	15.75				53	-0.16	3.83	38	-0.19	1.63	25	-0.05	2.17	38	-0.16	1.64	36	-0.19	1.58	38	-0.16	1.66	38	-0.17	1.63	38	-0.32	1.34			
						60	-0.27	5.50	40	-0.17	1.64	27	-0.14	1.81	40	-0.22	1.62	38	-0.16	1.65	40	-0.18	1.66	40	-0.18	1.65	40	-0.30	1.38			
						66	-0.33	4.20				30	-0.18	2.52	60	-0.31	14.70	40	-0.18	1.66	60	-0.30	15.20	60	-0.30	15.20	50	-0.29	7.05			
						71	-0.46	3.03				50	-0.21	16.10	80	-0.32	13.70	60	-0.35	14.70	80	-0.40	13.00	80	-0.34	13.60	75	-0.29	17.75			
						81	-0.19	6.75				75	-0.33	18.25	100	-0.48	12.00	80	-0.31	13.40	100	-0.48	11.20	100	-0.37	12.90	100	-0.39	16.50			
						93	-0.33	8.88				100	-0.44	15.38				100	-0.47	12.20												
SUM	62.3		SUM	62.1		SUM	65.5		SUM	64.5		SUM	65.5		SUM	65.6		SUM	66.5		SUM	65.1		SUM	68.0		SUM	76.4		SUM	63.5	
Comparison 0 to 30m			DIFF	-0.22		DIFF	3.41		DIFF	-1		DIFF	1.03		DIFF	0.08		DIFF	0.89		DIFF	-1.33		DIFF	2.82		DIFF	8.48		DIFF	-12.93	
			CUM CHANGE	-0.22		CUM CHANGE	3.19		CUM CHANGE	2.19		CUM CHANGE	3.22		CUM CHANGE	3.3		CUM CHANGE	4.19		CUM CHANGE	2.86		CUM CHANGE	5.68		CUM CHANGE	14.16		CUM CHANGE	1.23	

BLP17 JAN82

X	Y	Vol
BM	2.59	
0	1.86	
2	1.86	7.72
4	2.07	7.93
6	1.95	8.02
8	1.51	7.46
10	1.16	6.67
12	0.83	5.99
14	0.56	5.39
16	0.44	5.00
18	0.09	4.53
20	-0.23	3.86
22	-0.32	3.45
24	-0.42	3.26
26	-0.47	3.11
28	-0.47	3.06
30	-0.47	3.06
50	-0.47	30.60
75	-0.44	38.63
100	-0.53	37.88
SUM		78.5

Comparison 0 to 30m

BLP17 JUN82

X	Y	Vol
BM	2.59	
0	1.89	
2	1.89	7.78
4	2.09	7.98
6	1.81	7.90
8	1.38	7.19
10	1.09	6.47
12	0.73	5.82
14	0.45	5.18
16	0.24	4.69
18	-0.05	4.19
20	-0.26	3.69
22	-0.37	3.37
24	-0.42	3.21
26	-0.45	3.13
28	-0.46	3.09
30	-0.48	3.06
SUM		76.8
DIFF		-1.8
CUM CHANGE		-1.8

BLP17 JAN83

X	Y	Vol
BM	2.59	
0	1.89	
2	1.88	7.77
4	2.00	7.88
6	1.76	7.76
8	1.39	7.15
10	1.01	6.40
12	0.69	5.70
14	0.41	5.10
16	0.21	4.62
18	0.01	4.22
20	-0.19	3.82
22	-0.31	3.50
24	-0.41	3.28
26	-0.42	3.17
28	-0.43	3.15
30	-0.44	3.13
38	-0.45	12.44
57	-0.37	30.21
89	-0.55	49.28
92	-0.40	4.58
SUM		76.7
DIFF		-0.1
CUM CHANGE		-1.9

BLP17 AUG83

X	Y	Vol
BM	2.59	
0	1.83	
2	1.87	7.70
4	2.11	7.98
6	1.70	7.81
8	1.33	7.03
10	1.01	6.34
12	0.72	5.73
14	0.43	5.15
16	0.23	4.66
18	0.04	4.27
20	-0.21	3.83
22	-0.36	3.43
24	-0.37	3.27
26	-0.40	3.23
28	-0.45	3.15
30	-0.47	3.08
SUM		76.7
DIFF		.0
CUM CHANGE		-1.9

BLP17 AUG84

X	Y	Vol
BM	2.59	
0	1.83	
1	1.82	3.83
2	1.87	3.85
3	2.01	3.94
4	2.12	4.07
5	2.06	4.09
6	1.88	1.99
6	1.82	1.93
7	1.69	1.88
7	1.66	1.84
8	1.67	1.83
8	1.64	1.83
10	1.37	7.01
12	1.01	6.38
14	0.71	5.72
16	0.48	5.19
17	0.40	2.44
18	0.32	1.18
19	0.15	3.35
20	0.05	2.10
21	-0.05	2.00
23	-0.27	3.68
25	-0.40	3.33
30	-0.45	7.88
50	-0.43	31.20
75	-0.45	39.00
100	-0.45	38.75
SUM		81.3
DIFF		4.6
CUM CHANGE		2.8

BLP17 JUL85

X	Y	Vol
BM	2.59	
0	1.83	
2	1.95	7.78
4	2.15	8.10
6	1.85	8.00
8	1.60	7.45
10	1.14	6.74
12	0.80	5.94
14	0.55	5.35
16	0.33	4.88
18	0.11	4.44
20	-0.14	3.97
22	-0.36	3.50
24	-0.41	3.23
26	-0.48	3.11
28	-0.45	3.07
30	-0.47	3.08
32	-0.47	3.06
34	-0.50	3.03
36	-0.49	3.01
38	-0.50	3.01
60	-0.38	34.32
80	-0.36	32.60
100	-0.35	32.90
SUM		78.6
DIFF		-2.7
CUM CHANGE		0.1

BLP17 AUG86

X	Y	Vol
BM	2.59	
0	1.83	
2	2.03	7.86
4	1.92	7.95
6	1.52	7.44
8	1.07	6.59
10	0.72	5.79
12	0.44	5.16
14	0.22	4.66
16	-0.01	4.21
18	-0.23	3.76
20	-0.38	3.39
22	-0.47	3.15
24	0.64	4.17
26	-0.53	4.11
28	-0.57	2.90
30	-0.58	2.85
32	-0.55	2.87
34	-0.57	2.88
36	-0.58	2.85
38	-0.56	2.86
40	-0.49	2.95
60	-0.47	30.40
80	-0.48	30.50
100	-0.38	31.40
SUM		74.0
DIFF		-4.7
CUM CHANGE		-4.5

BLP17 FEB87

X	Y	Vol
BM	2.59	
0	1.83	
2	2.02	7.85
4	1.95	7.97
6	2.03	7.98
8	1.37	7.40
10	0.95	6.32
12	0.51	5.46
14	0.22	4.73
16	-0.05	4.17
18	-0.25	3.70
20	-0.39	3.36
22	-0.47	3.14
24	-0.53	3.00
26	-0.55	2.92
28	-0.56	2.89
30	-0.56	2.88
32	-0.54	2.90
34	-0.55	2.91
36	-0.53	2.92
38	-0.52	2.95
40	-0.47	3.01
60	-0.37	31.60
80	-0.39	32.40
100	-0.39	32.20
SUM		73.8
DIFF		-0.2
CUM CHANGE		-4.7

BLP17 JUN87

X	Y	Vol
BM	2.59	
0	1.83	
2	1.88	7.71
4	2.01	7.89
6	1.85	7.86
8	1.22	7.07
10	0.83	6.05
12	0.52	5.35
14	0.26	4.78
16	0.05	4.31
18	-0.14	3.91
20	-0.34	3.52
22	-0.43	3.23
24	-0.48	3.09
26	-0.51	3.01
28	-0.52	2.97
30	-0.54	2.94
32	-0.53	2.93
34	-0.55	2.92
36	-0.54	2.91
38	-0.54	2.92
40	-0.53	2.93
60	-0.4	30.70
80	-0.41	31.90
100	-0.45	31.40
		73.7
DIFF		-0.1
CUM CHANGE		-4.8

BLP17 JAN88

X	Y	Vol
BM		
0	1.83	
1	1.84	3.84
2	1.94	3.89
3	1.99	3.97
4	1.90	3.95
5	1.77	3.84
6	1.65	1.86
6	1.53	1.80
7	1.36	1.72
7	1.26	1.66
8	1.13	1.60
8	1.01	1.54
10	0.63	5.64
12	0.35	4.98
14	0.14	4.49
16	-0.07	4.07
17	-0.18	1.88
18	-0.23	0.90
19	-0.34	2.57
20	-0.45	1.61
21	-0.46	1.55
23	-0.53	3.01
25	-0.56	2.91
30	-0.58	7.15
50	-0.40	30.20
75	-0.40	40.00
100	-0.46	39.25
SUM		70.4
DIFF		-3.3
CUM CHANGE		-8.1

BLP17 JUL88

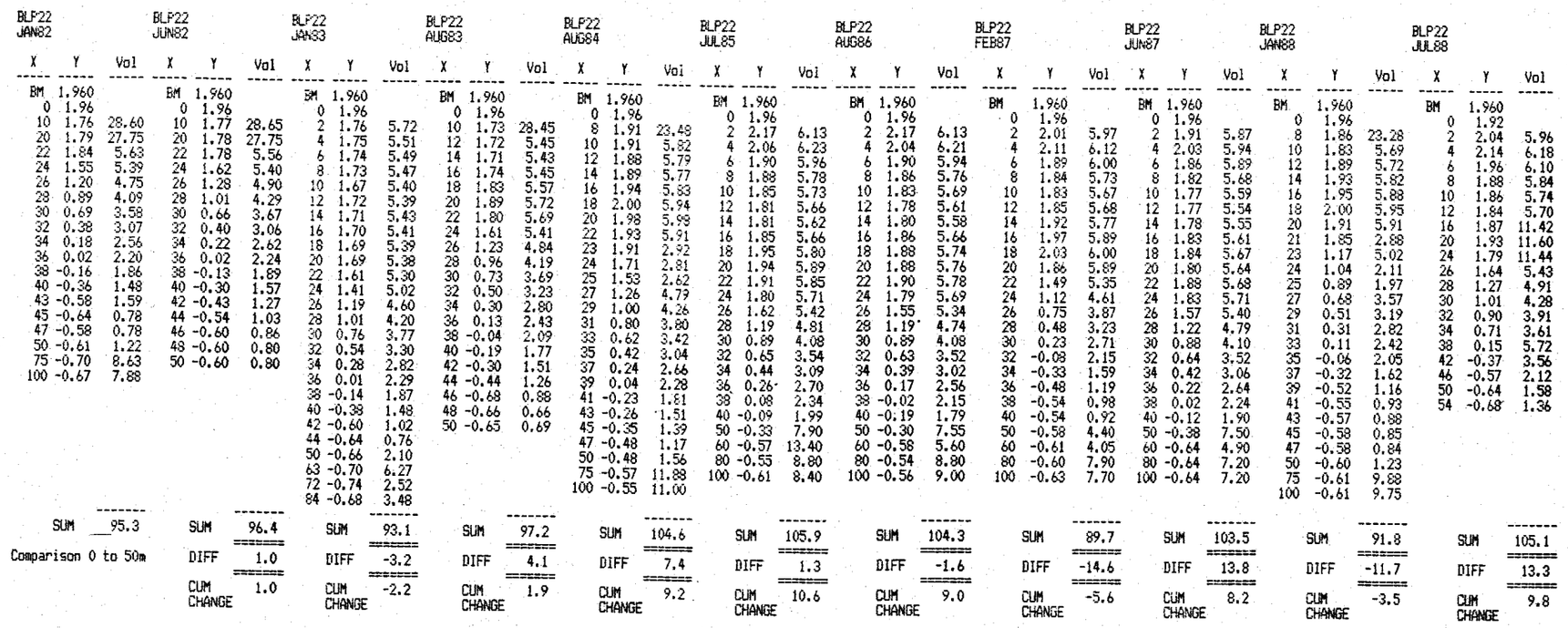
X	Y	Vol
BM		
0	1.83	
2	1.86	7.69
4	2.00	7.86
6	1.81	7.81
8	1.51	7.32
10	1.17	6.68
12	0.93	6.10
14	0.40	5.33
16	0.12	4.52
18	-0.11	4.01
20	-0.32	3.57
22	-0.48	3.20
24	-0.50	3.02
30	-0.51	8.97
35	-0.53	7.40
37	-0.51	2.96
39	-0.51	2.98
41	-0.50	2.99
43	-0.46	3.04
45	-0.47	3.07
SUM		76.1
DIFF		5.7
CUM CHANGE		-2.4

