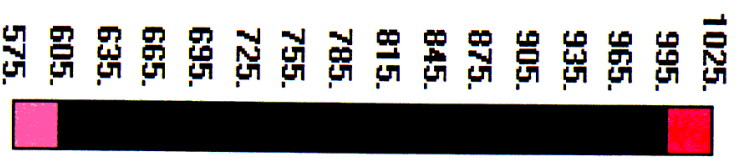
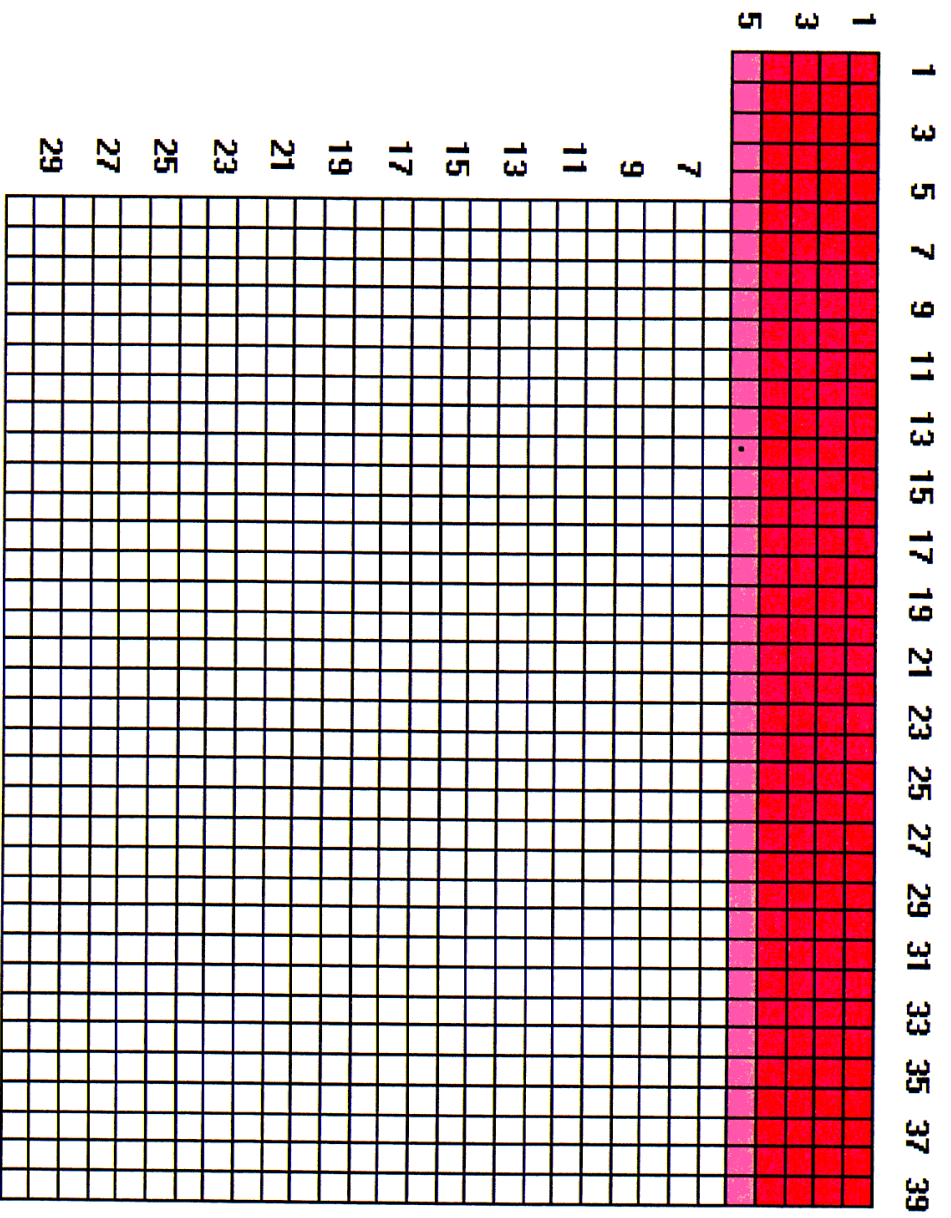


