

This document provides a description of the full layout view templates and interpretation view templates defined for the Sondex tools (in SondexTemplates.kvt) and the Schlumberger tools (in SchlumbergerTemplates.kvt) in Emeraude.

The full layout templates described here are made of a combination of different type of view templates:

- Automatic views, also visible individually under the Automatic views folder.
- Rate view templates, also visible individually under the Rate views folder.
- User view templates generated for one pass selected by the user, also visible individually under the User views folder.
- Interpretation view templates (for the active interpretation), also visible individually under the Interpretation views folder. This one is organized by type, and contains the PL reference and Match views, the PNL volume views, the MPT processing result views and the APERM views.
- Image view templates generated for one pass selected by the user, also visible individually under the Image views folder.
- Well view templates, also visible individually under the Well views folder.
- Depth, zones display, volume of fluids and well sketch view templates, also visible under the Other folder.

For more information about the Full Layout Templates and other types of templates, please refer to the online Help of Emeraude.

## I. Sondex Full layout Templates

## **CAT N Probes**

Call this full layout template to display the CAT normalized data (NCAPxx) and its relative bearing (CATROT) :

D	)epth	N	CAPO	)1	N	CAPO	2	N	ICAP	03	N	ICAP(	)4	N	CAP	05	N	<b>ICAP</b>	06	N	CAP	07	N	CAPO	)8	N	CAPO	9	N	CAP	10	N	CAP	11	N	CAP	12	(	CATRO	т
	ft	0.9	cps	1.1	0.9	cps	1.1	0.9	cps	1.1	0.9	cps	1.1	0.9	cps	1.1	0.9	cps	1.1	0.9	cps	1.1	0.9	cps	1.1	0.9	cps	1.1	0.9	cps	1.1	0.9	cps	1.1	0.9	cps	1.1	0	۰	360
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#### **CAT R Probes**

Call this full layout template to display the CAT raw data (RCAPxx) and its relative bearing (CATROT) :



#### **RAT HU Probes**

Call this full layout template to display the RAT Holdup data (RATHUxx) and its relative bearing (RATROT) :

	Depth	RATHU01	RATHU02	RATHU03	RATHU04	RATHU05	RATHU06	RATHU07	RATHU08	RATHU09	RATHU10	RATHU11	RATHU12	RATROT
Г	m	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 1	0 ° 360
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### **RAT MEAN Probes**

Call this full layout template to display the RAT Mean data (RATMNxx) and its relative bearing (RATROT) :



### SAT Spinners

Call this full layout template to display the 6 SAT spinner rps readings (SPINxx), the SAT bearing data (SATROT), a fullbore spinner data (CFB) and an inline spinner data (ILS):

Depth		SPIN1			SPIN2			SPIN3			SPIN4			SPIN5			SPIN6			CFB			ILS		9	SATROT	
ft	-40	rps	70	-14	rps	14	-8	rps	12	0	•	360															
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#### SAT - V apparent

Call this full layout template to display the 6 SAT spinner velocities (VASPINxx), the SAT bearing (SATROT), a fullbore spinner velocity (VACFB) and an inline spinner velocity (VAILS):

Depth		VASPIN	1		VASPIN2	2		VASPIN3	3		VASPIN4	1		VASPIN	5		ASPIN	6		VACFB			VAILS			SATROT	
ft	-20	ft/min	260	-30	ft/min	120	-30	ft/min	120	-50	ft/min	110	-20	0 ft/min	180	-1200	ft/min	200	-20	ft/min	35	-50	ft/min	110	0	•	360
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#### Interpretation match

Call this full layout template to display the curves selected for the interpretation (Interpretation # x), depth, zone display (Z), phase holdups match views, mixture velocity match view, and phase rates match views. It is also possible to display a temperature match view, a density match view, a capacitance match view and phase velocities match views when these measures are available. In the example below, the interpretation relies on the inputs of a density, a water holdup, a gas holdup, the phase rates and a mixture velocity.

