



Collaboration Onshore/Offshore at ConocoPhillips Norway “The Results”



Henning Lillejord
Solution Analyst
ConocoPhillips Norway

Børre Heggernes
CTO
Amitec AS (Norway)

Michael Purcell
Director – Process Industries
Omicron Consulting



Quick Review from 2006



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Greater Ekofisk Area



ConocoPhillips

Aberdeen

ConocoPhillips

Teesside
UK

London

ConocoPhillips

Stavanger

Emden
Germany

UK

Gannet

Fulmar
Auk

Clyde

J-Block

Janice

Eldfisk
Embla

Ula

Gyda

Tor

Valhall

Hod

Ekofisk

Oil Pipeline

Gas Pipeline

280 Km SW of Stavanger

The Vision of Colibri

- Collaboration between onshore and offshore
- Achieving production, maintenance and efficiency targets
- Automated real-time warnings on condition monitors and alerts
- Consolidated views into real time production and maintenance data
- Leverage existing technology platforms such as Microsoft Sharepoint and OSIsoft tools

Colibri Key Functionality

- Real-time Collaboration
- Real-Time Data Updates In a Browser
- Web-Based Comments/Annotations
- Consolidated Alerting and Alarm
- Integrated and Contextual Views of Equipment Data
- Short Interval Control (SIC process)

The Colibri Project

Team:

- ConocoPhillips GIS
- Omicron Consulting
- Amitec

Core software products:

- PI system
- RtWebParts

Colibri Users

- OOC
- Offshore Operators and Supervisors
- Field Engineers
- Process Engineers
- Maintenance

Project Schedule

Prototype in Late 2005

Define and Build QTR 1&2 2006

Production in August 2006 on Phase 1

Production in October 2006 on Phase 2

Production in May 2007 on Phase 3

MOSS 2007/RtWebParts 2.0 – 4th QTR 2007

Phasing

- Phase 1 – Hierarchy, Real-Time Displays, SPS, Core Functionality
- Phase 2 – Alerting, Real Time Messaging
- Phase 3 – Short Interval Control, Gas Production, Resource Tracking
- Phase 4 – MOSS, Transpara

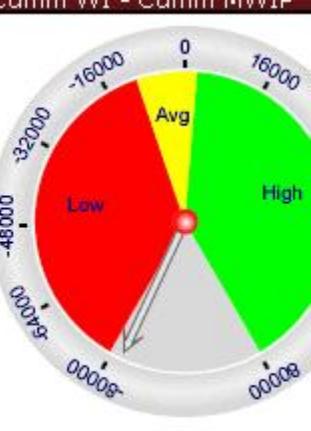
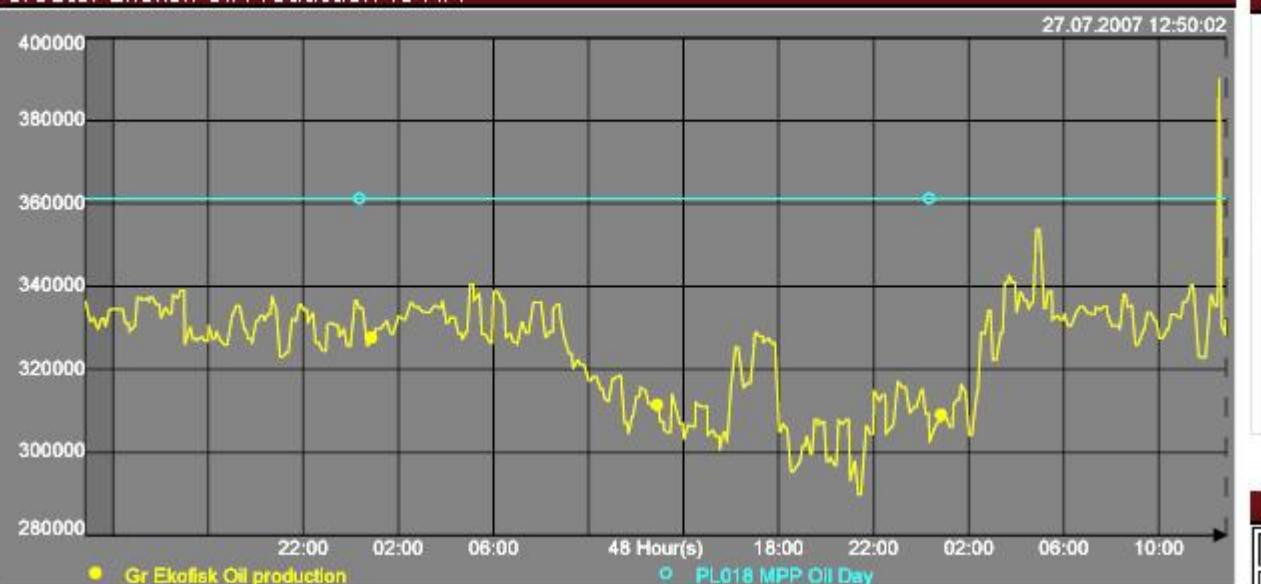
Live Demo