Form Parameters Data Edit Display Settings X-section Graph Wells

X PERMEABILITY (KX) (XZ, Y = 1, LGR Y = 1) md

Region Range 14 1 5 14 1 5  
 Cell LGR 0 0 0 0 0 0  
 Data

Constant v Apply  Planes  All



Cell ( 14, 1, 5 LGR 0, 0) value = 583.3333

**COMPONENT PROPERTIES F:\PMORRIS\3.1A-1900.DAT**



Form Data Edit Delete Component

All Components Base Pressure kPaa  Base Temperature oC

Component  Name   Write mole frac to .BLK

Molar distribution of Component in phase at Surface Conditions  
 Oil  Gas  Water  Molecular Weight

Stock Tank Density kg/m<sup>3</sup> of Component in phase  
 Oil  Gas  Water  Pc kPaa  Tc degK

Heat Capacity Coefficients kJ/kg/oK.../oK<sup>2</sup>.../oK<sup>3</sup>  
   Heat of Vaporization kJ/kg

Phase Properties at Reservoir Conditions  
 Component Properties in Phase - Select ->    Gas

**GAS PHASE PROPERTIES**

K values  Correlation  Tables Viscosity cp  Correlation  Tables

Temperature oC	(1) Pressure kpa	(2) Pressure kpa	(3) Pressure kpa	(4) Pressure kpa	Temperature oC	Viscosity cp
100	1				80	0.011
					183	0.013
					287	0.014
					390	0.016
					493	0.017
					597	0.019
					700	0.02

Temperature oC	(1) Pressure kpa	(2) Pressure kpa	(3) Pressure kpa	(4) Pressure kpa	Temperature oC	Viscosity cp
100	1				80	0.011
					183	0.013
					287	0.014
					390	0.016
					493	0.017
					597	0.019
					700	0.02

FLUID DEFINITIONS

MODEL 3 3 3 == WATER, OIL and CH4

COMPNAME	'WATER'	'OIL'	'CH4'	
CMM	0	.48	0.01604	== g/g.mole
PCRIT	0	1360	4600.0	== kPa
TCRIT	0	624.65	-82.55	== deg C
MOLDEN	0	2145.8	62500.0	== g.mol/m3
CP	0	5.5e-7	5.5e-7	== kPa-1
CT1	0	8.0e-4	8.0e-4	== /deg C
CT2	0	0	0	
KV1	0	0	31914.	== kPa
KV2	0	0	0	
KV3	0	0	0	
KV4	0	0	-33.067	== deg C
KV5	0	0	-27.71	== deg C
cpgl	0	841.	35.2	== J/g.mol-C
CPL1	0	1000.	67.2	== J/g.mol-C (2551.0 J/kg-C)
hvaepr	0	1346.	1770	== J/g.mol

viscstable == copied from schrw007.dat in CMG example data  
 == 10 to 350 dec C range

10 0 5000000. 200.0

**COMPONENT PROPERTIES F:\PMorris\3.1A-1900.DAT**

Form Data Edit Delete Component

All Components Base Pressure kPaa  Base Temperature ofC

Component  Name   Write mole frac to .BLK

Molar distribution of Component in phase at Surface Conditions  
 Oil  Gas  Water  Molecular Weight

Stock Tank Density kg/m<sup>3</sup> of Component in phase  
 Oil  Gas  Water  Pc kPaa  Tc degK

Heat Capacity Coefficients kJ/Kg<sup>o</sup>K  
   Heat of Vaporization kJ/Kg

Phase Properties at Reservoir Conditions  
 Component Properties in Phase - Select ->

**GAS PHASE PROPERTIES**

K values  Correlation Tables

Viscosity cp  Correlation Tables

Temperature ofC	(1) Pressure kpa	(2) Pressure kpa	(3) Pressure kpa	(4) Pressure kpa	Temperature ofC	Viscosity cp
1000	1				80	0.011
					183	0.013
					287	0.014
					390	0.016
					493	0.017
					597	0.019
					700	0.02



SET ALL GRID CELL VALUES TO CONSTANT VALUE



Form Edit Data

Enter values only for required parameters. Use Display/Enter Grid Cell Data to show and modify local areas. Values displayed are current AVERAGED values. Use Data Menu to save entered values to a file for redisplay.