BLP18 JAN82			BLP18 JUN82			BLP18 JAN83			BLP18 AUG83			BLP18 AUG84			BLP18 JUL85			BLP18 AUG86			BLP18 FEB87			BLP18 JUN87			BLP18 JAN88			BLP18 JUL88		
X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	2.670		BM	2.670		BM	2.670		BM	2.670		BM	2.670		BM	2.670		BM	2.670		BM	2.670		BM	2.670		BM	2.670		BM	2.670	
0	2.08		0	2.08		0	2.08		0	2.08		0	2.08		0	2.08		0	2.06		0	2.06		0	2.07		0	2.08		0	2.08	
2	2.02	6.10	10	1.78	29.30	2	2.06	6.14	10	1.91	29.95	2	2.19	6.27	4	2.03	12.22	2	2.20	6.26	2	2.12	6.18	2	2.15	6.22	2	2.07	6.15	2	2.14	6.22
8	2.02	18.12	12	1.81	5.59	12	2.01	30.35	12	1.93	5.84	8	2.05	18.72	6	2.02	6.05	4	2.36	6.56	4	2.33	6.45	4	2.24	6.39	8	2.18	18.75	4	2.08	6.22
10	1.84	5.86	14	1.46	5.27	14	1.94	5.95	14	2.02	5.95	10	1.88	5.93	8	1.72	5.74	6	2.03	6.39	6	2.21	6.54	6	2.20	6.44	9	2.06	3.12	6	2.15	6.23
12	1.84	5.68	16	1.17	4.63	16	1.76	5.70	16	1.82	5.84	12	2.00	5.88	10	1.21	4.93	8	2.10	6.13	10	1.92	12.26	8	2.23	6.43	10	1.69	2.88	9	2.12	9.41
14	1.57	5.41	18	0.80	3.97	18	1.58	5.34	18	1.71	5.53	13	2.02	1.51	12	0.88	4.09	10	1.62	5.72	12	1.49	5.41	10	2.04	6.27	12	1.37	5.06	11	1.33	5.45
16	1.16	4.73	20	0.57	3.37	20	1.44	5.02	20	1.50	5.21	13	2.03	1.51	14	0.60	3.48	12	1.26	4.88	14	1.13	4.62	12	1.61	5.65	13	1.28	1.16	13	0.88	4.21
18	0.91	4.07	22	0.34	2.91	22	1.26	4.70	22	1.12	4.62	14	2.01	1.51	16	0.36	2.96	14	0.96	4.22	16	0.81	3.94	14	1.22	4.83	13	1.17	1.11	15	0.58	3.46
20	0.65	3.56	24	0.14	2.48	24	1.06	4.32	24	0.82	3.94	14	1.61	1.41	18	0.11	2.47	16	0.69	3.65	18	0.56	3.37	16	0.85	4.07	14	1.06	1.06	17	0.33	2.91
22	0.35	3.00	26	-0.06	2.08	26	0.91	3.97	26	0.59	3.41	15	1.30	2.46	20	-0.08	2.03	18	0.47	3.16	20	0.35	2.91	18	0.58	3.43	14	0.94	1.00	21	-0.12	4.42
24	0.14	2.49	28	-0.16	1.78	28	0.73	3.64	28	0.43	3.02	17	0.97	4.27	22	-0.18	1.74	20	0.23	2.70	22	0.14	2.49	20	0.37	2.95	15	0.83	1.89	23	-0.22	1.66
26	-0.01	2.13	30	-0.29	1.55	30	0.56	3.29	30	0.12	2.55	19	0.76	3.73	24	-0.25	1.57	22	0.00	2.23	24	-0.17	1.97	22	0.12	2.49	17	0.60	3.43	25	-0.32	1.46
28	-0.17	1.82	32	-0.43	1.28	32	0.41	2.97	32	0.00	2.12	21	0.57	3.33	26	-0.33	1.42	24	-0.15	1.85	26	-0.27	1.56	24	-0.09	2.03	19	0.39	2.99	27	-0.41	1.27
30	-0.32	1.51	34	-0.46	1.11	34	0.21	2.62	34	-0.15	1.85	22	0.41	1.49	28	-0.38	1.29	26	-0.24	1.61	28	-0.40	1.33	26	-0.17	1.74	21	0.16	2.55	29	-0.45	1.14
32	-0.34	1.34	36	-0.43	1.11	36	-0.02	2.19	36	-0.26	1.59	23	0.30	1.36	30	-0.41	1.21	28	-0.36	1.40	30	-0.45	1.15	28	-0.27	1.56	23	-0.06	2.10	40	-0.38	6.44
34	-0.36	1.30	38	-0.35	1.22	38	-0.26	1.72	38	-0.34	1.40	24	0.21	1.26	32	-0.45	1.14	30	-0.40	1.24	32	-0.47	1.08	30	-0.36	1.37	25	-0.19	1.75			
36	-0.38	1.26	40	-0.33	1.32	40	-0.34	1.40	40	-0.36	1.30	25	0.14	1.18	34	-0.44	1.11	32	-0.44	1.16	34	-0.44	1.09	32	-0.40	1.24	27	-0.30	1.51			
38	-0.40	1.22				44	-0.31	2.70	42	-0.44	1.20	26	0.06	1.10	36	-0.43	1.13	34	-0.47	1.09	36	-0.49	1.07	34	-0.46	1.14	29	-0.40	1.30			
40	-0.41	1.19				48	-0.44	2.50	44	-0.37	1.19	27	-0.01	1.03	38	-0.47	1.10	36	-0.48	1.05	38	-0.49	1.02	36	-0.49	1.05	30	-0.43	0.59			
50	-0.38	6.05				55	-0.42	3.99	46	-0.38	1.25	30	-0.19	2.70	40	-0.36	1.17	38	-0.50	1.02	40	-0.50	1.01	38	-0.47	1.04	40	-0.54	5.15			
75	-0.47	14.38				64	-0.33	5.63	48	-0.37	1.25	40	-0.34	7.35	60	-0.51	11.30	40	-0.48	1.02	60	-0.53	9.70	40	-0.51	1.02	50	-0.56	4.50			
100	-0.53	12.50				70	-0.39	3.84	50	-0.45	1.18	50	-0.49	5.85	80	-0.49	10.00	60	-0.55	9.70	80	-0.58	8.90	60	-0.52	9.70	75	-0.58	10.75			
						77	-0.33	4.48				75	-0.48	12.88	100	-0.52	9.90	80	-0.56	8.90	100	-0.55	8.70	80	-0.54	9.40	100	-0.61	10.13			
						89	-0.53	6.84				100	-0.53	12.38				100	-0.60	8.40				100	-0.55	9.10						
	SUM	70.79	SUM		69.0	SUM		89.3	SUM		84.1	SUM		74.0	SUM		56.9	SUM		63.3	SUM		65.5			69.5	SUM		64.9	SUM		75.4
Comparison of 0 to 40m			DIFF		-1.8	DIFF		20.3	DIFF		-5.2	DIFF		-10.2	DIFF		-17.1	DIFF		6.5	DIFF		2.1			4.1	DIFF		-4.6	DIFF		10.5
			CUM CHANGE		-1.8	CUM CHANGE		18.5	CUM CHANGE		13.3	CUM CHANGE		3.2	CUM CHANGE		-13.9	CUM CHANGE		-7.5	CUM CHANGE		-5.3	CUM CHANGE		-1.3	CUM CHANGE		-5.9	CUM CHANGE		4.6

BLP19 JAN82			BLP19 JUN82			BLP19 JAN83			BLP19 AUG83			BLP19 AUG84			BLP19 JUL85			BLP19 AUG86			BLP19 FEB87			BLP19 JUN87			BLP19 JAN88			BLP19 JUL88		
X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	1.730		BM	1.730		BM	1.730		BM	1.730		BM	1.730		BM	1.730		BM	1.730		BM	1.730		BM	1.730		BM	1.730		BM	1.730	
0	1.35		0	1.34		0	1.34		0	1.29		0	1.37		0	1.37		0	0.69		0	0.69		BM	1.730		0	1.28		0	1.26	
2	1.37	4.72	2	1.35	4.69	10	1.61	24.75	10	1.44	23.65	5	1.43	12.00	2	1.34	4.71	2	0.75	3.44	2	1.18	3.87	0	1.27		BM	1.730		2	1.30	4.56
4	1.90	5.27	4	1.40	4.75	12	1.76	5.37	12	1.56	5.00	10	1.59	12.55	4	1.37	4.71	4	0.81	3.56	4	1.28	4.46	2	1.31	4.58	5	1.44	11.80	4	1.35	4.65
6	1.43	5.33	6	1.43	4.83	14	1.86	5.62	14	1.70	5.26	15	1.91	13.75	6	1.42	4.79	6	0.89	3.70	6	1.33	4.61	4	1.38	4.69	10	1.60	12.60	6	1.40	4.75
8	1.47	4.90	8	1.48	4.91	16	1.98	5.84	16	1.97	5.67	17	2.11	6.02	8	1.44	4.86	8	0.93	3.82	8	1.45	4.78	6	1.45	4.83	15	1.77	13.43	8	1.46	4.86
10	1.50	4.97	10	1.51	4.99	18	2.01	5.99	18	2.16	6.13	19	2.23	6.34	10	1.51	4.95	10	0.99	3.92	10	1.52	4.97	8	1.51	4.96	17	1.86	5.63	10	1.54	5.00
12	1.59	5.09	12	1.63	5.14	20	2.06	6.07	20	2.22	6.38	21	2.35	6.58	12	1.63	5.14	12	1.07	4.06	12	1.62	5.14	10	1.56	5.07	19	1.98	5.84	12	1.63	5.17
14	1.79	5.38	14	1.81	5.44	22	2.10	6.16	22	2.30	6.52	24	2.33	10.02	14	1.77	5.40	14	1.15	4.22	14	1.75	5.37	12	1.66	5.22	21	2.12	6.10	14	1.74	5.37
16	2.00	5.79	16	2.00	5.81	24	2.12	6.22	24	1.79	6.09	25	2.08	3.21	16	1.91	5.68	16	1.26	4.41	16	2.37	6.12	14	1.75	5.41	24	2.20	9.48	16	1.85	5.59
18	2.17	6.17	18	2.21	6.21	26	1.86	5.98	26	1.69	5.48	27	1.76	5.84	18	2.04	5.95	18	1.35	4.61	18	2.15	6.52	16	1.83	5.58	25	2.28	3.24	18	1.95	5.80
20	2.24	6.41	20	2.27	6.48	28	1.46	5.32	28	1.44	5.13	29	1.48	5.24	20	2.24	6.28	20	1.49	4.84	20	1.81	5.96	18	1.90	5.73	27	2.17	6.45	20	2.02	5.97
22	2.27	6.51	22	2.35	6.62	30	1.13	4.59	30	1.18	4.62	31	1.28	4.76	22	2.29	6.53	22	1.86	5.35	22	1.53	5.34	20	2.00	5.90	29	1.97	6.14	22	2.30	6.32
24	2.27	6.54	24	2.33	6.68	32	0.91	4.04	32	0.92	4.10	33	1.09	4.37	24	2.20	6.49	24	1.80	5.66	24	1.08	4.61	22	2.35	6.35	31	1.57	5.54	24	2.31	6.66
26	2.01	6.28	26	2.04	6.37	34	0.84	3.75	34	0.76	3.68	35	0.89	3.98	26	1.82	6.02	26	1.29	5.09	26	0.83	3.91	24	2.31	6.66	33	1.19	4.76	26	2.02	12.64
28	1.77	5.78	28	1.69	5.73	36	0.48	3.32	36	0.53	3.29	37	0.69	3.58	28	1.46	5.28	28	1.01	4.30	28	0.56	3.39	26	2.11	6.42	35	0.88	4.07	28	1.73	5.75
30	1.48	5.25	30	1.39	5.08	38	0.31	2.79	38	0.39	2.92	39	0.54	3.23	30	1.17	4.63	30	0.72	3.73	30	0.29	2.85	28	1.97	6.08	37	0.63	3.51	30	1.32	5.05
32	1.25	4.73	32	1.12	4.51	40	0.08	2.39	40	0.19	2.58	41	0.38	2.92	32	0.94	4.11	32	0.33	3.05	32	0.09	2.38	30	1.71	5.68	39	0.48	3.11	32	1.05	4.37
34	1.01	4.26	34	0.86	3.98	42	-0.13	1.95	42	0.09	2.28	46	-0.07	5.20	34	0.74	3.68	34	0.13	2.46	34	-0.16	1.93	32	2.42	6.13	41	0.31	2.79	36	0.53	7.16
36	0.76	3.77	36	0.65	3.51	44	0.01	1.88	44	-0.07	2.02	50	-0.18	3.94	36	0.56	3.30	36	-0.11	2.02	36	-0.32	1.52	34	1.13	5.55	45	-0.12	4.38	40	0.14	5.34
38	0.54	3.30	38	0.41	3.06	46	-0.34	1.25	46	-0.11	1.82	64	-0.56	8.82	38	0.40	2.96	38	-0.32	1.57	38	-0.58	1.10	36	0.80	3.93	50	-0.24	4.10	44	-0.03	4.22
40	0.30	2.84	40	0.24	2.65	48	-0.06	2.00	48	-0.18	1.71	70	-0.67	2.31	40	0.25	2.65	40	-0.52	1.16	40	-0.42	1.00	38	0.56	3.36	60	-0.49	6.35	48	-0.33	3.28
50	-0.26	10.20	42	0.05	2.29	50	-0.18	1.76	50	-0.23	1.59	80	-0.80	2.65	50	-0.14	10.55	50	-0.80	3.40	50	-0.55	5.15	40	0.34	2.90	70	-0.54	4.85	50	-0.45	1.22
64	-0.66	7.56	44	-0.14	1.91	53	-0.44	2.07				90	-0.79	2.05	60	-0.53	6.65	60	-1.09	0.55	60	-0.68	3.85	60	-0.56	17.80	80	-0.72	3.70	52	-0.53	1.02
74	-0.71	3.15	46	-0.09	1.77	64	-0.67	4.90				100	-0.83	1.90	80	-0.79	6.80	80	-1.28	-3.70	80	-0.85	4.70	80	-0.79	6.50	90	-0.54	3.70	56	-0.58	1.78
80	-0.81	1.44	48	-0.37	1.54	70	-0.72	1.83							100	-0.86	3.50	100	-1.31	-5.90	100	-0.88	2.70	100	-0.80	4.10	100	-0.62	4.20	60	-0.61	1.62
90	-0.87	1.60				85	-0.80	3.60																								
100	-0.90	1.15				93	-0.81	1.56																								
SUM		113.5	SUM		109.0	SUM		107.0	SUM		105.9	SUM		113.5	SUM		108.7			78.4	SUM		85.0	SUM		77.5	SUM		113.0	SUM		107.1
Comparison 0 to 50m			DIFF		-4.5	DIFF		-1.9	DIFF		-1.1	DIFF		7.6	DIFF		-4.8	DIFF		-30.3	DIFF		6.6	DIFF		-7.5	DIFF		35.5	DIFF		-5.9
			CUM		-4.5	CUM		-6.4	CUM		-7.6	CUM		.0	CUM		-4.8	CUM		-35.1	CUM		-28.5	CUM		-36.0	CUM		-0.5	CUM		-6.4

