--- Simulation Input File ---

```
*-STMT-*
            *XPSIM>  ...generated by XpsimWin v.1.06 ...
            *EXE-OPT> PAGELEN=66
            *
     100    RUN ID=PVT05A CUSTOMER=STAFF PROJECT='NORTH AFRICA RESERVOIR'
     200    DESC PVT EXPERIMENTS FOR OIL CHARACTERIZATION
     300    DESC PRELIMINARY STUDY REQUIRED FOR
     400    DESC   GATHERING SYSTEM HYDRAULIC STUDY - 24/09/2002
     500    DIMENSION INPUT SI PRES=BAR STDVAP=23.69 RTEMP=15.5 RPRES=1
            *
            *
     600    Petroleum Data
            *
            *
     700    HYPO ID=C5+ NAME=C5+ SPGR=.637 MW=71.97 / ID=C6+ NAME=C6+ SPGR=.707 +
             MW=84.77 / ID=C7+ NAME=C7+ SPGR=.736 MW=98.27 / ID=C8+ NAME=C8+ +
             SPGR=.752 MW=112.09 / ID=C9+ NAME=C9+ SPGR=.767 MW=125.51 / ID=C10+ +
             NAME=C10+ SPGR=.761 MW=140.27 / ID=C11+ NAME=C11+ SPGR=.756 +
             MW=155.54 TCRIT=370 PCRIT=21.2 / ID=C12+ NAME=C12+ SPGR=.826 +
             MW=198.68 TCRIT=425 PCRIT=19.87
     800    CALC CRIT=CAVETT
            *
            *
     900    Thermodynamic Data
            *
            *
    1000    METHOD METHOD=SRK
    1100    BINARY=C1,C5+ KIJ=0.05,,,,,,,,,,,,,,,,,,
    1200    BINARY=C1,C6+ KIJ=0.03,,,,,,,,,,,,,,,,,,
    1300    BINARY=C1,C7+ KIJ=0.015,,,,,,,,,,,,,,,,,,
    1400    BINARY=C1,C8+ KIJ=0.055,,,,,,,,,,,,,,,,,,
    1500    BINARY=C1,C9+ KIJ=0.07,,,,,,,,,,,,,,,,,,
    1600    BINARY=C1,C10+ KIJ=0.08,,,,,,,,,,,,,,,,,,
    1700    BINARY=C1,C11+ KIJ=0.12
    1800    BINARY=C1,C12+ KIJ=0.15
    1900    METHOD METHOD=PR
    2000    BINARY=C1,C5+ KIJ=0.05,,,,,,,,,,,,,,,,,,
    2100    BINARY=C1,C6+ KIJ=0.03,,,,,,,,,,,,,,,,,,
    2200    BINARY=C1,C7+ KIJ=0.015,,,,,,,,,,,,,,,,,,
    2300    BINARY=C1,C8+ KIJ=0.055,,,,,,,,,,,,,,,,,,
    2400    BINARY=C1,C9+ KIJ=0.07,,,,,,,,,,,,,,,,,,
    2500    BINARY=C1,C10+ KIJ=0.10,,,,,,,,,,,,,,,,,,
    2600    BINARY=C1,C11+ KIJ=0.17
    2700    BINARY=C1,C12+ KIJ=0.22
            *
            *
    2800    System Data
            *
            *
    2900    CHEMCOMP H2O / H2S / N2 / CO2 / C1 / C2 / C3 / IC4 / NC4
    3000    THERMSET UID=SETF
    3100    WOPT K=2
    3200    METHODS K=SRK HS=LK CP=IDEAL DV=LK DL=SRK-P IV=LK VIS=IDEAL THC=IDEAL +
             SURT=IDEAL
    3300    PRINT PETRO METHOD
            *
            *
    3400    PVT Analysis
            *
            *
    3500    STREAM=OIL1
```

- Simulation input - Continuation -

```
*-STMT-*
   3600     COMP H2O:0 / H2S:0.37 / N2:6.13 / CO2:15.56 / C1:65.85 / C2:4.40 / +
             C3:2.18 / IC4:0.56 / NC4:0.95 / C5+:1.03 / C6+:0.66 / C7+:0.65 / +
             C8+:0.53 / C9+:0.37 / C10+:0.26 / C11+:0.17 / C12+:0.33
   3700     CCE TEMP(CENT)=140 REFSTR=OIL1 DENS=1000 UID=CCE1
   3800     DATA PRES=310.3 RV=0.8538 LVF=0.0000 Z=0.980
   3900     DATA PRES=303.4 RV=0.8681 LVF=0.0000 Z=0.974
   4000     DATA PRES=298.2 RV=0.8792 LVF=0.0000 Z=0.970
   4100     DATA PRES=293.5 RV=0.8900 LVF=0.0000 Z=0.966
   4200     DATA PRES=288.7 RV=0.9014 LVF=0.0000 Z=0.962
   4300     DATA PRES=282.6 RV=0.9167 LVF=0.0000 Z=0.958
   4400     DATA PRES=275.9 RV=0.9347 LVF=0.0000 Z=0.954
   4500     DATA PRES=270.3 RV=0.9503 LVF=0.0000 Z=0.950
   4600     DATA PRES=262.0 RV=0.9755 LVF=0.0000 Z=0.945
   4700     DATA PRES=254.4 RV=1.0000 LVF=0.0000 Z=0.941
   4800     DATA PRES=248.6 RV=1.0203 LVF=0.00056
   4900     DATA PRES=240.6 RV=1.0500 LVF=0.00139
   5000     DATA PRES=228.9 RV=1.0979 LVF=0.00268
   5100     DATA PRES=215.5 RV=1.1597 LVF=0.00429
   5200     DATA PRES=191.0 RV=1.2982 LVF=0.00750
   5300     DATA PRES=160.6 RV=1.5404 LVF=0.01079
   5400     DATA PRES=123.1 RV=2.0188 LVF=0.01342
   5500     DATA PRES=100.8 RV=2.4827 LVF=0.01423
   5600     DATA PRES=80.6 RV=3.1345 LVF=0.01439
   5700     DATA PRES=59.0 RV=4.3389 LVF=0.01392
   5800     CVD TEMP(CENT)=140 REFSTR=OIL1 UID=CVD1
   5900     DATA PRES=254.4 RV=0.0000 LVF=0.0000 Z=0.941
   6000     DATA PRES=247.9 RV=0.0208 LVF=0.00042 Z=0.919
   6100     DATA PRES=237.2 RV=0.0590 LVF=0.00167 Z=0.913
   6200     DATA PRES=212.7 RV=0.1483 LVF=0.00432 Z=0.902
   6300     DATA PRES=185.2 RV=0.2542 LVF=0.00771 Z=0.893
   6400     DATA PRES=153.1 RV=0.3834 LVF=0.01009 Z=0.885
   6500     DATA PRES=118.2 RV=0.5285 LVF=0.01167 Z=0.881
   6600     DATA PRES=79.8 RV=0.6878 LVF=0.01143 Z=0.882
   6700     DATA PRES=38.2 RV=0.8484 LVF=0.01080 Z=0.893
   6800     SEP REFSTR=OIL1 STOD=759 GG=1.268 GOR=1000 UID=SEP1
   6900     DATA TEMP(K)=307.6 PRES=37.6
   7000     LCOMP H2O:0 / H2S:0.20 / N2:0.24 / CO2:4.95 / C1:10.24 / C2:3.15 / +
             C3:4.42 / IC4:2.00 / NC4:6.01 / C5+:11.59 / C6+:10.54 / C7+:11.74 / +
             C8+:10.63 / C9+:7.90 / C10+:5.60 / C11+:3.67 / C12+:7.13
            *
            *
   7100     Flowsheet Data
            *
            *
   7200     EQUI 3PHASE LLSM=LHLW KEY1=H2O
            *
   7300     STREAM=WEST TEMP=40.55 PRES=172.8 RATE(M)=100 NORM XBASIS=M
   7400     COMP H2O:0 / H2S:0.37 / N2:6.13 / CO2:15.56 / C1:65.85 / C2:4.40 / +
             C3:2.18 / IC4:0.56 / NC4:0.95 / C5+:1.03 / C6+:0.66 / C7+:0.65 / +
             C8+:0.53 / C9+:0.37 / C10+:0.26 / C11+:0.17 / C12+:0.33
            *
   7500     PHASENV IN WEST UID=PHASE1
   7600     CALC PMAX=400
   7700     PRINT PLOT
            *
   7800     FLASH IN WEST OUT GASA0065(V) LIQA0065(L) UID=CYLIND
   7900     CALC ISO TEMP=34.4 PRES=37.6
            *
   8000     FLASH IN LIQA0065 OUT SGS03(V) STDLIQ(L) UID=STD
   8100     CALC ISO TEMP=15.56 PRES=1.013
```

```
       - Simulation input - Continuation -
  *-STMT-*
            *
     8200     FLASH IN GASA0065 SGS03 OUT STDGAS UID=RECOMB
     8300     CALC ISO TEMP=15.56 PRES=1.013
            *
     8400     FLASH IN WEST OUT DEW UID=DEW
     8500     CALC DEW TEMP=140.55 PEST=250
            *
            *
     8600     VLE Analysis
            *
            *
     8700     VLECURVE STR=WEST
     8800     CALC ISO TEMP=140.5 PRES=100,300 POINTS=11
            *
            *
     8900     Output Data
            *
            *
     9000     PRINT FORMAT=2 MFRAC
            *
            *
     9100     END
          ---   End of Simulation Input File   ---
```

I) * PROBLEM GENERAL DATA *

1) * PROBLEM/PROJECT *
'PVT EXPERIMENTS FOR OIL CHARACTERIZATION '
'PRELIMINARY STUDY REQUIRED FOR '
' GATHERING SYSTEM HYDRAULIC STUDY - 24/09/2002 '

2) * UNITS OF MEASURE *
- Input system SI - Output system SI

- INPUT AND OUTPUT UNITS -

Time	- HR	Weight	- KG
Temperature	- CENT	Pressure	- BAR
Energy/Duty	- M-KJ	Work	- KW
Liq volums	- CUMT	Vap Volume	- CUMT
Viscosity	- CP	Thermal cond	- W/MC
Surface tens	- DYCM	Std Vap Vol	- N-CUMT

Standard Vapor Volume is 23.69000 M3/KMOL
Reference Status - Temperature 15.5 - Pressure 1

Enthalpy is 0.0 for ideal gas at 298.15 K
Std entropy is for ideal gas at 298.15 K and 1 Atm

*** HYPOTHETICAL/PETROLEUM COMPONENTS CALCULATION OPTIONS ***

Initial point interval 2.00
End point interval 98.00

Critical props calculation method 'CAVETT '

I.D) * USER'S SUPPLIED THERMODYNAMIC DATA *

1) * METHOD 'SRK ' *

No. of COMPONENT parameters 3
No. of BINARY parameters 1

* INTERACTION/BINARY CONSTANTS BETWEEN COMPONENT

C1	- ' '	and	C5+	- ' '			
1)	0.500000E-01						
C1	- ' '	and	C6+	- ' '			
1)	0.300000E-01						
C1	- ' '	and	C7+	- ' '			
1)	0.150000E-01						
C1	- ' '	and	C8+	- ' '			
1)	0.550000E-01						
C1	- ' '	and	C9+	- ' '			
1)	0.700000E-01						
C1	- ' '	and	C10+	- ' '			
1)	0.800000E-01						
C1	- ' '	and	C11+	- ' '			
1)	0.120000						
C1	- ' '	and	C12+	- ' '			
1)	0.150000						

2) * METHOD 'PR ' *

No. of COMPONENT parameters 3
No. of BINARY parameters 1

* INTERACTION/BINARY CONSTANTS BETWEEN COMPONENT

C1	- ' '	and	C5+	- ' '			
1)	0.500000E-01						
C1	- ' '	and	C6+	- ' '			
1)	0.300000E-01						
C1	- ' '	and	C7+	- ' '			
1)	0.150000E-01						
C1	- ' '	and	C8+	- ' '			
1)	0.550000E-01						
C1	- ' '	and	C9+	- ' '			
1)	0.700000E-01						
C1	- ' '	and	C10+	- ' '			
1)	0.100000						
C1	- ' '	and	C11+	- ' '			
1)	0.170000						

```
        C1       - '                    '  and   C12+     - '                    '
        1)  0.220000
```