Parameter	Value
7 TOPmost Depth (TIC) metres	328
8 Midpoint depth (DEP) metres	
9 POROSITY (POR) fraction	0.3199878
10 ROCK HEAT CAPACITY (RHCI) kJ/m <sup>3</sup> /ok	2390
11 X PERMEABILITY (KXH) md	4238.04
12 Y PERMEABILITY (KYH) md	0
13 Z PERMEABILITY (KZH) md	0
14 Flux Boundary Regions (FLX)	
15 Local Grid Refinement (LGR)	
16 Cell Shape Types (SHA)	5.741627E-02
17 Reserved	
18 Reserved Influence Coefficients	
19 Reserved	
20 Reserved	
21 Reserved	
22 Reserved	
23 ROCK COMPRESSIBILITY (CRK) v/v/kPa	1.399967E-05
24 X THERMAL CONDUCTIVITY (XTC) kJ/D-m-ok	146.8758
25 Y THERMAL CONDUCTIVITY (YTC) kJ/D-m-ok	146.8758
26 Z THERMAL CONDUCTIVITY (ZTC) kJ/D-m-ok	146.8758
27 INITIAL DATUM PRESSURE (PIC) kPa	2200
28 DATUM DEPTH (DPI) metres	328
29 GAS-OIL CONTACT DEPTH (DGO) metres	300
30 WATER-OIL CONTACT DEPTH (DWO) metres	500
31 INITIAL SATURATION PRESSURE (PSCI) kPa	
32 Initial Water Saturations (SWI)	0.1744311
33 Initial Gas Saturations (SGI)	0.1586103
34 INITIAL MOLEFRACTION TABLE#(IXT1)	1
35 Oil In Place Regions (MIG)	
36 X Trans Multiplier (XKM)	1
37 Y Trans Multiplier (YKM)	
38 Z Trans Multiplier (ZKM)	1
39 # Heat Transfer Tubes (RFTC)	
40 INITIAL RESPYR TEMPERATURE (TRR) deg C	12
41 Critical Water Saturation (SWC) fraction	

Default Parameters for Water... (partial text)



**SET ALL GRID CELL VALUES TO CONSTANT VALUE**



Form Edit Data

Enter values only for required parameters. Use Display/Enter Grid Cell Data to show and modify local areas. Values displayed are current AVERAGED values. Use Data Menu to save entered values to a file for redisplay.

Parameter	Value
7 TOPmost Depth (TIC) metres	328
8 Midpoint depth (DEP) metres	
9 POROSITY (POR) fraction	0.3199878
10 ROCK HEAT CAPACITY (RHCI) kJ/m <sup>3</sup> /ok	2390
11 X PERMEABILITY (KXH) md	4238.04
12 Y PERMEABILITY (KYH) md	0
13 Z PERMEABILITY (KZH) md	0
14 Flux Boundary Regions (FLX)	
15 Local Grid Refinement (LGR)	
16 Cell Shape Types (SHA)	5.741627E-02
17 Reserved	
18 Reserved Influence Coefficients	
19 Reserved	
20 Reserved	
21 Reserved	
22 Reserved	
23 ROCK COMPRESSIBILITY (CRK) v/v/kPa	1.399967E-05
24 X THERMAL CONDUCTIVITY (XIC) kJ/D-m-ok	146.8758
25 Y THERMAL CONDUCTIVITY (YIC) kJ/D-m-ok	146.8758
26 Z THERMAL CONDUCTIVITY (ZIC) kJ/D-m-ok	146.8758
27 INITIAL DATUM PRESSURE (PIC) kPa	2200
28 DATUM DEPTH (DPI) metres	328
29 GAS-OIL CONTACT DEPTH (DGD) metres	300
30 WATER-OIL CONTACT DEPTH (DWD) metres	500
31 INITIAL SATURATION PRESSURE (PSCI) kPa	
32 Initial Water Saturations (SWI)	0.1744311
33 Initial Gas Saturations (SGI)	0.1586103
34 INITIAL MOLEFRACTION TABLE#(IXT)	1
35 Oil In Place Regions (MIG)	
36 X Trans Multiplier (XKM)	1
37 Y Trans Multiplier (YKM)	
38 Z Trans Multiplier (ZKM)	1
39 # Heat Transfer Tubes (BFC)	
40 INITIAL RESRVR TEMPERATURE (TR1) deg C	12
41 Critical Water Saturation (SWC) fraction	
42	

Default Data for the... (text is small and partially obscured)

SET ALL GRID CELL VALUES TO CONSTANT VALUE

Form Edit Data

Enter values only for required parameters. Use Display/Enter Grid Cell Data to show and modify local areas. Values displayed are current AVERAGED values. Use Data Menu to save entered values to a file for redisplay.

