**Supplementary Online Material**

Figure X1: Tel Azekah phase S2-6

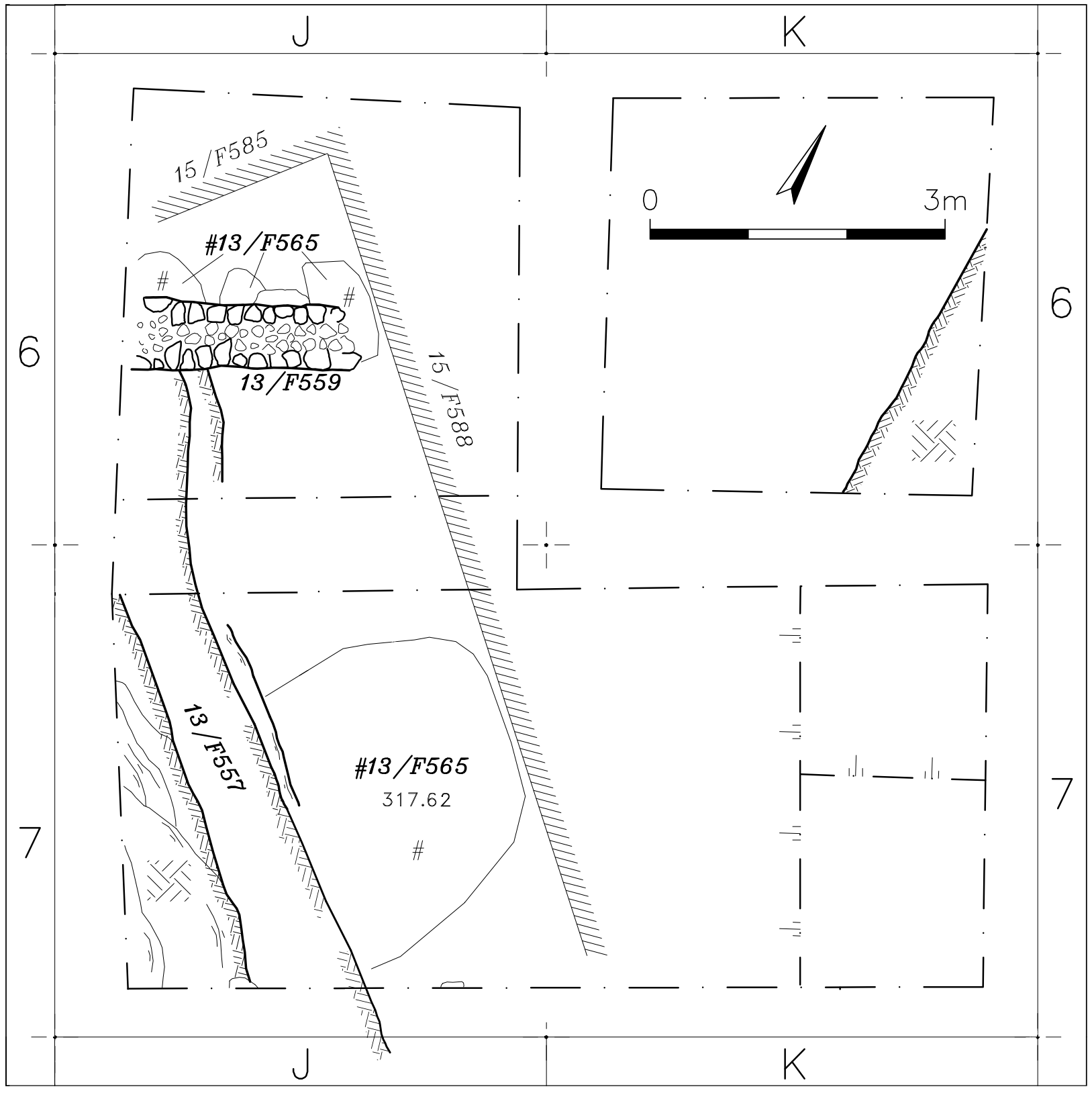


Figure X2: Tel Azekah phase S2-5b