II) * DEFINED COMPONENTS *

* No of Chemical Components 17
No of Hypothetical/Petroleum Components 8

No	1	2	3	4	5
CAS Registry no.	7732-18-5	7783-06-4	7727-37-9	124-38-9	74-82-8
Name	WATER	HYDROGEN SULPHIDE	NITROGEN	CARBON DIOXIDE	METHANE
Component Key	H2O	H2S	N2	CO2	C1
Type	LIBRARY	LIBRARY	LIBRARY	LIBRARY	LIBRARY
Class	INOR	INOR	INOR	INOR	SHYD
Formula	H2O	H2S	N2	CO2	CH4
Molecular weight	18.020	34.080	28.010	44.010	16.040
Boiling point,CENT	100.00	-60.25	-195.80	-78.55	-161.52
Std spec. gravity	1.00100	0.78638	0.64315	0.81906	0.40749
Critical temp,CENT	374.15	100.05	-146.95	31.06	-82.62
Critical pres,BAR	221.200	89.400	34.000	73.825	45.950
Critical vol,CUMT	0.056313	0.098498	0.089489	0.094039	0.099013
Critical Z	0.231459	0.283798	0.289987	0.274489	0.287211
Acentric factor	0.344000	0.104000	0.037000	0.223000	0.011000
Lat. heat, KJ/KMOL	40714.413	18893.595	5552.287	15245.787	8176.826
H form, KJ/KMOL	-241828.891	-20584.362	0.000	-393494.298	-74586.151
G form, KJ/KMOL	-298119.724	-81913.940	-57066.025	-447817.337	-130101.793
Std entr, KJ/KML-C	188.80073	205.70080	191.40074	182.20071	186.20072

No	6	7	8	9	10
CAS Registry no.	74-84-0	74-98-6	75-28-5	106-97-8	00000-00-0
Name	ETHANE	PROPANE	ISOBUTANE	BUTANE	C5+
Component Key	C2	C3	IC4	NC4	C5+
Type	LIBRARY	LIBRARY	LIBRARY	LIBRARY	PETRO
Class	SHYD	SHYD	SHYD	SHYD	PETR
Formula	C2H6	C3H8	C4H10	C4H10	
Molecular weight	30.070	44.100	58.120	58.120	71.970
Boiling point,CENT	-88.60	-42.10	-11.73	-0.50	37.97
Std spec. gravity	0.35522	0.50430	0.55891	0.58434	0.63700
Critical temp,CENT	32.27	96.67	134.99	152.03	199.93
Critical pres,BAR	48.790	42.490	36.480	37.980	33.488
Critical vol,CUMT	0.148129	0.203227	0.262988	0.254914	0.318220
Critical Z	0.284617	0.280844	0.282728	0.273882	0.270941
Acentric factor	0.099000	0.153000	0.183000	0.200000	0.250739
Lat. heat, KJ/KMOL	14535.497	18848.524	21127.358	21978.088	26237.364
H form, KJ/KMOL	-84015.754	-103855.711	-134606.193	-125771.935	0.000
G form, KJ/KMOL	-152322.057	-184416.002	-222679.880	-218138.991	0.000
Std entr, KJ/KML-C	229.10089	270.20105	295.40115	309.80120	156.48729

No	11	12	13	14	15
CAS Registry no.	00000-00-0	00000-00-0	00000-00-0	00000-00-0	00000-00-0
Name	C6+	C7+	C8+	C9+	C10+
Component Key	C6+	C7+	C8+	C9+	C10+
Type	PETRO	PETRO	PETRO	PETRO	PETRO
Class	PETR	PETR	PETR	PETR	PETR
Formula					
Molecular weight	84.770	98.270	112.090	125.510	140.270
Boiling point,CENT	69.56	97.65	123.67	148.54	167.58
Std spec. gravity	0.70700	0.73600	0.75200	0.76700	0.76100
Critical temp,CENT	238.29	268.39	293.82	317.73	329.93
Critical pres,BAR	33.124	31.327	29.090	27.095	24.260
Critical vol,CUMT	0.340883	0.373737	0.412255	0.451548	0.501459
Critical Z	0.265543	0.260040	0.254413	0.249044	0.242629
Acentric factor	0.318216	0.386998	0.457344	0.524446	0.604638
Lat. heat, KJ/KMOL	29176.403	31810.732	34267.166	36627.102	38443.187
H form, KJ/KMOL	0.000	0.000	0.000	0.000	0.000
G form, KJ/KMOL	0.000	0.000	0.000	0.000	0.000
Std entr, KJ/KML-C	72.90771	57.74207	73.25436	88.16845	168.10503

No	16	17
CAS Registry no.	00000-00-0	00000-00-0
Name	C11+	C12+
Component Key	C11+	C12+
Type	PETRO	PETRO
Class	PETR	PETR
Formula		
Molecular weight	155.540	198.680
Boiling point,CENT	185.15	248.57
Std spec. gravity	0.75600	0.82600
Critical temp,CENT	370.00	425.00
Critical pres,BAR	21.200	19.870
Critical vol,CUMT	0.595266	0.664265
Critical Z	0.236005	0.227393
Acentric factor	0.687435	0.795084
Lat. heat, KJ/KMOL	40124.206	46239.246
H form, KJ/KMOL	0.000	0.000
G form, KJ/KMOL	0.000	0.000
Std entr, KJ/KML-C	251.88085	157.01906

II-A) * PETROLEUM / HYPOTHETICAL COMPONENTS DATA *

Number	10	11	12	13	14	15
Code	C5+	C6+	C7+	C8+	C9+	C10+
Boiling point, CENT	37.973	69.558	97.649	123.674	148.537	167.582
API density	90.6350	68.6414	60.7554	56.6649	52.9850	54.4396
Specific gravity	0.63700	0.70700	0.73600	0.75200	0.76700	0.76100
K-UOP factor	12.9398	12.0405	11.8739	11.8870	11.8930	12.1646
Molecular weight	71.970	84.770	98.270	112.090	125.510	140.270
Viscosity at 100 F,cst	0.23056	0.31222	0.40318	0.51260	0.65536	0.77579
Viscosity at 210 F,cst	0.27387	0.31444	0.36156	0.41595	0.47991	0.53934
Critical temperature,CENT	199.929	238.294	268.387	293.822	317.727	329.928
Critical pressure,BAR	33.4883	33.1239	31.3267	29.0903	27.0946	24.2601
Acentric factor	0.25074	0.31822	0.38700	0.45734	0.52445	0.60464

Number	16	17
Code	C11+	C12+
Boiling point, CENT	185.148	248.574
API density	55.6693	39.8075
Specific gravity	0.75600	0.82600
K-UOP factor	12.4056	11.8556
Molecular weight	155.540	198.680
Viscosity at 100 F,cst	0.91293	2.1816
Viscosity at 210 F,cst	0.60334	0.96144
Critical temperature,CENT	370.000	425.000
Critical pressure,BAR	21.2000	19.8700
Acentric factor	0.68743	0.79508

III) * PVT/THERMO/TRANSPORT PROPERTIES CALCULATION METHODS *

* CALCULATION SET 1 - SETF *

VLE K-values	SRK	- REDLICH-KWONG-SOAVE
ENTHALPY - Vapor	LK	- LEE-KESLER
ENTHALPY - Liquid	LK	- LEE-KESLER
ENTROPY - Vapor	LK	- LEE-KESLER
ENTROPY - Liquid	LK	- LEE-KESLER
DENSITY - Vapor	LK	- LEE-KESLER
DENSITY - Liquid	SRK-P	- SRK - PENELOUX MOD
VISCOSITY - Vapor	IDEAL	- IDEAL/LIBRARY
VISCOSITY - Liquid	IDEAL	- IDEAL/LIBRARY
HEAT CAPACITY - Vapor	IDEAL	- IDEAL/LIBRARY
HEAT CAPACITY - Liquid	IDEAL	- IDEAL/LIBRARY
CONDUCTIVITY - Vapor	IDEAL	- IDEAL/LIBRARY
CONDUCTIVITY - Liquid	IDEAL	- IDEAL/LIBRARY
ISENTROPIC Vapor Coeff	LK	- LEE-KESLER
SURFACE TENSION	IDEAL	- IDEAL/LIBRARY

- LIMITS AND OPTIONS -
Temperature - Min -223.15 CENT - Max 1200.05 CENT
Pressure - Min 0.100000E-04 BAR - Max 3000.00 BAR

Lowest significant composition 0.10000000E-19

Water K-values are calculated based on
'NGPA vapor pressure chart '
Water thermo-props are calculated based on
'Saturated conditions '
Water solubility in hydr phases calculated based on
'API solubility in HC mixtures '

* CONSTANTS/PARAMETERS FOR CALCULATION SET 1 SETF

1) Parameters of method SRK - REDLICH-KWONG-SOAVE

No. of component parameters 3
No. of binary parameters 1

Component 1 H2O - 'WATER '
1) 1165.14 2) 3208.24 3) 0.344000
- Interaction/Binary parameters
2 H2S 1) 0.00000
3 N2 1) 0.00000
4 CO2 1) 0.00000
5 C1 1) 0.500000
6 C2 1) 0.500000
7 C3 1) 0.500000
8 IC4 1) 0.500000
9 NC4 1) 0.500000
10 C5+ 1) 0.500000
11 C6+ 1) 0.500000
12 C7+ 1) 0.500000
13 C8+ 1) 0.500000
14 C9+ 1) 0.500000
15 C10+ 1) 0.500000
16 C11+ 1) 0.500000
17 C12+ 1) 0.500000

Component 2 H2S - 'HYDROGEN SULPHIDE '
1) 671.760 2) 1296.64 3) 0.104000
- Interaction/Binary parameters
3 N2 1) 0.00000
4 CO2 1) 0.00000
5 C1 1) 0.900000E-01
6 C2 1) 0.850000E-01
7 C3 1) 0.760000E-01
8 IC4 1) 0.600000E-01
9 NC4 1) 0.600000E-01
10 C5+ 1) 0.600000E-01
11 C6+ 1) 0.600000E-01
12 C7+ 1) 0.600000E-01
13 C8+ 1) 0.500000E-01
14 C9+ 1) 0.500000E-01
15 C10+ 1) 0.500000E-01
16 C11+ 1) 0.500000E-01
17 C12+ 1) 0.500000E-01