Parameter	Value
7 TOPmost Depth (TIC) metres	328
8 Midpoint depth (DEPI) metres	
9 POROSITY (POR) fraction	0.3199878
10 ROCK HEAT CAPACITY (RHC) kJ/m <sup>3</sup> /ok	2390
11 X PERMEABILITY (KXH) md	4238.04
12 Y PERMEABILITY (KYH) md	0
13 Z PERMEABILITY (KZH) md	0
14 Flux Boundary Regions (FLX)	
15 Local Grid Refinement (LGR)	
16 Cell Shape Types (SHA)	5.741627E-02
17 Reserved	
18 Reserved Influence Coefficients	
19 Reserved	
20 Reserved	
21 Reserved	
22 Reserved	
23 ROCK COMPRESSIBILITY (CRK) v/v/kPa	1.399967E-05
24 X THERMAL CONDUCTIVITY (XIC) kJ/D-m-ok	146.8758
25 Y THERMAL CONDUCTIVITY (YIC) kJ/D-m-ok	146.8758
26 Z THERMAL CONDUCTIVITY (ZIC) kJ/D-m-ok	146.8758
27 INITIAL DATUM PRESSURE (PIC) kPa	2200
28 DATUM DEPTH (DPI) metres	920
29 GAS-OIL CONTACT DEPTH (DGO) metres	300
30 WATER-OIL CONTACT DEPTH (DWO) metres	500
31 INITIAL SATURATION PRESSURE (PSC) kPa	
32 Initial Water Saturations (SWI)	0.1744311
33 Initial Gas Saturations (SGI)	0.1586103
34 INITIAL MOLEFRACTION TABLE#(IXT)	1
35 Oil In Place Regions (MIG)	
36 X Trans Multiplier (XKM)	1
37 Y Trans Multiplier (YKM)	
38 Z Trans Multiplier (ZKM)	1
39 # Heat Transfer Tubes (RFC)	
40 INITIAL RESRVR TEMPERATURE (TRI) deg C	12
41 Critical Water Saturation (SWC) fraction	

SET ALL GRID CELL VALUES TO CONSTANT VALUE

Form Edit Data

Enter values only for required parameters. Use Display/Enter Grid Cell Data to show and modify local areas. Values displayed are current AVERAGED values. Use Data Menu to save entered values to a file for redisplay.

Parameter	Value
7 TOPmost Depth (TIC) metres	328
8 Midpoint depth (DEP) metres	
9 POROSITY (POR) fraction	0.3199878
10 ROCK HEAT CAPACITY (RHCI) kJ/m <sup>3</sup> /oK	2390
11 X PERMEABILITY (KXH) md	4238.04
12 Y PERMEABILITY (KYH) md	0
13 Z PERMEABILITY (KZH) md	0
14 Flux Boundary Regions (FLX)	
15 Local Grid Refinement (LGR)	
16 Cell Shape Types (SHA)	5.741627E-02
17 Reserved	
18 Reserved Influence Coefficients	
19 Reserved	
20 Reserved	
21 Reserved	
22 Reserved	
23 ROCK COMPRESSIBILITY (CRK) v/v/kPa	1.399967E-05
24 X THERMAL CONDUCTIVITY (XTC) kJ/D-m-oK	146.8758
25 Y THERMAL CONDUCTIVITY (YTC) kJ/D-m-oK	146.8758
26 Z THERMAL CONDUCTIVITY (ZTC) kJ/D-m-oK	146.8758
27 INITIAL DATUM PRESSURE (PIC) kPa	2200
28 DATUM DEPTH (DPI) metres	328
29 GAS-OIL CONTACT DEPTH (DGD) metres	300
30 WATER-OIL CONTACT DEPTH (DWD) metres	500
31 INITIAL SATURATION PRESSURE (PSCI) kPa	
32 Initial Water Saturations (SWI)	0.1744311
33 Initial Gas Saturations (SGI)	0.1586103
34 INITIAL MOLEFRACTION TABLE # (IXT)	1
35 Oil In Place Regions (MIG)	
36 X Trans Multiplier (XKM)	1
37 Y Trans Multiplier (YKM)	
38 Z Trans Multiplier (ZKM)	1
39 # Heat Transfer Tubes (HTU)	
40 INITIAL RESRVR TEMPERATURE (TRII) deg C	12
41 Critical Water Saturation (SWC) fraction	