BLP20 JAN82			BLP20 JUN82			BLP20 JAN83			BLP20 AUG83			BLP20 AUG84			BLP20 JUL85			BLP20 AUG86			BLP20 FEB87			BLP20 JUN87			BLP20 JAN88			BLP20 JUL88		
X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	2.06		BM	2.06		BM	2.06		BM	2.06		BM	2.06		BM	2.06		BM	2.06		BM											
0	1.52		0	1.52		0	1.70		0	1.70		0	1.98		0	1.98		0	1.56													
2	1.53	5.05	2	1.54	5.06	2	1.76	5.46	6	2.00	17.10	2	1.96	5.94	2	1.58	5.56	2	1.58	5.14							BM	2.06		BM	2.06	
4	1.56	5.09	4	1.60	5.14	4	1.86	5.62	8	1.90	5.90	4	1.89	5.85	4	1.65	5.23	4	1.67	5.25							2	1.680		0	2.06	
6	1.76	5.32	6	1.78	5.38	6	1.94	5.80	10	1.80	5.70	6	1.69	5.58	6	1.85	5.50	6	1.83	5.50							4	1.770	5.45	2	1.67	5.73
8	1.90	5.66	8	1.95	5.73	8	2.01	5.95	12	1.89	5.69	8	1.27	4.96	8	1.93	5.78	8	1.91	5.74							6	1.820	5.59	4	1.68	5.35
10	1.98	5.88	10	2.02	5.97	10	2.04	6.05	14	1.84	5.73	10	0.99	4.26	10	1.97	5.90	10	1.97	5.88							8	1.220	5.04	6	0.94	4.62
12	1.98	5.96	12	2.07	6.09	12	2.01	6.05	16	1.26	5.10	12	0.81	3.80	12	1.98	5.95	12	1.98	5.95							10	0.970	4.19	8	0.65	3.59
14	1.86	5.84	14	1.77	5.84	14	2.00	6.01	18	0.92	4.18	14	0.62	3.43	14	1.86	5.84	14	1.86	5.84							12	0.740	3.71	10	0.43	3.08
16	1.53	5.39	16	1.35	5.12	16	1.95	5.95	20	0.69	3.61	15	0.55	1.59	16	1.64	5.50	16	1.86	5.72							14	0.540	3.28	12	0.24	2.67
18	1.33	4.86	18	1.03	4.38	18	1.91	5.86	22	0.45	3.14	18	0.26	4.22	18	1.24	4.88	18	1.89	5.75							16	0.380	2.92	14	0.05	2.29
20	1.09	4.42	20	0.73	3.76	20	1.86	5.77	24	0.27	2.72	20	0.09	2.35	20	0.97	4.21	20	1.76	5.65							18	0.210	2.59	16	-0.08	1.97
22	0.87	3.96	22	0.55	3.28	22	1.71	5.57	26	0.12	2.39	22	-0.06	2.03	22	0.75	3.72	22	1.44	5.20							20	0.060	2.27	18	-0.21	1.71
24	0.56	3.43	24	0.36	2.91	24	1.36	5.07	28	0.00	2.12	24	-0.21	1.73	24	0.56	3.31	24	1.09	4.53							22	-0.090	1.97	20	-0.41	1.38
26	0.09	2.65	26	0.21	2.57	26	1.06	4.42	30	-0.12	1.88	26	-0.35	1.44	26	0.37	2.93	26	0.82	3.91							24	-0.280	1.63	22	-0.48	1.11
28	0.01	2.10	28	0.09	2.30	28	0.81	3.87	32	-0.26	1.62	28	-0.44	1.21	28	0.21	2.58	28	0.59	3.41							26	-0.490	1.23	24	-0.56	0.96
30	-0.07	1.94	30	-0.06	2.03	30	0.54	3.35	34	-0.29	1.45	30	-0.50	1.06	30	0.07	2.28	30	0.34	2.93							28	-0.590	0.92	25	-0.58	0.43
32	-0.23	1.70	32	-0.19	1.75	32	0.36	2.90	36	-0.47	1.24	32	-0.55	0.95	32	-0.05	2.02	32	0.19	2.53							30	-0.650	0.76	30	-0.58	2.10
34	-0.40	1.37	34	-0.37	1.44	34	0.21	2.57	38	-0.56	0.97	34	-0.62	0.83	34	-0.17	1.78	34	0.02	2.21							32	-0.660	0.69	35	-0.68	1.85
36	-0.47	1.13	36	-0.46	1.17	36	0.06	2.27	40	-0.64	0.80	36	-0.70	0.68	36	-0.31	1.52	36	-0.15	1.87							34	-0.650	0.69	40	-0.81	1.27
38	-0.55	0.98	38	-0.51	1.03	38	-0.14	1.92				38	-0.70	0.60	38	-0.42	1.27	38	-0.32	1.53							36	-0.680	0.67	50	-0.78	2.05
40	-0.52	0.93	40	-0.55	0.94	40	-0.34	1.52				40	-0.62	0.68	40	-0.42	1.16	40	-0.49	1.19							38	-0.750	0.57			
45	-0.62	2.15				50	-0.68	4.90				45	-0.62	1.90	60	-0.69	8.90	60	-0.64	8.70							40	-0.840	0.41			
50	-0.59	1.98				60	-0.60	3.60				75	-0.71	10.05	80	-0.77	5.40	80	-0.77	5.90							50	-0.810	1.75			
75	-0.71	8.75				70	-0.71	3.45				100	-0.67	7.75	100	-0.68	5.50	100	-0.72	5.10							75	-0.860	4.12			
100	-0.74	6.88				83	-0.70	3.84																			100	-0.850	3.63			
						100	-0.66	5.44																								
	SUM	73.7	SUM	71.9		SUM	92.0		SUM	71.3		SUM	53.2		SUM	76.9		SUM	85.7									SUM	44.6		SUM	40.1	
Comparison of 0 to 40m			DIFF	-1.8		DIFF	20.1		DIFF	-20.6		DIFF	-18.2		DIFF	23.7		DIFF	8.8												DIFF	-4.5	
			CUM	-1.8		CUM	18.3		CUM	-2.3		CUM	-20.5		CUM	3.3		CUM	12.1												CUM	-4.5	

BLP21 JAN82			BLP21 JUN82			BLP21 JAN83			BLP21 AUG83			BLP21 AUG84			BLP21 JUL85			BLP21 AUG86			BLP21 FEB87			BLP21 JUN87			BLP21 JAN88			BLP21 JUL88		
X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	2.270		BM	2.270		BM	2.270		BM	2.270		BM	2.270		BM	2.270		BM	2.270		BM	2.270		BM	2.270		BM	2.270		BM	2.270	
0	2.03		0	2.02		0	2.02		0	1.98		0	2.04		0	2.04		0	2.32		0	2.27		0	1.92		0	1.97		0	2.34	
2	2.06	6.09	2	2.12	6.14	6	2.14	18.48	2	2.04	6.02	2	1.97	6.01	4	2.06	12.20	4	2.32	13.28	6	1.93	18.60	2	1.86	5.78	2	1.93	5.90	2	2.34	6.68
4	2.01	6.07	4	2.02	6.14	8	2.08	6.22	4	1.89	5.93	4	1.92	5.89	6	2.06	6.12	6	2.30	6.62	10	1.85	11.56	4	1.89	5.75	4	1.89	5.82	4	2.26	6.60
6	1.99	6.00	6	1.96	5.98	10	2.04	6.12	6	1.83	5.72	6	1.92	5.84	10	1.98	12.08	8	2.25	6.55	12	1.85	5.70	6	1.96	5.85	6	1.89	5.78	6	2.24	6.50
8	1.91	5.90	8	1.93	5.89	12	1.97	6.01	8	1.85	5.68	9	1.86	8.67	12	1.93	5.91	10	2.24	6.49	14	1.91	5.76	8	1.93	5.89	9	1.95	8.76	8	2.28	6.52
10	1.75	5.66	10	1.76	5.69	14	1.62	5.59	10	1.81	5.66	10	1.81	2.84	14	1.92	5.85	12	2.25	6.49	16	1.94	5.85	10	1.79	5.72	10	1.92	2.94	10	2.33	6.61
12	1.34	5.09	12	1.40	5.16	16	1.37	4.99	12	1.73	5.54	11	1.50	2.66	16	1.84	5.76	14	2.24	6.49	18	1.72	5.66	12	1.74	5.53	11	1.85	2.89	16	2.15	19.44
14	1.10	4.44	14	1.08	4.48	18	1.07	4.44	14	1.59	5.32	12	1.27	2.39	18	1.58	5.42	16	1.93	6.17	20	1.56	5.28	14	1.59	5.33	12	1.82	2.84	20	1.32	10.94
16	0.83	3.93	16	0.72	3.80	20	0.77	3.84	16	1.05	4.64	14	0.99	4.26	20	1.21	4.79	18	1.62	5.55	22	1.32	4.88	16	1.21	4.80	14	1.82	5.64	24	0.80	8.24
18	0.61	3.44	18	0.53	3.25	22	0.54	3.31	18	0.77	3.82	16	0.79	3.78	22	0.96	4.17	20	1.34	4.96	24	1.01	4.33	18	0.90	4.11	16	1.73	5.55	28	0.47	6.54
20	0.36	2.97	20	0.33	2.86	24	0.34	2.88	20	0.56	3.33	18	0.59	3.38	24	0.74	3.70	22	1.11	4.45	26	0.77	3.78	20	0.53	3.43	17	1.64	2.69	32	0.22	5.38
22	0.14	2.50	22	0.18	2.51	26	0.12	2.46	22	0.35	2.91	20	0.44	3.03	26	0.55	3.29	24	0.90	4.01	28	0.52	3.29	22	0.19	2.72	18	1.35	2.50	38	-0.26	5.88
24	-0.07	2.07	24	0.06	2.24	28	-0.06	2.06	24	0.20	2.55	22	0.24	2.68	28	0.38	2.93	26	0.72	3.62	30	0.32	2.84	24	-0.04	2.15	20	0.97	4.32	40	-0.32	1.42
26	-0.28	1.65	26	-0.07	1.99	30	-0.28	1.66	26	0.04	2.24	24	0.09	2.33	30	0.23	2.61	28	0.54	3.26	32	0.12	2.44	26	-0.20	1.76	22	0.66	3.63	42	-0.37	1.31
28	-0.40	1.32	28	-0.18	1.75	32	-0.43	1.29	28	-0.09	1.95	25	0.01	1.05	32	0.10	2.33	30	0.39	2.93	34	-0.10	2.02	28	-0.37	1.43	24	0.41	3.07	46	-0.38	2.50
30	-0.46	1.14	30	-0.44	1.38	34	-0.50	1.07	30	-0.20	1.71	27	-0.12	1.89	34	-0.03	2.07	32	0.18	2.57	36	-0.32	1.58	30	-0.63	1.00	25	0.31	1.36			
32	-0.50	1.04	32	-0.52	1.04	36	-0.58	0.92	32	-0.34	1.46	29	-0.25	1.63	36	-0.16	1.81	34	-0.03	2.15	38	-0.53	1.15	32	-0.67	0.70	27	0.11	2.42			
34	-0.54	0.96	34	-0.56	0.92	38	-0.62	0.80	34	-0.48	1.18	31	-0.36	1.39	38	-0.29	1.55	36	-0.13	1.84	40	-0.67	0.80	34	-0.69	0.64	29	-0.10	2.01			
36	-0.56	0.90	36	-0.59	0.85	40	-0.62	0.76	36	-0.58	0.94	35	-0.53	2.22	40	-0.45	1.26	38	-0.25	1.62	60	-0.75	5.80	36	-0.71	0.60	34	-0.42	3.70			
38	-0.58	0.86	38	-0.60	0.81	53	-0.66	4.68	38	-0.64	0.78	40	-0.61	2.15	60	-0.68	8.70	40	-0.28	1.47	80	-0.82	4.30	38	-0.73	0.56	36	-0.59	0.99			
40	-0.59	0.83	40	-0.57	0.83	78	-0.72	7.75	40	-0.69	0.67	50	-0.71	3.40	80	-0.73	5.90	60	-0.35	13.70	100	-0.83	3.50	40	-0.75	0.52	38	-0.66	0.75			
50	-0.62	3.95				88	-0.78	2.50				75	-0.77	6.50	100	-0.75	5.20	80	-0.43	12.20				60	-0.81	4.40	40	-0.69	0.65			
75	-0.76	7.75										100	-0.73	6.25				100	-0.43	11.40				80	-0.80	3.90	50	-0.77	2.70			
100	-0.80	5.50																						100	-0.82	3.80	75	-0.81	5.25			
																											100	-0.82	4.63			
	SUM	62.9	SUM	63.7		SUM	72.9		SUM	68.1		SUM	64.1		SUM	83.9		SUM	90.5		SUM	85.5			64.3		SUM	74.2		SUM	80.0	
Comparison 0 to 40m			DIFF	0.9		DIFF	9.2		DIFF	-4.9		DIFF	-4.0		DIFF	19.8		DIFF	6.7		DIFF	-5.0	DIFF	-21.3		DIFF	9.9		DIFF	5.8		
			CUM	0.9		CUM	10.0		CUM	5.2		CUM	1.2		CUM	21.0		CUM	27.7		CUM	22.7	CUM	1.4		CUM	11.3		CUM	17.1		



BLP22 JAN82			BLP22 JUN82			BLP22 JAN83			BLP22 AUG83			BLP22 AUG84			BLP22 JUL85			BLP22 AUG86			BLP22 FEB87			BLP22 JUN87			BLP22 JAN88			BLP22 JUL88		
X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	1.960		BM	1.960		BM	1.960		BM	1.960		BM	1.960		BM	1.960		BM	1.960		BM	1.960		BM	1.960		BM	1.960		BM	1.960	
0	1.96		0	1.96		0	1.96		0	1.96		0	1.96		0	1.96		0	1.96		0	1.96		0	1.96		0	1.96		0	1.92	
10	1.76	28.60	10	1.77	28.65	2	1.76	5.72	10	1.73	28.45	8	1.91	23.48	2	2.17	6.13	2	2.17	6.13	2	2.01	5.97	2	1.91	5.87	8	1.86	23.28	2	2.04	5.96
20	1.79	27.75	20	1.78	27.75	4	1.75	5.51	12	1.72	5.45	10	1.91	5.82	4	2.06	6.23	4	2.04	6.21	4	2.11	6.12	4	2.03	5.94	10	1.83	5.69	4	2.14	6.18
22	1.84	5.63	22	1.78	5.56	6	1.74	5.49	14	1.71	5.43	12	1.88	5.79	6	1.90	5.96	6	1.90	5.94	6	1.89	6.00	6	1.86	5.89	12	1.89	5.72	6	1.96	6.10
24	1.55	5.39	24	1.62	5.40	8	1.73	5.47	16	1.74	5.45	14	1.89	5.77	8	1.88	5.78	8	1.86	5.76	8	1.84	5.73	8	1.82	5.68	14	1.93	5.82	8	1.88	5.84
26	1.20	4.75	26	1.28	4.90	10	1.67	5.40	18	1.83	5.57	16	1.94	5.83	10	1.85	5.73	10	1.83	5.69	10	1.83	5.67	10	1.77	5.59	16	1.95	5.88	10	1.86	5.74
28	0.89	4.09	28	1.01	4.29	12	1.72	5.39	20	1.89	5.72	18	2.00	5.94	12	1.81	5.66	12	1.78	5.61	12	1.85	5.68	12	1.77	5.54	18	2.00	5.95	12	1.84	5.70
30	0.69	3.58	30	0.66	3.67	14	1.71	5.43	22	1.80	5.69	20	1.98	5.98	14	1.81	5.62	14	1.80	5.58	14	1.92	5.77	14	1.78	5.55	20	1.91	5.91	16	1.87	11.42
32	0.38	3.07	32	0.40	3.06	16	1.70	5.41	24	1.61	5.41	22	1.93	5.91	16	1.85	5.66	16	1.86	5.66	16	1.97	5.89	16	1.83	5.61	21	1.85	2.88	20	1.93	11.60
34	0.18	2.56	34	0.22	2.62	18	1.69	5.39	26	1.23	4.84	23	1.91	2.92	18	1.95	5.80	18	1.88	5.74	18	2.03	6.00	18	1.84	5.67	23	1.17	5.02	24	1.79	11.44
36	0.02	2.20	36	0.02	2.24	20	1.69	5.38	28	0.96	4.19	24	1.71	2.81	20	1.94	5.89	20	1.88	5.76	20	1.86	5.89	20	1.80	5.64	24	1.04	2.11	26	1.64	5.43
38	-0.16	1.86	38	-0.13	1.89	22	1.61	5.30	30	0.73	3.69	25	1.53	2.62	22	1.91	5.85	22	1.90	5.78	22	1.49	5.35	22	1.88	5.68	25	0.89	1.97	28	1.27	4.91
40	-0.36	1.48	40	-0.30	1.57	24	1.41	5.02	32	0.50	3.23	27	1.26	4.79	24	1.80	5.71	24	1.79	5.69	24	1.12	4.61	24	1.83	5.71	27	0.68	3.57	30	1.01	4.28
43	-0.58	1.59	42	-0.43	1.27	26	1.19	4.60	34	0.30	2.80	29	1.00	4.26	26	1.62	5.42	26	1.55	5.34	26	0.75	3.87	26	1.57	5.40	29	0.51	3.19	32	0.90	3.91
45	-0.64	0.78	44	-0.54	1.03	28	1.01	4.20	36	0.13	2.43	31	0.80	3.80	28	1.19	4.81	28	1.19	4.74	28	0.48	3.23	28	1.22	4.79	31	0.31	2.82	34	0.71	3.61
47	-0.58	0.78	46	-0.60	0.86	30	0.76	3.77	38	-0.04	2.09	33	0.62	3.42	30	0.89	4.08	30	0.89	4.08	30	0.23	2.71	30	0.88	4.10	33	0.11	2.42	38	0.15	5.72
50	-0.61	1.22	48	-0.60	0.80	32	0.54	3.30	40	-0.19	1.77	35	0.42	3.04	32	0.65	3.54	32	0.63	3.52	32	-0.08	2.15	32	0.64	3.52	35	-0.06	2.05	42	-0.37	3.56
75	-0.70	8.63	50	-0.60	0.80	34	0.28	2.82	42	-0.30	1.51	37	0.24	2.66	34	0.44	3.09	34	0.39	3.02	34	-0.33	1.59	34	0.42	3.06	37	-0.32	1.62	46	-0.57	2.12
100	-0.67	7.88				36	0.01	2.29	44	-0.44	1.26	39	0.04	2.28	36	0.26	2.70	36	0.17	2.56	36	-0.48	1.19	36	0.22	2.64	39	-0.52	1.16	50	-0.64	1.58
						38	-0.14	1.87	46	-0.68	0.88	41	-0.23	1.81	38	0.08	2.34	38	-0.02	2.15	38	-0.54	0.98	38	0.02	2.24	41	-0.55	0.93	54	-0.68	1.36
						40	-0.38	1.48	48	-0.66	0.66	43	-0.26	1.51	40	-0.09	1.99	40	-0.19	1.79	40	-0.54	0.92	40	-0.12	1.90	43	-0.57	0.88			
						42	-0.60	1.02	50	-0.65	0.69	45	-0.35	1.39	50	-0.33	7.90	50	-0.30	7.55	50	-0.58	4.40	50	-0.38	7.50	45	-0.58	0.85			
						44	-0.64	0.76				47	-0.48	1.17	60	-0.57	13.40	60	-0.58	5.60	60	-0.61	4.05	60	-0.64	4.90	47	-0.58	0.84			
						50	-0.66	2.10				50	-0.48	1.56	80	-0.55	8.80	80	-0.54	8.80	80	-0.60	7.90	80	-0.64	7.20	50	-0.60	1.23			
						63	-0.70	6.27				75	-0.57	11.88	100	-0.61	8.40	100	-0.56	9.00	100	-0.63	7.70	100	-0.64	7.20	75	-0.61	9.88			
						72	-0.74	2.52				100	-0.55	11.00													100	-0.61	9.75			
						84	-0.68	3.48																								
	SUM	95.3		SUM	96.4		SUM	93.1		SUM	97.2		SUM	104.6		SUM	105.9		SUM	104.3		SUM	89.7		SUM	103.5		SUM	91.8		SUM	105.1
Comparison 0 to 50m				DIFF	1.0		DIFF	-3.2		DIFF	4.1		DIFF	7.4		DIFF	1.3		DIFF	-1.6		DIFF	-14.6		DIFF	13.8		DIFF	-11.7		DIFF	13.3
				CUM CHANGE	1.0		CUM CHANGE	-2.2		CUM CHANGE	1.9		CUM CHANGE	9.2		CUM CHANGE	10.6		CUM CHANGE	9.0		CUM CHANGE	-5.6		CUM CHANGE	8.2		CUM CHANGE	-3.5		CUM CHANGE	9.8

