This paper presents an analysis of the intonational patterns and phrasal domains in simple declaratives in Torres-Martinez Desert (TMD) Cahuilla, a critically endangered Uto-Aztecan language spoken in Southern California. While the word-prosodic system of Cahuilla has been addressed in previous literature [1], [2], [3], no intonational analysis has been proposed for any Cahuilla variety. Using novel data, I motivate a preliminary intonational model for declarative sentences in TMD Cahuilla within the AM (autosegmental-metrical) framework. Specifically, I analyze TMD Cahuilla as having two distinct levels of prosodic constituency, the Intonational Phrase (IP), which is composed of at least one Accentual Phrase (AP). The AP, which consists of at least one prosodic word, has an obligatory H* pitch accent on the lexically stressed syllable and a La edge tone aligned to the right edge of the phrase. The IP ends in a L% boundary tone, which overwrites the La when they co-occur. Phrase-final lengthening and optional pauses delineate the IP. Given the paucity of intonational research on American Indian languages, this paper contributes to a growing body of cross-linguistic research that tests the ability of an AM-based system of annotation such as ToBI, to model a wide range of intonation systems.