Component 3 N2 - 'NITROGEN '
1) 227.160 2) 493.129 3) 0.370000E-01
- Interaction/Binary parameters
4 CO2 1) 0.00000
5 C1 1) 0.300000E-01
6 C2 1) 0.600000E-01
7 C3 1) 0.900000E-01
8 IC4 1) 0.113000
9 NC4 1) 0.113000
10 C5+ 1) 0.140000
11 C6+ 1) 0.166000
12 C7+ 1) 0.200000
13 C8+ 1) 0.200000

```
      14 C9+         1)  0.200000
      15 C10+        1)  0.200000
      16 C11+        1)  0.200000
      17 C12+        1)  0.200000

     Component   4 CO2      - 'CARBON DIOXIDE      '
      1)   547.578        2)   1070.74        3)  0.223000
        - Interaction/Binary parameters
       5 C1          1)  0.933000E-01
       6 C2          1)  0.136300
       7 C3          1)  0.128900
       8 IC4         1)  0.128500
       9 NC4         1)  0.143000
      10 C5+         1)  0.131000
      11 C6+         1)  0.112000
      12 C7+         1)  0.110000
      13 C8+         1)  0.120000
      14 C9+         1)  0.125000
      15 C10+        1)  0.130000
      16 C11+        1)  0.130000
      17 C12+        1)  0.130000

     Component   5 C1       - 'METHANE             '
      1)   342.954        2)   666.450        3)  0.110000E-01
        - Interaction/Binary parameters
       6 C2          1)   0.00000
       7 C3          1)   0.00000
       8 IC4         1)   0.00000
       9 NC4         1)   0.00000
      10 C5+         1)  0.500000E-01
      11 C6+         1)  0.300000E-01
      12 C7+         1)  0.150000E-01
      13 C8+         1)  0.550000E-01
      14 C9+         1)  0.700000E-01
      15 C10+        1)  0.800000E-01
      16 C11+        1)  0.120000
      17 C12+        1)  0.150000

     Component   6 C2       - 'ETHANE              '
      1)   549.756        2)   707.640        3)  0.990000E-01
        - Interaction/Binary parameters
       7 C3          1)   0.00000
       8 IC4         1)   0.00000
       9 NC4         1)   0.00000
      10 C5+         1)   0.00000
      11 C6+         1)   0.00000
      12 C7+         1)   0.00000
      13 C8+         1)   0.00000
      14 C9+         1)   0.00000
      15 C10+        1)   0.00000
      16 C11+        1)   0.00000
      17 C12+        1)   0.00000

     Component   7 C3       - 'PROPANE             '
      1)   665.676        2)   616.266        3)  0.153000
        - Interaction/Binary parameters
       8 IC4         1)   0.00000
       9 NC4         1)   0.00000
      10 C5+         1)   0.00000
      11 C6+         1)   0.00000
      12 C7+         1)   0.00000
      13 C8+         1)   0.00000
```

```
      14 C9+         1)   0.00000
      15 C10+        1)   0.00000
      16 C11+        1)   0.00000
      17 C12+        1)   0.00000

     Component   8 IC4      - 'ISOBUTANE           '
      1)   734.652        2)   529.099        3)  0.183000
        - Interaction/Binary parameters
       9 NC4         1)   0.00000
      10 C5+         1)   0.00000
      11 C6+         1)   0.00000
      12 C7+         1)   0.00000
      13 C8+         1)   0.00000
      14 C9+         1)   0.00000
      15 C10+        1)   0.00000
      16 C11+        1)   0.00000
      17 C12+        1)   0.00000

     Component   9 NC4      - 'BUTANE              '
      1)   765.324        2)   550.854        3)  0.200000
        - Interaction/Binary parameters
      10 C5+         1)   0.00000
      11 C6+         1)   0.00000
      12 C7+         1)   0.00000
      13 C8+         1)   0.00000
      14 C9+         1)   0.00000
      15 C10+        1)   0.00000
      16 C11+        1)   0.00000
      17 C12+        1)   0.00000

     Component  10 C5+      - 'C5+                 '
      1)   851.541        2)   485.707        3)  0.250739
        - Interaction/Binary parameters
      11 C6+         1)   0.00000
      12 C7+         1)   0.00000
      13 C8+         1)   0.00000
      14 C9+         1)   0.00000
      15 C10+        1)   0.00000
      16 C11+        1)   0.00000
      17 C12+        1)   0.00000

     Component  11 C6+      - 'C6+                 '
      1)   920.600        2)   480.422        3)  0.318216
        - Interaction/Binary parameters
      12 C7+         1)   0.00000
      13 C8+         1)   0.00000
      14 C9+         1)   0.00000
      15 C10+        1)   0.00000
      16 C11+        1)   0.00000
      17 C12+        1)   0.00000

     Component  12 C7+      - 'C7+                 '
      1)   974.767        2)   454.356        3)  0.386998
        - Interaction/Binary parameters
      13 C8+         1)   0.00000
      14 C9+         1)   0.00000
      15 C10+        1)   0.00000
      16 C11+        1)   0.00000
      17 C12+        1)   0.00000
```

```
 Component  13 C8+      - 'C8+                '
  1)   1020.55        2)   421.919        3)  0.457344
    - Interaction/Binary parameters
  14 C9+          1)   0.00000
  15 C10+         1)   0.00000
  16 C11+         1)   0.00000
  17 C12+         1)   0.00000

 Component  14 C9+      - 'C9+                '
  1)   1063.58        2)   392.975        3)  0.524446
    - Interaction/Binary parameters
  15 C10+         1)   0.00000
  16 C11+         1)   0.00000
  17 C12+         1)   0.00000

 Component  15 C10+     - 'C10+               '
  1)   1085.54        2)   351.864        3)  0.604638
    - Interaction/Binary parameters
  16 C11+         1)   0.00000
  17 C12+         1)   0.00000

 Component  16 C11+     - 'C11+               '
  1)   1157.67        2)   307.481        3)  0.687435
    - Interaction/Binary parameters
  17 C12+         1)   0.00000

 Component  17 C12+     - 'C12+               '
  1)   1256.67        2)   288.191        3)  0.795084

2) Parameters of method LK       - LEE-KESLER

 General component parameters are used

3) Parameters of method SRK-P    - SRK - PENELOUX MOD

 No. of component parameters  3
 No. of binary    parameters  1

 Component   1 H2O      - 'WATER              '
  1)   0.00000        2)   0.00000        3)   0.00000
    - Interaction/Binary parameters
   2 H2S          1)   0.00000
   3 N2           1)   0.00000
   4 CO2          1)   0.00000
   5 C1           1)   0.00000
   6 C2           1)   0.00000
   7 C3           1)   0.00000
   8 IC4          1)   0.00000
   9 NC4          1)   0.00000
  10 C5+          1)   0.00000
  11 C6+          1)   0.00000
  12 C7+          1)   0.00000
  13 C8+          1)   0.00000
  14 C9+          1)   0.00000
  15 C10+         1)   0.00000
  16 C11+         1)   0.00000
  17 C12+         1)   0.00000
```

```
Component   2 H2S      - 'HYDROGEN SULPHIDE   '
 1)   0.00000        2)   0.00000        3)   0.00000
   - Interaction/Binary parameters
  3 N2           1)   0.00000
  4 CO2          1)   0.00000
  5 C1           1)   0.00000
  6 C2           1)   0.00000
  7 C3           1)   0.00000
  8 IC4          1)   0.00000
  9 NC4          1)   0.00000
 10 C5+          1)   0.00000
 11 C6+          1)   0.00000
 12 C7+          1)   0.00000
 13 C8+          1)   0.00000
 14 C9+          1)   0.00000
 15 C10+         1)   0.00000
 16 C11+         1)   0.00000
 17 C12+         1)   0.00000

Component   3 N2       - 'NITROGEN            '
 1)   0.00000        2)   0.00000        3)   0.00000
   - Interaction/Binary parameters
  4 CO2          1)   0.00000
  5 C1           1)   0.00000
  6 C2           1)   0.00000
  7 C3           1)   0.00000
  8 IC4          1)   0.00000
  9 NC4          1)   0.00000
 10 C5+          1)   0.00000
 11 C6+          1)   0.00000
 12 C7+          1)   0.00000
 13 C8+          1)   0.00000
 14 C9+          1)   0.00000
 15 C10+         1)   0.00000
 16 C11+         1)   0.00000
 17 C12+         1)   0.00000

Component   4 CO2      - 'CARBON DIOXIDE      '
 1)   0.00000        2)   0.00000        3)   0.00000
   - Interaction/Binary parameters
  5 C1           1)   0.00000
  6 C2           1)   0.00000
  7 C3           1)   0.00000
  8 IC4          1)   0.00000
  9 NC4          1)   0.00000
 10 C5+          1)   0.00000
 11 C6+          1)   0.00000
 12 C7+          1)   0.00000
 13 C8+          1)   0.00000
 14 C9+          1)   0.00000
 15 C10+         1)   0.00000
 16 C11+         1)   0.00000
 17 C12+         1)   0.00000

Component   5 C1       - 'METHANE             '
 1)  -116.630        2)   667.800        3)  0.287600
   - Interaction/Binary parameters
  6 C2           1)   0.00000
  7 C3           1)   0.00000
  8 IC4          1)   0.00000
  9 NC4          1)   0.00000
```

```
      10 C5+         1)   0.00000
      11 C6+         1)   0.00000
      12 C7+         1)   0.00000
      13 C8+         1)   0.00000
      14 C9+         1)   0.00000
      15 C10+        1)   0.00000
      16 C11+        1)   0.00000
      17 C12+        1)   0.00000

     Component   6 C2       - 'ETHANE             '
      1)   90.0900        2)   707.800        3)  0.278900
        - Interaction/Binary parameters
       7 C3          1)   0.00000
       8 IC4         1)   0.00000
       9 NC4         1)   0.00000
      10 C5+         1)   0.00000
      11 C6+         1)   0.00000
      12 C7+         1)   0.00000
      13 C8+         1)   0.00000
      14 C9+         1)   0.00000
      15 C10+        1)   0.00000
      16 C11+        1)   0.00000
      17 C12+        1)   0.00000

     Component   7 C3       - 'PROPANE            '
      1)   206.010        2)   616.300        3)  0.276300
        - Interaction/Binary parameters
       8 IC4         1)   0.00000
       9 NC4         1)   0.00000
      10 C5+         1)   0.00000
      11 C6+         1)   0.00000
      12 C7+         1)   0.00000
      13 C8+         1)   0.00000
      14 C9+         1)   0.00000
      15 C10+        1)   0.00000
      16 C11+        1)   0.00000
      17 C12+        1)   0.00000

     Component   8 IC4      - 'ISOBUTANE          '
      1)   274.980        2)   529.100        3)  0.275000
        - Interaction/Binary parameters
       9 NC4         1)   0.00000
      10 C5+         1)   0.00000
      11 C6+         1)   0.00000
      12 C7+         1)   0.00000
      13 C8+         1)   0.00000
      14 C9+         1)   0.00000
      15 C10+        1)   0.00000
      16 C11+        1)   0.00000
      17 C12+        1)   0.00000

     Component   9 NC4      - 'BUTANE             '
      1)   305.650        2)   550.700        3)  0.272800
        - Interaction/Binary parameters
      10 C5+         1)   0.00000
      11 C6+         1)   0.00000
      12 C7+         1)   0.00000
      13 C8+         1)   0.00000
      14 C9+         1)   0.00000
      15 C10+        1)   0.00000
      16 C11+        1)   0.00000
      17 C12+        1)   0.00000
```

```
Component  10 C5+      - 'C5+               '
 1)   0.00000        2)   0.00000        3)   0.00000
   - Interaction/Binary parameters
 11 C6+          1)   0.00000
 12 C7+          1)   0.00000
 13 C8+          1)   0.00000
 14 C9+          1)   0.00000
 15 C10+         1)   0.00000
 16 C11+         1)   0.00000
 17 C12+         1)   0.00000

Component  11 C6+      - 'C6+               '
 1)   0.00000        2)   0.00000        3)   0.00000
   - Interaction/Binary parameters
 12 C7+          1)   0.00000
 13 C8+          1)   0.00000
 14 C9+          1)   0.00000
 15 C10+         1)   0.00000
 16 C11+         1)   0.00000
 17 C12+         1)   0.00000

Component  12 C7+      - 'C7+               '
 1)   0.00000        2)   0.00000        3)   0.00000
   - Interaction/Binary parameters
 13 C8+          1)   0.00000
 14 C9+          1)   0.00000
 15 C10+         1)   0.00000
 16 C11+         1)   0.00000
 17 C12+         1)   0.00000

Component  13 C8+      - 'C8+               '
 1)   0.00000        2)   0.00000        3)   0.00000
   - Interaction/Binary parameters
 14 C9+          1)   0.00000
 15 C10+         1)   0.00000
 16 C11+         1)   0.00000
 17 C12+         1)   0.00000

Component  14 C9+      - 'C9+               '
 1)   0.00000        2)   0.00000        3)   0.00000
   - Interaction/Binary parameters
 15 C10+         1)   0.00000
 16 C11+         1)   0.00000
 17 C12+         1)   0.00000

Component  15 C10+     - 'C10+              '
 1)   0.00000        2)   0.00000        3)   0.00000
   - Interaction/Binary parameters
 16 C11+         1)   0.00000
 17 C12+         1)   0.00000

Component  16 C11+     - 'C11+              '
 1)   0.00000        2)   0.00000        3)   0.00000
   - Interaction/Binary parameters
 17 C12+         1)   0.00000

Component  17 C12+     - 'C12+              '
 1)   0.00000        2)   0.00000        3)   0.00000
```

*** PVT ANALYSIS ***

1) *** STREAM 'OIL1 ' ***

* No *	Component	- Mols -
2	HYDROGEN SULPHIDE	0.003700
3	NITROGEN	0.061300
4	CARBON DIOXIDE	0.155600
5	METHANE	0.658500
6	ETHANE	0.044000
7	PROPANE	0.021800
8	ISOBUTANE	0.005600
9	BUTANE	0.009500
10	C5+	0.010300
11	C6+	0.006600
12	C7+	0.006500
13	C8+	0.005300
14	C9+	0.003700
15	C10+	0.002600
16	C11+	0.001700
17	C12+	0.003300

2) *** EXPERIMENT NO. 1 CCE1 ***
COSTANT COMPOSITION EXPANSION

Temperature 140.000 CENT
Saturation density 1000.0000 KG/CUMT
Reference stream OIL1

* EXPERIMENTAL POINTS *

POINT NO. 1
Pressure 310.300 BAR
Relative volume 0.854
Liquid volume fraction 0.000
Gas Z factor 0.980

POINT NO. 2
Pressure 303.400 BAR
Relative volume 0.868
Liquid volume fraction 0.000
Gas Z factor 0.974

POINT NO. 3
Pressure 298.200 BAR
Relative volume 0.879
Liquid volume fraction 0.000
Gas Z factor 0.970

POINT NO. 4
Pressure 293.500 BAR
Relative volume 0.890
Liquid volume fraction 0.000
Gas Z factor 0.966

POINT NO. 5
Pressure 288.700 BAR
Relative volume 0.901
Liquid volume fraction 0.000
Gas Z factor 0.962

POINT NO. 6
Pressure 282.600 BAR
Relative volume 0.917
Liquid volume fraction 0.000
Gas Z factor 0.958

POINT NO. 7
Pressure 275.900 BAR
Relative volume 0.935
Liquid volume fraction 0.000
Gas Z factor 0.954

POINT NO. 8
Pressure 270.300 BAR
Relative volume 0.950
Liquid volume fraction 0.000
Gas Z factor 0.950

POINT NO. 9
Pressure 262.000 BAR
Relative volume 0.976
Liquid volume fraction 0.000
Gas Z factor 0.945

POINT NO. 10
Pressure 254.400 BAR
Relative volume 1.000
Liquid volume fraction 0.000
Gas Z factor 0.941

POINT NO. 11
Pressure 248.600 BAR
Relative volume 1.020
Liquid volume fraction 0.001

