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(71) Applicant *(for CA only)*: **SCHLUMBERGER CANADA LIMITED** [CA/CA]; 525-3rd Avenue S.W., Calgary, Alberta T2P 0G4 (CA).

(71) Applicant *(for FR only)*: **SERVICES PETROLIERS SCHLUMBERGER** [FR/FR]; 42 rue Saint Dominique, F-75007 Paris (FR).

(71) Applicant *(for GB, JP, NL only)*: **SCHLUMBERGER HOLDINGS LIMITED**; P.O. Box 71 Craigmuir Chambers Road Town, Tortola, British Virgin Islands (VG).

(71) Applicant *(for AL, AM, AU, AZ, BF, BG, BJ, BY, CF, CG, CI, CM, CO, CZ, DE, DK, GA, GN, GQ, GR, GW, HU, ID, IE, IL, IT, KG, KP, KR, KZ, LT, MD, ML, MR, MX, MY, NE, NO, NZ, OM, PL, RO, RU, SI, SK, SN, TD, TG, TH, TJ, TM, TN, TR, TT, UZ, ZA only)*: **SCHLUMBERGER TECHNOLOGY B.V.** [NL/NL]; Parkstraat 83-89, NL-2514 JG The Hague (NL).

(71) Applicant *(for all designated States except AL, AM, AU, AZ, BF, BG, BJ, BY, CA, CF, CG, CI, CM, CO, CZ, DE, DK, FR, GA, GB, GN, GQ, GR, GW, HU, ID, IE, IL, IT, JP, KG, KP, KR, KZ, LT, MD, ML, MR, MX, MY, NE, NL, NO, NZ, OM, PL, RO, RU, SI, SK, SN, TD, TG, TH, TJ, TM, TN, TR, TT, US, UZ, ZA)*: **PRAD RESEARCH AND DEVELOPMENT LIMITED**; P.O. Box 71 Craigmuir Chambers, Road Town, Tortola, British Virgin Islands (VG).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **SINGH, Anil** [CA/US]; 1414, 8787 Sienna Springs Blvd, Missouri City, Texas 77459 (US). **SCHMIDT, Kurt** [CA/CA]; 46, 26540 Highway 11, Red Deer, Alberta T4E 1A3 (CA). **ABBOTT, Brian** [CA/CA]; 4212 - 47 Street NW, Edmonton, Alberta T6L 6J5 (CA). **SCHROEDER, Robert** [US/US]; 71 Castle Hill Road, Newtown, Connecticut 06470 (US). **DONZIER, Eric** [FR/FR]; 5 Rue du puits au Gall, F-28260 Bercheres Sur Vesgre (FR).

(74) Agent: **KANAK, Wayne, I.**; 9750 - 17 Avenue, Edmonton, Alberta T6N 1M9 (CA).

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(54) Title: APPARATUS AND METHOD FOR PHASE EQUILIBRIUM WITH IN-SITU SENSING

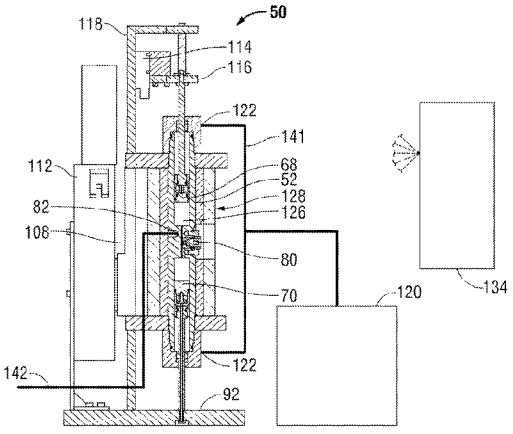



FIG. 2

(57) Abstract: A technique facilitates the monitoring of thermodynamic properties of reservoir fluids. The technique utilizes a modular sensor assembly designed to evaluate a sample of a hydrocarbon-containing fluid within a cell body. A variety of sensors may be selectively placed into communication with a sample chamber within the cell body to evaluate the sample at potentially high pressures and temperatures. The sensors may comprise a density-viscosity sensor located in-situ to efficiently measure both the density and viscosity of the sample as a function of pressure and temperature. Other sensors, such as an optic sensor, may also be positioned to measure parameters of the sample while the sample is retained in the sample chamber.

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