BLP23 JAN82			BLP23 JUN82			BLP23 JAN83			BLP23 AUG83			BLP23 AUG84			BLP23 JUL85			BLP23 AUG86			BLP23 FEB87			BLP23 JUN87			BLP23 JAN88			BLP23 JUL88		
X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	2.310		BM	2.310		BM	2.310		BM	2.310		BM	2.310		BM	2.310		BM	2.310		BM	2.310		BM	2.310		BM	2.310		BM	2.310	
0	2.23		0	2.21		0	2.20		0	2.24		0	2.22		0	2.22		0	2.22		0	2.31		0	2.53		0	2.28		0	2.20	
2	2.09	6.32	2	2.10	6.31	2	2.16	6.36	2	2.11	6.35	1	2.24	3.23	2	2.32	6.54	2	2.16	6.38	2	2.27	6.58	1	2.51	3.52	1	2.21	3.25	2	2.03	6.23
4	1.92	6.01	4	1.98	6.08	4	2.06	6.22	4	2.00	6.11	2	2.12	3.18	4	2.02	6.34	4	1.94	6.10	4	2.08	6.35	3	2.34	6.85	2	2.10	3.16	4	1.79	5.82
6	1.75	5.67	6	1.74	5.72	6	1.76	5.82	6	1.69	5.69	3	2.13	3.13	6	1.75	5.77	6	1.69	5.63	6	1.89	5.97	5	2.06	6.40	3	2.00	3.05	6	1.07	4.86
8	1.45	5.20	8	1.44	5.18	8	1.68	5.44	8	1.17	4.86	4	2.01	3.07	8	1.27	5.02	8	1.36	5.05	8	1.51	5.40	7	1.70	5.76	4	1.89	2.95	8	0.71	3.78
10	1.16	4.61	10	1.10	4.54	10	1.16	4.84	10	0.89	4.06	5	1.84	2.93	10	0.96	4.23	10	1.02	4.38	10	1.19	4.70	9	1.33	5.03	5	1.76	2.83	10	0.41	3.12
12	0.90	4.06	12	0.79	3.89	12	0.91	4.07	12	0.63	3.52	6	1.56	2.70	12	0.75	3.71	12	0.76	3.78	12	0.92	4.11	11	1.07	4.40	6	1.30	2.53	12	0.17	2.58
14	0.69	3.59	14	0.57	3.36	14	0.61	3.52	14	0.40	3.03	7	1.26	2.41	14	0.54	3.29	14	0.52	3.28	14	0.64	3.56	13	0.83	3.90	7	1.13	2.22	14	-0.01	2.16
16	0.42	3.11	16	0.36	2.93	16	0.28	2.89	16	0.25	2.65	8	1.11	2.19	16	0.34	2.88	16	0.33	2.85	16	0.43	3.07	15	0.63	3.46	8	0.95	2.04	16	-0.20	1.79
18	0.20	2.62	18	0.19	2.55	18	0.11	2.39	18	0.08	2.33	10	0.90	4.01	18	0.15	2.49	18	0.16	2.49	18	0.15	2.58	30	0.00	19.73	10	0.73	3.68	18	-0.42	1.38
20	0.01	2.21	20	0.04	2.23	20	-0.08	2.03	20	-0.04	2.04	12	0.75	3.65	20	0.02	2.17	20	0.00	2.16	20	-0.01	2.14	35	-0.22	4.45	12	0.53	3.26	20	-0.51	1.07
22	-0.21	1.80	22	-0.10	1.94	22	-0.29	1.63	22	-0.17	1.79	14	0.61	3.36	22	-0.11	1.91	22	-0.16	1.84	22	-0.23	1.76	55	-0.30	14.80	14	0.31	2.84	22	-0.57	0.92
24	-0.42	1.37	24	-0.22	1.68	24	-0.51	1.20	24	-0.32	1.51	16	0.39	3.00	24	-0.26	1.63	24	-0.38	1.46	24	-0.40	1.37	75	-0.23	14.70	16	0.13	2.44	24	-0.58	0.85
26	-0.54	1.04	26	-0.39	1.39	26	-0.54	0.95	26	-0.47	1.21	18	0.25	2.64	26	-0.44	1.30	26	-0.49	1.13	26	-0.47	1.13				18	-0.05	2.08	26	-0.58	0.84
28	-0.54	0.92	28	-0.50	1.11	28	-0.52	0.94	28	-0.50	1.03	20	0.07	2.32	28	-0.58	0.98	28	-0.53	0.98	28	-0.53	1.00				20	-0.35	1.60	28	-0.58	0.84
30	-0.52	0.94	30	-0.53	0.97	30	-0.52	0.96	30	-0.53	0.97	22	-0.11	1.96	30	-0.60	0.82	30	-0.59	0.88	30	-0.59	0.88				22	-0.50	1.15	30	-0.58	0.84
50	-0.58	9.00				32	-0.52	0.96	32	-0.52	0.95	24	-0.31	1.58	32	-0.60	0.80	32	-0.58	0.83	32	-0.59	0.82				24	-0.54	0.96	32	-0.59	0.83
75	-0.54	11.00				34	-0.52	0.96	34	-0.54	0.94	26	-0.40	1.29	34	-0.59	0.81	34	-0.59	0.83	34	-0.59	0.82				26	-0.60	0.86	34	-0.61	0.80
100	-0.54	11.50				36	-0.52	0.96	36	-0.53	0.93	28	-0.55	1.05	36	-0.57	0.84	36	-0.59	0.82	36	-0.59	0.82				28	-0.60	0.80	36	-0.61	0.78
						38	-0.52	0.96	38	-0.53	0.94	30	-0.56	0.89	38	-0.57	0.86	38	-0.56	0.85	38	-0.60	0.81				30	-0.59	0.81	38	-0.62	0.77
						40	-0.52	0.96	40			50	-0.59	8.50	40	-0.54	0.89	40	-0.57	0.87	40	-0.58	0.82				50	-0.60	8.10	40	-0.61	0.77
						61	-0.53	9.98				75	-0.62	9.88	60	-0.61	8.50	60	-0.60	8.30	60	-0.63	7.90				75	-0.62	9.75	60	-0.61	7.80
						75	-0.53	6.58				100	-0.56	10.25	80	-0.57	8.20	80	-0.57	8.30	80	-0.55	8.20				100	-0.59	9.88	80	-0.52	8.70
						90	-0.45	7.65							100	-0.59	8.40	100	-0.59	8.40	100	-0.59	8.60							100	-0.61	8.70
SUM	49.5		SUM	49.9		SUM	49.3		SUM	47.2		SUM	48.6		SUM	49.1		SUM	48.4		SUM	50.6		SUM	59.0		SUM	42.5		SUM	37.1	
Comparison 0 to 30m			DIFF	0.4		DIFF	-0.6		DIFF	-2.1		DIFF	1.4		DIFF	0.5		DIFF	-0.7		DIFF	2.2		DIFF	8.4		DIFF	-16.6		DIFF	-5.4	
			CUM CHANGE	0.4		CUM CHANGE	-0.2		CUM CHANGE	-2.3		CUM CHANGE	-0.9		CUM CHANGE	-0.4		CUM CHANGE	-1.1		CUM CHANGE	1.1		CUM CHANGE	9.6		CUM CHANGE	-7.0		CUM CHANGE	-12.4	

BLP24 JAN82			BLP24 JUN82			BLP24 JAN83			BLP24 AUG83			BLP24 AUG84			BLP24 JUL85			BLP24 AUG86			BLP24 FEB87			BLP24 JUN87			BLP24 JAN88			BLP24 JUL88		
X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	2.780		BM	2.780		BM	2.780		BM	2.780		BM	2.780		BM	2.780		BM	2.780		BM	2.780		BM	2.780		BM	2.780		BM	2.780	
0	1.88		0	1.67		0	1.94		0	1.87		0	1.89		0	1.87		0	1.85		0	1.85		0	1.86		0	1.86		0	1.82	
2	1.95	5.83	2	1.75	5.42	2	1.96	5.90	2	1.95	5.82	2	1.97	5.86	2	1.87	5.74	2	1.92	5.77	2	1.84	5.69	2	1.91	5.77	2	1.93	5.79	2	1.94	5.76
4	1.97	5.92	4	1.75	5.50	4	1.98	5.94	4	1.94	5.89	4	1.94	5.91	4	1.95	5.82	4	1.93	5.85	4	1.93	5.77	4	1.92	5.83	4	1.94	5.87	4	1.94	5.88
6	1.90	5.87	6	1.64	5.39	6	2.00	5.98	6	1.91	5.85	6	1.95	5.89	6	1.92	5.87	6	1.94	5.87	6	1.95	5.88	6	1.87	5.79	6	1.70	5.64	6	1.85	5.79
8	1.57	5.47	8	1.49	5.13	8	1.71	5.71	8	1.53	5.44	7	1.89	1.46	8	1.79	5.71	8	1.77	5.71	8	1.86	5.81	8	1.83	5.70	8	1.86	5.56	8	1.77	5.62
10	1.41	4.98	10	1.17	4.66	10	1.41	5.12	10	1.15	4.68	7	1.85	1.44	10	1.49	5.28	10	1.63	5.40	10	1.79	5.65	10	1.58	5.41	10	1.70	5.56	10	1.40	5.17
12	1.10	4.51	12	0.91	4.08	12	1.11	4.52	12	0.86	4.01	8	1.72	1.39	12	1.16	4.65	12	1.27	4.90	12	1.33	5.12	12	1.24	4.82	12	1.53	5.23	12	0.94	4.34
14	0.71	3.81	14	0.60	3.51	14	0.81	3.92	14	0.63	3.49	8	1.67	1.35	14	0.87	4.03	14	0.99	4.26	14	1.14	4.47	14	1.01	4.25	14	1.14	4.67	14	0.68	3.62
16	0.57	3.28	16	0.39	2.99	16	0.51	3.32	16	0.43	3.06	9	1.50	2.59	16	0.65	3.52	16	0.73	3.72	16	0.80	3.94	16	0.65	3.66	16	0.84	3.98	16	0.34	3.02
18	0.27	2.84	18	0.14	2.53	18	0.26	2.77	18	0.30	2.73	10	1.32	2.41	18	0.49	3.22	18	0.49	3.11	18	0.53	3.33	18	0.44	3.09	18	0.60	3.44	18	0.10	2.44
20	0.02	2.29	20	-0.05	2.09	20	0.01	2.27	20	0.08	2.38	11	1.16	2.24	20	0.28	2.74	20	0.29	2.78	20	0.31	2.84	20	0.22	2.66	20	0.37	2.97	20	-0.17	1.93
22	-0.13	1.89	22	-0.28	1.67	22	-0.09	1.92	22	-0.07	2.01	12	1.03	2.10	22	0.11	2.39	22	0.18	2.47	22	0.07	2.38	22	0.05	2.27	22	0.13	2.50	22	-0.27	1.56
24	-0.17	1.70	24	-0.37	1.35	24	-0.12	1.79	24	-0.20	1.73	14	0.81	3.84	24	-0.09	2.02	24	-0.03	2.15	24	-0.15	1.92	24	-0.15	1.90	24	-0.14	1.99	24	-0.30	1.43
26	-0.22	1.61	26	-0.39	1.24	26	-0.14	1.74	26	-0.22	1.58	16	0.65	3.46	26	-0.20	1.71	26	-0.19	1.78	26	-0.23	1.62	26	-0.24	1.61	26	-0.25	1.61	26	-0.29	1.41
28	-0.22	1.56	28	-0.35	1.26	28	-0.16	1.70	28	-0.23	1.55	18	0.43	3.08	28	-0.26	1.54	28	-0.26	1.55	28	-0.29	1.48	28	-0.27	1.49	28	-0.28	1.47	28	-0.28	1.43
30	-0.16	1.62	30	-0.32	1.33	30	-0.18	1.66	30	-0.23	1.54	20	0.25	2.68	30	-0.25	1.49	30	-0.28	1.46	30	-0.35	1.36	30	-0.30	1.43	30	-0.27	1.45	30	-0.28	1.44
50	-0.17	16.70				32	-0.18	1.64	32	-0.24	1.53	22	0.08	2.33	32	-0.27	1.48	32	-0.28	1.44	32	-0.31	1.34	32	-0.30	1.40	40	-0.32	7.05	32	-0.29	1.43
75	-0.22	20.13				34	-0.18	1.64	34	-0.23	1.53	24	-0.09	1.99	34	-0.26	1.47	34	-0.27	1.45	34	-0.32	1.37	34	-0.27	1.43	50	-0.28	7.00	34	-0.29	1.42
100	-0.29	18.63				36	-0.19	1.63	36	-0.24	1.53	26	-0.25	1.66	36	-0.26	1.48	36	-0.28	1.45	36	-0.31	1.37	36	-0.27	1.46	75	-0.30	17.75	36	-0.27	1.44
						38	-0.19	1.62	38	-0.25	1.51	28	-0.25	1.50	38	-0.27	1.47	38	-0.28	1.44	38	-0.31	1.38	38	-0.27	1.46	100	-0.29	17.63	38	-0.26	1.47
						40	-0.22	1.59	40	-0.25	1.50	30	-0.26	1.49	40	-0.26	1.47	40	-0.28	1.44	40	-0.32	1.37	40	-0.26	1.47				40	-0.27	1.47
						55	-0.20	11.85				50	-0.23	15.10	60	-0.18	15.60	60	-0.21	15.10	60	-0.21	14.70	60	-0.18	15.60				60	-0.21	15.20
						75	-0.17	16.30				75	-0.23	19.25	80	-0.22	16.00	80	-0.16	16.30	80	-0.18	16.10	80	-0.19	16.30				80	-0.23	15.60
						100	-0.20	20.38				100	-0.30	18.38	100	-0.28	15.00	100	-0.28	15.60	100	-0.23	15.90	100	-0.20	16.10				100	-0.28	14.90
SUM	53.2		SUM	48.2		SUM	54.3		SUM	51.8		SUM	54.7		SUM	55.6		SUM	56.9		SUM	57.3		SUM	55.7		SUM	57.7		SUM	50.8	
Comparison 0 to 30m			DIFF	-5.0		DIFF	6.1		DIFF	-2.5		DIFF	2.9		DIFF	1.0		DIFF	1.3		DIFF	0.4		DIFF	-1.6		DIFF	2.1		DIFF	-6.9	
			CUM CHANGE	-5.0		CUM CHANGE	1.1		CUM CHANGE	-1.4		CUM CHANGE	1.5		CUM CHANGE	2.4		CUM CHANGE	3.7		CUM CHANGE	4.1		CUM CHANGE	2.5		CUM CHANGE	4.6		CUM CHANGE	-2.3	