Henning Lillejord

ConocoPhillips

ConocoPhillips Norway



Gr Eko Water Injection Pr

Date	MWI
26 jul 07	5848
25 jul 07	5848
24 jul 07	5848

Current Well Activities

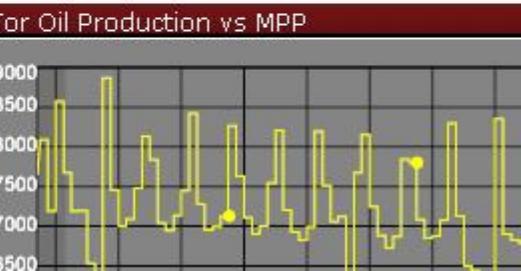
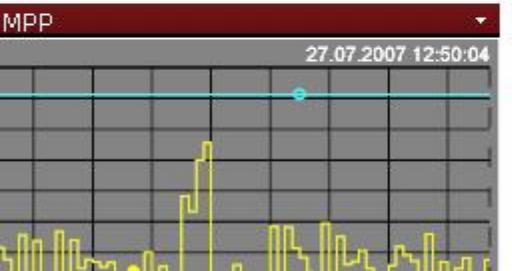
Error in DataServices.GetMarqueeHtml

The ConnectionString property has not been initialized.



Asset Water Injection

Asset	MWI
Ekofisk	44540
Eldfisk/Embla	13610
Tor	3300



complete
ort issues to Henning

-Time data display
tion
ected the week of 11

port integration

Air Temperature (C) Wind Speed (m/s) Peak Production By Platform

15,3221
27.07.2007 12:46:22

Gale
Breeze

Platform	Peak Day (YTD)	Production
EldA/Embla	7-Jul-07	63983
EldB		40645
Tor	6-Jul-07	35850
EkoA		71223
EkoB	25-May-07	37900
EkoC	2-Jul-07	302659
EkoM		3283792
EkoX		166611

Wind direction Wave Height Peak Water Injection By Platform

Platform	Peak Day (YTD)	Production
EldA	6-Jul-07	91608
EldB		89774
Tor		5045
EkoK		558988
EkoW		116922

Weather Greater Ekofisk Field

Air Temperature	15 degC
Water Temperature	20 degC
Avg Wind Direction	247 Deg
Avg Wind Speed Last 10 min	12 m/s
Significant Wave Ht	3 m

VISION
Be at the forefront of
Operations development,
deployment and be
thought leaders within
industry

STRATEGY
Achieve the above
Building on the open
already established
Ekofisk

Sharing knowledge
established onshore
across operating units

Using our challenging
improvement culture
techniques to go beyond
thinking Working in
government bodies
institutes, fellow oil