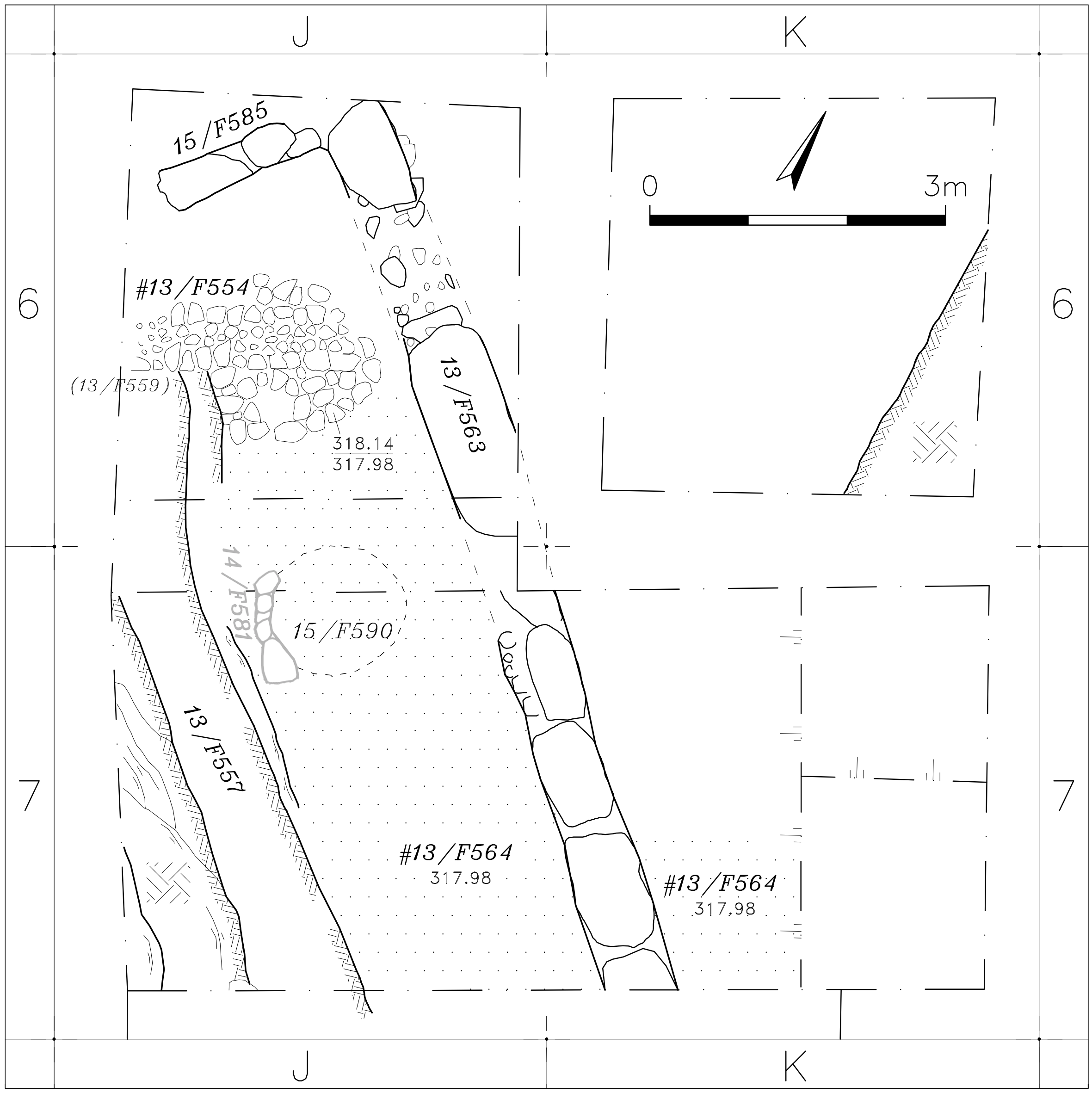


Figure X3: Tel Azekah phase S2-5a

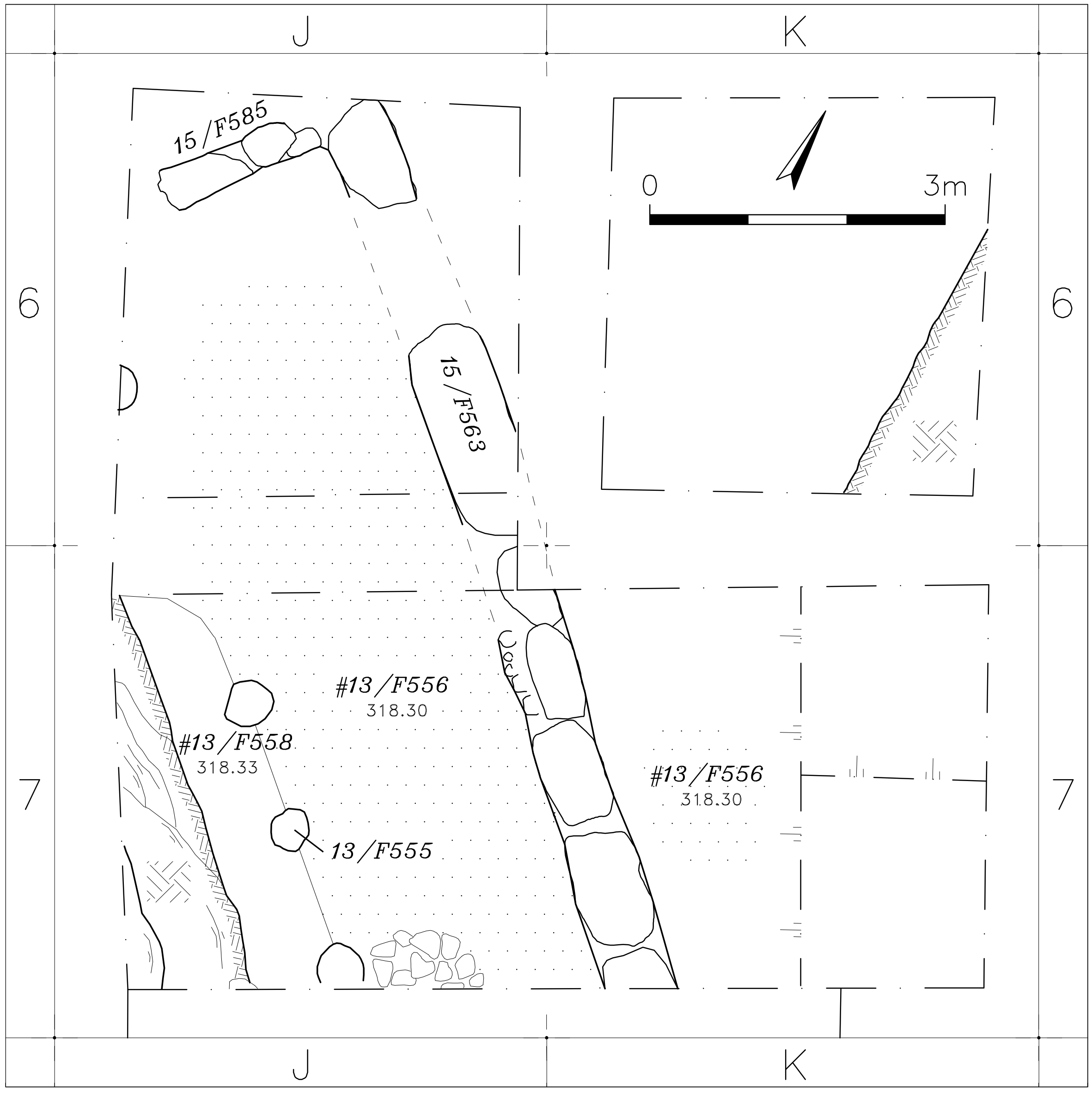