BLP25 JAN82			BLP25 JUN82			BLP25 JAN83			BLP25 AUG83			BLP25 AUG84			BLP25 JUL85			BLP25 AUG86			BLP25 FEB87			BLP25 JUN87			BLP25 JAN88			BLP25 JUL88		
X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	3.220		BM	3.220		BM	3.220		BM	3.220		BM	3.220		BM			BM	1.993		BM	1.993		BM	1.993		BM	1.993		BM	1.993	
0	2.14		0	2.14		0	2.14		0	2.14		0	2.14					0	2.12		0	1.99		0	1.99		0	1.99		0	1.99	
10	2.04	30.90	10	2.09	31.15	10	2.04	30.90	10	1.98	30.60	10	2.13	31.35				2	1.93	6.05	2	2.11	6.10	2	2.02	6.01	2	2.02	6.01	2	1.79	5.78
12	2.01	6.05	12	2.06	6.15	12	2.03	6.07	20	1.89	29.35	12	2.04	6.17				4	1.74	5.67	4	1.89	6.00	4	1.89	5.91	4	1.83	5.85	4	1.81	5.60
14	1.59	5.60	14	1.69	5.75	14	2.01	6.04	22	1.83	5.72	13	1.99	3.02				6	1.63	5.37	6	1.82	5.71	6	1.88	5.77	6	1.87	5.70	6	1.73	5.54
16	1.70	5.29	16	1.48	5.17	16	1.91	5.92	24	1.53	5.36	14	1.93	2.96				8	1.57	5.20	8	1.80	5.62	8	1.90	5.78	8	1.86	5.73	8	1.69	5.42
18	1.35	5.05	18	1.15	4.63	18	1.88	5.79	26	0.95	4.48	16	1.89	4.37				10	1.18	4.75	10	1.70	5.50	10	1.79	5.69	10	1.75	5.61	10	1.65	5.34
20	0.71	4.06	20	0.80	3.95	20	1.86	5.74	28	0.70	3.65	16	1.33	1.31				12	0.94	4.12	12	1.68	5.38	12	1.74	5.53	12	1.72	5.47	12	1.77	5.42
22	0.51	3.22	22	0.60	3.40	22	1.81	5.67	30	0.45	3.15	18	0.94	4.27				14	0.68	3.62	14	1.62	5.30	14	1.69	5.43	14	1.71	5.43	14	1.74	5.51
24	0.33	2.84	24	0.40	3.00	24	1.54	5.35	32	0.22	2.67	20	0.77	3.71				16	0.45	3.13	16	1.45	5.07	16	1.65	5.34	16	1.82	5.53	16	1.55	5.29
26	0.13	2.46	26	0.21	2.61	26	1.26	4.80	34	0.03	2.25	22	0.50	3.27				18	0.25	2.70	18	1.17	4.62	18	1.64	5.29	18	1.67	5.49	18	1.17	4.72
28	-0.07	2.06	28	-0.01	2.20	28	0.96	4.22	36	-0.14	1.89	24	0.31	2.81				20	0.08	2.33	20	0.80	3.97	20	1.57	5.21	20	1.63	5.30	20	0.78	3.95
30	-0.25	1.68	30	-0.18	1.81	30	0.66	3.62	38	-0.22	1.64	26	0.10	2.41				22	-0.11	1.97	22	0.49	3.29	22	1.21	4.78	22	1.09	4.72	22	0.47	3.25
40	-0.28	7.35	32	-0.24	1.58	32	0.36	3.02	40	-0.20	1.58	28	-0.12	1.98				24	-0.22	1.67	24	0.19	2.68	24	0.88	4.09	24	0.81	3.90	24	0.17	2.64
50	-0.32	7.00	34	-0.20	1.56	34	0.08	2.44	42	-0.22	1.58	30	-0.16	1.72				26	-0.19	1.59	26	-0.02	2.17	26	0.53	3.41	26	0.56	3.37	26	-0.10	2.07
75	-0.29	17.38	36	-0.20	1.60	36	-0.12	1.96	44	-0.21	1.57	32	-0.20	1.64				28	-0.18	1.63	28	-0.26	1.72	28	0.34	2.87	28	0.32	2.88	28	-0.20	1.70
100	-0.25	18.25	38	-0.20	1.60	38	-0.14	1.74	46	-0.21	1.58	34	-0.21	1.59				30	-0.20	1.62	30	-0.24	1.50	30	0.08	2.42	30	0.04	2.36	30	-0.21	1.59
			40	-0.20	1.60	40	-0.16	1.70	48	-0.19	1.60	36	-0.22	1.57				32	-0.22	1.58	32	-0.24	1.52	32	-0.14	1.94	32	-0.12	1.92	32	-0.25	1.54
						48	-0.19	6.60	50	-0.20	1.61	40	-0.20	3.16				34	-0.18	1.60	34	-0.22	1.54	34	-0.15	1.71	34	-0.19	1.69	34	-0.21	1.54
						65	-0.22	13.52				50	-0.22	7.90				36	-0.20	1.62	36	-0.24	1.54	36	-0.17	1.68	36	-0.21	1.60	36	-0.24	1.55
						75	-0.25	7.65				75	-0.28	18.75				38	-0.22	1.58	38	-0.22	1.54	38	-0.17	1.66	38	-0.20	1.59	38	-0.21	1.55
						100	-0.22	19.13				100	-0.27	18.13				40	-0.24	1.54	40	-0.29	1.49	40	-0.17	1.66	40	-0.22	1.58	40	-0.23	1.56
																		60	-0.30	14.60	60	-0.31	14.00	60	-0.23	16.00	50	-0.21	7.85	60	-0.28	14.90
																		80	-0.28	14.20	80	-0.33	13.60	80	-0.25	15.20	75	-0.23	19.50	80	-0.28	14.40
																		100	-0.35	13.70	100	-0.38	12.90	100	-0.28	14.70	100	-0.24	19.13	100	-0.30	14.20
SUM	76.6		SUM	77.8		SUM	95.0		SUM	92.3		SUM	77.3					SUM	59.3		SUM	72.3		SUM	82.2		SUM	81.7		SUM	71.6	
Comparison 0 to 40m			DIFF	1.2		DIFF	17.2		DIFF	-2.6		DIFF	-15.0								DIFF	12.9		DIFF	9.9		DIFF	-0.5		DIFF	-10.2	
			CUM CHANGE	1.2		CUM CHANGE	18.4		CUM CHANGE	15.8		CUM CHANGE	0.7								CUM CHANGE	12.9		CUM CHANGE	22.8		CUM CHANGE	22.4		CUM CHANGE	12.2	

BLP26
JUN87

X	Y	Vol
BM	2.192	
0	2.19	
2	2.17	6.36
4	2.28	6.45
6	1.95	6.23
8	1.59	5.54
10	1.38	4.97
12	1.05	4.43
14	0.80	3.85
16	0.58	3.38
18	0.39	2.97
20	0.20	2.59
22	0.04	2.24
24	-0.02	2.02
26	-0.06	1.92
28	-0.06	1.88
30	-0.09	1.85
32	-0.11	1.80
34	-0.16	1.73
36	-0.13	1.71
38	-0.05	1.82
40	-0.01	1.94
60	-0.06	19.30
80	-0.06	18.80
100	-0.11	18.30
SUM		103.8

Comparison 0 to 80m

BLP26
JAN88

X	Y	Vol
BM	2.192	
0	2.19	
2	2.17	6.36
4	2.22	6.39
6	1.92	6.14
8	1.55	5.47
10	1.29	4.84
12	1.01	4.30
14	0.72	3.73
16	0.45	3.17
18	0.16	2.61
20	0.01	2.17
22	0.00	2.01
24	-0.05	1.95
26	-0.10	1.85
28	-0.11	1.79
30	-0.07	1.82
50	-0.07	18.60
70	-0.08	18.50
80	-0.09	9.15
100	-0.11	18.00
SUM		100.9
DIFF		-2.93
CUM CHANGE		-2.93

BLP26
JUL88

X	Y	Vol
BM	2.192	
0	1.92	
2	1.90	5.82
4	1.93	5.83
6	1.87	5.80
8	1.81	5.68
9	1.59	2.70
11	0.97	4.56
13	0.73	3.70
15	0.41	3.14
17	0.20	2.61
19	-0.03	2.17
21	-0.25	1.72
23	-0.34	1.41
25	-0.33	1.33
38	-0.38	8.39
45	-0.39	4.31
55	-0.37	6.20
65	-0.34	6.45
75	-0.36	6.50
80	-0.36	3.20
SUM		81.5
DIFF		-19.34
CUM CHANGE		-22.27

BLP27 JUN87			BLP27 JAN88			BLP27 JUL88		
X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	2.909		BM	2.909		BM	2.909	
0	2.91		0	2.91		0.0	2.91	
2	1.89	6.80	2	1.90	6.81	0.2	2.25	0.61
4	1.69	5.58	4	1.66	5.56	0.9	2.21	2.26
6	1.66	5.35	6	1.74	5.40	1.0	2.08	0.41
8	1.69	5.35	8	1.79	5.53	3.0	1.82	5.90
10	1.58	5.27	10	1.75	5.54	5.0	1.68	5.50
12	1.49	5.07	12	1.66	5.41	7.0	1.70	5.38
14	1.23	4.72	14	1.62	5.28	9.0	1.75	5.45
16	1.10	4.33	15	1.57	2.60	11.0	1.79	5.54
18	0.88	3.98	17	1.13	4.70	14.0	1.60	8.09
20	0.53	3.41	19	0.84	3.97	16.0	1.30	4.90
22	0.27	2.80	21	0.65	3.49	18.0	1.02	4.32
24	0.14	2.41	23	0.45	3.10	20.0	0.84	3.86
26	0.12	2.26	25	0.15	2.60	22.0	0.72	3.56
28	0.12	2.24	27	0.07	2.22	24.0	0.54	3.26
30	0.10	2.22	29	0.10	2.17	27.0	0.08	3.93
32	0.10	2.20	31	0.12	2.22	29.0	0.08	2.16
34	0.12	2.22	33	0.11	2.23	31.0	0.04	2.12
36	0.09	2.21	35	0.04	2.15	33.0	-0.01	2.03
38	0.09	2.18	40	-0.06	4.95	35.0	-0.06	1.93
40	0.01	2.10	50	-0.28	8.30	40.0	-0.19	4.38
60	-0.39	16.20	75	-0.20	19.00			
80	-0.55	10.60	100	-0.18	20.25			
100	-0.65	8.00						
	SUM	72.7		SUM	75.9		SUM	75.6
Comparison 0 to 40m				DIFF	3.2		DIFF	-0.3
				CUM CHANGE	3.2		CUM CHANGE	2.9

BLP28 JUN87			BLP28 JAN88			BLP28 JUL88		
X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	2.918		BM	2.918		BM	2.918	
0	2.92		0	2.24		0	2.25	
2	1.71	6.63	1	2.16	2.88	1	2.09	3.17
4	1.03	4.74	2	1.53	3.70	2.4	1.45	3.88
6	0.85	3.88	4	1.12	3.95	3	1.43	1.46
8	0.65	3.50	6	0.95	4.07	4	1.30	2.37
10	0.42	3.07	8	0.78	3.73	5	1.16	2.23
12	0.18	2.60	10	0.63	3.41	7	0.89	4.05
14	-0.03	2.15	12	0.43	3.06	10	0.67	5.34
16	-0.24	1.73	14	0.26	2.69	12	0.48	3.15
18	-0.43	1.33	16	0.02	2.28	14	0.23	2.71
20	-0.67	0.90	18	-0.26	1.76	16	-0.01	2.22
22	-0.70	0.63	20	-0.63	1.11	18	-0.31	1.68
24	-0.72	0.58	22	-0.77	0.60	20	-0.57	1.12
26	-0.72	0.56	24	-0.79	0.44	30	-0.81	3.10
28	-0.72	0.56	26	-0.79	0.42			
30	-0.74	0.54	28	-0.79	0.42			
32	-0.74	0.52	30	-0.80	0.41			
34	-0.75	0.51	50	-0.81	3.90			
36	-0.76	0.49	75	-0.81	4.75			
38	-0.77	0.47	100	-0.94	3.13			
40	-0.76	0.47						
60	-0.84	4.00						
80	-0.88	2.80						
100	-0.90	2.20						
SUM		26.7	SUM		28.4	SUM		28.0
Comparison 4 to 30m			DIFF		1.6	DIFF		-0.4
			CUM CHANGE		1.6	CUM CHANGE		1.3