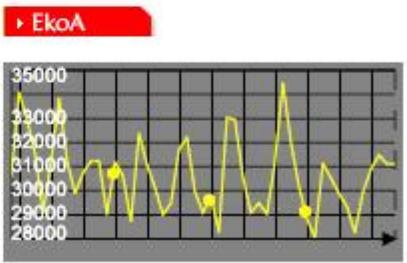
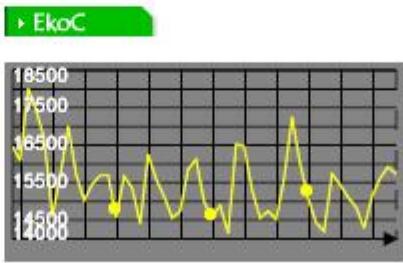
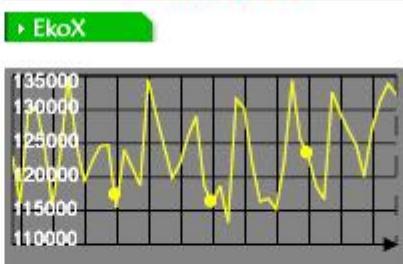
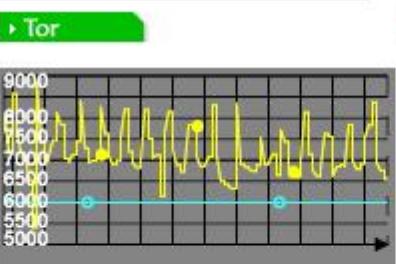
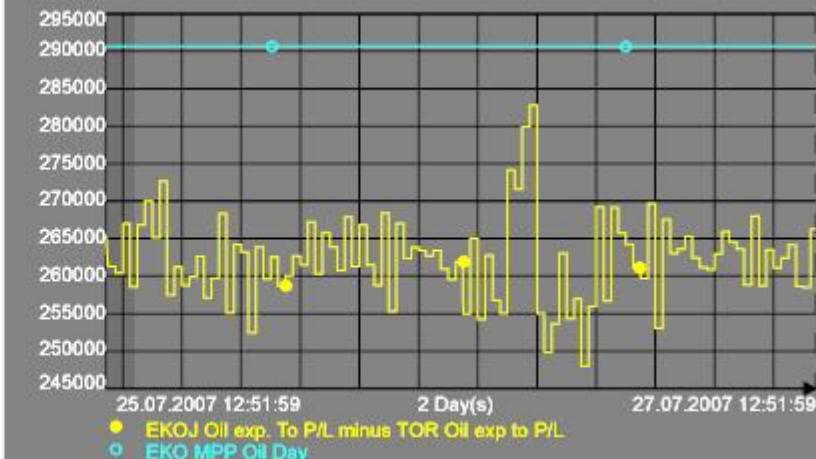
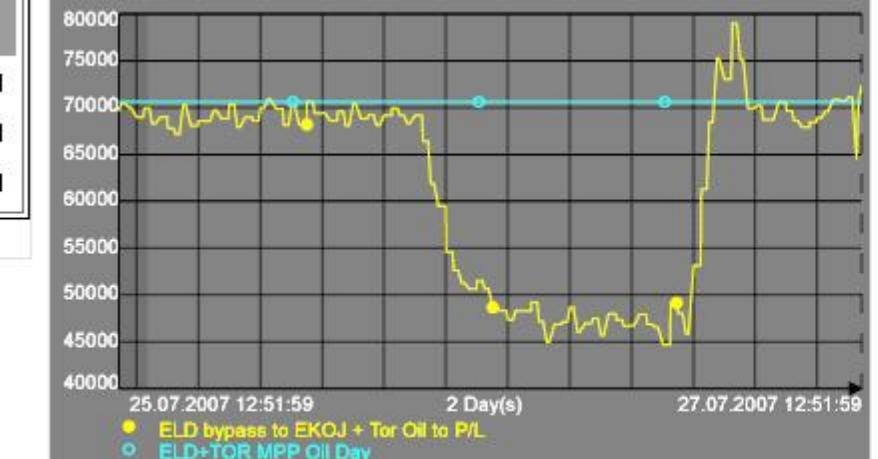
Embla, Tor



MPP:

Current:

Previous:

Start Time End Time

Apply



Colibri Alert Display

Date/Time	Priority	Cnt	Entity	Title	Comment
-----------	----------	-----	--------	-------	---------

M-01	M-02	M-03	M-04	M-05	M-06	M-07
M-09	M-10	M-11	M-12	M-13	M-14	M-15
M-17	M-18	M-19	M-20	M-21	M-22	M-23
M-25	M-26	M-27	M-28	M-29	M-30	