Default on C-45 for Viterbo... remain constant

# Pressure, kPa

# 3D SAGD Models

AT 0 DAYS (2000 JAN 1)

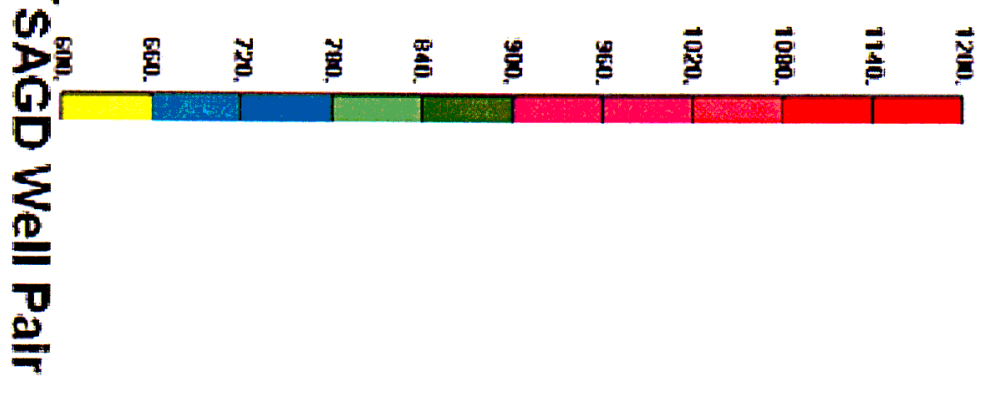
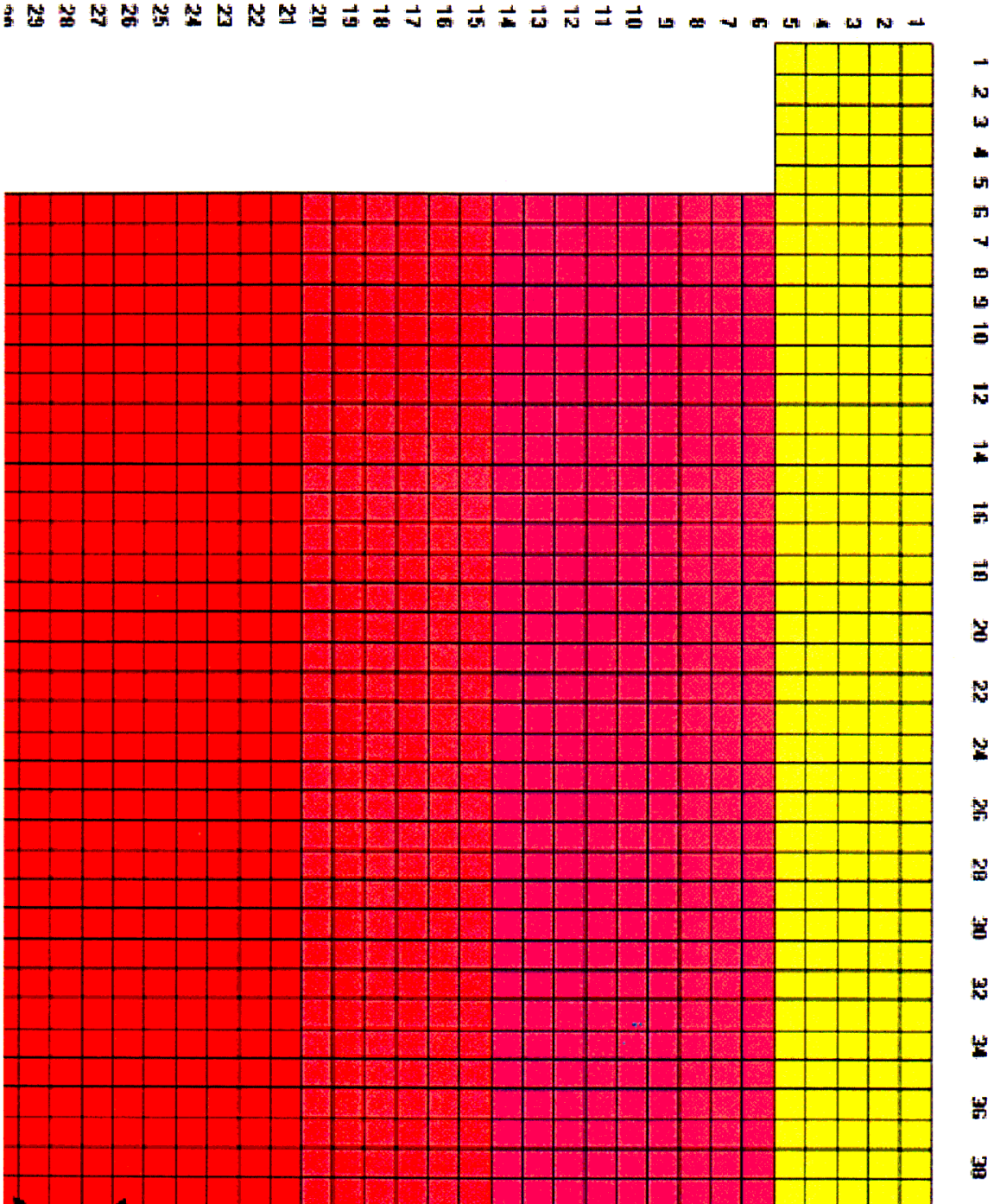