Figure X4: Tel Azekah phase S2-4

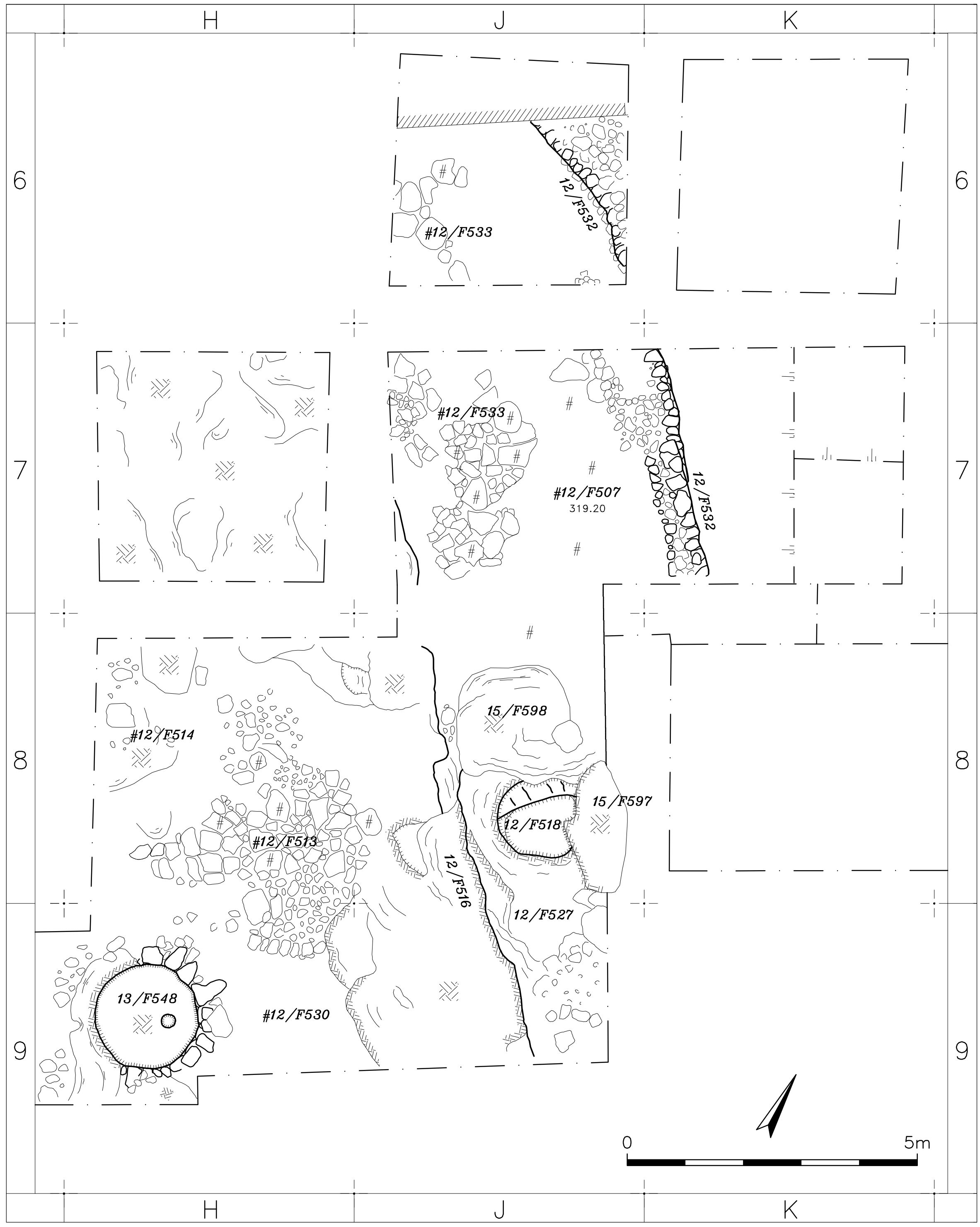


Figure X5: Tel Azekah phase T2-3