Platform Status Alerts

Date/Time	Priority	Well	Title
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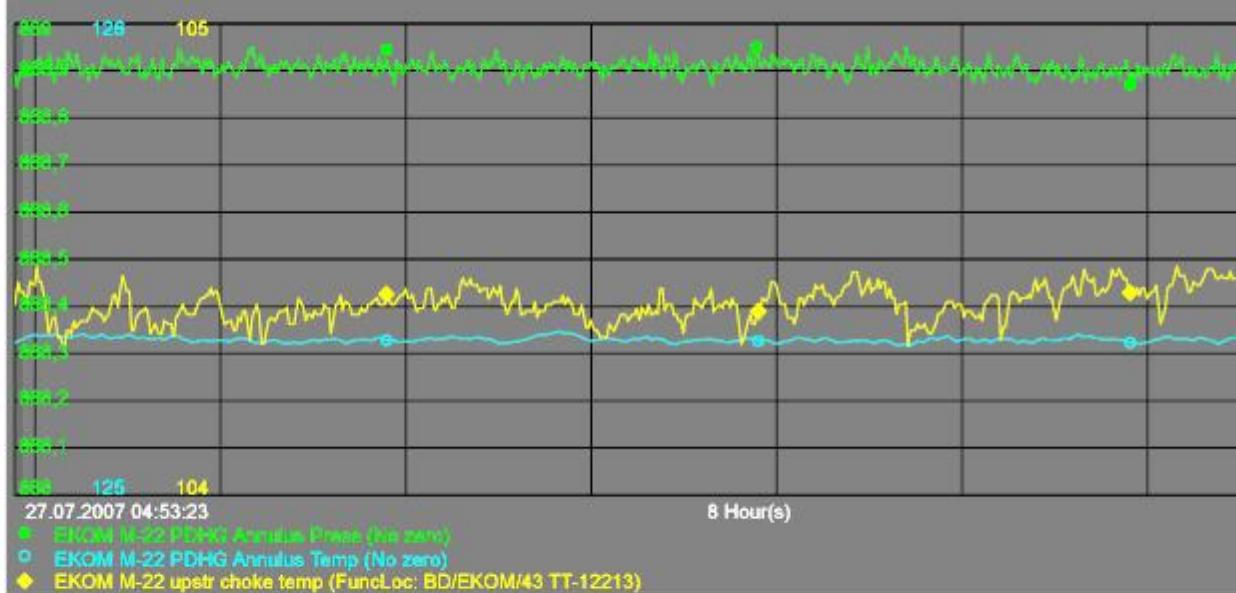
Time range for Trend

Start Time End Time

Tags for Selected Well

Alias	Select	►SUBMIT
ChokeSize	<input type="checkbox"/>	
ChokeSize_Max	<input type="checkbox"/>	
ChokeSize_Recommended	<input type="checkbox"/>	
EST_Gas_Prod_mmscf	<input type="checkbox"/>	
EST_Oil_Prod_bblsd	<input type="checkbox"/>	
EST_Wtr-Prod	<input type="checkbox"/>	
Gaslift_target_rate	<input type="checkbox"/>	
PDHG_Annulus_pressure_psia	<input checked="" type="checkbox"/>	
PDHG_Annulus_temperature_degc	<input checked="" type="checkbox"/>	
PDHG_Tubing_pressure_psia	<input type="checkbox"/>	
PDHG_Tubing_temperature_degc	<input type="checkbox"/>	

Well Data - Trending



								▶ RESET PRIORITIES		▶ AUTO PRIORITIZE	
Well	Last Test	Days Since Last WT	Oil (BBLSD)	Gas (MSCFD)	Water (BBLSD)	Priority	Duration	Water Sample	Oil/Gas Sample	Comments	
A-22	19-jul-2007	8	1411	1466	908						Edit
A-20	18-jul-2007	9	11870	13902	125						Edit
A-02	16-jul-2007	11	1596	3621	17						Edit
A-12	15-jul-2007	12	2116	2181	321						Edit
A-08	14-jul-2007	13	2947	2869	529						Edit
A-06	13-jul-2007	14	5824	6975	0						Edit
A-15	07-jul-2007	20	1167	1525	1985						Edit
A-17	06-jul-2007	21	1018	1206	2283						Edit
A-21	18-mai-2007	70	772	1093	61						Edit
A-10	10-mai-2007	78	364	685	167						Edit
A-23	09-mai-2007	79	3817	5289	85						Edit
A-05	08-mai-2007	80	371	658	2404						Edit
A-18	02-apr-2007	116	82	108	584						Edit
A-19	20-okt-2005	645	0	1453	84						Edit
A-07	14-nov-2003	1351	1615	1367	105						Edit
A-14	15-sep-2002	1776	2716	3024	1312						Edit
A-13	07-feb-2001	2361	3045	4827	1231						Edit
A-04	01-apr-1999	3039	3669	3165	499						Edit
A-16	23-jul-1998	3291	2482	2299	978						Edit
A-11	19-jul-1998	3295	1749	1406	1638						Edit
A-09	01-mai-1997	3739	515	359	0						Edit
A-03	01-jan-1997	3859	683	1879	137						Edit
A-01	29-apr-1995	4472	2078	2538	128						Edit