POINT NO. 12
Pressure 240.600 BAR
Relative volume 1.050
Liquid volume fraction 0.001

POINT NO. 13
Pressure 228.900 BAR
Relative volume 1.098
Liquid volume fraction 0.003

POINT NO. 14
Pressure 215.500 BAR
Relative volume 1.160
Liquid volume fraction 0.004

POINT NO. 15
Pressure 191.000 BAR
Relative volume 1.298
Liquid volume fraction 0.007

POINT NO. 16
Pressure 160.600 BAR
Relative volume 1.540
Liquid volume fraction 0.011

POINT NO. 17
Pressure 123.100 BAR
Relative volume 2.019
Liquid volume fraction 0.013

POINT NO. 18
Pressure 100.800 BAR
Relative volume 2.483
Liquid volume fraction 0.014

POINT NO. 19
Pressure 80.600 BAR
Relative volume 3.135
Liquid volume fraction 0.014

POINT NO. 20
Pressure 59.000 BAR
Relative volume 4.339
Liquid volume fraction 0.014

3) *** EXPERIMENT NO. 2 CVD1 ***
COSTANT VOLUME DEPLETION

Temperature 140.000 CENT
Reference stream OIL1

* EXPERIMENTAL POINTS *

POINT NO. 1
Pressure 254.400 BAR
Relative volume 0.000
Liquid volume fraction 0.000
Gas Z factor 0.941

POINT NO. 2
Pressure 247.900 BAR
Relative volume 0.021
Liquid volume fraction 0.000
Gas Z factor 0.919

POINT NO. 3
Pressure 237.200 BAR
Relative volume 0.059
Liquid volume fraction 0.002
Gas Z factor 0.913

POINT NO. 4
Pressure 212.700 BAR
Relative volume 0.148
Liquid volume fraction 0.004
Gas Z factor 0.902

POINT NO. 5
Pressure 185.200 BAR
Relative volume 0.254
Liquid volume fraction 0.008
Gas Z factor 0.893

POINT NO. 6
Pressure 153.100 BAR
Relative volume 0.383
Liquid volume fraction 0.010
Gas Z factor 0.885

POINT NO. 7
Pressure 118.200 BAR
Relative volume 0.528
Liquid volume fraction 0.012
Gas Z factor 0.881

POINT NO. 8
Pressure 79.800 BAR
Relative volume 0.688
Liquid volume fraction 0.011
Gas Z factor 0.882

POINT NO. 9
Pressure 38.200 BAR
Relative volume 0.848
Liquid volume fraction 0.011
Gas Z factor 0.893

4) *** EXPERIMENT NO. 3 SEP1 ***
TEST SEPARATORS

Reference stream OIL1
Oil density 759.000 KG/CUMT
Gas gravity 1.2680
Gas/oil ratio 1000.000 NM3/M3

* EXPERIMENTAL POINTS *

POINT NO. 1
Temperature 307.600 K
Pressure 37.600 BAR

* LIQUID COMPOSITION *

* No *	Component	* - Mols -
2	HYDROGEN SULPHIDE	0.002000
3	NITROGEN	0.002400
4	CARBON DIOXIDE	0.049495
5	METHANE	0.102390
6	ETHANE	0.031497
7	PROPANE	0.044196
8	ISOBUTANE	0.019998
9	BUTANE	0.060094
10	C5+	0.115888
11	C6+	0.105389
12	C7+	0.117388
13	C8+	0.106289
14	C9+	0.078992
15	C10+	0.055994
16	C11+	0.036696
17	C12+	0.071293

*** STREAM 'WEST ' ***
- Temperature 40.550 CENT - Pressure 172.8000 BAR

* No *	Component	GLOBAL STREAM - Mols	-Mol fr-	Weight	-Wt fr-
2	HYDROGEN SULPHIDE	0.370	0.003700	12.610	0.004723
3	NITROGEN	6.130	0.061300	171.701	0.064312
4	CARBON DIOXIDE	15.560	0.155600	684.796	0.256495
5	METHANE	65.850	0.658500	1056.234	0.395619
6	ETHANE	4.400	0.044000	132.308	0.049557
7	PROPANE	2.180	0.021800	96.138	0.036009
8	ISOBUTANE	0.560	0.005600	32.547	0.012191
9	BUTANE	0.950	0.009500	55.214	0.020681
10	C5+	1.030	0.010300	74.129	0.027766
11	C6+	0.660	0.006600	55.948	0.020956
12	C7+	0.650	0.006500	63.875	0.023925
13	C8+	0.530	0.005300	59.408	0.022252
14	C9+	0.370	0.003700	46.439	0.017394
15	C10+	0.260	0.002600	36.470	0.013660
16	C11+	0.170	0.001700	26.442	0.009904
17	C12+	0.330	0.003300	65.564	0.024558
	* TOTAL *	100.000	1.000000	2669.823	1.000000
		KMOL		KG	

*** UNIT 1 - 'PHASE1 ' - ' PHASE ENVELOPE ' ***
--- Feed Streams --- - Product Streams -
'WEST '
- 3 Phase VLE (LHLW separation) equilibrium applied

1) * CALCULATION PARAMETERS *

Maximum envelope pressure 400.0000 BAR
Maximum bubble point pressure 400.0000 BAR

Calculation starts from DEW POINT curve
Initial pressure 9.8067 BAR
Maximum temperature stepsize 5.0000 CENT
Maximum pressure stepsize 4.8344 BAR

1) * PRINTOUT OPTION *

Envelope plot requested

*** UNIT 2 - 'CYLIND ' - ' FLASH ' ***
--- Feed Streams --- - Product Streams -
'WEST ' 'GASA0065' VAPOR to unit 4 - RECOMB
'LIQA0065' LIQUID to unit 3 - STD
- 3 Phase VLE (LHLW separation) equilibrium applied

1) * CALCULATION TYPE *
Isothermal/Isobaric flash
Temperature is fixed at 34.400 CENT
Pressure is fixed at 37.6000 BAR

*** UNIT 3 - 'STD ' - ' FLASH ' ***
--- Feed Streams --- - Product Streams -
from unit 2 - CYLIND 'LIQA0065' 'SGS03 ' VAPOR to unit 4 - RECOMB
'STDLIQ ' LIQUID
- 3 Phase VLE (LHLW separation) equilibrium applied

1) * CALCULATION TYPE *
Isothermal/Isobaric flash
Temperature is fixed at 15.560 CENT
Pressure is fixed at 1.0130 BAR

```
        ***   UNIT    4 - 'RECOMB  ' - ' FLASH                          '   ***
                          --- Feed Streams ---          - Product  Streams -
    from unit   2 - CYLIND   'GASA0065'                  'STDGAS  '
    from unit   3 - STD      'SGS03   '
      - 3 Phase VLE (LHLW separation) equilibrium applied

    1) * CALCULATION TYPE *
      Isothermal/Isobaric flash
      Temperature is fixed at     15.560 CENT
      Pressure is fixed at     1.0130 BAR




        ***   UNIT    5 - 'DEW     ' - ' FLASH                          '   ***
                          --- Feed Streams ---          - Product  Streams -
                          'WEST    '                   'DEW     '
      - 3 Phase VLE (LHLW separation) equilibrium applied

    1) * CALCULATION TYPE *
      Dew-point
      Temperature is fixed at    140.550 CENT
      Pressure is variable, estimate   250.0000 BAR
```

V) **** STREAM / UNITS DICTIONARY ****

1) STREAMS-UNITS CROSS-REFERENCE TABLE

No	Stream Id	Description/Service	Product of Unit	Feed of Unit(s)
1	WEST	.....		1 PHASE1 2 CYLIND 5 DEW
2	GASA0065	.....	2 CYLIND	4 RECOMB
3	LIQA0065	.....	2 CYLIND	3 STD
4	SGS03	.....	3 STD	4 RECOMB
5	STDLIQ	.....	3 STD	
6	STDGAS	.....	4 RECOMB	
7	DEW	.....	5 DEW	

2) UNITS-STREAMS CROSS-REFERENCE TABLE

No	Unit	Unit Description	Feed Streams		Product Streams	
1	PHASE1	.....	1	WEST		
2	CYLIND	.....	1	WEST	2 3	GASA0065 LIQA0065
3	STD	.....	3	LIQA0065	4 5	SGS03 STDLIQ
4	RECOMB	.....	2 4	GASA0065 SGS03	6	STDGAS
5	DEW	.....	1	WEST	7	DEW

VI) **** RUN STATISTICS ****

* No of streams 7
process operations 5
topping structures 0
control operations 0
set operations 0

The calculation is NOT a RECYCLE PROBLEM
Calculation sequence defined by input sequence

*** VAPOR/LIQUID EQUILIBRIUM CURVES - SET NO. 1 ***

VLE calculation for stream 'WEST '
3 PHASE flash calculation used
Key component 1 1 H2O WATER
Calculation model 1

No. of VLE curves 1

1) - FLASH AT GIVEN T/P -
Initial temperature 140.500 CENT - End temperature 140.500 CENT
Initial pressure 100.0000 BAR - End pressure 300.0000 BAR
No. of points 11

*** PVT ANALYSIS TRACE FOLLOWS ***

```
        EXPERIMENT NO.   1   CCE1       SIMULATED
 * 'BUBBLE  ' POINT CALCULATION FAILED *
        EXPERIMENT NO.   2   CVD1       SIMULATED
        EXPERIMENT NO.   3   SEP1       SIMULATED
```

*** PVT ANALYSIS ***

1) *** EXPERIMENT NO. 1 CCE1 ***
COSTANT COMPOSITION EXPANSION

Temperature 140.000 CENT

* FLUID COMPOSITION *

* No *	Component *	- Mols -
2	HYDROGEN SULPHIDE	0.003700
3	NITROGEN	0.061300
4	CARBON DIOXIDE	0.155600
5	METHANE	0.658500
6	ETHANE	0.044000
7	PROPANE	0.021800
8	ISOBUTANE	0.005600
9	BUTANE	0.009500
10	C5+	0.010300
11	C6+	0.006600
12	C7+	0.006500
13	C8+	0.005300
14	C9+	0.003700
15	C10+	0.002600
16	C11+	0.001700
17	C12+	0.003300

Saturation pressure, BAR -Exp 254.4000 -Calc 252.9194
Saturation pressure error(abs) 1.4806 (rel) 0.0058
Saturation density 1000.0000 KG/CUMT

* EXPERIMENTAL AND CALCULATED POINTS *

POINT NO. 1
Pressure 310.300 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Relative volume	0.8538	0.8528	0.001002	0.001174
Liquid volume frac.	0.000000	0.000000	0.000000	0.000000
Gas Z factor	0.980000	0.965978	0.014022	0.014308

POINT NO. 2
Pressure 303.400 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Relative volume	0.8681	0.8674	0.000657	0.000756
Liquid volume frac.	0.000000	0.000000	0.000000	0.000000
Gas Z factor	0.974000	0.960718	0.013282	0.013636

POINT NO. 3
Pressure 298.200 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Relative volume	0.8792	0.8790	0.000171	0.000195
Liquid volume frac.	0.000000	0.000000	0.000000	0.000000
Gas Z factor	0.970000	0.956864	0.013136	0.013542

POINT NO. 4
Pressure 293.500 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Relative volume	0.8900	0.8899	0.000068	0.000077
Liquid volume frac.	0.000000	0.000000	0.000000	0.000000
Gas Z factor	0.966000	0.953464	0.012536	0.012978

POINT NO. 5
Pressure 288.700 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Relative volume	0.9014	0.9015	0.000113	0.000126
Liquid volume frac.	0.000000	0.000000	0.000000	0.000000
Gas Z factor	0.962000	0.950076	0.011924	0.012395

POINT NO. 6
Pressure 282.600 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Relative volume	0.9167	0.9169	0.000225	0.000245
Liquid volume frac.	0.000000	0.000000	0.000000	0.000000
Gas Z factor	0.958000	0.945900	0.012100	0.012631

POINT NO. 7
Pressure 275.900 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Relative volume	0.9347	0.9348	0.000109	0.000117
Liquid volume frac.	0.000000	0.000000	0.000000	0.000000
Gas Z factor	0.954000	0.941487	0.012513	0.013117

POINT NO. 8
Pressure 270.300 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Relative volume	0.9503	0.9506	0.000286	0.000301
Liquid volume frac.	0.000000	0.000000	0.000000	0.000000
Gas Z factor	0.950000	0.937944	0.012056	0.012691

POINT NO. 9
Pressure 262.000 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Relative volume	0.9755	0.9755	0.000022	0.000023
Liquid volume frac.	0.000000	0.000000	0.000000	0.000000
Gas Z factor	0.945000	0.932950	0.012050	0.012752

POINT NO. 10
Pressure 254.400 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Relative volume	1.0000	1.0000	0.000000	0.000000
Liquid volume frac.	0.000000	0.000000	0.000000	0.000000
Gas Z factor	0.941000	0.928660	0.012340	0.013114