BLP29 JUN87			BLP29 JAN88			BLP29 JUL88		
X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	3.196		BM	3.196		BM	3.196	
0	3.20		0	2.56		0	2.53	
2	2.24	7.44	1	2.41	2.44	1	2.28	3.41
4	0.90	5.14	1	2.29	0.67	2	2.11	3.20
6	0.58	3.48	2	2.20	2.60	4	1.02	5.13
8	0.34	2.92	3	1.34	3.88	5	0.81	1.92
10	0.15	2.49	4	0.88	1.69	7	0.56	3.37
12	-0.07	2.08	5	0.42	1.98	9	0.29	2.85
14	-0.30	1.63	6	0.33	1.10	11	0.07	2.36
16	-0.59	1.11	8	0.11	2.44	13	-0.16	1.91
18	-0.54	0.87	10	-0.09	2.02	15	-0.47	1.37
20	-0.53	0.93	12	-0.28	1.63	17	-0.73	0.80
22	-0.53	0.94	15	-0.51	1.82	19	-0.77	0.50
24	-0.56	0.91	17	-0.60	0.89	21	-0.85	0.38
26	-0.64	0.80	19	-0.66	0.74	23	-0.88	0.27
28	-0.74	0.62	21	-0.75	0.59	25	-0.90	0.22
30	-0.81	0.45	23	-0.82	0.43	27	-0.93	0.17
32	-0.85	0.34	25	-0.90	0.28	30	-0.93	0.21
34	-0.87	0.28	27	-0.93	0.17			
36	-0.89	0.24	30	-0.96	0.17			
38	-0.91	0.20	40	-0.99	0.25			
40	-0.90	0.19	50	-1.00	0.05			
60	-0.98	1.20	75	-1.02	-0.25			
80	-1.03	-0.10	100	-1.04	-0.75			
100	-1.08	-1.10						
SUM		24.4	SUM		15.9	SUM		21.5
Comparison 4 to 30m			DIFF		-8.4	DIFF		5.5
			CUM CHANGE		-8.4	CUM CHANGE		-2.9

BLP30 JUN87			BLP30 JAN88			BLP30 JUL88		
X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	2.872		BM	2.872		BM	2.872	
0	2.87		0	2.87		0	2.87	
2	1.59	6.46	0	2.26	0.36	1	1.94	3.41
4	0.76	4.35	1	2.15	2.24	2	1.38	2.66
6	0.5	3.26	3	1.12	5.27	4	1.08	4.46
8	0.28	2.78	5	0.89	4.01	6	0.88	3.96
10	0.07	2.35	6	0.78	2.20	8	0.73	3.61
12	-0.14	1.93	8	0.56	3.34	10	0.44	3.17
14	-0.34	1.52	10	0.37	2.93	12	0.17	2.61
16	-0.59	1.07	12	0.16	2.53	14	-0.04	2.13
18	-0.73	0.68	14	-0.03	2.13	16	-0.27	1.69
20	-0.75	0.52	16	-0.30	1.67	18	-0.63	1.10
22	-0.75	0.50	18	-0.67	1.03	20	-0.81	0.56
24	-0.75	0.50	20	-0.81	0.52	22	-0.80	0.39
26	-0.77	0.48	22	-0.81	0.38	24	-0.81	0.39
28	-0.78	0.45	24	-0.82	0.37	26	-0.81	0.38
30	-0.79	0.43	26	-0.80	0.38	30	-0.83	0.72
32	-0.80	0.41	28	-0.83	0.37			
34	-0.8	0.40	30	-0.82	0.35			
36	-0.81	0.39	50	-0.81	3.70			
38	-0.83	0.36	75	-0.84	4.38			
40	-0.84	0.33	100	-0.84	4.00			
60	-0.88	2.80						
80	-0.91	2.10						
100	-0.98	1.10						
SUM		16.5	SUM		18.2	SUM		20.7
			DIFF		1.7	DIFF		2.5
			CUM CHANGE		1.7	CUM CHANGE		4.2

Comparison 6 to 30m

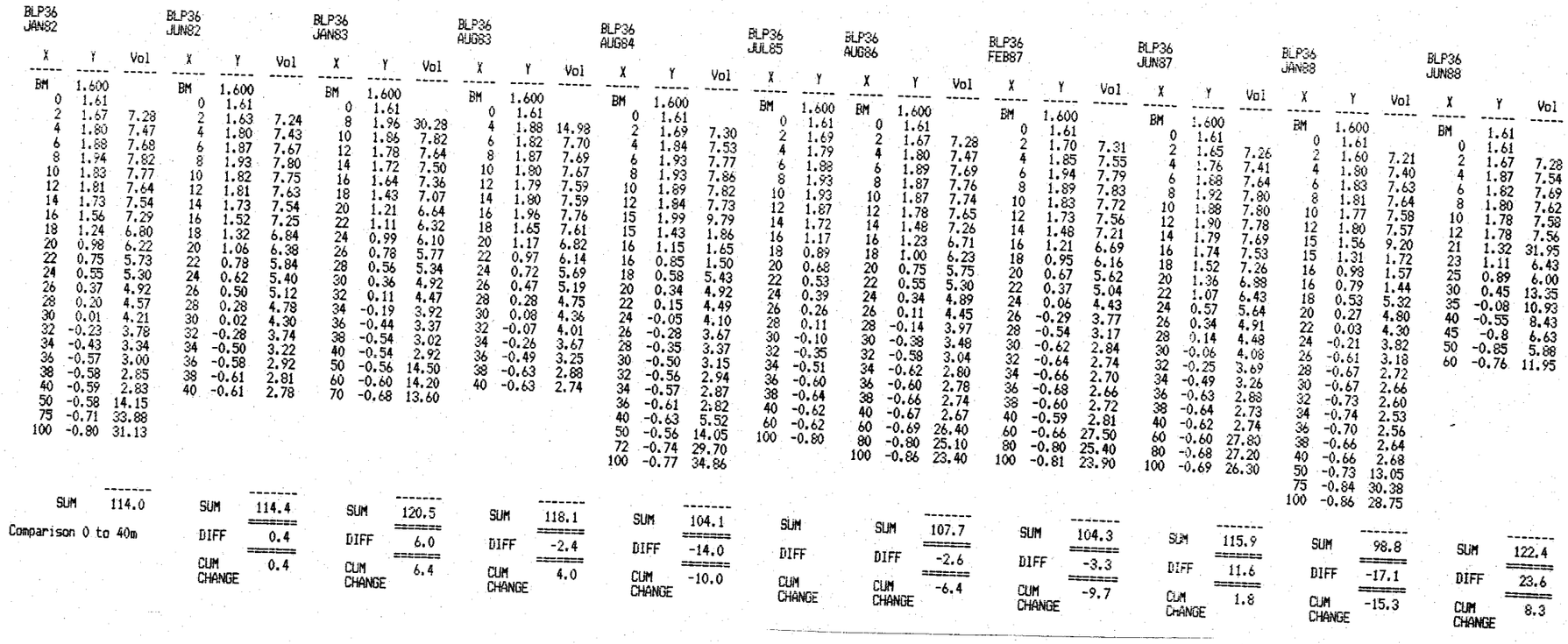
BLP31 JUN87			BLP31 JAN88			BLP31 JUL88		
X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	2.884		BM	2.884		BM	2.884	
0	2.88		0.1	2.32		0	2.34	
2	1.68	6.56	0.6	2.28	1.65	1	2.33	3.34
4	0.38	4.06	3.4	0.45	6.62	2	2.01	3.17
6	0.30	2.68	5.4	0.51	2.96	3	1.36	2.69
8	0.38	2.68	6.0	0.50	0.90	4	0.43	1.90
10	0.35	2.73	7.4	0.48	2.09	6	0.5	2.93
12	0.31	2.66	8.4	0.62	1.55	8	0.49	2.99
14	0.57	2.88	11.4	0.63	4.88	10	0.63	3.12
16	0.63	3.20	13.4	0.63	3.26	12	0.65	3.28
18	0.08	2.71	15.4	0.59	3.22	14	0.61	3.26
20	0.13	2.21	17.4	0.43	3.02	16	0.61	3.22
22	0.34	2.47	19.4	0.42	2.85	18	0.53	3.14
24	0.38	2.72	21.4	0.88	3.30	20	0.48	3.01
26	0.35	2.73	23.4	0.97	3.85	22	0.68	3.16
28	0.30	2.65	25.4	1.05	4.02	24	1.05	3.73
30	0.25	2.55	27.4	1.16	4.21	26	1.15	4.20
32	0.22	2.47	29.4	1.22	4.38	28	1.21	4.36
34	-0.02	2.20	31.4	1.29	4.51	30	1.27	4.48
36	0.19	2.17	33.4	1.36	4.65	32	1.34	4.61
38	0.48	2.67	35.4	1.28	4.64	34	1.38	4.72
40	0.87	3.35	37.4	1.09	4.37	36	0.87	4.25
42	0.90	3.77	39.4	1.08	4.17	38	0.55	3.42
44	1.12	4.02	41.4	0.87	3.95	40	0.2	2.75
46	1.22	4.34	43.4	0.65	3.52	44	-0.2	4.00
48	1.30	4.52	45.4	0.47	3.12	48	-0.59	2.42
50	1.44	4.74	47.4	0.32	2.79	52	-0.69	1.44
52	1.48	4.92	49.4	0.09	2.41	56	-0.7	1.22
54	1.31	4.79	51.4	-0.12	1.97	60	-0.69	1.22
56	0.95	4.26	53.4	-0.41	1.47	64	-0.75	1.12
58	0.58	3.53	54.4	-0.60	0.50	70	-0.79	1.38
60	0.34	2.92	56.4	-0.66	0.74			
70	-0.17	10.85	58.4	-0.66	0.68			
80	-0.69	5.70	60.4	-0.70	0.64			
100	-0.76	5.50	70.4	-0.77	2.65			

BLP32 JAN82			BLP32 JUN82			BLP32 JAN83			BLP32 AUG83			BLP32 AUG84			BLP32 JUL85			BLP32 AUG86			BLP32 FEB87			BLP32 JUN87			BLP32 JAN88			BLP32 JUL88		
X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	2.030		BM	2.030		BM	2.030		BM	2.030		BM	2.030		BM	2.030		BM	2.030		BM	2.030		BM	2.030		BM	2.030		BM	2.03	
0	1.87		-20	1.78		-20	1.78		-20	1.91		0	1.32		0	1.32		0	1.32		0	1.32		0	1.57		-20	1.85		-20	1.63	
2	1.69	7.56	-18	1.78	7.56	-18	1.76	7.54	-18	1.91	7.82	2	1.29	6.61	2	1.55	6.87	2	1.53	6.85	2	1.27	6.59	2	1.42	6.99	-18	1.87	7.72	-19	1.87	3.75
4	1.50	7.19	-16	1.78	7.56	-16	1.76	7.52	-16	1.86	7.77	4	1.13	6.42	4	1.56	7.11	4	1.56	7.09	4	1.01	6.28	4	1.15	6.57	-16	1.91	7.78	-18	1.81	3.84
6	1.61	7.11	-14	1.78	7.56	-14	1.74	7.50	-14	1.84	7.70	5	0.99	3.06	6	1.61	7.17	6	1.57	7.13	6	0.78	5.79	6	0.80	5.95	-15	1.60	5.63	-17	1.81	3.81
8	1.61	7.22	-12	1.78	7.56	-12	1.58	7.32	-12	1.59	7.43	6	0.92	2.96	8	1.52	7.13	8	1.52	7.09	8	0.60	5.38	8	0.53	5.33	-14	1.30	1.73	-16	1.49	3.65
10	1.35	6.96	-10	1.78	7.56	-10	1.31	6.89	-10	1.46	7.05	8	0.81	5.73	10	1.55	7.07	10	1.58	7.10	10	0.44	5.04	10	0.25	4.78	-12	0.88	6.18	-15	1.27	3.38
12	1.11	6.46	-8	1.78	7.56	-8	1.03	6.34	-8	1.45	6.91	10	0.74	5.55	12	1.64	7.19	12	1.69	7.27	12	0.33	4.77	12	0.04	4.29	-10	0.69	5.57	-14	1.23	3.25
14	0.89	6.00	-6	1.78	7.56	-6	0.71	5.74	-6	1.37	6.82	12	0.56	5.30	14	1.50	7.14	14	1.74	7.43	14	0.19	4.52	14	-0.12	3.92	-8	0.51	5.20	-12	1.08	6.31
16	0.68	5.57	-4	1.78	7.56	-4	-0.24	4.47	-4	1.16	6.53	13	0.35	2.46	16	1.12	6.62	16	1.75	7.49	16	0.09	4.28	16	-0.32	3.56	-6	0.29	4.80	-10	1.29	6.37
18	0.48	5.16	-2	1.78	7.56	-2	-0.79	2.97	-2	0.99	6.15	16	0.17	6.78	18	0.85	5.97	18	1.59	7.34	18	-0.06	4.03	18	-0.55	3.13	-4	0.05	4.34	-8	0.97	6.26
20	0.26	4.74	0	1.78	7.56	0	-0.79	2.42	0	0.75	5.74	18	-0.03	4.20	20	0.63	5.48	20	1.33	6.92	20	-0.29	3.65	20	-0.81	2.64	-3	0.04	2.66	-6	0.78	5.75
22	0.06	4.32	2	1.69	7.47	2	0.81	4.02	2	0.56	5.31	20	-0.14	3.89	22	0.45	5.08	22	1.07	6.40	22	-0.46	3.25	22	-0.91	2.28	-1	-0.25	2.46	-4	0.69	5.47
24	-0.32	3.74	4	1.62	7.31	4	-0.82	3.99	4	0.37	4.93	22	-0.29	3.57	24	0.29	4.74	24	0.83	5.90	24	-0.76	2.78	24	-0.93	2.16	0	-0.46	2.30	-2	0.42	5.11
			6	1.62	7.24	6	-0.84	2.34	6	0.21	4.58	24	-0.47	3.24	26	0.49	4.78	26	0.59	5.42	26	-0.88	2.36	26	-0.90	2.17	2	-0.67	2.87	0	0.18	4.60
			8	1.61	7.23	8	-0.85	2.31	8	0.06	4.27				28	0.31	4.80	28	0.36	4.95	28	-0.98	2.14	28	-0.91	2.19	4	-0.76	2.57	2	-0.07	4.11
			10	1.47	7.08	10	-0.86	2.29	10	-0.09	3.97				30	0.07	4.38	30	0.12	4.48	30	-0.99	2.03	30	-0.95	2.14	6	-0.77	2.47	4	-0.3	3.63
			12	1.14	6.61	12	-0.87	2.27	12	-0.25	3.66				32	-0.1	3.97	32	-0.09	4.03	32	-1.01	2.00	32	-0.97	2.08	7	-0.77	1.23	8	-0.84	5.72
			14	0.78	5.92	14	-0.88	2.25	14	-0.50	3.25				34	-0.26	3.64	34	-0.28	3.63	34	-1.01	1.98	34	-0.98	2.05	8	-0.79	1.22	13	-0.95	5.53
			16	0.68	5.46	16	-0.89	2.23							36	-0.26	3.48	36	-0.46	3.26	36	-1.06	1.93	36	-1.01	2.01	9	-0.79	1.21	20	-0.96	7.32
			18	0.56	5.24	18	-0.90	2.21							38	-0.48	3.26	38	-0.67	2.87	38	-1.03	1.91	38	-1.02	1.97	10	-0.80	1.21	24	-0.96	4.16
			20	0.32	4.88	20	0.91	4.01							40	-0.48	3.04	40	-0.92	2.41	40	-1.01	1.96	40	-1.02	1.96	12	-0.83	2.37	50	-0.99	26.65
			22	0.06	4.38	22	0.91	5.82							44	-0.95	5.14	60	-0.99	20.90	60	-1.01	19.80	60	-1.07	19.10	14	-0.84	2.33			
			24	-0.20	3.86	24	0.91	5.82							48	-1.02	4.06	80	-1.06	19.50	80	-1.02	19.70	80	-0.99	19.40	16	-0.89	2.27			
			26	-0.43	3.37	26	0.91	5.82							68	-1.02	19.60	100	-1.10	18.40	100	-1.04	19.40	100	-1.03	19.80	18	-0.94	2.17			
			28	-0.64	2.93	28	0.91	5.82																			20	-0.92	2.14			
			30	-0.75	2.61	30	0.91	5.82																			22	-0.91	2.17			
																											24	-0.94	2.15			
SUM	72.0		SUM	80.2		SUM	42.0					SUM	59.8		SUM	77.6		SUM	84.0		SUM	56.4		SUM	51.6		SUM	30.7		SUM	35.1	
Comparison 0 to 24m			DIFF	8.2		DIFF	-38.3					DIFF	17.8		DIFF	17.8		DIFF	6.4		DIFF	-27.7		DIFF	-4.8		DIFF	-20.9		DIFF	4.4	
			CUM	8.2		CUM	-30.1					CUM	-12.3		CUM	5.5		CUM	12.0		CUM	-15.7		CUM	-20.4		CUM	-41.4		CUM	-37.0	

