CLAIMS

1. A method of monitoring the phase composition resulting from different phases in production fluid from at least one of the wells of a plurality of hydrocarbon production wells, the method comprising:

modulating the flow of said fluid from said at least one of the wells;

passing the flow of production fluid from all of said wells through a multiphase flow meter common to the wells; and

processing data from said multiphase flow meter by means responsive to the modulation of the flow from said at least one of the wells to produce information relating to the phase composition of production fluid from said at least one of the wells wherein:

the flow of production fluid from the at least one of the wells is modulated by modulating a respective one of a plurality of chokes through which the production fluid flows from the well by modulating the choke around its nominal set position by a modulating signal from a subsea electronics module of a respective one of a plurality of subsea control modules to provide a relatively small amplitude flow component at a frequency superimposed on the nominal flow for a time period.

2. A method according to claim 1, wherein the flow of production fluid from all of said wells is modulated, said processing being carried out on data from the multiphase flow meter to produce information relating to the phase composition of production fluid for each of said wells.

3. A method according to claim 2, wherein the flows of production fluid from said wells are modulated in turn, so that information relating to the phase composition of production fluid is produced for each of said wells in turn.

4. A method according to any one of the preceding claims, wherein the flow of production fluid from all of said wells is passed to said via meter via a manifold common to the wells.

5. A method according to any one of the preceding claims, wherein said different phases comprise oil, gas and water.

6. A method according to any one of the preceding claims, wherein said processing comprises filtering signals from said data from the multiphase flow meter.

7. A method according to any one of the preceding claims, wherein the wells are subsea wells, said processing being carried out topside.

8. A well system comprising a plurality of hydrocarbon production wells, the system including means for monitoring the phase composition resulting from different phases in production fluid from at least one of the wells, the monitoring means comprising:

means for modulating the flow of said fluid from said at least one of the wells;

a multiphase flow meter common to the wells and means for passing the flow of production fluid from all of said wells through said flow meter; and

means for processing data from said multiphase flow meter comprising means responsive to the modulation of the flow from said at least one of the wells to produce information relating to the phase composition of production fluid from said at least one of the wells wherein:

the modulating means is adapted for modulating the flow of production fluid from the at least one of the wells by modulating a respective one of a plurality of chokes through which the production fluid flows from the well by modulating the choke around its nominal set position by a modulating signal from a subsea electronics module of a respective one of a plurality of subsea control modules to provide a relatively small amplitude flow component at a frequency superimposed on the nominal flow for a time period.

9. A system according to claim 8, adapted for modulating the flow of production fluid from all of said wells, said processing means processing data from the multiphase flow meter to produce information relating to the phase composition of production fluid from each of said wells in use of the monitoring means.

10. A system according to claim 9, wherein the modulating means is adapted for modulating the flows of production fluid from said wells in turn, the processing means being adapted for producing information relating to the phase composition of production fluid from each of said wells in turn.

11. A system according any one of claims 8 to 10, wherein the modulating means is

adapted for modulating the flow of production fluid from the at least one of the wells by modulating a respective choke through which the production fluid flows from the well.

12. A system according to any one of claims 8 to 11, wherein said passing means comprises a manifold common to the wells.

13. A system according to any one of claims 8 to 12, wherein said processing means comprises filtering means.

14. A system according to any one of claims 8 to 13, wherein the wells are subsea wells, said processing being means being located topside.