POINT NO. 11
Pressure 248.600 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Relative volume	1.0203	1.0204	0.000144	0.000141
Liquid volume frac.	0.000560	0.000660	0.000100	0.178767

POINT NO. 12
Pressure 240.600 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Relative volume	1.0500	1.0509	0.000945	0.000900
Liquid volume frac.	0.001390	0.001941	0.000551	0.396074

POINT NO. 13
Pressure 228.900 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Relative volume	1.0979	1.0999	0.002039	0.001857
Liquid volume frac.	0.002680	0.003473	0.000793	0.295908

POINT NO. 14
Pressure 215.500 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Relative volume	1.1597	1.1636	0.003926	0.003385
Liquid volume frac.	0.004290	0.004883	0.000593	0.138288

POINT NO. 15
Pressure 191.000 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Relative volume	1.2982	1.3067	0.008474	0.006528
Liquid volume frac.	0.007500	0.006595	0.000905	0.120692

POINT NO. 16
Pressure 160.600 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Relative volume	1.5404	1.5529	0.012527	0.008133
Liquid volume frac.	0.010790	0.007366	0.003424	0.317350

POINT NO. 17
Pressure 123.100 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Relative volume	2.0188	2.0410	0.022248	0.011020
Liquid volume frac.	0.013420	0.006665	0.006755	0.503331

POINT NO. 18
Pressure 100.800 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Relative volume	2.4827	2.5141	0.031423	0.012657
Liquid volume frac.	0.014230	0.005608	0.008622	0.605882

POINT NO. 19
Pressure 80.600 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Relative volume	3.1345	3.1769	0.042374	0.013519
Liquid volume frac.	0.014390	0.004385	0.010005	0.695280

POINT NO. 20
Pressure 59.000 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Relative volume	4.3389	4.3995	0.060574	0.013961
Liquid volume frac.	0.013920	0.002942	0.010978	0.788648

2) *** EXPERIMENT NO. 2 CVD1 ***
COSTANT VOLUME DEPLETION

Temperature 140.000 CENT

* FLUID COMPOSITION *

* No *	Component	* - Mols -
2	HYDROGEN SULPHIDE	0.003700
3	NITROGEN	0.061300
4	CARBON DIOXIDE	0.155600
5	METHANE	0.658500
6	ETHANE	0.044000
7	PROPANE	0.021800
8	ISOBUTANE	0.005600
9	BUTANE	0.009500
10	C5+	0.010300
11	C6+	0.006600
12	C7+	0.006500
13	C8+	0.005300
14	C9+	0.003700
15	C10+	0.002600
16	C11+	0.001700
17	C12+	0.003300

Saturation pressure, BAR - Exp 254.4000 - Calc 35.9841
Saturation pressure error(abs) 218.4159 (rel) 0.8586

* EXPERIMENTAL AND CALCULATED POINTS *

POINT NO. 1
Pressure 254.400 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Removed vap. frac.	0.0000	0.0000	0.000000	0.000000
Liquid volume frac.	0.000000	0.000000	0.000000	0.000000
Gas Z factor	0.941000	0.928660	0.012340	0.013114

* CALCULATED VAPOR COMPOSITION *

* No * Component	* - Mols -
2 HYDROGEN SULPHIDE	0.003700
3 NITROGEN	0.061300
4 CARBON DIOXIDE	0.155600
5 METHANE	0.658500
6 ETHANE	0.044000
7 PROPANE	0.021800
8 ISOBUTANE	0.005600
9 BUTANE	0.009500
10 C5+	0.010300
11 C6+	0.006600
12 C7+	0.006500
13 C8+	0.005300
14 C9+	0.003700
15 C10+	0.002600
16 C11+	0.001700
17 C12+	0.003300

POINT NO. 2
Pressure 247.900 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Removed vap. frac.	0.0208	0.0225	0.001746	0.083953
Liquid volume frac.	0.000420	0.000824	0.000404	0.961758
Gas Z factor	0.919000	0.925786	0.006786	0.007384

* CALCULATED VAPOR COMPOSITION *

* No * Component	* - Mols -
2 HYDROGEN SULPHIDE	0.003700
3 NITROGEN	0.061333
4 CARBON DIOXIDE	0.155637
5 METHANE	0.658776
6 ETHANE	0.044002
7 PROPANE	0.021794
8 ISOBUTANE	0.005597
9 BUTANE	0.009493
10 C5+	0.010285
11 C6+	0.006585
12 C7+	0.006478
13 C8+	0.005273
14 C9+	0.003673
15 C10+	0.002575
16 C11+	0.001668
17 C12+	0.003132

POINT NO. 3
Pressure 237.200 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Removed vap. frac.	0.0590	0.0606	0.001633	0.027677
Liquid volume frac.	0.001670	0.002429	0.000759	0.454588
Gas Z factor	0.913000	0.921814	0.008814	0.009654

* CALCULATED VAPOR COMPOSITION *

No	Component	Mols
2	HYDROGEN SULPHIDE	0.003699
3	NITROGEN	0.061401
4	CARBON DIOXIDE	0.155715
5	METHANE	0.659349
6	ETHANE	0.044006
7	PROPANE	0.021781
8	ISOBUTANE	0.005590
9	BUTANE	0.009478
10	C5+	0.010254
11	C6+	0.006553
12	C7+	0.006432
13	C8+	0.005216
14	C9+	0.003614
15	C10+	0.002522
16	C11+	0.001600
17	C12+	0.002790

POINT NO. 4
Pressure 212.700 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Removed vap. frac.	0.1483	0.1508	0.002495	0.016827
Liquid volume frac.	0.004320	0.005234	0.000914	0.211680
Gas Z factor	0.902000	0.915054	0.013054	0.014473

* CALCULATED VAPOR COMPOSITION *

No	Component	Mols
2	HYDROGEN SULPHIDE	0.003698
3	NITROGEN	0.061541
4	CARBON DIOXIDE	0.155894
5	METHANE	0.660563
6	ETHANE	0.044021
7	PROPANE	0.021758
8	ISOBUTANE	0.005577
9	BUTANE	0.009448
10	C5+	0.010185
11	C6+	0.006481
12	C7+	0.006326
13	C8+	0.005083
14	C9+	0.003477
15	C10+	0.002395
16	C11+	0.001439
17	C12+	0.002114

POINT NO. 5
Pressure 185.200 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Removed vap. frac.	0.2542	0.2560	0.001778	0.006994
Liquid volume frac.	0.007710	0.007423	0.000287	0.037256
Gas Z factor	0.893000	0.911643	0.018643	0.020877

* CALCULATED VAPOR COMPOSITION *

* No * Component	* - Mols -
2 HYDROGEN SULPHIDE	0.003698
3 NITROGEN	0.061673
4 CARBON DIOXIDE	0.156097
5 METHANE	0.661763
6 ETHANE	0.044048
7 PROPANE	0.021742
8 ISOBUTANE	0.005565
9 BUTANE	0.009420
10 C5+	0.010117
11 C6+	0.006404
12 C7+	0.006207
13 C8+	0.004930
14 C9+	0.003316
15 C10+	0.002244
16 C11+	0.001256
17 C12+	0.001519

POINT NO. 6
Pressure 153.100 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Removed vap. frac.	0.3834	0.3829	0.000499	0.001301
Liquid volume frac.	0.010090	0.008687	0.001403	0.139058
Gas Z factor	0.885000	0.913564	0.028564	0.032275

* CALCULATED VAPOR COMPOSITION *

* No * Component	* - Mols -
2 HYDROGEN SULPHIDE	0.003701
3 NITROGEN	0.061789
4 CARBON DIOXIDE	0.156330
5 METHANE	0.662916
6 ETHANE	0.044094
7 PROPANE	0.021740
8 ISOBUTANE	0.005557
9 BUTANE	0.009399
10 C5+	0.010054
11 C6+	0.006326
12 C7+	0.006076
13 C8+	0.004756
14 C9+	0.003126
15 C10+	0.002063
16 C11+	0.001050
17 C12+	0.001021

POINT NO. 7
Pressure 118.200 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Removed vap. frac.	0.5285	0.5231	0.005353	0.010128
Liquid volume frac.	0.011670	0.008799	0.002871	0.246036
Gas Z factor	0.881000	0.922751	0.041751	0.047391

* CALCULATED VAPOR COMPOSITION *

* No * Component	* - Mols -
2 HYDROGEN SULPHIDE	0.003708
3 NITROGEN	0.061852
4 CARBON DIOXIDE	0.156562
5 METHANE	0.663733
6 ETHANE	0.044164
7 PROPANE	0.021769
8 ISOBUTANE	0.005560
9 BUTANE	0.009401
10 C5+	0.010028
11 C6+	0.006277
12 C7+	0.005972
13 C8+	0.004603
14 C9+	0.002947
15 C10+	0.001886
16 C11+	0.000860
17 C12+	0.000677

POINT NO. 8
Pressure 79.800 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Removed vap. frac.	0.6878	0.6766	0.011168	0.016237
Liquid volume frac.	0.011430	0.007437	0.003993	0.349329
Gas Z factor	0.882000	0.940470	0.058470	0.066293

* CALCULATED VAPOR COMPOSITION *

* No * Component	* - Mols -
2 HYDROGEN SULPHIDE	0.003719
3 NITROGEN	0.061806
4 CARBON DIOXIDE	0.156717
5 METHANE	0.663706
6 ETHANE	0.044258
7 PROPANE	0.021853
8 ISOBUTANE	0.005588
9 BUTANE	0.009456
10 C5+	0.010106
11 C6+	0.006325
12 C7+	0.005996
13 C8+	0.004584
14 C9+	0.002877
15 C10+	0.001790
16 C11+	0.000738
17 C12+	0.000481

POINT NO. 9
Pressure 38.200 BAR

	- Experimental -	- Calculated -	- Err(abs) -	- Err(rel) -
Removed vap. frac.	0.8484	0.8384	0.010002	0.011789
Liquid volume frac.	0.010800	0.004324	0.006476	0.599659
Gas Z factor	0.893000	0.967196	0.074196	0.083086

* CALCULATED VAPOR COMPOSITION *

No	Component	Mols
2	HYDROGEN SULPHIDE	0.003732
3	NITROGEN	0.061485
4	CARBON DIOXIDE	0.156465
5	METHANE	0.661173
6	ETHANE	0.044319
7	PROPANE	0.022014
8	ISOBUTANE	0.005665
9	BUTANE	0.009620
10	C5+	0.010451
11	C6+	0.006679
12	C7+	0.006493
13	C8+	0.005130
14	C9+	0.003326
15	C10+	0.002099
16	C11+	0.000857
17	C12+	0.000493

3) *** EXPERIMENT NO. 3 SEP1 ***
TEST SEPARATORS

* FLUID COMPOSITION *

No	Component	Mols
2	HYDROGEN SULPHIDE	0.003700
3	NITROGEN	0.061300
4	CARBON DIOXIDE	0.155600
5	METHANE	0.658500
6	ETHANE	0.044000
7	PROPANE	0.021800
8	ISOBUTANE	0.005600
9	BUTANE	0.009500
10	C5+	0.010300
11	C6+	0.006600
12	C7+	0.006500
13	C8+	0.005300
14	C9+	0.003700
15	C10+	0.002600
16	C11+	0.001700
17	C12+	0.003300

Oil density,KG/CUMT	759.000	719.747	39.252878	0.051717
Gas gravity	1.26800	0.81570	0.452303	0.356706
Gas/oil ratio,NM3/M3	1000.0000	3668.7276	2668.727553	2.668728

* EXPERIMENTAL AND CALCULATED POINTS *

POINT NO. 1

Temperature, K	307.600
Pressure, BAR	37.600
Oil density, KG/CUMT	719.747
Gas gravity	0.815697
Gas/oil ratio,NM3/M3	3668.7276

* CALCULATED VAPOR COMPOSITION *

No	Component	Mols
2	HYDROGEN SULPHIDE	0.003694
3	NITROGEN	0.064104
4	CARBON DIOXIDE	0.160289
5	METHANE	0.685785
6	ETHANE	0.044524
7	PROPANE	0.020659
8	ISOBUTANE	0.004797
9	BUTANE	0.007582
10	C5+	0.005527
11	C6+	0.001872
12	C7+	0.000822
13	C8+	0.000260
14	C9+	0.000065
15	C10+	0.000019
16	C11+	0.000002
17	C12+	0.000000

* LIQUID Composition *

No	Component	Experimental Mols	Calculated Mols	Err(abs)
2	HYDROGEN SULPHIDE	0.002000	0.003827	0.001827
3	NITROGEN	0.002400	0.002712	0.000312
4	CARBON DIOXIDE	0.049495	0.057640	0.008145
5	METHANE	0.102390	0.088430	0.013960
6	ETHANE	0.031497	0.033051	0.001554
7	PROPANE	0.044196	0.045634	0.001438
8	ISOBUTANE	0.019998	0.022381	0.002383
9	BUTANE	0.060094	0.049583	0.010511
10	C5+	0.115888	0.110032	0.005857
11	C6+	0.105389	0.105383	0.000006
12	C7+	0.117388	0.125123	0.007735
13	C8+	0.106289	0.110598	0.004309
14	C9+	0.078992	0.079645	0.000653
15	C10+	0.055994	0.056530	0.000536
16	C11+	0.036696	0.037181	0.000485
17	C12+	0.071293	0.072243	0.000950

    *** SIMULATION TRACE FOLLOWS ***

 ... New/output binary file 'PVT05A ' initialized ...