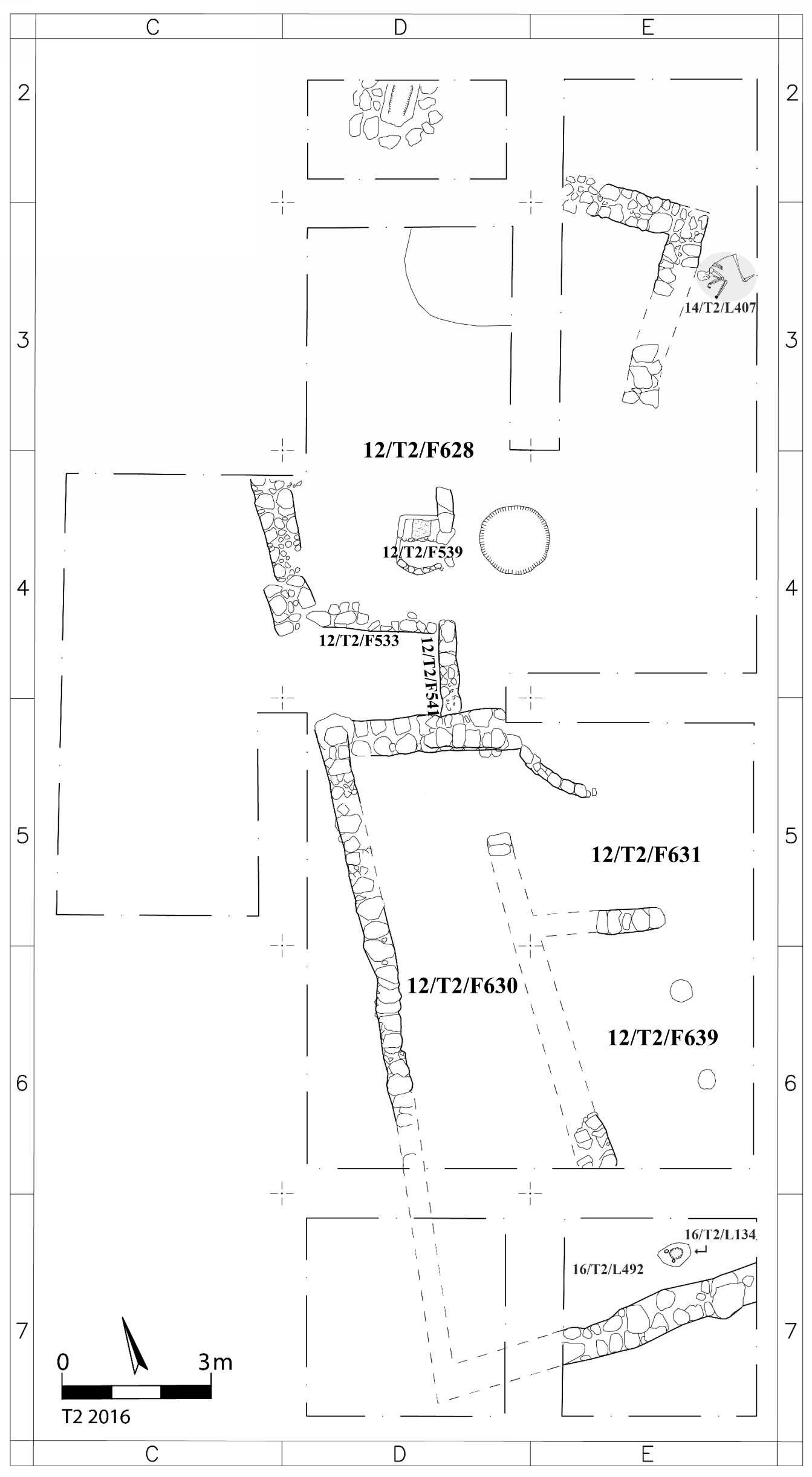


Figure X6: Curve plot of individual calibrated dates from Tel Azekah Area S2 Late Bronze phases.

