This process is an exercise of trading synchronous I/Os for GBP access to obtain better performance. The number of synchronous I/Os per transaction hovers from the high-20s to the mid-30s for GBP sizes ranging 5 GB - 151 GB. During those measurements, there is no clear relationship between CPU time and increased GBP size, as shown in Figure 3-24. However, when a 566 GB group buffer pool is used, synchronous I/Os are down to less than 5 per transaction, and there is clear performance advantage in terms of class 2 CPU time. At this point, a large group buffer pool clearly benefits this workload.

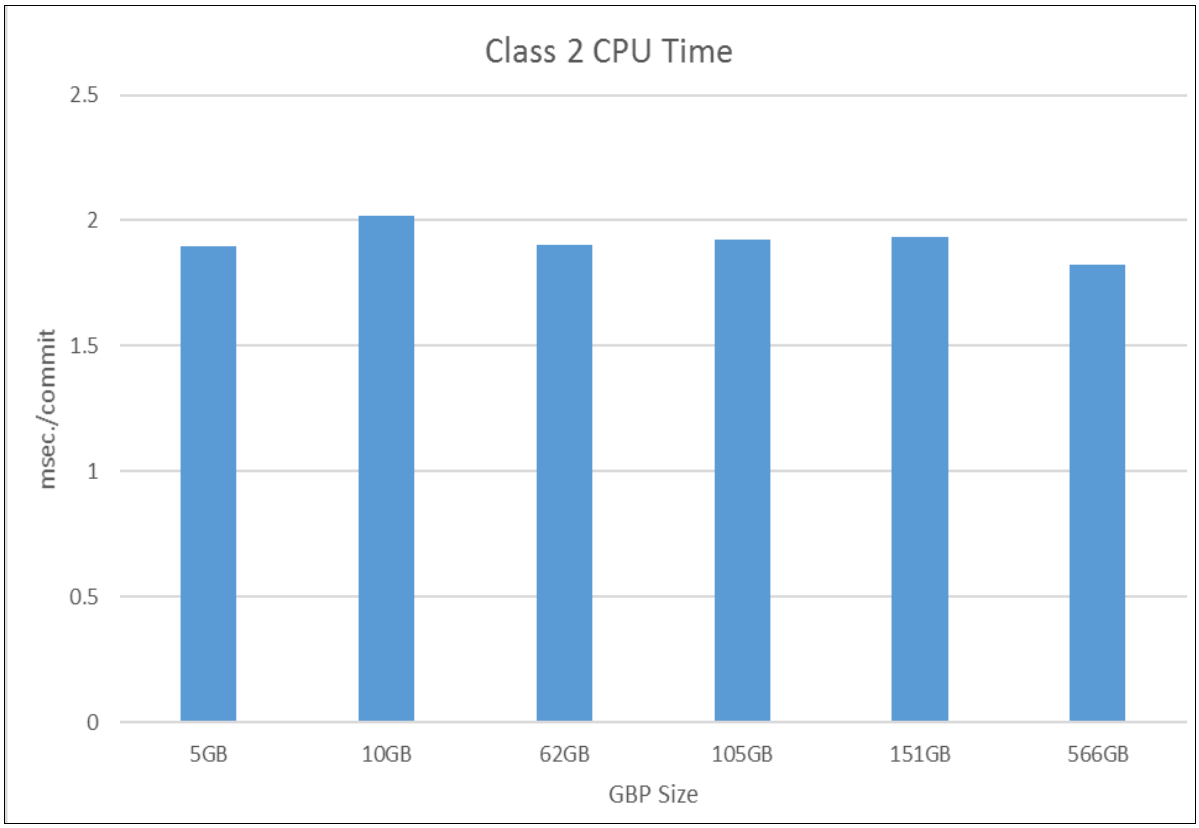

Figure 3-24 Db2 Class 2 CPU time with increasing GBP size

3.6.2 Summary

Large group buffer pools can help to minimize the number of synchronous reads for GBP-dependent objects. The access time to a group buffer pool is about three orders of magnitude faster than access to disk. This difference shortens the transaction's class 3 suspension time, which results in faster transaction response time and improves overall workload throughput.

The reduction in the number of synchronous reads for GBP-dependent objects should also benefit transaction CPU time. However, in our observation, access shifting from DASD I/O to CF requests results in longer CF service times in our environment and negatively affects transaction CPU time. It is not until synchronous I/Os are drastically reduced (566 GB measurement) that we begin to observe improved transaction class 2 CPU time.