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STATEMENT REGARDING WOOD FLOW PROJECTIONS FROM APP PLANTATIONS

PT Ata Marie (Ata Marie) is an independent professional forestry consulting firm based in Jakarta Indonesia and operating throughout the Asia Pacific region. The company specializes in provision of forest asset management and forestry technical services including forest inventory, growth and yield modeling, wood supply forecasting.

Between June 2012 to January 2013, Ata Marie implemented a study of forest productivity, growth and yield and wood flow for 21 concessions supplying to APP in Indonesia. Plantation wood forecasts were prepared according to a conventional methods using best practice industry standard modeling approaches as summarized below:

- Plantation area age classes were prepared using client supplied data in the form of plantation maps and associated area summary data.
- Plantation growth rates and yields were estimated using forest inventory data supplied by the client. Yield tables were then prepared by species and location.
- Flyovers of all forests were conducted to verify the existence and general extent of plantation resources.
- Forest conditions and realized harvest yields were checked in the field through forest inspections at selected locations. Some adjustments to yield tables were made based on field observations.
- Wood flow projections were then prepared for each plantation concession.

Growth and yield of the existing plantations are approximately 25 tonnes / ha / year at age of harvest. We also saw growth and yield improvement in more recent plantations. This level of plantation is relatively modest compared to growth rates in Brazil, but is comparable to the best plantation companies operating in South East Asia.

Ata Marie has not implemented a wood supply study for all APP plantations. However APP and TFT have utilized our yield tables for the purposes of estimating wood supply from all plantation concessions in APP associated companies in Sumatra. We stand by our study findings and we believe that the wood production forecasts generated by TFT are realistic and achievable.

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