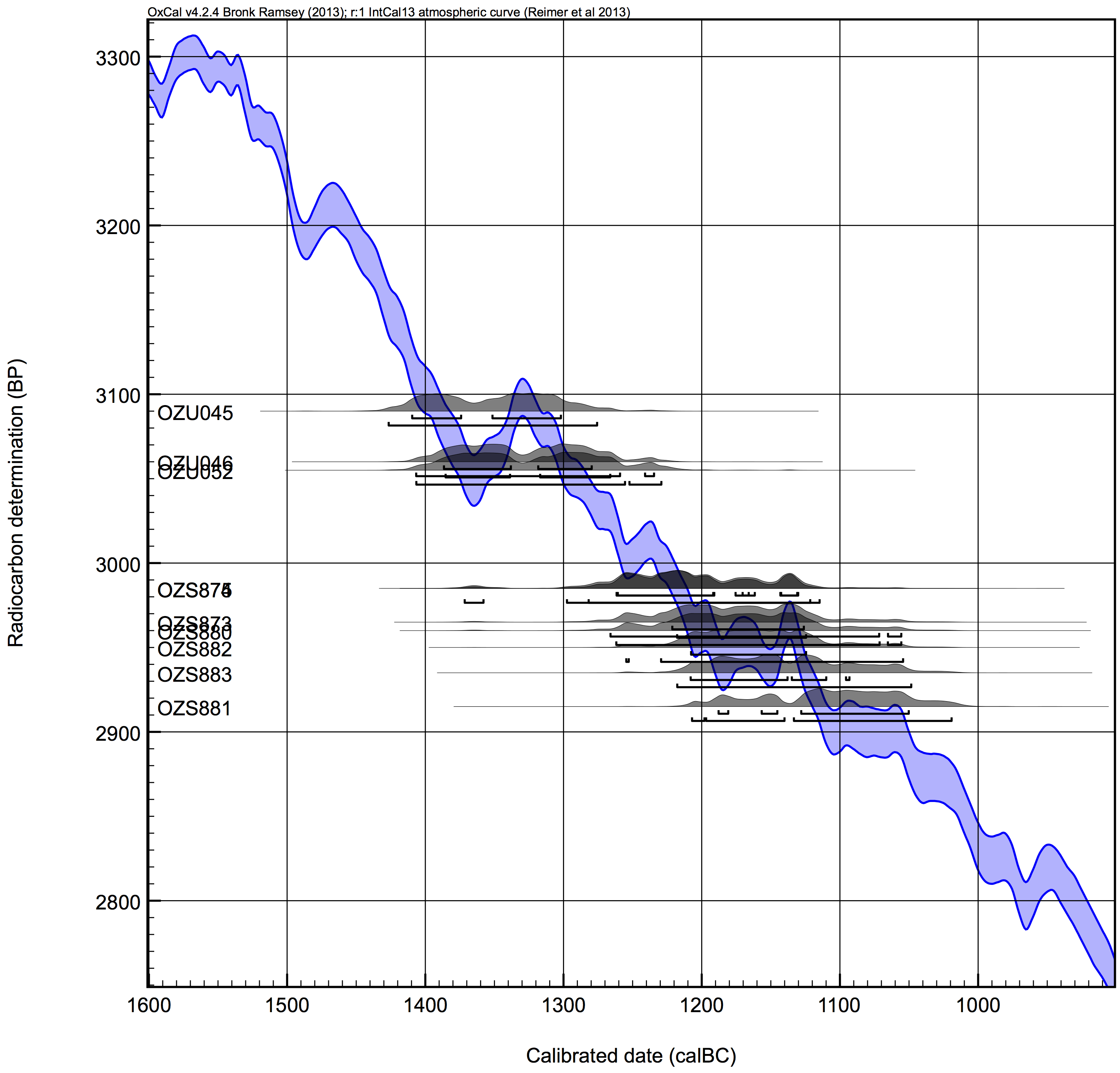


Figure X7: Bayesian model following the initial stratigraphic association of OZS882 and OZS883 with Phase S2-6, and excluding the more recently dated sample (cluster OZU045/046/052). (Refer also to Webster 2015: 73-74, but note that phase numbering has since been updated).

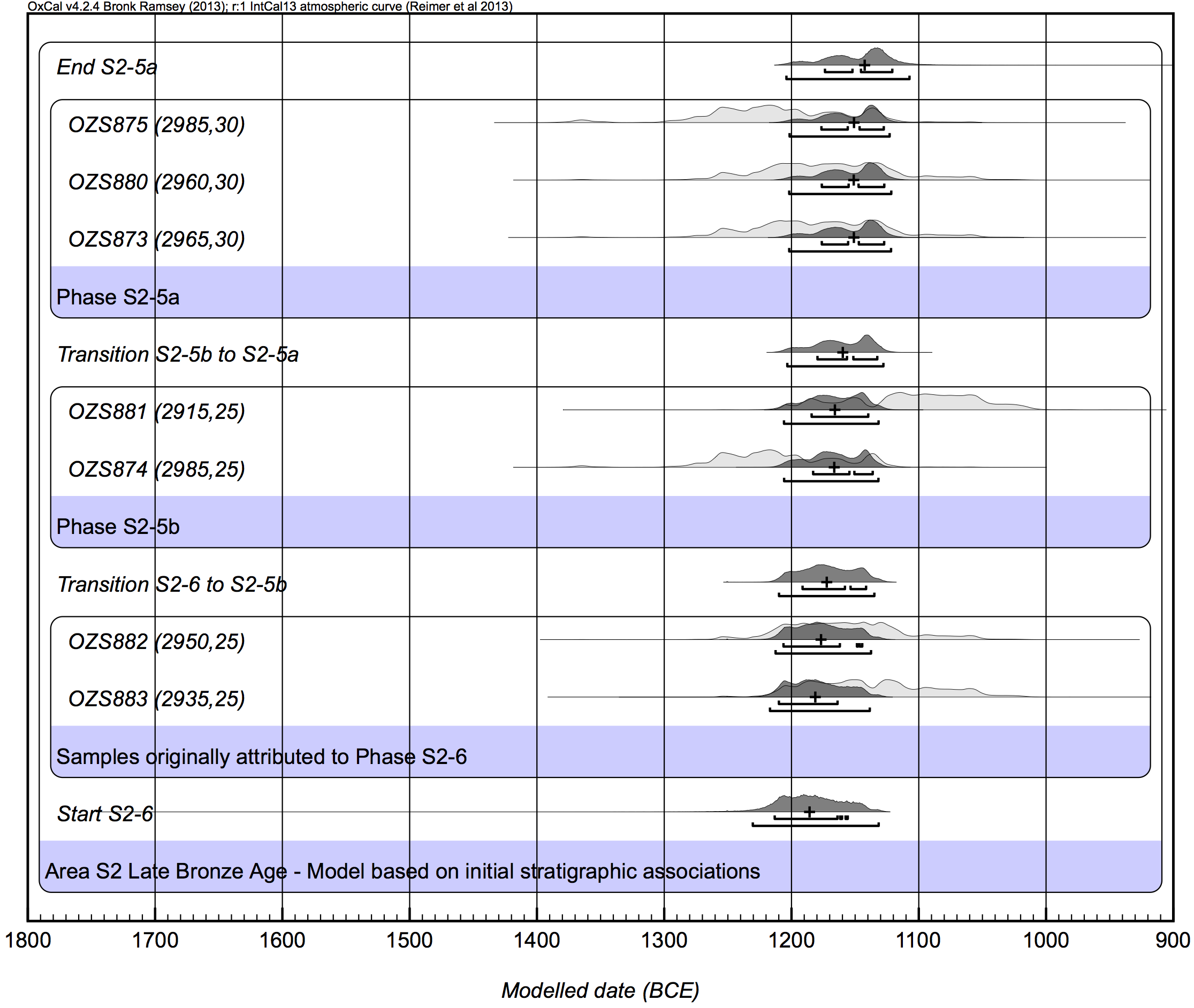
****

Figure X8: Narrow span of S2-6 through S2-5a under the original stratigraphic association of OZS882 and OZS883 with phase S2-6 (model shown in Figure X7).