BLP33 JAN82			BLP33 JUN82			BLP33 JAN83			BLP33 AUG83			BLP33 AUG84			BLP33 JUL85			BLP33 AUG86			BLP33 FEB87			BLP33 JUN87			BLP33 JAN88			BLP33 JUL88		
X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	2.520		BM	2.520		BM	2.520		BM	2.520		BM	2.520		BM	2.520		BM	2.520		BM	2.520		BM	2.520		BM	2.520		BM	2.520	
0	2.03		0	2.03		0	2.03		0	1.95		0	1.90		0	1.91		0	1.91		0	1.91		0	1.98		0	1.92		0	1.94	
10	1.94	44.85	10	1.87	44.50	4	1.91	17.88	2	2.01	8.96	2	1.96	8.86	2	1.93	8.84	2	2.40	9.31	2	2.40	9.31	2	1.94	8.92	2	1.95	8.87	2	1.97	8.91
12	1.91	8.85	12	1.86	8.73	6	1.94	8.85	4	1.91	8.92	4	1.93	8.89	4	1.90	8.83	4	1.93	9.33	4	1.93	9.33	4	1.92	8.86	4	1.97	8.92	4	2.04	9.01
14	1.91	8.82	14	1.74	8.60	8	1.98	8.92	6	1.89	8.80	6	1.99	8.92	6	1.92	8.82	6	1.96	8.89	6	1.95	8.88	6	1.95	8.87	6	2.02	8.99	6	1.98	9.02
16	1.73	8.64	16	1.52	8.26	10	2.00	8.98	8	1.90	8.79	8	1.98	8.97	8	1.95	8.87	8	2.03	8.99	8	1.94	8.89	8	1.97	8.92	8	1.96	8.98	8	1.91	8.89
18	1.41	8.14	18	1.22	7.74	12	2.02	9.02	10	1.94	8.84	10	1.86	8.84	10	1.91	8.86	10	2.06	9.09	10	1.92	8.86	10	1.99	8.96	10	1.84	8.80	10	1.80	8.71
20	1.15	7.56	20	0.89	7.11	14	2.06	9.08	12	1.99	8.93	12	1.93	8.79	12	1.34	8.25	12	1.93	8.99	12	1.98	8.90	12	1.79	8.78	12	1.71	8.55	12	1.53	8.33
22	0.91	7.06	22	0.65	6.54	16	2.01	9.07	14	2.04	9.03	14	1.35	8.28	14	1.00	7.34	14	1.67	8.60	14	1.88	8.86	14	1.56	8.35	14	1.59	8.30	14	1.13	7.66
24	0.70	6.61	24	0.61	6.26	18	1.66	8.67	16	1.33	8.37	16	1.05	7.40	16	0.64	6.64	16	1.06	7.73	16	1.87	8.75	16	1.41	7.97	15	1.31	1.98	16	0.81	6.94
26	0.48	6.18	26	0.40	6.01	20	1.41	8.07	18	1.06	7.39	18	0.74	6.79	18	0.50	6.14	18	0.82	6.88	18	1.38	8.25	18	1.25	7.66	15	1.20	1.88	19	0.56	9.56
28	0.30	5.78	28	0.16	5.56	22	1.18	7.59	20	0.76	6.82	20	0.58	6.32	20	0.36	5.86	20	0.61	6.43	20	1.21	7.59	20	1.07	7.32	16	1.12	1.83	22	0.30	8.79
30	0.10	5.40	30	-0.09	5.07	24	0.91	7.09	22	0.52	6.28	22	0.38	5.96	22	0.23	5.59	22	0.36	5.97	22	1.03	7.24	22	0.84	6.91	16	1.02	1.79	32	-0.54	23.80
32	-0.14	4.96	32	-0.37	4.54	26	0.71	6.62	24	0.34	5.86	24	0.18	5.56	24	0.03	5.26	24	0.17	5.53	24	0.88	6.91	24	0.60	6.44	18	0.80	6.82	36	-0.74	7.44
34	-0.31	4.55	34	-0.52	4.11	28	0.46	6.17	26	0.17	5.51	26	0.03	5.21	26	-0.15	4.88	26	-0.04	5.13	26	0.67	6.55	26	0.38	5.98	20	0.60	6.40	37	-0.79	1.74
36	-0.54	4.15	36	-0.61	3.87	30	0.24	5.70	28	0.02	5.19	28	-0.14	4.89	28	-0.33	4.52	28	-0.22	4.74	28	0.44	6.11	28	0.18	5.56	22	0.42	6.02	42	-0.80	8.53
38	-0.61	3.85	38	-0.81	3.58	32	0.01	5.25	30	-0.15	4.87	30	-0.33	4.53	30	-0.53	4.14	30	-0.44	4.34	30	0.25	5.69	30	0.03	5.21	24	0.24	5.66	50	-0.87	13.32
40	-0.67	3.72	40	-0.84	3.35	34	-0.19	4.82	32	-0.27	4.58	32	-0.52	4.15	32	-0.58	3.89	32	-0.56	4.00	32	0.01	5.26	32	-0.15	4.88	26	0.05	5.29	60	-0.92	16.05
45	-0.68	9.13				36	-0.42	4.39	34	-0.49	4.24	34	-0.59	3.89	34	-0.55	3.87	34	-0.54	3.90	34	-0.22	4.79	34	-0.32	4.53	28	-0.12	4.93			
50	-0.72	9.00				38	-0.55	4.03	36	-0.58	3.93	36	-0.58	3.83	36	-0.57	3.88	36	-0.56	3.90	36	-0.40	4.38	36	-0.54	4.14	30	-0.35	4.53			
75	-0.92	42.00				40	-0.56	3.89							38	-0.73	3.70	38	-0.68	3.76	38	-0.57	4.03	38	-0.71	3.75	32	-0.64	4.01			
100	-0.89	39.88				63	-0.70	43.01							40	-0.72	3.55	40	-0.66	3.66	40	-0.68	3.75	40	-0.71	3.58	34	-0.72	3.64			
						95	-0.85	55.20							50	-0.72	17.80	60	-0.72	36.20	60	-0.69	36.30	60	-0.88	34.10	36	-0.72	3.56			
															75	-0.92	42.00	80	-0.90	33.80	80	-0.85	34.60	80	-0.86	32.60	38	-0.71	3.57			
															100	-0.94	39.25	100	-0.93	31.70	100	-0.89	32.60	100	-0.91	32.30	40	-0.73	3.56			
																											45	-0.74	8.83			
																											50	-0.79	8.68			
																											75	-0.85	42.00			
																											100	-0.91	40.50			
SUM	131.6		SUM	126.9		SUM	136.2		SUM	125.3		SUM	120.1		SUM	114.5		SUM	121.8		SUM	134.6		SUM	128.3		SUM	119.7		SUM	117.1	
Com-parison of 0 to 36m			DIFF	-4.65		DIFF	9.27		DIFF	-10.86		DIFF	-5.23		DIFF	-5.6		DIFF	7.27		DIFF	12.8		DIFF	-6.29		DIFF	-8.5		DIFF	-2.7	
			CUM CHANGE	-4.65		CUM CHANGE	4.62		CUM CHANGE	-6.24		CUM CHANGE	-11.47		CUM CHANGE	-17.07		CUM CHANGE	-9.8		CUM CHANGE	3.0		CUM CHANGE	-3.29		CUM	-11.8		CUM CHANGE	-14.49	

BLP34 JAN82			BLP34 JUN82			BLP34 JAN83			BLP34 AUG83			BLP34 AUG84			BLP34 JUL85			BLP34 AUG86			BLP34 FEB87			BLP34 JUN87			BLP34 JAN88			BLP34 JUL88		
X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	2.560		BM	2.560		BM	2.560		BM	2.560		BM	2.560		BM	2.560		BM	2.560		BM	2.560		BM	2.560		BM	2.560		BM	2.560	
0	2.01		0	2.01		0	2.01		0	1.80		0	1.88		0	1.88		0	1.88		0	1.88		0	1.86		0	1.89		-5	2.05	
10	1.78	38.95	10	1.82	39.15	2	1.93	7.94	2	1.85	7.65	2	1.91	7.79	2	1.89	7.77	0	1.88		0	1.88		0	1.86		0	1.89		0	1.83	
12	1.69	7.47	12	1.71	7.53	4	1.86	7.79	4	1.86	7.71	4	1.96	7.87	4	1.82	7.71	2	1.76	7.64	2	1.92	7.80	2	1.90	7.76	2	1.88	7.77	5	1.78	19.03
14	1.50	7.19	14	1.50	7.21	6	1.82	7.68	6	1.74	7.60	6	1.80	7.76	6	1.76	7.58	4	1.78	7.54	4	1.86	7.78	4	1.88	7.78	4	1.86	7.74	10	1.76	18.85
16	1.20	6.70	16	1.21	6.71	8	1.87	7.69	8	1.75	7.49	8	1.80	7.60	8	1.84	7.60	6	1.76	7.53	6	1.87	7.73	6	1.81	7.69	6	1.78	7.64	15	1.76	18.80
18	0.93	6.13	18	0.81	6.02	10	1.91	7.78	10	1.78	7.53	10	1.91	7.71	10	1.82	7.66	8	1.76	7.51	8	1.88	7.75	8	1.77	7.58	8	1.81	7.59	19	1.76	15.04
20	0.68	5.61	20	0.68	5.49	12	1.96	7.87	12	1.89	7.67	11	1.83	3.87	12	1.70	7.52	10	1.81	7.57	10	1.85	7.73	10	1.79	7.56	10	1.85	7.66	23	1.28	14.08
22	0.47	5.15	22	0.57	5.25	14	1.76	7.72	14	1.64	7.53	12	1.74	3.79	14	1.49	7.19	12	1.85	7.66	12	1.77	7.62	12	1.89	7.68	12	1.90	7.75	25	1.46	6.74
24	0.27	4.74	24	0.32	4.89	16	1.56	7.32	16	1.51	7.15	13	1.68	3.71	16	1.15	6.64	14	1.80	7.75	14	1.83	7.60	14	1.93	7.82	13	1.85	3.88	30	0.55	15.03
26	0.07	4.34	26	0.08	4.40	18	1.31	6.87	18	1.44	6.95	14	1.63	3.66	18	0.91	6.06	16	1.76	7.66	16	1.88	7.71	16	1.83	7.76	14	1.84	3.85	40	-0.36	20.95
28	-0.13	3.94	28	-0.21	3.87	20	1.21	6.52	20	1.23	6.67	15	1.56	3.60	20	0.68	5.59	18	1.46	7.22	18	1.91	7.79	18	1.62	7.45	15	1.84	3.84	43	-0.63	4.52
30	-0.35	3.52	30	-0.46	3.33	22	1.12	6.33	22	1.05	6.28	17	1.25	6.81	22	0.44	5.12	20	1.24	6.70	20	1.83	7.74	20	1.52	7.14	17	1.76	7.60	45	-0.79	2.58
35	-0.68	7.43	32	-0.56	2.98	24	0.91	6.03	24	0.84	5.89	19	1.01	6.26	24	0.23	4.67	22	1.01	6.25	22	1.73	7.56	22	1.42	6.94	19	1.61	7.37	55	-0.70	12.55
40	-0.74	6.45	34	-0.68	2.76	26	0.66	5.57	26	0.61	5.45	21	0.78	5.79	26	0.01	4.24	24	0.79	5.80	24	1.39	7.12	24	1.19	6.61	21	1.39	7.00	75	-0.82	24.80
50	-0.74	12.60	36	-0.70	2.62	28	0.44	5.10	28	0.43	5.04	23	0.56	5.34	28	-0.27	3.74	26	0.57	5.36	26	1.20	6.59	26	0.94	6.13	23	1.12	6.51			
75	-0.78	31.00	38	-0.73	2.57	30	0.21	4.65	30	0.26	4.69	25	0.36	4.92	30	-0.55	3.18	28	0.39	4.96	28	1.06	6.26	28	0.74	5.68	25	0.87	5.99			
100	-0.86	29.50	40	-0.71	2.56	32	-0.04	4.17	32	0.09	4.35	27	0.20	4.56	32	-0.67	2.78	30	0.19	4.58	30	0.93	5.99	30	0.46	5.20	27	0.68	5.55			
						34	-0.27	3.69	34	-0.06	4.03	29	0.04	4.24	34	-0.71	2.62	32	0.01	4.20	32	0.70	5.63	32	0.21	4.67	29	0.51	5.19			
						36	-0.46	3.27	36	-0.20	3.74	31	-0.13	3.91	36	-0.71	2.58	34	-0.17	3.84	34	0.46	5.16	34	0.04	4.25	31	0.35	4.86			
						38	-0.50	3.04	38	-0.37	3.43	33	-0.31	3.56	38	-0.75	2.54	36	-0.35	3.48	36	0.24	4.70	36	-0.17	3.87	33	0.17	4.52			
						40	-0.52	2.98	40	-0.60	3.03	40	-0.70	10.47	38	-0.53	3.12	38	0.03	4.27	38	-0.36	3.47	35	-0.03	4.14			
						50	-0.67	14.05	42	-0.71	2.69	50	-0.71	12.95	40	-0.72	2.53	40	-0.74	2.73	40	-0.18	3.85	40	-0.40	3.24	40	-0.56	8.53			
						60	-0.72	13.05	44	-0.74	2.55	75	-0.76	31.63	60	-0.77	25.10	60	-0.73	25.30	60	-0.76	30.60	58	-0.74	25.74	50	-0.71	13.65			
						78	-0.73	22.95				100	-0.75	31.13	100	-0.82	48.20	80	-0.78	24.90	80	-0.76	24.80	78	-0.79	24.70	75	-0.84	30.63			
						96	-0.77	22.50										100	-0.84	23.80	100	-0.83	24.10	98	-0.86	23.50	100	-0.77	29.88			
SUM	107.6		SUM	107.3		SUM	120.0		SUM	119.9		SUM	113.2		SUM	105.3		SUM	119.1		SUM	134.4		SUM	126.3		SUM	125.0		SUM	128.5	
Comparison of 0 to 40m			DIFF	-0.3		DIFF	12.7		DIFF	-0.1		DIFF	-6.7		DIFF	-7.9		DIFF	13.8		DIFF	15.3		DIFF	-8.1		DIFF	-1.3		DIFF	3.5	
			CUM CHANGE	-0.3		CUM CHANGE	12.4		CUM CHANGE	12.3		CUM CHANGE	5.6		CUM CHANGE	-2.3		CUM CHANGE	11.5		CUM CHANGE	26.8		CUM CHANGE	18.7		CUM CHANGE	17.4		CUM CHANGE	20.9	

