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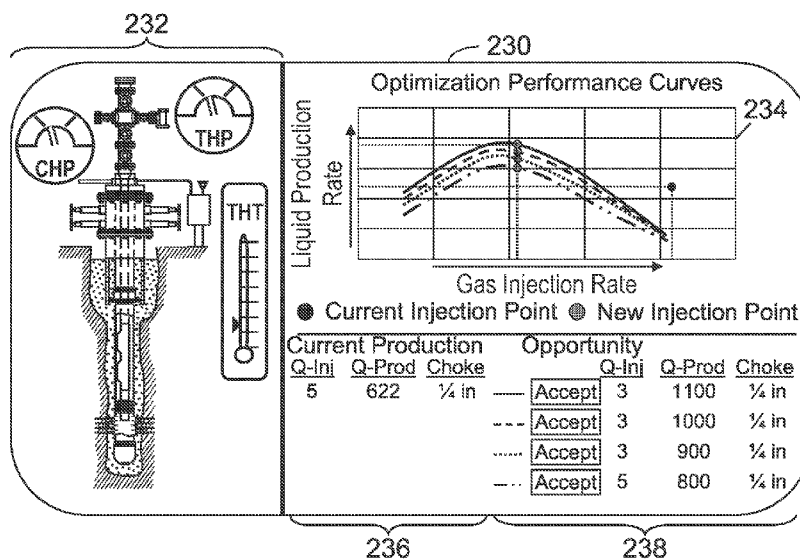
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13/711,815 12 December 2012 (12.12.2012) US(71) Applicant: **LANDMARK GRAPHICS CORPORATION** [US/US]; 2107 Citywest Boulevard, Building 2, Houston, TX 77042 (US).(72) Inventors: **QUERALES, Maiquel, Manuel**; 24333 Cinco Terrace Dr., Apt. #125, Katy, TX 77494 (US). **VILLAMIZAR, Miguel**; 1725 Crescent Plaza Dr., Apt. #3127, Houston, TX 77077 (US). **CARVAJAL, Gustavo**; 28010 Iberville Glen Dr., Katy, TX 77494 (US). **VELLANKI, Rama, Krishna**; 12951 Briar Forest Dr., Apt. #1001, Houston, TX 77077 (US). **MORICCA, Giuseppe**; Via Ugoni 1, I-26845 Codogno (IT). **CULLICK, Alvin, Stanley**; 2959 E 143rd Place, Thornton, CO 80602 (US). **RODRIGUEZ, Jose**; 24906 Morning Raven Ln., Katy, TX 77494 (US).(74) Agents: **KRUEGER, Daniel, J.** et al.; Krueger Iselin LLP, P.O. Box 1906, Cypress, TX 77410-1906 (US).

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(54) Title: MONITORING, DIAGNOSING AND OPTIMIZING GAS LIFT OPERATIONS



(57) Abstract: Systems and methods for monitoring, diagnosing and optimizing operation of a gas lift (GL) system, at least some of which include a method that includes collecting measured data representative of the GL system's state, storing the measured data, comparing the measured data to a well model's calculated data for the well and identifying likely conditions of the GL system based on mismatches between the measured data and the calculated data. The method further includes updating the model to reflect the likely conditions and selected corrections of the likely conditions, generating GL system performance curves using the updated model and presenting to a user actions recommended to achieve a GL system performance consistent with a GL system operating point on at least one of the GL system performance curves.



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