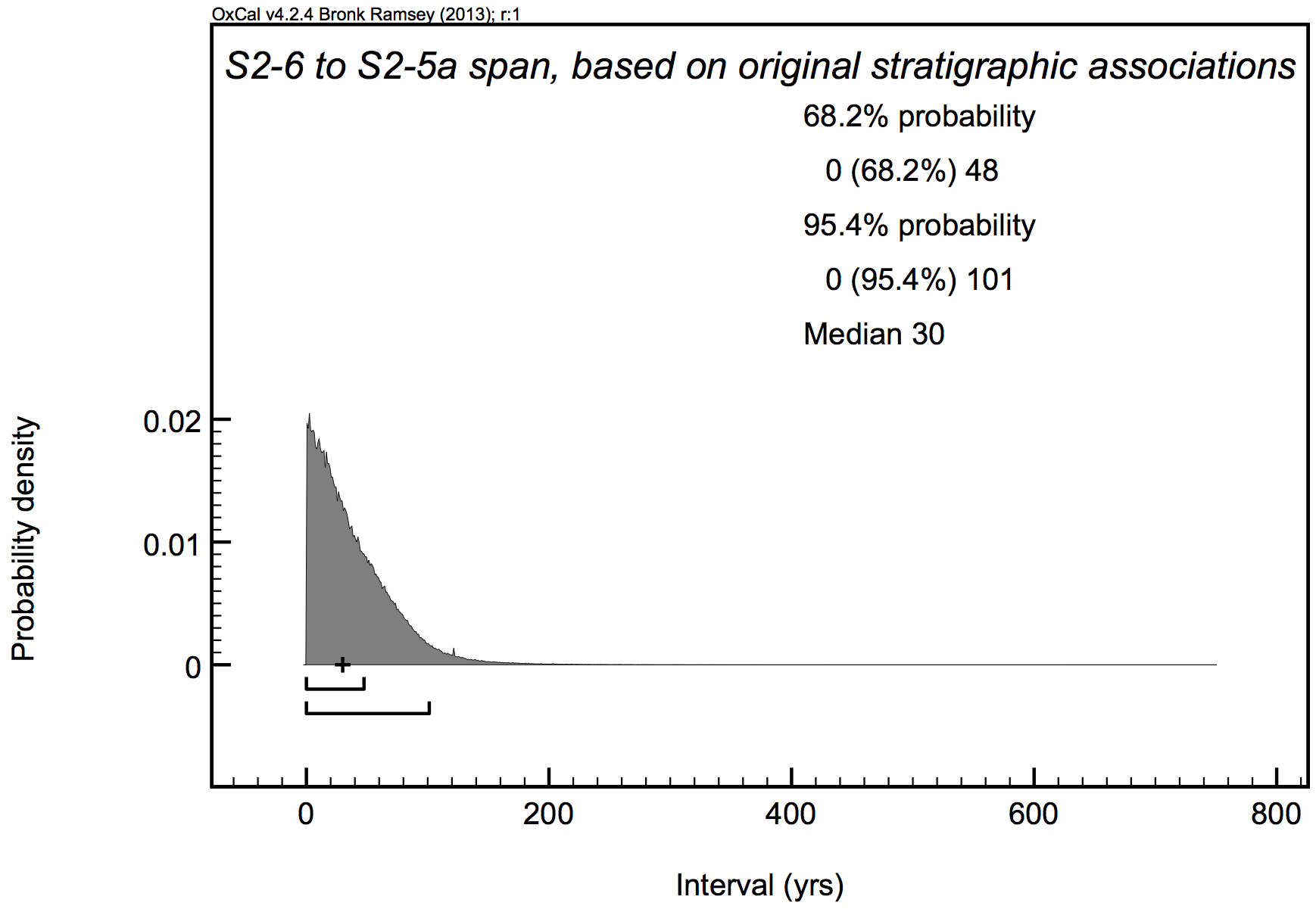


Figure X9: Modelled interval between S2-6 and S2-5b (Area S2 Model A, Figure 7).