Figure 57: Run 3.2B-600 5 m Gas Cap, 25 m Bitumen at 600 kPa

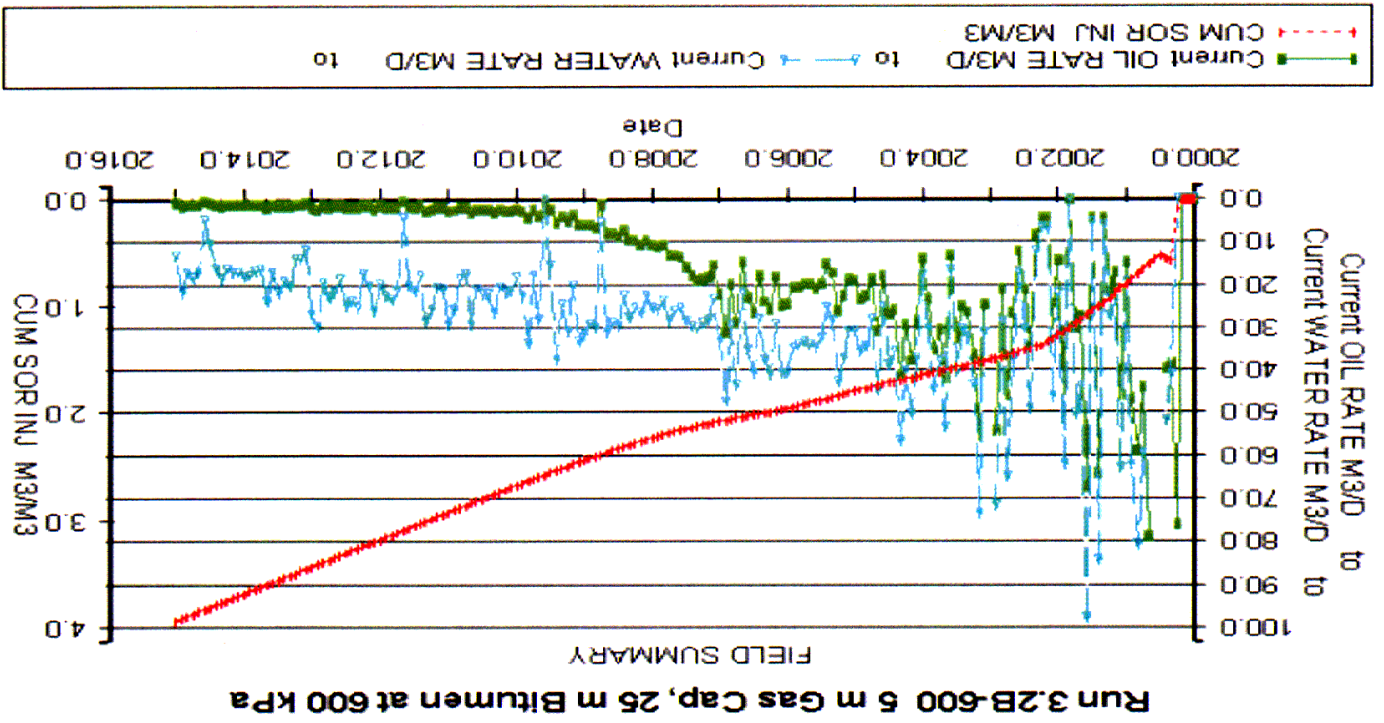


Figure 56: Run 3.1A-1900 5 