 . Stream 'WEST   ' flashed .
 . Feed/Recycle streams processed .
    *** CALCULATION TERMINATED, PRESSURE LIMIT REACHED ***
    *** CALCULATION TERMINATED, TOO MANY INDIPENDENT VARIABLES CHANGES ***
   Unit op   1 - 'PHASE1 ' calculated
   Unit op   2 - 'CYLIND ' calculated
   Unit op   3 - 'STD   ' calculated
   Unit op   4 - 'RECOMB ' calculated
   Unit op   5 - 'DEW   ' calculated

         *** SOLUTION OBTAINED ***

 ... Base case results loaded on binary file 'PVT05A ' ...

* ISOTHERMAL/ISOBARIC FLASH CURVE - STREAM WEST *
Initial temperature 140.500 °C - End temperature 140.500 °C
Initial pressure 100.0000 bar - End pressure 300.0000 bar
No. of points 11

1)	Temp	140.500 °C	Pres	100.0000 bar	V/F ratio	0.98950	
2)	Temp	140.500 °C	Pres	120.0000 bar	V/F ratio	0.98937	
3)	Temp	140.500 °C	Pres	140.0000 bar	V/F ratio	0.98971	
4)	Temp	140.500 °C	Pres	160.0000 bar	V/F ratio	0.99048	
5)	Temp	140.500 °C	Pres	180.0000 bar	V/F ratio	0.99170	
6)	Temp	140.500 °C	Pres	200.0000 bar	V/F ratio	0.99337	
7)	Temp	140.500 °C	Pres	220.0000 bar	V/F ratio	0.99551	
8)	Temp	140.500 °C	Pres	240.0000 bar	V/F ratio	0.99817	
9) * PHASE CHANGE *	Temp	140.500 °C	Pres	251.8041 bar	V/F ratio	1.00000	
10)	Temp	140.500 °C	Pres	260.0000 bar	V/F ratio	1.00000	
11)	Temp	140.500 °C	Pres	280.0000 bar	V/F ratio	1.00000	
12)	Temp	140.500 °C	Pres	300.0000 bar	V/F ratio	1.00000	

*** UNIT 1 - 'PHASE1 ' - ' PHASE ENVELOPE ' ***
--- Feed Streams --- - Product Streams -
'WEST '

1) * FEEDS *

Stream		WEST
Temperature,	°C	40.55
Pressure,	bar	172.800
Total rate,	kmol/h	100.00
Vapor,	kmol/h	94.411
Liquid,	kmol/h	5.5893

2) * METHOD *
K-values calculation method 'SRK '

3) *** DEW POINT EQUILIBRIUM CURVE ***

Cricondentherm Point - Temp 184.764 °C - Pres 78.7096 bar
Cricondenbar Point - *** NOT DETERMINED ***
Critical Point - *** NOT DETERMINED ***
Max Temp/Pres Point - Temp 184.764 °C - Pres 399.3893 bar

1)	-	DEW	PT - PRES	9.8067	bar	- TEMP	153.265	°C
2)	-	DEW	PT - PRES	10.7873	bar	- TEMP	155.203	°C
3)	-	DEW	PT - PRES	11.8661	bar	- TEMP	157.136	°C
4)	-	DEW	PT - PRES	13.0527	bar	- TEMP	159.061	°C
5)	-	DEW	PT - PRES	14.3579	bar	- TEMP	160.974	°C
6)	-	DEW	PT - PRES	15.7937	bar	- TEMP	162.872	°C
7)	-	DEW	PT - PRES	17.3731	bar	- TEMP	164.749	°C
8)	-	DEW	PT - PRES	19.1104	bar	- TEMP	166.600	°C
9)	-	DEW	PT - PRES	21.0215	bar	- TEMP	168.419	°C
10)	-	DEW	PT - PRES	23.1236	bar	- TEMP	170.201	°C
11)	-	DEW	PT - PRES	25.4360	bar	- TEMP	171.936	°C
12)	-	DEW	PT - PRES	27.9796	bar	- TEMP	173.618	°C
13)	-	DEW	PT - PRES	30.7775	bar	- TEMP	175.237	°C
14)	-	DEW	PT - PRES	33.8553	bar	- TEMP	176.781	°C
15)	-	DEW	PT - PRES	37.2408	bar	- TEMP	178.240	°C
16)	-	DEW	PT - PRES	40.9649	bar	- TEMP	179.599	°C
17)	-	DEW	PT - PRES	45.0614	bar	- TEMP	180.844	°C
18)	-	DEW	PT - PRES	49.5675	bar	- TEMP	181.956	°C
19)	-	DEW	PT - PRES	51.9285	bar	- TEMP	182.446	°C
20)	-	DEW	PT - PRES	54.4631	bar	- TEMP	182.907	°C
21)	-	DEW	PT - PRES	57.1213	bar	- TEMP	183.326	°C
22)	-	DEW	PT - PRES	59.9094	bar	- TEMP	183.696	°C
23)	-	DEW	PT - PRES	62.8335	bar	- TEMP	184.019	°C
24)	-	DEW	PT - PRES	65.2059	bar	- TEMP	184.233	°C
25)	-	DEW	PT - PRES	67.6679	bar	- TEMP	184.413	°C
26)	-	DEW	PT - PRES	70.2228	bar	- TEMP	184.557	°C
27)	-	DEW	PT - PRES	72.8742	bar	- TEMP	184.664	°C
28)	-	DEW	PT - PRES	75.6257	bar	- TEMP	184.729	°C
29)	-	DEW	PT - PRES	78.4811	bar	- TEMP	184.764	°C
30)	-	DEW	PT - PRES	78.7096	bar	- TEMP MAX	184.764	°C
31)	-	DEW	PT - PRES	81.4443	bar	- TEMP	184.737	°C
32)	-	DEW	PT - PRES	83.8267	bar	- TEMP	184.690	°C
33)	-	DEW	PT - PRES	86.2787	bar	- TEMP	184.613	°C
34)	-	DEW	PT - PRES	88.8025	bar	- TEMP	184.506	°C
35)	-	DEW	PT - PRES	91.4001	bar	- TEMP	184.367	°C
36)	-	DEW	PT - PRES	94.0736	bar	- TEMP	184.195	°C
37)	-	DEW	PT - PRES	96.8254	bar	- TEMP	183.986	°C

38)	-	DEW	PT - PRES	99.6577	bar	- TEMP	183.744	°C
39)	-	DEW	PT - PRES	104.4921	bar	- TEMP	183.261	°C
40)	-	DEW	PT - PRES	106.8819	bar	- TEMP	182.992	°C
41)	-	DEW	PT - PRES	109.4437	bar	- TEMP	182.682	°C
42)	-	DEW	PT - PRES	112.0668	bar	- TEMP	182.344	°C
43)	-	DEW	PT - PRES	114.7528	bar	- TEMP	181.974	°C
44)	-	DEW	PT - PRES	117.1450	bar	- TEMP	181.626	°C
45)	-	DEW	PT - PRES	119.5872	bar	- TEMP	181.254	°C
46)	-	DEW	PT - PRES	122.0802	bar	- TEMP	180.856	°C
47)	-	DEW	PT - PRES	124.6252	bar	- TEMP	180.431	°C
48)	-	DEW	PT - PRES	127.2233	bar	- TEMP	179.979	°C
49)	-	DEW	PT - PRES	129.8755	bar	- TEMP	179.502	°C
50)	-	DEW	PT - PRES	132.5830	bar	- TEMP	178.974	°C
51)	-	DEW	PT - PRES	135.3470	bar	- TEMP	178.450	°C
52)	-	DEW	PT - PRES	140.1814	bar	- TEMP	177.460	°C
53)	-	DEW	PT - PRES	145.0158	bar	- TEMP	176.412	°C
54)	-	DEW	PT - PRES	149.8502	bar	- TEMP	175.309	°C
55)	-	DEW	PT - PRES	154.6846	bar	- TEMP	174.152	°C
56)	-	DEW	PT - PRES	159.5189	bar	- TEMP	172.942	°C
57)	-	DEW	PT - PRES	164.3533	bar	- TEMP	171.680	°C
58)	-	DEW	PT - PRES	166.7530	bar	- TEMP	171.035	°C
59)	-	DEW	PT - PRES	169.7050	bar	- TEMP	170.225	°C
60)	-	DEW	PT - PRES	172.7092	bar	- TEMP	169.381	°C
61)	-	DEW	PT - PRES	175.7666	bar	- TEMP	168.503	°C
62)	-	DEW	PT - PRES	178.8781	bar	- TEMP	167.589	°C
63)	-	DEW	PT - PRES	182.0447	bar	- TEMP	166.638	°C
64)	-	DEW	PT - PRES	185.2673	bar	- TEMP	165.649	°C
65)	-	DEW	PT - PRES	187.6690	bar	- TEMP	164.895	°C
66)	-	DEW	PT - PRES	190.1017	bar	- TEMP	164.126	°C
67)	-	DEW	PT - PRES	194.9361	bar	- TEMP	162.555	°C
68)	-	DEW	PT - PRES	199.7705	bar	- TEMP	160.937	°C
69)	-	DEW	PT - PRES	202.1732	bar	- TEMP	160.111	°C
70)	-	DEW	PT - PRES	204.7278	bar	- TEMP	159.228	°C
71)	-	DEW	PT - PRES	207.1309	bar	- TEMP	158.378	°C
72)	-	DEW	PT - PRES	209.5622	bar	- TEMP	157.514	°C
73)	-	DEW	PT - PRES	214.3966	bar	- TEMP	155.752	°C
74)	-	DEW	PT - PRES	216.8003	bar	- TEMP	154.856	°C
75)	-	DEW	PT - PRES	219.2867	bar	- TEMP	153.923	°C
76)	-	DEW	PT - PRES	221.6907	bar	- TEMP	153.002	°C
77)	-	DEW	PT - PRES	224.1211	bar	- TEMP	152.066	°C
78)	-	DEW	PT - PRES	228.9555	bar	- TEMP	150.161	°C
79)	-	DEW	PT - PRES	233.7899	bar	- TEMP	148.208	°C
80)	-	DEW	PT - PRES	238.6243	bar	- TEMP	146.151	°C
81)	-	DEW	PT - PRES	243.4586	bar	- TEMP	144.157	°C
82)	-	DEW	PT - PRES	248.2930	bar	- TEMP	142.058	°C
83)	-	DEW	PT - PRES	253.1274	bar	- TEMP	139.907	°C
84)	-	DEW	PT - PRES	255.5332	bar	- TEMP	138.816	°C
85)	-	DEW	PT - PRES	258.2745	bar	- TEMP	137.563	°C
86)	-	DEW	PT - PRES	260.6804	bar	- TEMP	136.444	°C
87)	-	DEW	PT - PRES	263.1088	bar	- TEMP	135.309	°C
88)	-	DEW	PT - PRES	265.5150	bar	- TEMP	134.164	°C
89)	-	DEW	PT - PRES	267.9432	bar	- TEMP	133.003	°C
90)	-	DEW	PT - PRES	272.7776	bar	- TEMP	130.644	°C
91)	-	DEW	PT - PRES	275.1842	bar	- TEMP	129.449	°C
92)	-	DEW	PT - PRES	277.6556	bar	- TEMP	128.213	°C
93)	-	DEW	PT - PRES	282.4900	bar	- TEMP	125.749	°C
94)	-	DEW	PT - PRES	287.3244	bar	- TEMP	123.178	°C
95)	-	DEW	PT - PRES	292.1588	bar	- TEMP	120.662	°C
96)	-	DEW	PT - PRES	296.9932	bar	- TEMP	118.040	°C
97)	-	DEW	PT - PRES	299.4006	bar	- TEMP	116.710	°C
98)	-	DEW	PT - PRES	301.9959	bar	- TEMP	115.290	°C
99)	-	DEW	PT - PRES	304.6136	bar	- TEMP	113.796	°C