QT MAPs Interpretation Depth Z 680PRES QT2,MAPS [psia] 780 QG_MAPS QT2,MAPS [B/D]	Density match DENR QT2,MAPS [g/cc]	Water holdup match 0-YW_MAPS QT2,MAPS-1 0YW_MAPSZ->QT2,MAPS-1	Gas holdup match 0-YG_MAPS_QT2_MAPS-1 0YG_MAPSZ->QT2_MAPS-1	Mixture velocity match VT_SAT QT2,MAPS [t/min]	Oil rate match QOZT-> QT2,MAPS [B/D] QO_MAPS QT2,MAPS [B/D]	Water rate match QWZT-> QT2,MAPS [B/D]	Gas rate match QG_MAPS QT2,MAPS [B/D] QGZT-> QT2,MAPS [B/D]
DENR QT2,MAPS (g/cc) 1 3360					1		

### MPT processing

Call this full layout template to display the curves obtained from the processing of the MAPS tool: depth, zone display (Z), MPT errors, MPT constraints, phase holdups, mixture velocity and phase rates.

Depth	Z	MPT errors 11	Constraints	YW_MAPS	YG_MAPS		VT_MAPS		G	W_MAPS	;	G	G_MAPS	S	G	O_MAPS	;
		-1-RATMN-1													1000		
ft		-I VASPIN I		0 1	0 1	<u>-100</u>	ft/min	140	-1200	B/D	1600	-1200	B/D	1600	-1200	B/D	1600

# **II. Schlumberger Full Layout Templates**

#### **PSP Basic Sensors**

Call this full layout template to display the unmemorized cable velocity (CVEL), memorized PFCS cable velocity (SCVL), memorized PILS cable velocity (SCV1), depth, PFCS spinner (SPIN), zones display, CFS/PILS spinner (SPI1), PBMS pressure (WPRE) and temperature (WTEP), PGMS density (WFDE), PFCS-X (PFC1) and PFCS-Y (PFC2) calipers, cable tension (TENS), PBMS CCL (CCLD) and gamma ray (GR).



#### **PFCS Holdup and Bubble Count**

Call this full layout template to display the 4 PFCS holdup sensors (DFHx), depth, PFCS probe 1 Relative bearing (D1RB), FloView Holdup image, FloView Bubbles image, zones display (Z) and the 4 PFCS Bubble sensors (DFBx).



### **PFCS Probe LQC**

Call this full layout template to display per pass and for the 4 electrical probes, the non water baseline (DFNx), water baseline (DFXx), the dynamic threshold (PFTH1x), the computed water holdup (DFHx) and the FloView minimum (hydrocarbon continuous phase) and maximum (water continuous phase).

Depth	Ζ	PFCS Eprobe 1	PFCS Eprobe 2	PFCS Eprobe 3	PFCS Eprobe 4
		0	0	0	0DFN4 S1,U1 [v]5
		0 DFX1 S1,U1 [v] 5	0 DFX2 S1,U1 [v] 5	0 DFX3 S1,U1 [v] 5	0
		0 PFTH1 S1,U1 [v] 5	0 PFTH2 S1,U1 [v] 5	0 PFTH3 S1,U1 [v] 5	0 PFTH4 S1,U1 [v] 5
		0 DFH1 S1,U1 1	0 DFH2 S1,U1 1	0 DFH3 S1,U1 1	0 DFH4 S1,U1 1
ft		FloView min-max	FloView min-max	FloView min-max	FloView min-max
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#### **GHOST Holdup and Bubble Count**

Call this full layout template to display the 4 GHOST holdup sensors (GHHx), depth, GHOST probe 5 Relative bearing (D1RB2), GHOST Holdup image, GHOST Bubbles image, zones display (Z) and the 4 GHOST Bubble sensors (GHBx).



#### **GHOST Probe LQC**

Call this full layout template to display per pass and for the 4 optical probes, the non gas baseline (DFNx), gas baseline (DFXx), the dynamic threshold (PFTHx), the computed gas holdup (GHHx) and the optical minimum (water gas plug slug flow) and maximum (gas continuous phase).

Depth	Z	Ghost Oprobe 5	Ghost Oprobe 6	Ghost Oprobe 7	Ghost Oprobe 8
		0	0	0	0
		0 DFX5 S1,U1 [v] 5	0 DFX6 S1,U1 [v] 5	0 DFX7 S1,U1 [v] 5	0 DFX8 S1,U1 [v] 5
		0 PFTH5 S1,U1 [v] 5	0 PFTH6 S1,U1 [v] 5	0 PFTH7 S1,U1 [v] 5	0 PFTH8 S1,U1 [v] 5
		0 GHH5 S1,U1 1	0 GHH6 S1,U1 1	0 GHH7 S1,U1 1	0 GHH8 S1,U1 1
ft		Optical min-max	Optical min-max	Optical min-max	Optical min-max
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## **Dual DEFT Holdups**

Call this full layout template to display the 8 holdup sensors of a DEFT-PFCS combination (DFHx), depth, PFCS probe 1 Relative bearing (D1RB), FloView holdup image and the zone display (Z).