Start Time *-2d

End Time *

Apply

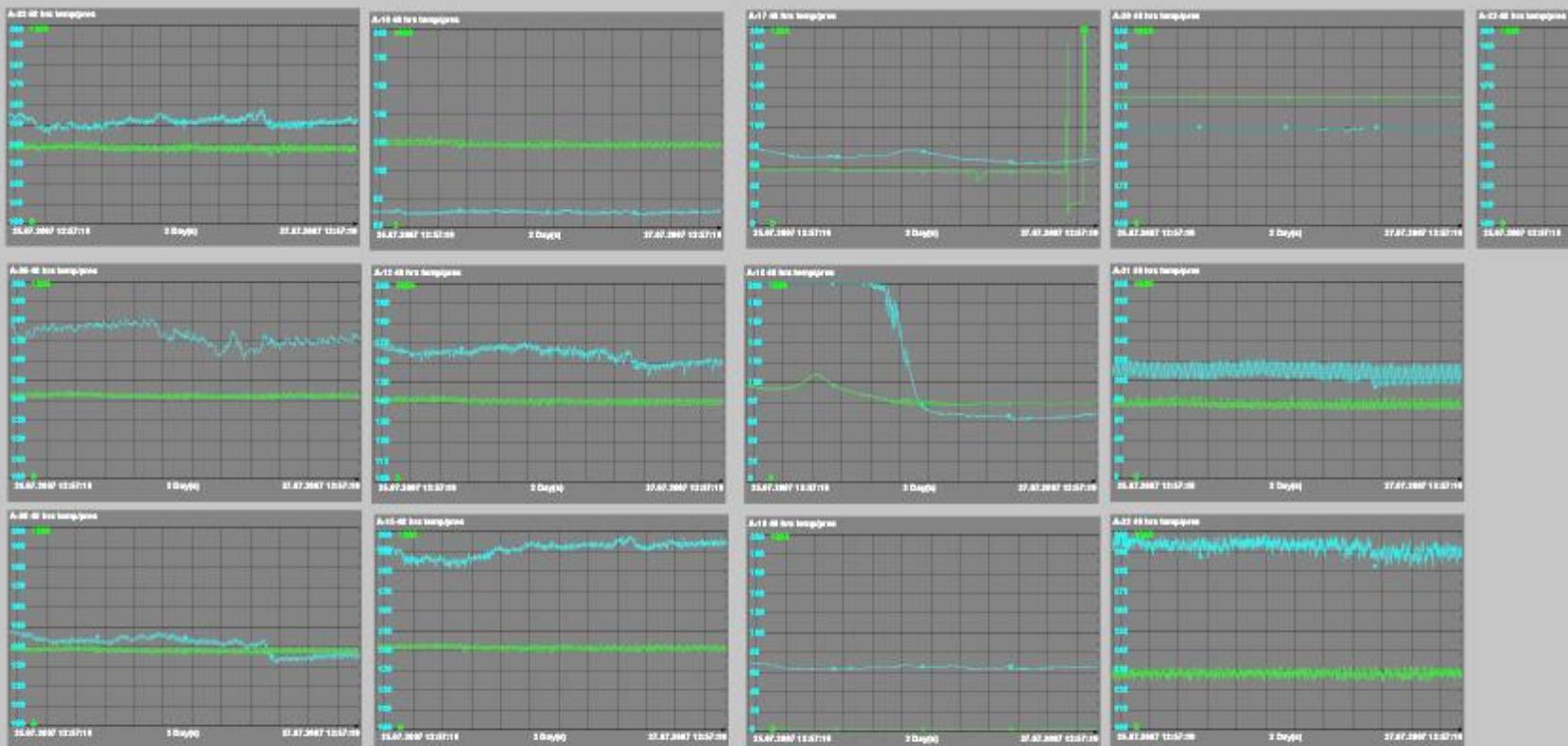


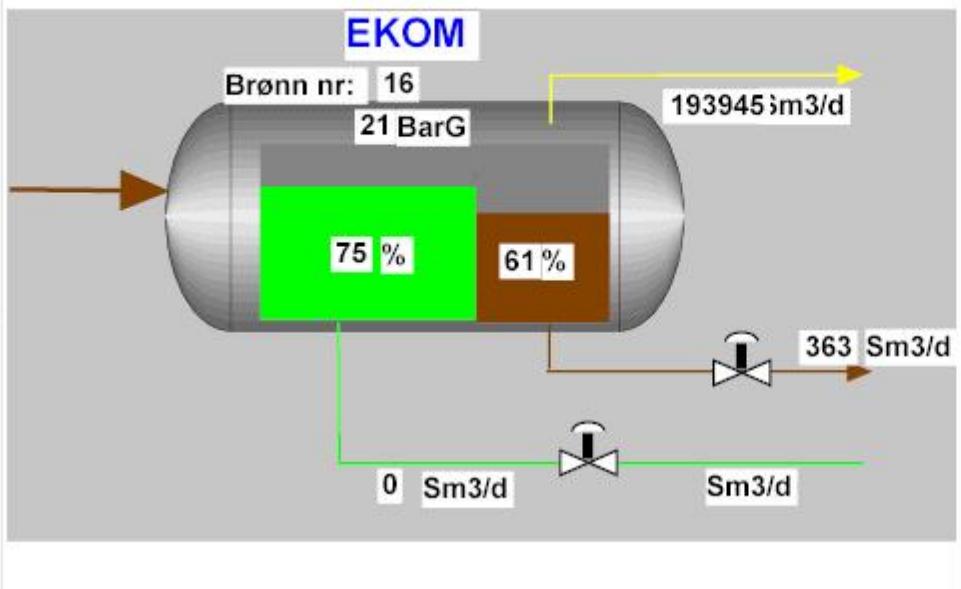
Brønn liste for Short Intervall Control loop