m Gas Cap, 25 m Bitumen at 1900 kPa

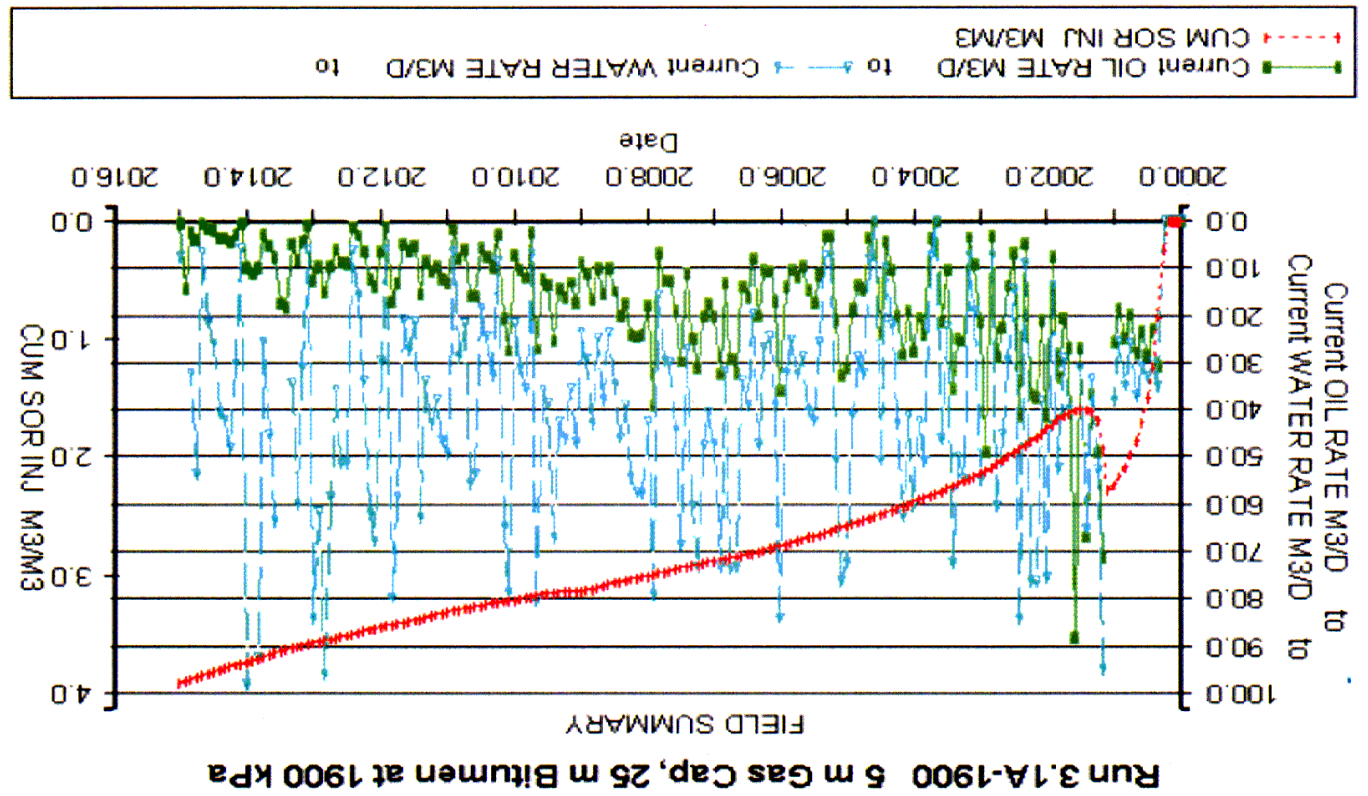


Figure 57: Run 3.2B-600 5 m Gas Cap, 25 m Bitumen at 600 kPa