BLP35 JAN82			BLP35 JUN82			BLP35 JAN83			BLP35 AUG83			BLP35 AUG84			BLP35 JUL85			BLP35 AUG86			BLP35 FEB87			BLP35 JUN87			BLP35 JAN88			BLP35 JUL88		
X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol	X	Y	Vol
BM	2.160		BM	2.160		BM	2.160		BM	2.100		BM	2.100		BM	2.100		BM	2.100		BM	2.100		BM	2.100		BM	2.100		BM	2.100	
0	1.86		0	1.93		0	1.91		0						0	1.94		0	1.94		0	1.94		0	1.94		0	1.92		0	1.94	
2	1.93	7.79	2	1.91	7.84	2	1.91	7.82	10	1.92	29.60				2	1.97	7.91	4	2.00	15.88	2	2.08	8.02	2	2.09	8.03	2	2.06	7.98	5	2.03	19.93
4	1.93	7.86	4	1.99	7.90	4	1.91	7.82	12	1.88	7.80				4	2.03	8.00	6	1.88	7.88	4	2.06	8.14	4	2.08	8.17	4	2.02	8.08	10	1.93	19.90
6	1.91	7.84	6	1.88	7.87	6	1.91	7.82	14	1.46	7.34				6	1.96	7.99	8	1.85	7.73	6	1.99	8.05	6	2.01	8.09	6	2.01	8.03	13	1.74	11.51
8	1.85	7.76	8	1.88	7.76	8	1.91	7.82	16	1.33	6.79				8	1.95	7.91	10	2.04	7.89	8	1.94	7.93	8	1.97	7.98	8	2.04	8.05	15	1.10	6.84
10	1.79	7.64	10	1.79	7.67	10	1.90	7.81	18	1.25	6.58				10	2.07	8.02	12	1.99	8.03	10	1.61	7.55	10	1.94	7.91	10	1.83	7.87	20	0.55	14.13
12	1.70	7.49	12	1.68	7.47	12	1.78	7.68	20	1.01	6.26				12	2.06	8.13	14	1.59	7.58	12	1.36	6.97	12	1.94	7.88	12	1.73	7.56	25	0.15	11.75
14	1.40	7.10	14	1.45	7.13	14	1.46	7.24	22	0.92	5.93				14	1.27	7.33	16	1.25	6.84	14	0.97	6.33	14	1.92	7.86	14	1.57	7.30	30	-0.44	9.28
16	1.11	6.51	16	1.11	6.56	16	1.26	6.72	24	0.67	5.59				16	0.96	6.23	18	0.93	6.18	16	0.59	5.56	16	1.90	7.82	16	1.22	6.79	40	-0.56	15.00
18	0.84	5.95	18	0.79	5.90	18	1.11	6.37	26	0.49	5.16				18	0.70	5.66	20	0.67	5.60	18	0.27	4.86	18	1.96	7.86	18	0.94	6.16	50	-0.57	14.35
20	0.61	5.45	20	0.61	5.40	20	0.93	6.04	28	0.31	4.80				20	0.50	5.20	22	0.43	5.10	20	-0.08	4.19	20	2.00	7.96	20	0.74	5.68	70	-0.62	28.10
22	0.41	5.02	22	0.47	5.08	22	0.76	5.69	30	0.15	4.46				22	0.20	4.70	24	0.16	4.59	22	-0.41	3.51	22	2.00	8.00	22	0.51	5.25			
24	0.23	4.64	24	0.23	4.70	24	0.51	5.27	32	-0.03	4.12				24	-0.04	4.16	26	-0.13	4.03	24	-0.59	3.00	24	2.00	8.00	24	0.31	4.82			
26	0.03	4.26	26	-0.06	4.17	26	0.31	4.82	34	-0.22	3.75				26	-0.23	3.73	28	-0.39	3.48	26	-0.66	2.75	26	1.93	7.93	26	0.12	4.43			
28	-0.20	3.83	28	-0.31	3.63	28	0.04	4.35	36	-0.43	3.35				28	-0.51	3.26	30	-0.59	3.02	28	-0.62	2.72	28	1.71	7.64	28	-0.05	4.07			
30	-0.41	3.39	30	-0.5	3.19	30	-0.16	3.88	38	-0.60	2.97				30	-0.56	2.93	32	-0.64	2.77	30	-0.69	2.69	30	1.60	7.31	30	-0.23	3.72			
32	-0.56	3.03	32	-0.56	2.94	32	-0.44	3.40	40	-0.60	2.80				32	-0.59	2.85	34	-0.65	2.71	32	-0.62	2.69	32	1.31	6.91	32	-0.51	3.26			
34	-0.56	2.88	34	-0.67	2.77	34	-0.52	3.04							34	-0.59	2.82	36	-0.64	2.71	34	-0.60	2.78	34	0.99	6.30	34	-0.67	2.82			
36	-0.57	2.87	36	-0.63	2.70	36	-0.52	2.96							36	-0.59	2.82	38	-0.58	2.78	36	-0.62	2.78	36	0.79	5.78	36	-0.65	2.68			
38	-0.59	2.84	38	-0.57	2.80	38	-0.54	2.94							38	-0.63	2.78	40	-0.57	2.85	38	-0.66	2.72	38	0.55	5.34	38	-0.61	2.74			
40	-0.61	2.80	40	-0.61	2.82	40	-0.54	2.92							40	-0.65	2.72	60	-0.68	27.50	40	-0.60	2.74	40	0.26	4.81	40	-0.66	2.73			
50	-0.68	13.55				43	-0.58	4.32							50	-0.74	13.05	80	-0.67	26.50	60	-0.68	27.20	60	-0.62	36.40	60	-0.68	26.60			
75	-0.74	32.25				60	-0.66	23.46							75	-0.75	31.38	100	-0.66	26.70	80	-0.68	26.40	80	-0.61	27.70	80	-0.67	26.50			
100	-0.77	31.13				75	-0.69	19.88							100	-0.76	31.13				100	-0.72	26.00	100	-0.70	26.90	100	-0.70	26.30			
	SUM	107.0		SUM	106.3		SUM	112.4		SUM	107.3					SUM	105.2		SUM	107.7		SUM	96.0		SUM	147.6			110.0		SUM	108.3
Comparison 0 to 40m				DIFF	-0.7		DIFF	6.1		DIFF	-5.1					DIFF	-2.1		DIFF	2.5		DIFF	-11.7		DIFF	51.6					DIFF	-1.7
				CUM CHANGE	-0.7		CUM CHANGE	5.5		CUM CHANGE	0.3					CUM CHANGE	-1.8		CUM CHANGE	0.7		CUM CHANGE	-11.0		CUM CHANGE	40.6					CUM CHANGE	-1.7



BLP36 JAN82

X	Y	Vol
BM	1.600	
0	1.61	
2	1.67	7.28
4	1.80	7.47
6	1.88	7.68
8	1.94	7.82
10	1.83	7.77
12	1.81	7.64
14	1.73	7.54
16	1.56	7.29
18	1.24	6.80
20	0.98	6.22
22	0.75	5.73
24	0.55	5.30
26	0.37	4.92
28	0.20	4.57
30	0.01	4.21
32	-0.23	3.78
34	-0.43	3.34
36	-0.57	3.00
38	-0.58	2.85
40	-0.59	2.83
50	-0.58	14.15
75	-0.71	33.88
100	-0.80	31.13

SUM 114.0

Comparison 0 to 40m

BLP36 JUN82

X	Y	Vol
BM	1.600	
0	1.61	
2	1.63	7.24
4	1.80	7.43
6	1.87	7.67
8	1.93	7.80
10	1.82	7.75
12	1.81	7.63
14	1.73	7.54
16	1.52	7.25
18	1.32	6.84
20	1.06	6.38
22	0.78	5.84
24	0.62	5.40
26	0.50	5.12
28	0.28	4.78
30	0.02	4.30
32	-0.28	3.74
34	-0.50	3.22
36	-0.58	2.92
38	-0.61	2.81
40	-0.61	2.78

SUM 114.4

DIFF 0.4

CUM CHANGE 0.4

BLP36 JAN83

X	Y	Vol
BM	1.600	
0	1.61	
8	1.96	30.28
10	1.86	7.82
12	1.78	7.64
14	1.72	7.50
16	1.64	7.36
18	1.43	7.07
20	1.21	6.64
22	1.11	6.32
24	0.99	6.10
26	0.78	5.77
28	0.56	5.34
30	0.36	4.92
32	0.11	4.47
34	-0.19	3.92
36	-0.44	3.37
38	-0.54	3.02
40	-0.54	2.92
50	-0.56	14.50
60	-0.60	14.20
70	-0.68	13.60

SUM 120.5

DIFF 6.0

CUM CHANGE 6.4

BLP36 AUG83

X	Y	Vol
BM	1.600	
0	1.61	
4	1.88	14.98
6	1.82	7.70
8	1.87	7.69
10	1.80	7.67
12	1.79	7.59
14	1.80	7.59
16	1.96	7.76
18	1.65	7.61
20	1.17	6.82
22	0.97	6.14
24	0.72	5.69
26	0.47	5.19
28	0.28	4.75
30	0.08	4.36
32	-0.07	4.01
34	-0.26	3.67
36	-0.49	3.25
38	-0.63	2.88
40	-0.63	2.74

SUM 118.1

DIFF -2.4

CUM CHANGE 4.0

BLP36 AUG84

X	Y	Vol
BM	1.600	
0	1.61	
2	1.69	7.30
4	1.84	7.53
6	1.93	7.77
8	1.93	7.86
10	1.89	7.82
12	1.84	7.73
15	1.99	9.79
15	1.43	1.86
16	1.15	1.65
16	0.85	1.50
18	0.58	5.43
20	0.34	4.92
22	0.15	4.49
24	-0.05	4.10
26	-0.28	3.67
28	-0.35	3.37
30	-0.50	3.15
32	-0.56	2.94
34	-0.57	2.87
36	-0.61	2.82
40	-0.63	5.52
50	-0.56	14.05
72	-0.74	29.70
100	-0.77	34.86

SUM 104.1

DIFF -14.0

CUM CHANGE -10.0

BLP36 JUL85

X	Y	Vol
BM	1.600	
0	1.61	
2	1.69	
4	1.79	
6	1.88	
8	1.93	
10	1.93	
12	1.87	
14	1.72	
16	1.17	
18	0.89	
20	0.68	
22	0.53	
24	0.39	
26	0.26	
28	0.11	
30	-0.10	
32	-0.35	
34	-0.51	
36	-0.60	
38	-0.64	
40	-0.62	
60	-0.62	
100	-0.80	

SUM

DIFF

CUM CHANGE

BLP36 AUG86

X	Y	Vol
BM	1.600	
0	1.61	
2	1.67	7.28
4	1.80	7.47
6	1.89	7.69
8	1.87	7.76
10	1.87	7.74
12	1.78	7.65
14	1.48	7.26
16	1.23	6.71
18	1.00	6.23
20	0.75	5.75
22	0.55	5.30
24	0.34	4.89
26	0.11	4.45
28	-0.14	3.97
30	-0.38	3.48
32	-0.58	3.04
34	-0.62	2.80
36	-0.60	2.78
38	-0.66	2.74
40	-0.67	2.67
60	-0.69	26.40
80	-0.80	25.10
100	-0.86	23.40

SUM 107.7

DIFF -2.6

CUM CHANGE -6.4

BLP36 FEB87

X	Y	Vol
BM	1.600	
0	1.61	
2	1.70	7.31
4	1.85	7.55
6	1.94	7.79
8	1.89	7.83
10	1.83	7.72
12	1.73	7.56
14	1.48	7.21
16	1.21	6.69
18	0.95	6.16
20	0.67	5.62
22	0.37	5.04
24	0.06	4.43
26	-0.29	3.77
28	-0.54	3.17
30	-0.62	2.84
32	-0.64	2.74
34	-0.66	2.70
36	-0.68	2.66
38	-0.60	2.72
40	-0.59	2.81
60	-0.66	27.50
80	-0.80	25.40
100	-0.81	23.90

SUM 104.3

DIFF -3.3

CUM CHANGE -9.7

BLP36 JUN87

X	Y	Vol
BM	1.600	
0	1.61	
2	1.65	7.26
4	1.76	7.41
6	1.88	7.64
8	1.92	7.80
10	1.88	7.80
12	1.90	7.78
14	1.79	7.69
16	1.74	7.53
18	1.52	7.26
20	1.36	6.88
22	1.07	6.43
24	0.57	5.64
26	0.34	4.91
28	0.14	4.48
30	-0.06	4.08
32	-0.25	3.69
34	-0.49	3.26
36	-0.63	2.88
38	-0.64	2.73
40	-0.62	2.74
60	-0.60	27.80
80	-0.68	27.20
100	-0.69	26.30

SUM 115.9

DIFF 11.6

CUM CHANGE 1.8

BLP36 JAN88

X	Y	Vol
BM	1.600	
0	1.61	
2	1.60	7.21
4	1.80	7.40
6	1.83	7.63
8	1.81	7.64
10	1.77	7.58
12	1.80	7.57
15	1.56	9.20
15	1.31	1.72
16	0.98	1.57
16	0.79	1.44
18	0.53	5.32
20	0.27	4.80
22	0.03	4.30
24	-0.21	3.82
26	-0.61	3.18
28	-0.67	2.72
30	-0.67	2.66
32	-0.73	2.60
34	-0.74	2.53
36	-0.70	2.56
38	-0.66	2.64
40	-0.66	2.68
50	-0.73	13.05
75	-0.84	30.38
100	-0.86	28.75

SUM 98.8

DIFF -17.1

CUM CHANGE -15.3

BLP36 JUN88

X	Y	Vol
BM	1.61	
0	1.61	
2	1.67	7.28
4	1.87	7.54
6	1.82	7.69
8	1.80	7.62
10	1.78	7.58
12	1.78	7.56
21	1.32	31.95
23	1.11	6.43
25	0.89	6.00
30	0.45	13.35
35	-0.08	10.93
40	-0.55	8.43
45	-0.8	6.63
50	-0.85	5.88
60	-0.76	11.95

SUM 122.4

DIFF 23.6

CUM CHANGE 8.3