#### **Dual DEFT Bubbles**

Call this full layout template to display the 8 bubble sensors of a DEFT-PFCS combination (DFBx), depth, PFCS probe 1 Relative bearing (D1RB), FloView bubbles image and the zone display (Z).



#### **Dual GHOST Holdups**

Call this full layout template to display the 8 holdup sensors of a GHOST-GHOST combination (GHHx), depth, PFCS probe 1 Relative bearing (D1RB), GHOST holdup image and the zone display (Z).



#### **Dual GHOST Bubbles**

Call this full layout template to display the 8 bubble sensors of a GHOST-GHOST combination (GHBx), depth, PFCS probe 1 Relative bearing D1RB), GHOST bubbles image and the zone display (Z).



### **PSP** Reconstruction Quality

Call this full layout template to display the velocity, the density, the water holdup, the gas holdup and the water velocity match, depth, zone display (Z), total flow rate (QZT) and zonal inflow (QZI).



#### **FSI Spinner View**

Call this full layout template to display the PBMS gamma ray (GR), depth, zone display (Z), FSI Relative bearing (RB\_FSI), FSI caliper (CALI\_FSI), cable tension (TENS), FSI cable velocity (CVEL\_FSI), the 5 FSI spinners rps readings (SPIFx\_FSI), TVD and deviation, PBMS temperature (WTEP) and pressure (WPRE).

GR	Depth	Z	RB_I	-SI	CAL	I_FSI	Т	ENS	CVEL_FSI	SF	PIFO_FS	51	SPI	IF1_F	SI	SP	IF2_F	SI	SPIF	3_FSI	SF	PIF4_	FSI	) and DEVI	WTEP	WPRE
	ft		-30 °	30	4.4	in 5.2				-2	rps 2	28	-2	rps	22	-2	rps	22	-2 п	os 20	-2	rps	20			
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## **FSI Spinner Velocity View**

Call this full layout template to display the PBMS gamma ray (GR), depth, zone display (Z) and the 5 FSI spinner velocities (VASPIFx\_FSI).

	GR		Depth	Z		VASPIF0_FSI			VASPIF1_FSI			VASPIF2_FSI			VASPIF3_FSI			VASPIF4_	FSI
0	GAPI	150	ft		-50	ft/min	500	-50	ft/min	500	-50	) ft/min 5	500	-20	ft/min	280	-50	ft/min	350
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## **FSI Spinner LQC View**

Call this full layout template to display per pass and for the 5 FSI spinners, the minimum (SPMNx) and maximum (SPMXx) spinner voltage, the first (SPTH1), second (SPTH2) and third (SPTH3) downhole thresholds and the rps readings (SPIFx\_FSI).

Depth	Z	Spinner 0	Spinner 1	Spinner 2	Spinner 3	Spinner 4
		0-SPMN0_FSI_S1,U1 [v]-5	0-SPMN1_FSI_S1,U1 [v]-5	0-SPMN2_FSI_S1,U1 [v]-5	0-SPMN3_FSI_S1,U1 [v]-5	0-SPMN4_FSI_S1,U1 [v]-5
		0-SPMX0_FSI_S1,U1 [v]-5	0-SPMX1_FSI_S1,U1 [v]-5	0-SPMX2_FSI_S1,U1 [v]-5	0-SPMX3_FSI_S1,U1 [v]-5	0-SPMX4_FSI_S1,U1 [v]-5
		0	0	0	0	0
		0	0	0	0	0
		0 SPTH3 S1,U1 [v] 5				
ft		-2 SPIF0_FSI S1,U1 [rps]24	-2 SPIF1_FSI S1,U1 [rps]20	-2 SPIF2_FSI S1,U1 [rps]20	-2 SPIF3_FSI S1,U1 [rps]16	-2 SPIF4_FSI S1,U1 [rps]16
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#### **FSI Electrical Probe View**

Call this full layout template to display the PBMS gamma ray (GR), depth, zone display (Z), FSI Relative bearing (RB\_FSI), FSI caliper (CALI\_FSI), TVD and deviation, PBMS temperature (WTEP) and pressure (WPRE) and the 6 FSI electrical probes (DFHFx\_FSI).