Ekofisk Reservoar vakttelefon: 95117522

TEMPERATUR

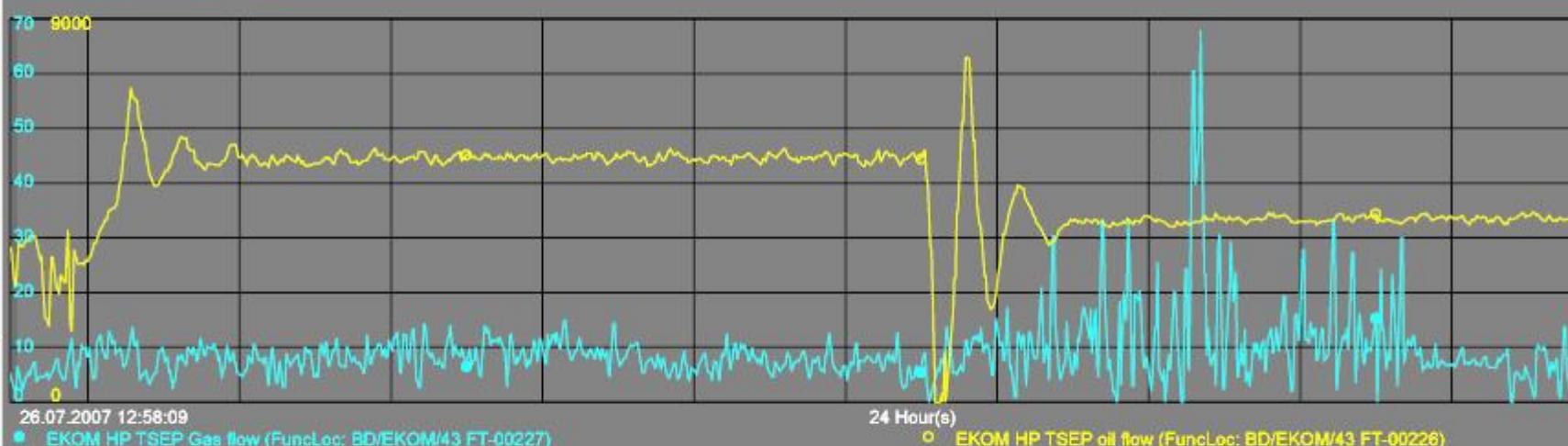
TRYKK





Platform	Well	Oil Rate	Water Rate
EKOA	EKOA-22	0	0
EKOB	EKOB-00	0	0
EKOJ	EKOX-05	0	0
EKOM	EKOM-16	2283	0
ELDA	ELDA-Calc Failed	0	0
ELDB	ELDB-02	0	0
EMBL	EMBLA-Calc Failed	0	0
TOR	TOR-03	0	0

