Theorem 1.1. *Every rank 2 orbit closure of genus 3 translation surfaces is one of*

$$\tilde{\mathcal{Q}}(3,-1^3) \subset \mathcal{H}^{odd}(4), \quad \tilde{\mathcal{H}}^{hyp}(2) \subset \mathcal{H}^{hyp}(2,2), \quad \tilde{\mathcal{H}}^{odd}(2) \subset \mathcal{H}^{odd}(2,2),$$

which have dimension 4, or

$$\tilde{\mathcal{Q}}(4,-1^4) \subset \mathcal{H}^{odd}(2,2), \quad \tilde{\mathcal{Q}}(2,1,-1^3) \subset \mathcal{H}(2,1,1), \quad \tilde{\mathcal{H}}(1,1) \subset \mathcal{H}(1^4),$$

which have dimension dimension 5, or $\tilde{\mathcal{Q}}(2,2,-1^4) \subset \mathcal{H}(1^4)$, which has dimension 6.

Note $\tilde{\mathcal{H}}^{hyp}(2) = \tilde{\mathcal{Q}}(1,1,-1^2)$, $\tilde{\mathcal{H}}^{odd}(2) \subset \tilde{\mathcal{Q}}(4,-1^4)$, and $\tilde{\mathcal{H}}(1,1) \subset \tilde{\mathcal{Q}}(2,2,-1^4)$.