## FSI Electrical Probe LQC

Call this full layout template to display per pass and for the 6 electrical probes, the non water baseline (DFMXx\_FSI), water baseline (DFMXx\_FSI), the dynamic threshold (DFTHx\_FSI), the computed water holdup (DFHFx\_FSI), the electrical probe downhole impedance (DFIx\_FSI) and the FloView minimum (hydrocarbon continuous phase) and maximum (water continuous phase).

Depth	Z	Eprobe 0	Eprobe 1	Eprobe 2	Eprobe 3	Eprobe 4	Eprobe 5
		0 DFMN0_FSI S1,U1 [v] 5	0 DFMN1_FSI S1,U1 [v] 5	0 DFMN2_FSI S1,U1 [v] 5	0 DFMN3_FSI S1,U1 [v] 5	0 DFMN4_FSI S1,U1 [v] 5	0 DFMN5_FSI S1,U1 [v] 5
		0-DFMX0_FSI_S1,U1 [v]-5	0-DFMX1_FSI_S1,U1 [v]-5	0.DFMX2_FSI_S1,U1 [v]-5	0-DFMX3_FSI_S1,U1 [v]-5	0-DFMX4_FSI_S1,U1[v]-5	0.DFMX5_FSI \$1,U1 [v]-5
		0-DFTH0_FSI_S1,U1[v]-5	0-DFTH1_FSI_S1,U1 [v]-5	0-DFTH2_FSI_S1,U1 [v]-5	0-DFTH3_FSI_S1,U1 [v]-5	0-DFTH4_FSI_S1,U1 [v]-5	0-DFTH5_FSI_S1,U1 [v]-5
		0 DFHF0_FSI S1,U1 1	0 DFHF1_FSI_S1,U1 1	0 DFHF2_FSI_S1,U1 1	0 DFHF3_FSI S1,U1 1	0 DFHF4_FSI S1,U1 1	0 DFHF5_FSI S1,U1 1
		-DFI0_FSI_S1,U1	DFI1_FSI_S1,U1	DFI2_FSI_S1,U1	-DFI3_FSI_S1,U1	-DFI4_FSI_S1.U1	-DFI5_FSI_S1,U1
ft		E Min-Max					
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### **FSI Optical Probe View**

Call this full layout template to display the PBMS gamma ray (GR), depth, zone display (Z), FSI Relative bearing (RB\_FSI), FSI caliper (CALI\_FSI), FSI cable velocity (CVEL\_FSI), the 6 FSI optical probes (GHHFx\_FSI), TVD and deviation, PBMS temperature (WTEP) and pressure (WPRE).

GR	Depth	Z	RB	_FSI	C	ALI_	_FSI	CVEL_FSI	GHHF	D_FSI	GHH	HF1_FSI	GHF	HF2_FSI	GHHF	-3_FSI	GHH	IF4_FSI	GHH	F5_FSI	) and DEVI	WTEP	WPRE
	ft E E		-30	° 3	0 4.4	in	5.2		-0.2	1.2	-0.2	1.2	-0.2	1.2	-0.2	1.2	-0.2	1.2	-0.2	1.2			

## **FSI Optical Probe LQC**

Call this full layout template to display per pass and for the 6 optical probes, the non gas baseline (GHMNx\_FSI), gas baseline (GHMXx\_FSI), the dynamic threshold (GTHx\_FSI), the computed gas holdup (GHHFx\_FSI) and the optical minimum (water gas plug slug flow) and maximum (gas continuous phase).