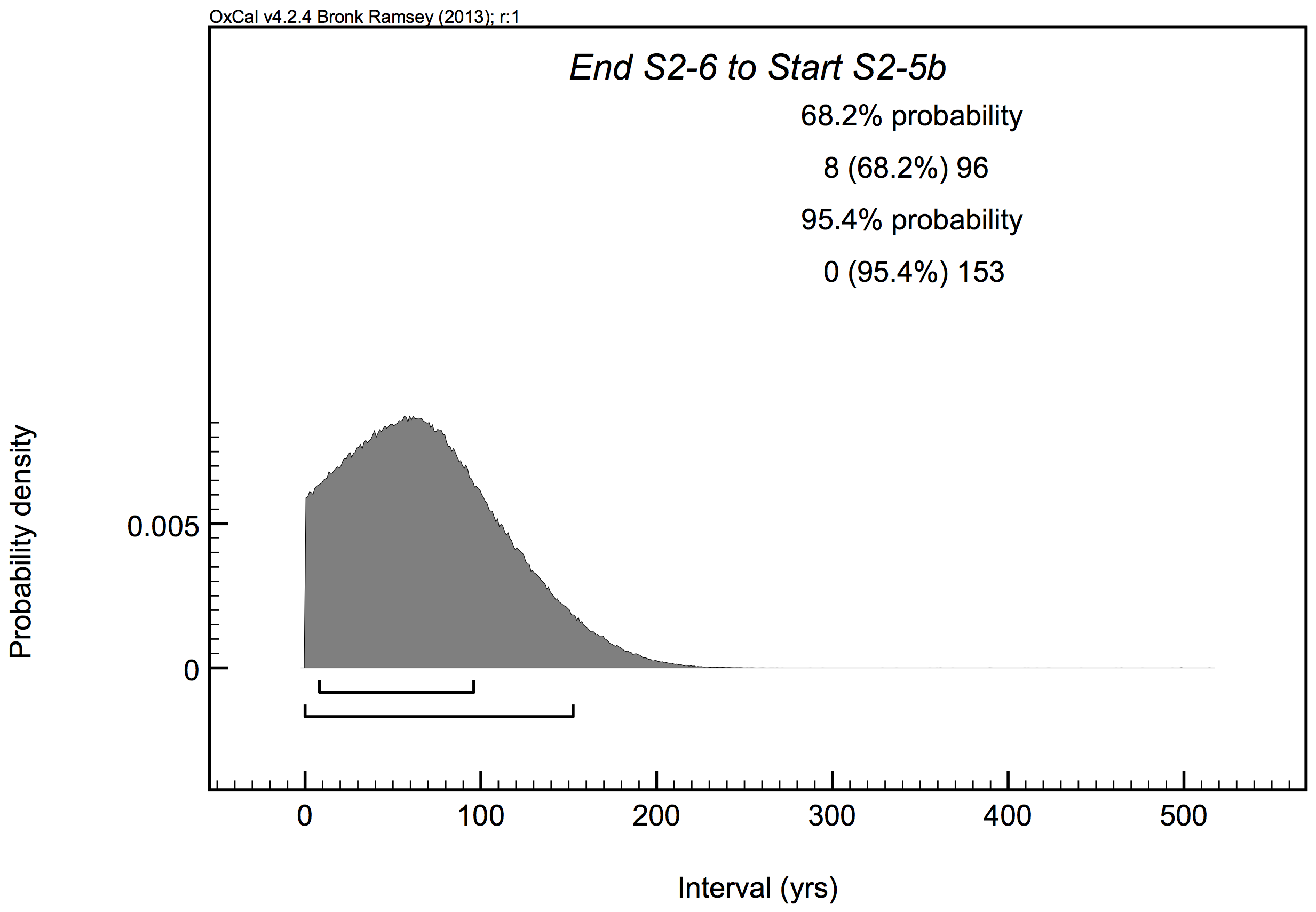


Table X1: Late Bronze phases and transitions at Lachish according to two models: 1) short-lived samples only (Model A, Figure 8); 2) all data (Model B, Figure 9).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Boundary or Phase** | **Cultural Period** | **1σ range (BCE)** | | | **2σ range (BCE)** | |
| Model A | Model B | Model A | | Model B |
| End VI |  | *1187-1092* | 1155-1069 | *1209-1015* | | 1186-1017 |
| VI | LB III | *1192-1110* | 1166-1090 | *1211-1067* | | 1191-1048 |
| Transition VII to VI |  | *1203-1128* | 1174-1119 | *1224-1094* | | 1200-1088 |
| VII | LB IIB | *1218-1153* | 1196-1135 | *1253-1117* | | 1228-1105 |
| Start VII |  | *1237-1162* | 1216-1151 | *1286-1124* | | 1253-1120 |
| End S-2 |  |  | 1278-1188 |  | | 1330-1151 |
| S-2 | LB IIA |  | 1305-1212 |  | | 1354-1177 |
| Transition S-3 to S-2 |  | *1296-1194*  *(End S-3)* | 1336-1238 | *1373-1156*  *(End S-3)* | | 1378-1200 |
| S-3 | LB IIA | *1371-1209* | 1375-1256 | *1427-1163* | | 1426-1216 |
| Start S-3 |  | *1383-1225* | 1401-1281 | *1488-1138* | | 1468-1224 |

**OXCAL MODELS**

**Tel Azekah – Area S2 Model A**

Options()

{

Resolution=1;

};

Plot()

{

Outlier\_Model("General",T(5),U(0,3),"t");

Sequence("TEL AZEKAH LATE BRONZE PHASES, AREA S2")

{

Boundary("Start S2-6");

Phase("Phase S2-6 (LB IIA)")

{

Label("(Three measurements from a cluster.)");

R\_Date("OZU045", 3090, 30)

{

Outlier("General",0.05);

};

R\_Date("OZU046", 3060, 25)

{

Outlier("General",0.05);

};

R\_Date("OZU052", 3055, 30)

{

Outlier("General",0.05);

};

};

Boundary("End S2-6");

Interval("End S2-6 to Start S2-5b");

Boundary("Start S2-5b");

Phase("Phase S2-5b (LB IIB)")

{

R\_Date("OZS874", 2985, 25)

{

Outlier("General",0.05);

};

R\_Date("OZS881", 2915, 25)

{

Outlier("General",0.05);

};

};

Boundary("Transition S2-5b to S2-5a");

Phase("Phase S2-5a (LB IIB)")

{

R\_Date("OZS873", 2965, 30)

{

Outlier("General",0.05);

};

R\_Date("OZS880", 2960, 30)

{

Outlier("General",0.05);

};

R\_Date("OZS875", 2985, 30)

{

Outlier("General",0.05);

};

};

Boundary("End S2-5a");

};

};

**Tel Azekah – Area S2 Model B**

**(elimination of OZS881 using agreement indices rather than outlier analysis)**

Options()

{

Resolution=1;

};

Plot()

{

Sequence("TEL AZEKAH LATE BRONZE PHASES, AREA S2")

{

Boundary("Start S2-6");

Phase("Phase S2-6 (LB IIA)")

{

Label("(Three measurements from a cluster.)");

R\_Date("OZU045", 3090, 30);

R\_Date("OZU046", 3060, 25);

R\_Date("OZU052", 3055, 30);

};

Boundary("End S2-6");

Interval("End S2-6 to Start S2-5b");

Boundary("Start S2-5b");

Phase("Phase S2-5b (LB IIB)")

{

R\_Date("OZS874", 2985, 25);

};

Boundary("Transition S2-5b to S2-5a");

Phase("Phase S2-5a (LB IIB)")

{

R\_Date("OZS873", 2965, 30);

R\_Date("OZS880", 2960, 30);

R\_Date("OZS875", 2985, 30);

};

Boundary("End S2-5a");

};

};

**Tel Azekah – Area T2**

Options()

{

Resolution=1;

};

Plot()