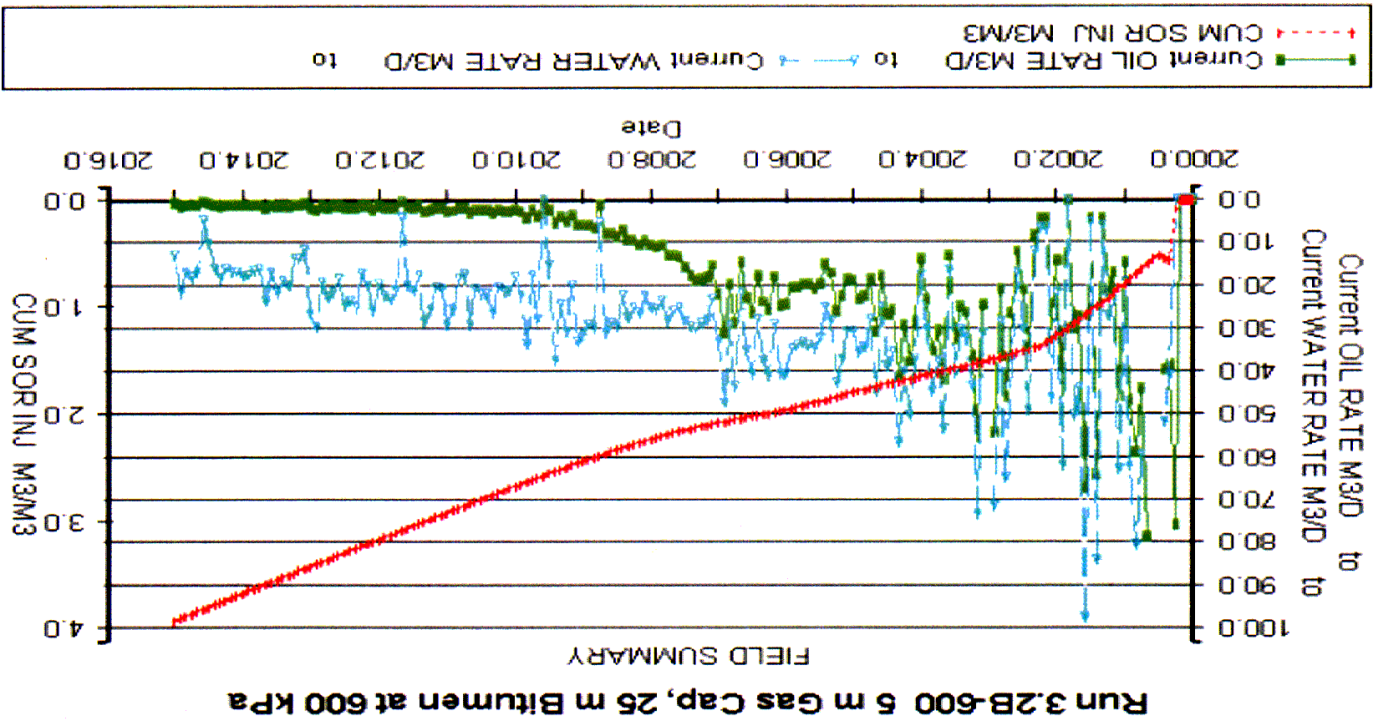


Figure 59: Run 3.1D2-Wat-600 5 m Gas Over 5 m Water Over 25 m Bitumen at 600 kPa

