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Scott Smith conjectured in 1979 that two distinct longest cycles of a  $k$ -connected graph meet in at least  $k$  vertices when  $k \geq 2$ . This conjecture is known to be true for  $k \leq 10$ . Reid and Wu generalized Smith's conjecture to  $k$ -connected matroids by considering largest circuits. The case  $k = 2$  of the matroid conjecture follows from a result of Seymour. McMurray, Reid, Sheppardson, Wei, and Wu established an extension of the matroid conjecture for  $k = 2$  and proved it for cographic matroids when  $k \leq 6$ . We establish Reid and Wu's Conjecture for matroids of connectivity three. (Received September 26, 2005)