100) -	DEW	PT - PRES	307.0213	bar	- TEMP	112.427	°C
101) -	DEW	PT - PRES	309.4480	bar	- TEMP	111.041	°C
102) -	DEW	PT - PRES	311.8939	bar	- TEMP	109.622	°C
103) -	DEW	PT - PRES	314.3018	bar	- TEMP	108.215	°C
104) -	DEW	PT - PRES	316.7283	bar	- TEMP	106.794	°C
105) -	DEW	PT - PRES	319.1735	bar	- TEMP	105.336	°C
106) -	DEW	PT - PRES	324.0079	bar	- TEMP	102.429	°C
107) -	DEW	PT - PRES	328.8423	bar	- TEMP	99.482	°C
108) -	DEW	PT - PRES	331.2506	bar	- TEMP	97.996	°C
109) -	DEW	PT - PRES	333.7499	bar	- TEMP	96.455	°C
110) -	DEW	PT - PRES	336.2680	bar	- TEMP	94.877	°C
111) -	DEW	PT - PRES	338.6765	bar	- TEMP	93.366	°C
112) -	DEW	PT - PRES	341.1023	bar	- TEMP	91.841	°C
113) -	DEW	PT - PRES	343.5455	bar	- TEMP	90.292	°C
114) -	DEW	PT - PRES	348.3799	bar	- TEMP	87.216	°C
115) -	DEW	PT - PRES	353.2143	bar	- TEMP	84.094	°C
116) -	DEW	PT - PRES	355.6233	bar	- TEMP	82.584	°C
117) -	DEW	PT - PRES	358.1167	bar	- TEMP	80.990	°C
118) -	DEW	PT - PRES	360.5258	bar	- TEMP	79.448	°C
119) -	DEW	PT - PRES	362.9511	bar	- TEMP	77.906	°C
120) -	DEW	PT - PRES	365.3927	bar	- TEMP	76.346	°C
121) -	DEW	PT - PRES	367.8020	bar	- TEMP	74.816	°C
122) -	DEW	PT - PRES	370.2271	bar	- TEMP	73.288	°C
123) -	DEW	PT - PRES	372.6682	bar	- TEMP	71.735	°C
124) -	DEW	PT - PRES	375.1255	bar	- TEMP	70.216	°C
125) -	DEW	PT - PRES	379.9599	bar	- TEMP	67.227	°C
126) -	DEW	PT - PRES	382.3694	bar	- TEMP	65.763	°C
127) -	DEW	PT - PRES	384.8254	bar	- TEMP	64.283	°C
128) -	DEW	PT - PRES	387.2350	bar	- TEMP	62.845	°C
129) -	DEW	PT - PRES	389.6598	bar	- TEMP	61.420	°C
130) -	DEW	PT - PRES	392.0997	bar	- TEMP	59.986	°C
131) -	DEW	PT - PRES	394.5549	bar	- TEMP	58.591	°C
132) -	DEW	PT - PRES	399.3893	bar	- TEMP	55.879	°C

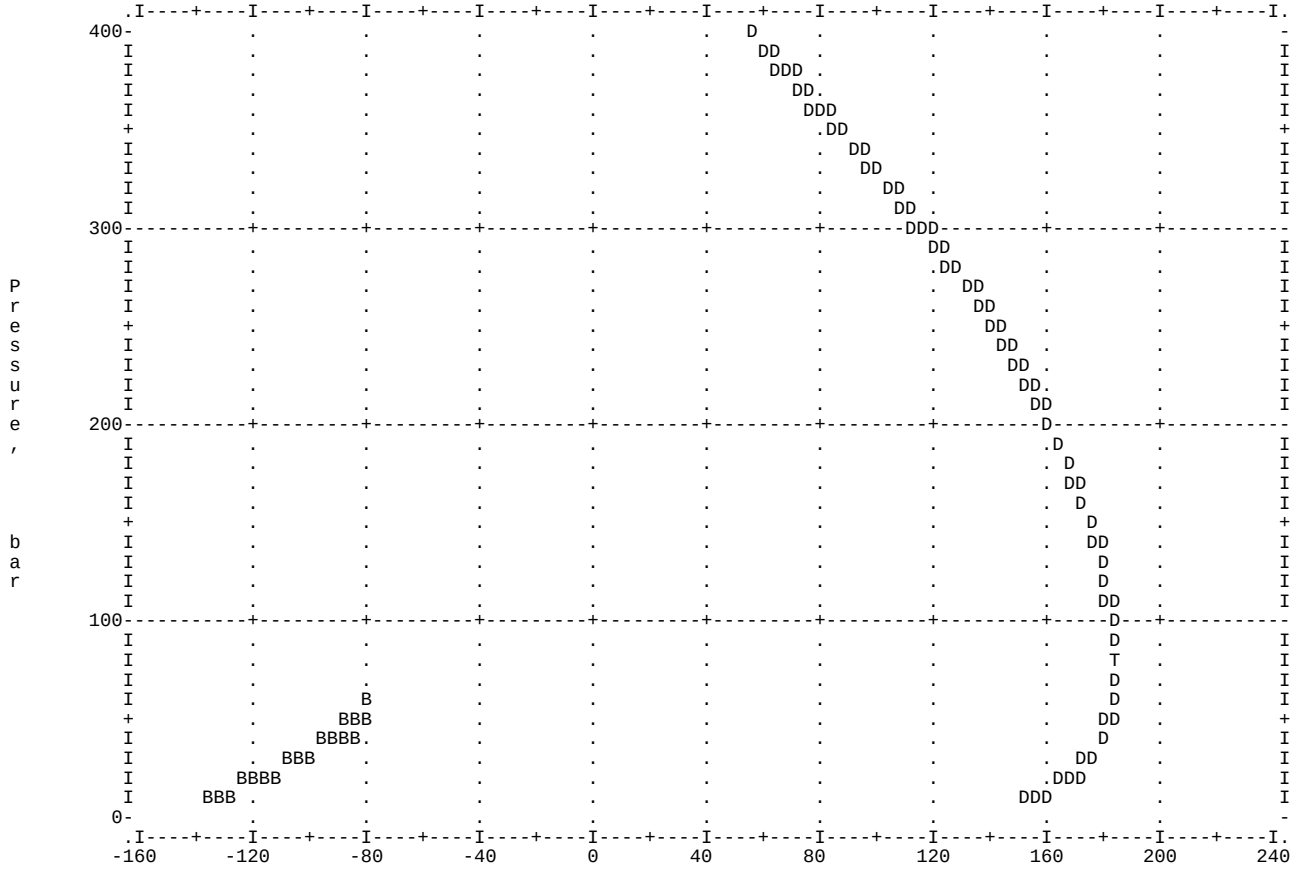
4) *** BUBBLE POINT EQUILIBRIUM CURVE ***

Cricondentherm Point - *** NOT DETERMINED ***
Cricondenbar Point - *** NOT DETERMINED ***
Critical Point - *** NOT DETERMINED ***
Max Temp/Pres Point - Temp -80.187 °C - Pres 55.3378 bar

1) -	BUBBLE	PT - PRES	9.8067	bar	- TEMP	-137.830	°C
2) -	BUBBLE	PT - PRES	10.7873	bar	- TEMP	-135.317	°C
3) -	BUBBLE	PT - PRES	11.8660	bar	- TEMP	-132.733	°C
4) -	BUBBLE	PT - PRES	13.0513	bar	- TEMP	-130.080	°C
5) -	BUBBLE	PT - PRES	14.3580	bar	- TEMP	-127.346	°C
6) -	BUBBLE	PT - PRES	15.7965	bar	- TEMP	-124.534	°C
7) -	BUBBLE	PT - PRES	17.3803	bar	- TEMP	-121.640	°C
8) -	BUBBLE	PT - PRES	19.1243	bar	- TEMP	-118.662	°C
9) -	BUBBLE	PT - PRES	21.0453	bar	- TEMP	-115.596	°C
10) -	BUBBLE	PT - PRES	23.1618	bar	- TEMP	-112.439	°C
11) -	BUBBLE	PT - PRES	25.4943	bar	- TEMP	-109.189	°C
12) -	BUBBLE	PT - PRES	28.0663	bar	- TEMP	-105.842	°C
13) -	BUBBLE	PT - PRES	30.9004	bar	- TEMP	-102.402	°C
14) -	BUBBLE	PT - PRES	34.0223	bar	- TEMP	-98.869	°C
15) -	BUBBLE	PT - PRES	37.4601	bar	- TEMP	-95.251	°C
16) -	BUBBLE	PT - PRES	41.2431	bar	- TEMP	-91.558	°C
17) -	BUBBLE	PT - PRES	45.3960	bar	- TEMP	-87.818	°C
18) -	BUBBLE	PT - PRES	49.9100	bar	- TEMP	-84.107	°C
19) -	BUBBLE	PT - PRES	53.4347	bar	- TEMP	-81.478	°C
20) -	BUBBLE	PT - PRES	55.3378	bar	- TEMP	-80.187	°C
21) -	BUBBLE	PT - PRES	54.3884	bar	- TEMP	-80.736	°C

22) - BUBBLE PT - PRES	52.5506 bar	- TEMP	-81.745 °C
23) - BUBBLE PT - PRES	48.4686 bar	- TEMP	-83.843 °C
24) - BUBBLE PT - PRES	45.4884 bar	- TEMP	-85.293 °C
25) - BUBBLE PT - PRES	44.6960 bar	- TEMP	-85.673 °C
26) - BUBBLE PT - PRES	44.1714 bar	- TEMP	-85.916 °C
27) - BUBBLE PT - PRES	43.9134 bar	- TEMP	-86.037 °C
28) - BUBBLE PT - PRES	43.7702 bar	- TEMP	-86.104 °C
29) - BUBBLE PT - PRES	43.6790 bar	- TEMP	-86.145 °C

**** PHASE ENVELOPE ****



*** UNIT 2 - 'CYLIND ' - ' FLASH ' ***

--- Feed Streams --- - Product Streams -

'WEST ' 'GASA0065' VAPOR to unit 4 - RECOMB

'LIQA0065' LIQUID to unit 3 - STD

1) * OPERATING CONDITIONS *

Outlet temperature 34.40 °C

Outlet pressure 37.6000 bar

Heat exchanged 236.630 MJ

2) * FEEDS *

Stream		WEST
Temperature,	°C	40.55
Pressure,	bar	172.800
Total rate,	kmol/h	100.00
Vapor,	kmol/h	94.411
Liquid,	kmol/h	5.5893

3) * PRODUCTS *

Stream		GASA0065	LIQA0065
Temperature,	°C	34.40	34.40
Pressure,	bar	37.600	37.600
Total rate,	kmol/h	95.430	4.5704
Vapor,	kmol/h	95.430	0.0000
Liquid,	kmol/h	0.0000	4.5704

*** UNIT 3 - 'STD ' - ' FLASH ' ***

--- Feed Streams --- - Product Streams -

from unit 2 - CYLIND 'LIQA0065' 'SGS03 ' VAPOR to unit 4 - RECOMB

'STDLIQ ' LIQUID

1) * OPERATING CONDITIONS *

Outlet temperature	15.56 °C
Outlet pressure	1.0130 bar
Heat exchanged	-5.834 MJ

2) * FEEDS *

Stream		LIQA0065
Temperature,	°C	34.40
Pressure,	bar	37.600
Total rate,	kmol/h	4.5704
Vapor,	kmol/h	0.0000
Liquid,	kmol/h	4.5704

3) * PRODUCTS *

Stream		SGS03	STDLIQ
Temperature,	°C	15.56	15.56
Pressure,	bar	1.013	1.013
Total rate,	kmol/h	1.2077	3.3627
Vapor,	kmol/h	1.2077	0.0000
Liquid,	kmol/h	0.0000	3.3627

*** UNIT 4 - 'RECOMB ' - ' FLASH ' ***

--- Feed Streams --- - Product Streams -
from unit 2 - CYLIND 'GASA0065' 'STDGAS '
from unit 3 - STD 'SGS03 '

1) * OPERATING CONDITIONS *
Outlet temperature 15.56 °C
Outlet pressure 1.0130 bar
Heat exchanged 5.716 MJ

2) * FEEDS *

Stream		GASA0065	SGS03
Temperature,	°C	34.40	15.56
Pressure,	bar	37.600	1.013
Total rate,	kmol/h	95.430	1.2077
Vapor,	kmol/h	95.430	1.2077
Liquid,	kmol/h	0.0000	0.0000

3) * PRODUCTS *

Stream		STDGAS
Temperature,	°C	15.56
Pressure,	bar	1.013
Total rate,	kmol/h	96.637
Vapor,	kmol/h	96.637
Liquid,	kmol/h	0.0000

*** UNIT 5 - 'DEW ' - ' FLASH ' ***
--- Feed Streams --- - Product Streams -
'WEST ' 'DEW '

1) * OPERATING CONDITIONS *
Outlet temperature 140.55 °C
Outlet pressure 251.6927 bar
Heat exchanged 649.707 MJ

2) * FEEDS *

Stream		WEST
Temperature,	°C	40.55
Pressure,	bar	172.800
Total rate,	kmol/h	100.00
Vapor,	kmol/h	94.411
Liquid,	kmol/h	5.5893

3) * PRODUCTS *

Stream		DEW
Temperature,	°C	140.55
Pressure,	bar	251.693
Total rate,	kmol/h	100.00
Vapor,	kmol/h	100.00
Liquid,	kmol/h	0.0000