Depth	Z	Oprobe 0	Oprobe 1	Oprobe 2	Oprobe 3	Oprobe 4	Oprobe 5
		0 GHMN0_FSI S1,U1 [v] 5	0 GHMN1_FSI S1,U1 [v] 5	0 GHMN2_FSI S1,U1 [v] 5	0 GHMN3_FSI S1,U1 [v] 5	0 GHMN4_FSI S1,U1 [v] 5	0 GHMN5_FSI S1,U1 [v] 5
		0 GHMX0_FSI S1,U1 [v] · 5	0 GHMX1_FSI S1,U1 [v] 5	0.GHMX2_FSI_S1,U1 [v].5	0.GHMX3_FSI_S1,U1 [v].5	0 GHMX4_FSI S1,U1 [v] 5	0 GHMX5_FSI S1,U1 [v] 5
		0-GTH0_FSI \$1,U1 [v]-5	0-GTH1_FSI \$1,U1 [v]-5	0-GTH2_FSI \$1,U1 [v]-5	0-GTH3_FSI_S1,U1 [v]-5	0-GTH4_FSI S1,U1 [v]-5	0-GTH5_FSI S1,U1 [v]-5
		0 GHHF0_FSI S1,U1 1	0 GHHF1_FSI S1,U1 1	0 GHHF2_FSI S1,U1 1	0 GHHF3_FSI S1,U1 1	0 GHHF4_FSI S1,U1 1	0 GHHF5_FSI S1,U1 1
ft		Optical min-max	Optical min-max	Optical min-max	Optical min-max	Optical min-max	Optical min-max
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## Shale Gas Holdup

Call this full layout template for shale gas wells as it shows the FSI gas and water holdup probes on reversed scales for quick quality control.

Depth	Z	DFHF0_FSI	GHHF0_FSI	DFHF1_FSI	GHHF1_FSI	DFHF2_FSI	GHHF2_FSI	DFHF3_FSI	GHHF3_FSI	DFHF4_FSI	GHHF4_FSI	DFHF5_FSI	GHHF5_FSI	TVD Holdups
m		-0.2 1.2	1.2 -0.2	2 -0.2 1.2	1.2 -0.2	-0.2 1.2	1.2 -0.2	-0.2 1.2	1.2 -0.2	-0.2 1.2	1.2 -0.2	-0.2 1.2	1.2 -0.2	

### **FSI Interpretation View**

Call this full layout template to display the water, oil and gas rate match, depth, zone display (Z), FSI reconstructed holdup image view, FSI reconstructed velocity image view, a well view with the FSI holdups (FSI TVD holdups), total flow rate (QZT) and zonal inflow (QZI).

Water rate match	Oil rate match	Gas rate match	Depth	Z	constructed Holdup	constructed Velocit	FSI TVD Holdups		QZT			QZI	
• ··· •	· ··· ·		ft					-1000	B/D	12000	-500	B/D	6000
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#### **TPHL Processing**

Call this full layout template to display the TPHL saturations, depth, well sketch, zone display (Z), TPHL holdup, a well view with the THPHL holdups (TPHL TVD holdups), NCOR, FCOR and NICR reconstruction views.



#### **Interpretation Match**

Call this full layout template to display the curves selected for the interpretation (Interpretation # x), depth, zone display (Z), phase holdups match views, mixture velocity match view, phase velocities match views and phase rates match views. It is also possible to display a temperature match view, a density match view and a capacitance match view when these measures are available. In the example below, the interpretation relies on the inputs of a water holdup, a gas holdup, the phase rates and the mixture velocity.

Int # 1 flow #1 Depth	Z	Water holdup match	Gas holdup match	Mixture velocity match	Oil rate match	Water rate match	Gas rate match		
-2-QO_FSI f1,i1f1 [m3/D]-2		0 YW_FSI f1,i1f1 1.2	0 YG_FSI f1,i1f1 1	-10	-2500-QO_FSI f1,i1f1 [m3/D]-2000	-200-QW_FSI f1,i1f1 [m3/D]-2400	-2QGZT-> f1,i1f1 [m3/D]2		
-2-QW_FSI f1,i1f1 [m3/D]-2		0	0 → YG_FSIZ-> f1,i1f1 → 1	VT_FSIZ-> f1,i1f1 [m/min]	QOZT-> f1,i1f1 [m3/D]	QWZT-> f1,i1f1 [m3/D]	-2-QG_FSI f1,i1f1 [m3/D]-2		
-2YW_FSI_f1.i1f12		_	_						

### MPT processing

Call this full layout template to display the curves obtained from the processing of the FSI, the GHOST or the PFCS tool: depth, zone display (Z), MPT errors, MPT constraints. With a FSI tool, generating the phase holdups and phase rates, one obtains:



## Steam Quality

Call this full layout template to display the depth, zone display (Z), the well sketch, the steam MFR (Mass Flow Rate) and the steam quality.

## Steam Quality LQC

Call this full layout template to display the steam pressure and temperature LQC, the depth, zone display (Z), the well sketch, the water and steam densities, the VPCF for steam and the superficial velocity of water.