Supplemental Table 1. Weight (g) of obsidian artifacts by visual and XRF source assignments by period from Ceibal, Guatemala.

Period SMJ ECH IXP PC UC ZRG ZNP ZCL UID Total

Early Middle Preclassic 107.3 289.8 6.1 0 0 0 0 0 0 403.2

% 26.6 71.9 1.5 0 0 0 0 0 0 100

Late Middle Preclassic 8491.8 543.6 15.5 0 0 0 0 0 0 9050.9

% 93.8 6 0.2 0 0 0 0 0 0 100

Late Preclassic 548.2 41 0 0 0 0 0 0 0 589.2

% 93 7 0 0 0 0 0 0 0 100

Terminal Preclassic 316.7 96.5 0.9 0 0 0 0 0 0 414.1

% 76.5 23.3 0.2 0 0 0 0 0 0 100

Early Classic 5.6 52 8.7 0 0 0 0 0 0 66.3

% 8.4 78.4 13.1 0 0 0 0 0 0 100

Late Classic 11.7 114 5.6 0 0 0 0 0 0 131.3

% 8.9 86.8 4.3 0 0 0 0 0 0 100

Terminal Classic 1.4 68.4 4 0 0.8 3 0 1.5 0 79.1

% 1.8 86.5 5.1 0 1 3.8 0 1.9 0 100

Mixed contexts 5670.1 1237.6 141.1 1.7 0.1 0 0.8 0 0.1 7035.3

Total 15152.8 2442.9 181.9 1.7 0.9 0.8 3 1.5 0.1 17785.6

% 85.2 13.7 1 0.01 0.005 0.005 0.02 0.01 0.001 100

Supplemental Table 2. Obsidian sources by technological type of obsidian artifacts from Ceibal, late Middle Preclassic period.

 San Martín Jilotepeque El Chayal Ixtepeque Total

**Core blade percussion and pressure blades**

Macroblades 29 2 0 31

Small percussion blades 147 10 1 158

Crested blades 95 5 0 100

Initial pressure blades

 Complete blades 12 0 0 12

 Nearly complete blades 2 0 0 2

 Proximal segments 265 19 1 285

 Medial segments 333 22 0 355

 Distal segments 66 4 0 70

Prismatic blades

 Complete blades 5 0 0 5

 Nearly complete blades 4 0 0 4

 Proximal segments 391 33 0 424

 Medial segments 921 76 5 1002

 Distal segments 140 7 0 147

Plunging blades 13 0 0 13

Exhausted polyhedral cores 37 1 0 38

Platform rejuvenation flakes 2 1 0 3

Hinge removal flakes 6 2 0 8

Ribbon flakes 0 1 0 1

Flakes from polyhedral cores 4 1 0 5

Unifacial points 1 0 0 1

Total Core blade 2473 184 7 2664

% 92.8 6.9 0.3 100

**Non-blade percussion**

Large percussion flakes

 Primary flakes 67 5 0 72

 Secondary flakes 175 14 0 189

 Tertiary flakes 307 21 0 328

Small percussion flakes

 Primary flakes 99 9 0 108

Secondary flakes 298 21 1 320

 Tertiary flakes 1862 111 2 1975

Scrapers 18 4 0 22

Notched flakes 3 0 0 3

Denticulates 53 1 1 55

Drills 6 0 0 6

Chunks 15 7 1 23

Flake cores 24 2 1 27

Nearly unworked nodules 2 0 0 2

Total Non-blade 2929 195 6 3130

% 93.6 6.2 0.2 100

Total Obsidian 5402 379 13 5794

% 93.2 6.5 0.2 100

Supplemental Table 3. Obsidian sources by technological type of obsidian artifacts from Ceibal, Late Preclassic period.

 San Martín Jilotepeque El Chayal Total

**Core blade percussion and pressure blades**

Macroblades 1 0 1

Small percussion blades 19 1 20

Crested blades 8 0 8

Initial pressure blades

 Complete blades 1 0 1

 Proximal segments 33 2 35

 Medial segments 31 4 35

 Distal segments 5 0 5

Prismatic blades

 Proximal segments 59 5 64

 Medial segments 144 20 164

 Distal segments 15 1 16

Plunging blades 1 0 1

Exhausted polyhedral cores 9 0 9

Recycled exhausted polyhedral cores 1 0 1

Hinge removal flakes 1 0 1

Ribbon flakes 0 1 1

Flakes from polyhedral cores 1 0 1

Total Core blade 329 34 363

% 90.6 9.4 100

**Non-blade percussion**

Large percussion flakes

 Secondary flakes 3 0 3

 Tertiary flakes 17 1 18

Small percussion flakes

 Primary flakes 5 2 7

 Secondary flakes 12 1 13

 Tertiary flakes 87 6 93

Scrapers 3 0 3

Notched flakes 1 0 1

Denticulates 3 0 3

Drills 1 0 1

Chunks 5 1 6

Flake cores 0 1 1

Total Non-blade 137 12 149

% 91.9 8.1 100

Total 466 46 512

%l 91 9 100

Supplemental Table 4. Obsidian sources by technological type of obsidian artifacts from Ceibal, Terminal Preclassic period.

