

# PetroSkills®

John M. Campbell

GCAP Version 10

## Download and Setup Instructions

1. Please [click](#) here to download the 30 day trial version of GCAP
2. Extract/Unzip the files
3. Run GCAP.exe
  - a. If a window “Windows Protected your PC” appears: click More Info, then Run Anyway.

Run the following test to ensure software is working correctly:

1. Click Vol. 1 on toolbar.
2. Select Chapter 5.
3. Select option A. Bubble point, dew point and flash calculations (SRK EOS).
4. Select 5. for Flash at known P and T
5. Enter Specified Temperature, Specified Pressure, and component Mole % C1 through C6 as follows:
  - a. Specified Temperature = -20 C
  - b. Specified Pressure = 4000 kPa (*Use -5 F and 600 psia if you have an FPS set of units*)
  - c. CH<sub>4</sub> = 85, C<sub>2</sub>H<sub>6</sub> = 5, C<sub>3</sub>H<sub>8</sub> = 3, i-C<sub>4</sub>H<sub>10</sub> = 2, n-C<sub>4</sub>H<sub>10</sub> = 1, i-C<sub>5</sub>H<sub>12</sub> = 1, n-C<sub>5</sub>H<sub>12</sub> = 1, nC<sub>6</sub>H<sub>14</sub> = 2.
6. Click “Run”. If you don’t get an error message the software is running OK.
7. The Estimated Liquid Fraction (L/F) should show **0.1213**.

The screenshot shows the GCAP 10.0.0 software interface. The title bar includes 'File', 'Vol. 1', 'Vol. 2', 'Blended', 'Preferences', 'Tools', 'Windows', and 'Help'. The main window displays 'Welcome to GCAP 10.0.0' and 'Chapter 5 Options'. Below this, it says 'Chapter5A. Bubble point, dew point, and flash calculations(SRK EOS)'. There are buttons for 'Run', 'Start Over', and 'Print Spread Sheet'. A red arrow points to the 'Run' button. Below the buttons, there is a 'Select Composition?' section with a 'Feed' button and a 'Normalize Mole %' button. The 'Type of Calculations ( SRK EOS)' section has seven radio button options, with option 5 selected: '5. Flash at known P and T, ( 3 stages of separation may be calculated )'. At the bottom, there are input fields for 'Specified Temperature ? -20.0000 C', 'Specified Pressure ? 4,000.0000 kPa', and 'Estimated Liquid Fraction (L/F) ? 0.0000'. On the right side, there is a table of components and their mole percentages.

Components	Formula	Mole %
Nitrogen	N2	0.0000
Carbon Dioxide	CO2	0.0000
Hydrogen Sulfide	H2S	0.0000
Methane	CH4	85.0000
Ethane	C2H6	5.0000
Propane	C3H8	3.0000
i-Butane	i-C4H10	2.0000
n-Butane	n-C4H10	1.0000
i-Pentane	i-C5H12	1.0000
n-Pentane	n-C5H12	1.0000
n-Hexane	n-C6H14	2.0000
n-Heptane	n-C7H16	0.0000
n-Octane	n-C8H18	0.0000
n-Nonane	n-C9H20	0.0000
n-Decane	n-C10H22	0.0000
Total mole%		100.0000
Flow Rate in kmol/h		0.0000

8. Test the graphics by:
  - a. Select Vol. 1, Chapter 4, Option A Multicomponent Phase Envelope.
  - b. Respond “Yes” to pop up message to update
  - c. Click “Run”. A graphic figure will appear.

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## Troubleshooting

1. Ensure the date and time are correct on your computer.
2. Maximize the program window if some fields are missing.
3. Set your Windows "Region Settings" setting to "English United Kingdom" or "English United States"
  - a. Click [here](#) for more information about changing regional settings.
4. If a window "Windows protected your PC" appears, click **More Info**, then **Run Anyway**.
  - a. This will appear the first time you launch the program.