{

Outlier\_Model("General",T(5),U(0,4),"t");

Sequence("TEL AZEKAH LATE BRONZE PHASES, AREA T2")

{

Boundary("Start T2-3b");

Phase("T2-3b (LB III)")

{

R\_Combine("Av. OZV243, 52509")

{

Outlier("General",0.05);

R\_Date("52509",2953, 24);

R\_Date("OZV243", 2925, 30);

};

};

Boundary("Transition T2-3b to T2-3a");

Phase("T2-3a (LB III)")

{

R\_Combine("Av. OZV265, 52510")

{

Outlier("General",0.05);

R\_Date("52510",2955, 23);

R\_Date("OZV265", 2890, 25);

};

};

Boundary("End T2-3a");

};

};

**Tel Lachish Model A (short-lived samples, Area S)**

Options()

{

Resolution=1;

};

Plot()

{

Outlier\_Model("General",T(5),U(0,3),"t");

Sequence("LACHISH LATE BRONZE LEVELS (short-lived samples, Area S)")

{

Boundary("Start S3");

Phase("Level S-3 (LBIIA)")

{

R\_Date("RT-3152", 2945, 65)

{

Outlier("General", 0.05);

};

R\_Date("RT-3153", 3125, 55)

{

Outlier("General", 0.05);

};

};

Boundary("End S3");

Label("Unspecified gap allowed for Levels S2 through VIIb")

Interval("End S3 to Start VIIa");

Boundary("Start VIIa");

Phase("Level VIIa (LBIIB)")

{

R\_Date("Pta-3320", 2940, 70)

{

Outlier("General", 0.05);

};

R\_Date("RT-2906", 2955, 35)

{

Outlier("General", 0.05);

};

};

Boundary("Transition VII to VI");

Phase("Level VI (LB III)")

{

R\_Date("RT-2912", 2915, 25)

{

Outlier("General", 0.05);

};

R\_Date("RT-2755", 2955, 25)

{

Outlier("General", 0.05);

};

};

Boundary("End VI");

};

};

**Tel Lachish Model B (wood charcoal and short-lived samples)**

*Note: For the Charcoal Plus model data, refer to Dee and Bronk Ramsey (2014, SOM).*

Options()

{

Resolution=1;

};

Plot()

{

Outlier\_Model("General",T(5),U(0,4),"t");

Outlier\_Model("Charcoal\_p",Prior("Charcoal\_p.prior"),U(0,3),"t");

Sequence("LACHISH LATE BRONZE LEVELS (wood charcoal and short-lived samples)")

{

Boundary("Start S-3");

Phase("Area S Level S-3 (LB IIA)")

{

R\_Date("RT-2756", 3080, 25)

{

Outlier("Charcoal\_p", 1);

};

R\_Date("RT-2916", 3210, 25)

{

Outlier("Charcoal\_p", 1);

};

R\_Date("RT-3152 (s)", 2945, 65)

{

Outlier("General", 0.05);

};

R\_Date("RT-3153 (s)", 3125, 55)

{

Outlier("General", 0.05);

};

};

Boundary("Transition S-3 to S-2");

Phase("Area S Level S-2 (LB IIA)")

{

R\_Date("RT-2754 (s)", 3945, 25)

{

Outlier("General", 0.05);

};

R\_Date("RT-2918", 3090, 40)

{

Outlier("Charcoal\_p", 1);

};

};

Boundary("End S-2");

Label("Unspecified gap allowed for Area S Level S-1");

Interval();

Boundary("Start VII");

Phase("General Level VII (LB IIB)")

{

Label("Area S Level VIIa");

R\_Date("RT-3154", 2955, 25)

{

Outlier("Charcoal\_p", 1);

};

R\_Date("Pta-3320", 2940, 70)

{

Outlier("Charcoal\_p", 1);

};

R\_Date("RT-2906 (s)", 2955, 35)

{

Outlier("General", 0.05);

};

R\_Date("RT-2757", 2995, 25)

{

Outlier("Charcoal\_p", 1);

};

R\_Date("RT-3155", 3055, 20)

{

Outlier("Charcoal\_p", 1);

};

R\_Date("RT-2910", 2885, 35)

{

Outlier("Charcoal\_p", 1);

};

R\_Date("RT-3156", 3025, 25)

{

Outlier("Charcoal\_p", 1);

};

Label("Area P Level P-1");

R\_Date("RT-2913", 3855, 40)

{

Outlier("General",0.05);

};

};

Boundary("Transition VII to VI");

Phase("General Level VI (LB III)")

{

Label("Area S (Pillared Building)");

R\_Date("RT-2912 (s)", 2915, 25)

{

Outlier("General", 0.05);

};

R\_Date("RT-2755 (s)", 2955, 25)

{

Outlier("General", 0.05);

};

R\_Date("RT-2914", 2985, 30)

{

Outlier("Charcoal\_p", 1);

};

Label("Area GE (Inner City Gate)");

R\_Date("RT-2920", 2850, 40)

{

Outlier("Charcoal\_p", 1);

};

R\_Date("RT-3157", 2955, 25)

{

Outlier("Charcoal\_p", 1);

};

Label("Area P (Temple)");

R\_Date("Hel-810", 3090, 120)

{

Outlier("Charcoal\_p", 1);

};

R\_Date("Hel-1421", 3000, 100)

{

Outlier("Charcoal\_p", 1);

};

R\_Date("Hel-1417 (s)", 2810, 100)

{

Outlier("General", 0.05);

};

R\_Date("Pta-3370", 3090, 60)

{

Outlier("Charcoal\_p", 1);

};

R\_Date("Hel-1028", 3510, 120)

{

Outlier("Charcoal\_p", 1);

};

};

Boundary("End VI");

};

};