 *** STREAM DATA CALCULATION AND STORING ***

    Stream 'WEST   ' pvt/thermo/trans props calculated
    Stream 'GASA0065' pvt/thermo/trans props calculated
    Stream 'LIQA0065' pvt/thermo/trans props calculated
    Stream 'SGS03   ' pvt/thermo/trans props calculated
    Stream 'STDLIQ ' pvt/thermo/trans props calculated
    Stream 'STDGAS ' pvt/thermo/trans props calculated
    Stream 'DEW   ' pvt/thermo/trans props calculated

*** STREAM COMPONENT MOLAR FLOW RATES - kmol/h ***

Stream Id	WEST	GASA0065	LIQA0065	SGS03	STDLIQ	STDGAS
Temperature, °C	40.550	34.400	34.400	15.560	15.560	15.560
Pressure, bar	172.8000	37.6000	37.6000	1.0130	1.0130	1.0130
Phase	MIXED	VAPOR	LIQUID	VAPOR	LIQUID	VAPOR
2 HYDROGEN SULPHIDE	0.370000	0.352498	0.017502	0.015327	0.002174	0.367826
3 NITROGEN	6.130000	6.117604	0.012396	0.012362	0.000034	6.129966
4 CARBON DIOXIDE	15.560000	15.296415	0.263585	0.253437	0.010148	15.549852
5 METHANE	65.850000	65.445719	0.404281	0.399944	0.004337	65.845663
6 ETHANE	4.400000	4.248849	0.151151	0.137657	0.013493	4.386507
7 PROPANE	2.180000	1.971272	0.208728	0.150209	0.058519	2.121481
8 ISOBUTANE	0.560000	0.457629	0.102371	0.050899	0.051472	0.508528
9 BUTANE	0.950000	0.723214	0.226786	0.089329	0.137457	0.812543
10 C5+	1.030000	0.526886	0.503114	0.069797	0.433317	0.596683
11 C6+	0.660000	0.178343	0.481657	0.019856	0.461800	0.198200
12 C7+	0.650000	0.078302	0.571698	0.006792	0.564906	0.085094
13 C8+	0.530000	0.024758	0.505242	0.001659	0.503583	0.026417
14 C9+	0.370000	0.006189	0.363811	0.000312	0.363498	0.006502
15 C10+	0.260000	0.001784	0.258216	0.000069	0.258147	0.001853
16 C11+	0.170000	0.000167	0.169833	0.000004	0.169829	0.000171
17 C12+	0.330000	0.000018	0.329982	0.000000	0.329982	0.000018
TOTALS, kmol/h	100.000000	95.429614	4.570386	1.207662	3.362724	96.637276
VAPOR fraction	0.944107	1.000000	0.000000	1.000000	0.000000	1.000000
LIQUID 1/H fraction	0.055893	0.000000	1.000000	0.000000	1.000000	0.000000
Enthalpy MJ/h	-423.509059	-42.558292	-144.321056	-0.732025	-149.422795	-37.574618

Stream Id	DEW
Temperature, °C	140.550
Pressure, bar	251.6927
Phase	VAPOR
2 HYDROGEN SULPHIDE	0.370000
3 NITROGEN	6.130000
4 CARBON DIOXIDE	15.560000
5 METHANE	65.850000
6 ETHANE	4.400000
7 PROPANE	2.180000
8 ISOBUTANE	0.560000
9 BUTANE	0.950000
10 C5+	1.030000
11 C6+	0.660000
12 C7+	0.650000
13 C8+	0.530000
14 C9+	0.370000
15 C10+	0.260000
16 C11+	0.170000
17 C12+	0.330000
TOTALS, kmol/h	100.000000
VAPOR fraction	1.000000
LIQUID 1/H fraction	0.000000
Enthalpy MJ/h	226.198279

*** STREAM MOLAR COMPOSITIONS ***

Stream Id	WEST	GASA0065	LIQA0065	SGS03	STDLIQ	STDGAS
Temperature, °C	40.550	34.400	34.400	15.560	15.560	15.560
Pressure, bar	172.8000	37.6000	37.6000	1.0130	1.0130	1.0130
Phase	MIXED	VAPOR	LIQUID	VAPOR	LIQUID	VAPOR
2 HYDROGEN SULPHIDE	0.00370000	0.00369380	0.00382937	0.01269165	0.00064663	0.00380625
3 NITROGEN	0.06130000	0.06410593	0.00271221	0.01023598	0.00001018	0.06343273
4 CARBON DIOXIDE	0.15560000	0.16029002	0.05767242	0.20985761	0.00301782	0.16090946
5 METHANE	0.65850000	0.68580094	0.08845659	0.33117164	0.00128981	0.68136919
6 ETHANE	0.04400000	0.04452338	0.03307173	0.11398674	0.00401255	0.04539146
7 PROPANE	0.02180000	0.02065681	0.04566975	0.12437991	0.01740241	0.02195302
8 ISOBUTANE	0.00560000	0.00479547	0.02239866	0.04214635	0.01530663	0.00526223
9 BUTANE	0.00950000	0.00757851	0.04962077	0.07396841	0.04087675	0.00840817
10 C5+	0.01030000	0.00552120	0.11008126	0.05779494	0.12885895	0.00617446
11 C6+	0.00660000	0.00186885	0.10538643	0.01644203	0.13732922	0.00205097
12 C7+	0.00650000	0.00082053	0.12508735	0.00562410	0.16799045	0.00088056
13 C8+	0.00530000	0.00025943	0.11054697	0.00137395	0.14975451	0.00027336
14 C9+	0.00370000	0.00006486	0.07960177	0.00025873	0.10809640	0.00006728
15 C10+	0.00260000	0.00001870	0.05649758	0.00005688	0.07676724	0.00001917
16 C11+	0.00170000	0.00000175	0.03715940	0.00000322	0.05050338	0.00000177
17 C12+	0.00330000	0.00000019	0.07220005	0.00000017	0.09812935	0.00000019
TOTALS, /h	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
VAPOR fraction	0.944107	1.000000	0.000000	1.000000	0.000000	1.000000
LIQUID 1/H fraction	0.055893	0.000000	1.000000	0.000000	1.000000	0.000000
Spec Ent, kJ/kmol	-4235.859805	-446.046258	-31583.165628	-606.260734	-44443.116199	-388.891781

Stream Id	DEW
Temperature, °C	140.550
Pressure, bar	251.6927
Phase	VAPOR
2 HYDROGEN SULPHIDE	0.00370000
3 NITROGEN	0.06130000
4 CARBON DIOXIDE	0.15560000
5 METHANE	0.65850000
6 ETHANE	0.04400000
7 PROPANE	0.02180000
8 ISOBUTANE	0.00560000
9 BUTANE	0.00950000
10 C5+	0.01030000
11 C6+	0.00660000
12 C7+	0.00650000
13 C8+	0.00530000
14 C9+	0.00370000
15 C10+	0.00260000
16 C11+	0.00170000
17 C12+	0.00330000
TOTALS, /h	1.000000
VAPOR fraction	1.000000
LIQUID 1/H fraction	0.000000
Spec Ent, kJ/kmol	2262.393632

STREAM SUMMARY

Stream Id		WEST	GASA0065	LIQA0065	SGS03	STDLIQ
Temperature, °C		40.550	34.400	34.400	15.560	15.560
Pressure, bar		172.8000	37.6000	37.6000	1.0130	1.0130
Phase		MIXED	VAPOR	LIQUID	VAPOR	LIQUID
Flow rate	kmol/h	100.000	95.430	4.570	1.208	3.363
	kg/h	2669.823	2254.203	415.620	44.960	370.660
Vapor fract.		0.944107	1.000000	0.000000	1.000000	0.000000
LIQUID 1/H FRACT		0.055893	0.000000	1.000000	0.000000	1.000000
LIQUID 2/W FRACT		0.000000	0.000000	0.000000	0.000000	0.000000
Mol. weight		26.6982	23.621625	90.937664	37.229354	110.226044
Act. Volume rate	m3/h	10.896660	59.332435	0.577453	28.350302	0.484853
Enthalpy	MJ/h	-423.509059	-42.558292	-144.321056	-0.732025	-149.422795
Spec. enthalpy	kJ/kmol	-4235.860	-446.046	-31583.166	-606.261	-44443.116
	kJ/kg	-158.657	-18.883	-347.306	-16.284	-403.200
*** VAPOUR ***						
Flow rate	kmol/h	94.411	95.430		1.208	
	kg/h	2302.316	2254.203		44.960	
Wt. fraction		0.862348	1.000000		1.000000	
Mol. weight		24.3862	23.6216		37.2294	
Std. Volume rate	N-m3/h	2236.589921	2260.727548		28.609520	
Act. Volume rate	m3/h	10.3438	59.3324		28.3503	
Enthalpy	MJ/h	-314.405646	-42.558292		-0.732025	
Spec. enthalpy	kJ/kmol	-3330.795	-446.046		-606.261	
	kJ/kg	-136.585	-18.883		-16.284	
Spec. Heat cap.	kJ/kmol °C	40.738091	39.142166		56.061979	
	kJ/kg °C	1.670540	1.657048		1.505854	
Spec. Entropy	kJ/kmol °C	148.0693	168.4872		224.0845	
	kJ/kg °C	6.0719	7.1328		6.0190	
Compressibility		0.725752	0.914078		0.990517	
Density	kg/m3	222.5802	37.9928		1.5859	
Isentr. Exponent		1.249446	1.300322		1.176492	
Viscosity	cP	0.2386E-01	0.1339E-01		0.9765E-02	
Thermal Conduct.	W/m°C	0.057321	0.032739		0.019299	
Reference Gas Status - Temperature 15.5			- Pressure 1			
*** LIQUID 1/H ***						
Flow rate	kmol/h	5.589		4.570		3.363
	kg/h	367.507		415.620		370.660
Wt. fraction		0.137652		1.000000		1.000000
Mol. weight		65.7520		90.9377		110.2260
Std. Volume rate	m3/h	0.541464		0.583287		0.502275
Act. Volume rate	m3/h	0.5529		0.5775		0.4849
Enthalpy	MJ/h	-109.103413		-144.321056		-149.422795
Spec. enthalpy	kJ/kmol	-19523.659		-31583.166		-44443.116
	kJ/kg	-296.929		-347.306		-403.200
Spec. Heat cap.	kJ/kmol °C	305.836280		268.390437		253.739510
	kJ/kg °C	4.651360		2.951367		2.301992
Spec. Entropy	kJ/kmol °C	95.1214		55.4700		26.0484
	kJ/kg °C	1.4467		0.6100		0.2363
Density	kg/m3	664.6911		719.7472		764.4794
Sp. Grav. 60/60		0.6787		0.7125		0.7379
Viscosity	cP	0.1033		0.2411		0.4553
Thermal Conduct.	W/m°C	0.121679		0.124252		0.128122
Surface Tension	dyn/cm	8.9238		15.4556		21.7673

STREAM SUMMARY

Stream Id		STDGAS	DEW
Temperature, °C		15.560	140.550
Pressure, bar		1.0130	251.6927
Phase		VAPOR	VAPOR
Flow rate	kmol/h	96.637	100.000
	kg/h	2299.163	2669.823
Vapor fract.		1.000000	1.000000
LIQUID 1/H FRACT		0.000000	0.000000
LIQUID 2/W FRACT		0.000000	0.000000
Mol. weight		23.7917	26.698228
Act. Volume rate	m3/h	2283.212862	12.683557
Enthalpy	MJ/h	-37.574618	226.198279
Spec. enthalpy	kJ/kmol	-388.892	2262.394
	kJ/kg	-16.346	84.739
*** VAPOUR ***			
Flow rate	kmol/h	96.637	100.000
	kg/h	2299.163	2669.823
Wt. fraction		1.000000	1.000000
Mol. weight		23.7917	26.6982
Std. Volume rate	N-m3/h	2289.337068	2369.000000
Act. Volume rate	m3/h	2283.2129	12.6836
Enthalpy	MJ/h	-37.574618	226.198279
Spec. enthalpy	kJ/kmol	-388.892	2262.394
	kJ/kg	-16.346	84.739
Spec. Heat cap.	kJ/kmol °C	38.451944	51.503550
	kJ/kg °C	1.616193	1.929100
Spec. Entropy	kJ/kmol °C	198.6212	160.4206
	kJ/kg °C	8.3483	6.0087
Compressibility		0.996900	0.927958
Density	kg/m3	1.0070	210.4948
Isentr. Exponent		1.276956	1.219736
Viscosity	cP	0.1176E-01	0.2540E-01
Thermal Conduct.	W/m°C	0.027266	0.064209

Reference Gas Status - Temperature 15.5 - Pressure 1

- Calculation time 0.41 sec

- Simulation no. 3 - Ended at 16.06.29 on MAR 04, 2009 -

XPSIM, Steady State Process Simulation Software
Version 1.07