Trend of Related Tags



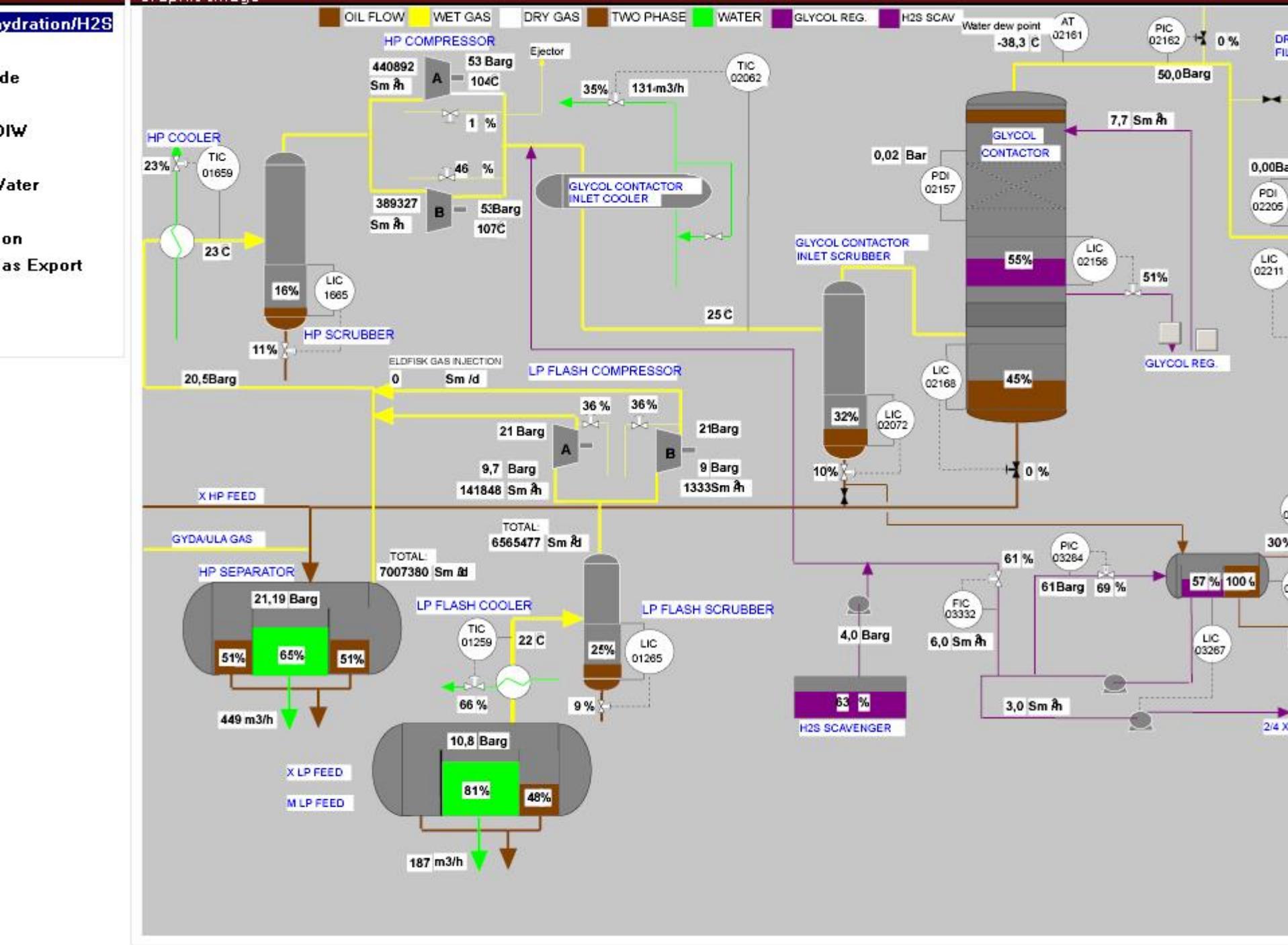
RtTimeRange

Start Time *-1d

End Time *

Apply





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►TEST

5 % Contributes to Status

Priority

Frequency

Last Evaluation

use the alert to be evaluated and sent even if the entity is disabled

By: Auto-Enable Date/Time:

<i>onal Subscriptions</i>	
<input checked="" type="checkbox"/>	
Email	<input type="button" value="▼"/>
08:00	<input type="button" value="▼"/>
16:00	<input type="button" value="▼"/>
SMS	<input type="button" value="▼"/>

Add the Alert to this specific Subscription Group

Subscription Group	<input type="button" value="▼"/>
Message Type	<input type="button" value="None ▾"/>
From	<input type="button" value="00:00 ▾"/>
To	<input type="button" value="00:00 ▾"/>
Otherwise	<input type="button" value="None ▾"/>

Send the Alert to this specific Duty Phone

Duty Phone Group

►NEW ►COPY ►SAVE ►SAVE/EXIT ►CANCEL ►EXIT

Colibri Tag Picker

Alias

Tag

Select

RtTrend

No Data Configured

Entity: EKOA

 Include subitems Across all platforms

Comment Type: Ad-Hoc

Keyword: From Date: 27-Jun-07 To Date: 28-Jul-07

▶ SEARCH

View Comments

Comment Type	Entity	Subject	TimeStamp	Action
▼ Ad-Hoc	EKOA WellheadAndFlowlines A-03	Choke changed	26-jul-07 17:19	

Message ID: 32 Entered By: CONOCO\HLILLEJ

I adjusted the choke with 5% at 20:00

Add Comment

Entity: EKOA

Comment Type: Ad-Hoc

Subject:

Comment:

