



- (51) **International Patent Classification:**
G01N 1/20 (2006.01) *G01N 30/60* (2006.01)
- (21) **International Application Number:**
PCT/MY2012/000023
- (22) **International Filing Date:**
16 February 2012 (16.02.2012)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
PI 2011000728 17 February 2011 (17.02.2011) MY
- (71) **Applicant (for all designated States except US):** **PETROLIAM NASIONAL BERHAD (PETRONAS)** [MY/MY]; Tower 1, Petronas Twin Towers, Kuala Lumpur City Centre, 50088 Kuala Lumpur (MY).
- (72) **Inventors; and**
- (75) **Inventors/Applicants (for US only):** **MOHD AZAM SHAH WONG, Sharizal** [MY/MY]; Petroliaam Nasional Berhad (Petronas), Tower 1, Petronas Twin Towers, Kuala Lumpur City Centre, 50088 Kuala Lumpur (MY). **TG MAT, T Mohd Uzaini** [MY/MY]; Petroliaam Nasional Berhad (Petronas), Tower 1, Petronas Twin Towers, Kuala Lumpur City Centre, 50088 Kuala Lumpur (MY). **SHAFAWI, Azman** [MY/MY]; Petroliaam Nasional Berhad (Petronas), Tower 1, Petronas Twin Towers, Kuala Lumpur City Centre, 50088 Kuala Lumpur (MY). **NAIM, Zaimi** [MY/MY]; Petroliaam Nasional Berhad (Petronas), Tower

1, Petronas Twin Towers, Kuala Lumpur City Centre, 50088 Kuala Lumpur (MY). **MOHD HALIM, Mohd Hanif** [MY/MY]; Petroliaam Nasional Berhad (Petronas), Tower 1, Petronas Twin Towers, Kuala Lumpur City Centre, 50088 Kuala Lumpur (MY).

- (74) **Agent:** **Soo Ee Lin**; Ella Cheong Spruson & Ferguson (Malaysia) Sdn Bhd, A-32-3A, Level 32, Menara UOA Bangsar, No. 5 Jalan Bangsar Utama 1, Kuala Lumpur 59000 (MY).

- (81) **Designated States** (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

- (84) **Designated States** (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK,

[Continued on next page]

- (54) **Title:** SAMPLE CAPTURE SYSTEM AND METHODS OF USE

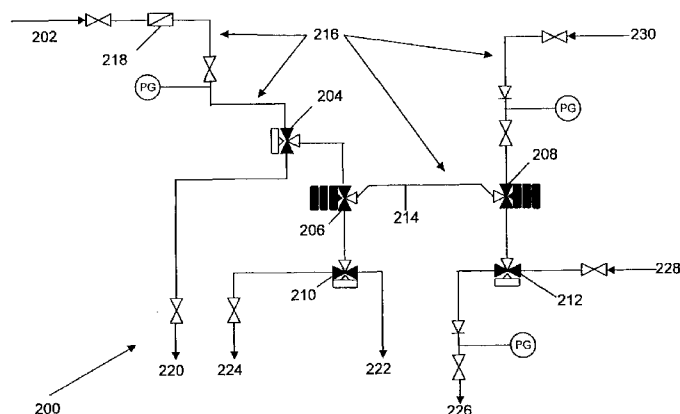


FIG. 8

- (57) **Abstract:** Disclosed herein is a sampling system for obtaining a representative fluid sample from a high pressure multiphase multicomponent fluid, the system comprising: a fluid flow path for transmitting the high pressure multiphase multicomponent fluid therethrough, the pressure of the fluid flow path being substantially the same as the pressure of an environment to be sampled; a sample capture chamber in direct fluid communication with the fluid flow path and having an inlet for receiving the high pressure multiphase multicomponent fluid therein and an outlet for expelling the high pressure multiphase multicomponent fluid therefrom; valves means configured to fluidly seal the inlet and outlet of the sample capture chamber and thereby capture the representative fluid sample of the multiphase multicomponent fluid as it passes therethrough; and control means for controlling the valve means so that the pressure of the representative fluid sample is substantially the same as the high pressure multiphase multicomponent fluid in the fluid flow path.



SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

— of inventorship (Rule 4.17(iv))

Declarations under Rule 4.17:

Published:

— as to applicant's entitlement to apply for and be granted
a patent (Rule 4.17(ii))

— with international search report (Art. 21(3))