 San Martín Jilotepeque El Chayal Ixtepeque Total

**Core blade percussion and pressure blades**

Small percussion blades 9 1 0 10

Crested blades 6 0 0 6

Initial pressure blades

Proximal segments 11 3 0 14

Medial segments 17 6 0 23

Distal segments 3 2 0 5

Prismatic blades

Proximal segments 30 14 0 44

Medial segments 61 39 1 101

Distal segments 7 6 0 13

Plunging blades 1 1 0 2

Exhausted polyhedral cores 0 0 1 1

Recycled exhausted polyhedral cores 0 1 0 1

Platform rejuvenation flakes 0 1 0 1

Flakes from polyhedral cores 1 0 0 1

Total Core blade 146 74 2 222

% 65.8 33.3 0.9 100

**Non-blade percussion**

Large percussion flakes

Primary flakes 1 1 0 2

Secondary flakes 7 0 0 7

Tertiary flakes 10 0 0 10

Small percussion flakes

Primary flakes 2 0 0 2

Secondary flakes 15 0 0 15

Tertiary flakes 39 14 0 53

Scrapers 1 0 0 1

Denticulates 3 0 0 3

Chunks 2 0 0 2

Flake cores 1 0 0 1

Total Non-blade 81 15 0 96

% 84.4 15.6 0 100

Total Obsidian 227 89 2 318

% 71.4 28 0.6 100

Supplemental Table 5. Obsidian sources by technological type of obsidian artifacts from Ceibal, Early Classic period.

 El Chayal Ixtepeque San Martín Jilotepeque Total

Initial pressure blades

Proximal segments 2 0 0 2

Medial segments 6 0 0 6

Distal segments 0 1 0 1

Prismatic blades

Nearly complete blades 1 0 0 1

Proximal segments 10 2 0 12

Medial segments 24 3 4 31

Distal segments 4 2 0 6

Exhausted polyhedral cores 1 0 0 1

Flakes from polyhedral cores 1 0 0 1

Small percussion flakes

Tertiary flakes 2 0 0 2

Scrapers 0 0 1 1

Total 51 8 5 64

% 79.7 12.5 7.8 100

Supplemental Table 6. Obsidian sources by technological type of obsidian artifacts from Ceibal, Late Classic period.

 El Chayal San Martín Jilotepeque Ixtepeque Total

Small percussion blades 0 1 0 1

Initial pressure blades

Proximal segments 4 0 0 4

Medial segments 2 0 0 2

Prismatic blades

 Nearly complete blades 1 0 0 1

 Proximal segments 31 0 2 33

 Medial segments 65 1 1 67

 Distal segments 1 0 0 1

Exhausted polyhedral cores 3 0 0 3

Bifacial thinning flakes 0 0 2 2

Large percussion flakes

 Tertiary flakes 0 2 0 2

Small percussion flakes

 Secondary flakes 0 1 0 1

 Tertiary flakes 0 0 1 1

Denticulates 0 1 0 1

Total 107 6 6 119

% 89.9 5 5 100

Supplemental Table 7. Obsidian sources by technological type of obsidian artifacts from Ceibal, Terminal Classic period.

 El Chayal Ixtepeque San Martín Jilotepeque Zaragoza Ucareo Zacualtipán Total

Small percussion blades 0 0 1 0 0 0 1

Initial pressure blades

 Proximal segments 2 1 0 0 0 0 3

 Medial segments 7 0 0 0 0 0 7

Prismatic blades

 Proximal segments 15 1 0 1 0 0 17

 Medial segments 38 2 0 0 1 1 42

 Distal segments 4 0 0 0 0 0 4

Prismatic blade points 1 0 0 0 0 0 1

Exhausted polyhedral cores 1 0 0 0 0 0 1

Bifacial points 0 1 0 1 0 0 2

Small percussion flakes

 Secondary flakes 0 0 1 0 0 0 1

 Tertiary flakes 4 0 0 0 0 0 4

Scrapers 1 0 0 0 0 0 1

Denticulates 0 1 0 0 0 0 1

Total 73 6 2 2 1 1 85

% 85.9 7.1 2.4 2.4 1.2 1.2 100