▶ SAVE

▶ CLOSE

Business Drivers/Benefits

- Production Regularity
- Production Optimization
- Reduced Production Losses
- Shorter Notice From Production Abnormalities to Reaction (be proactive)

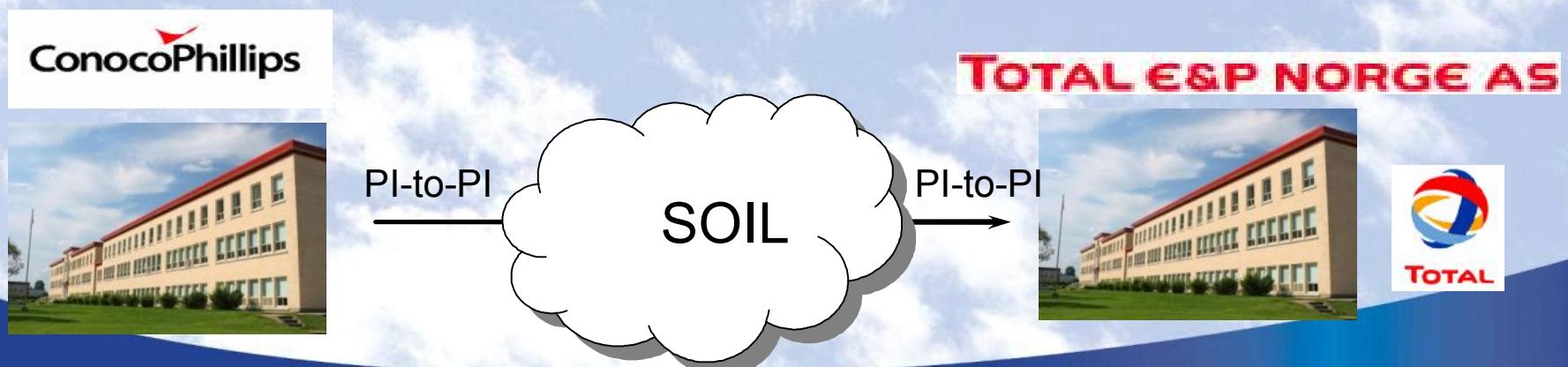
Leveraging the Platform



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Data Sharing

- Leverage Across ConocoPhillips E&P
 - ▶ Prototype in Aberdeen
 - ▶ Accessible from Other Sites
- Copy of Colibri in Total E&P Norway's office
 - ▶ PI-to-PI over the SOIL extranet



Future

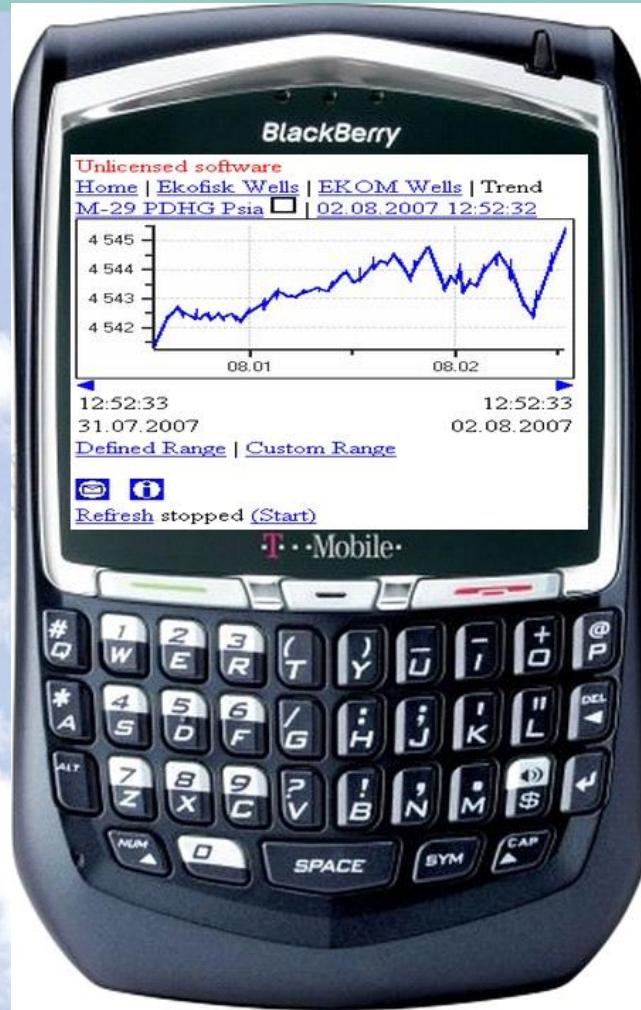
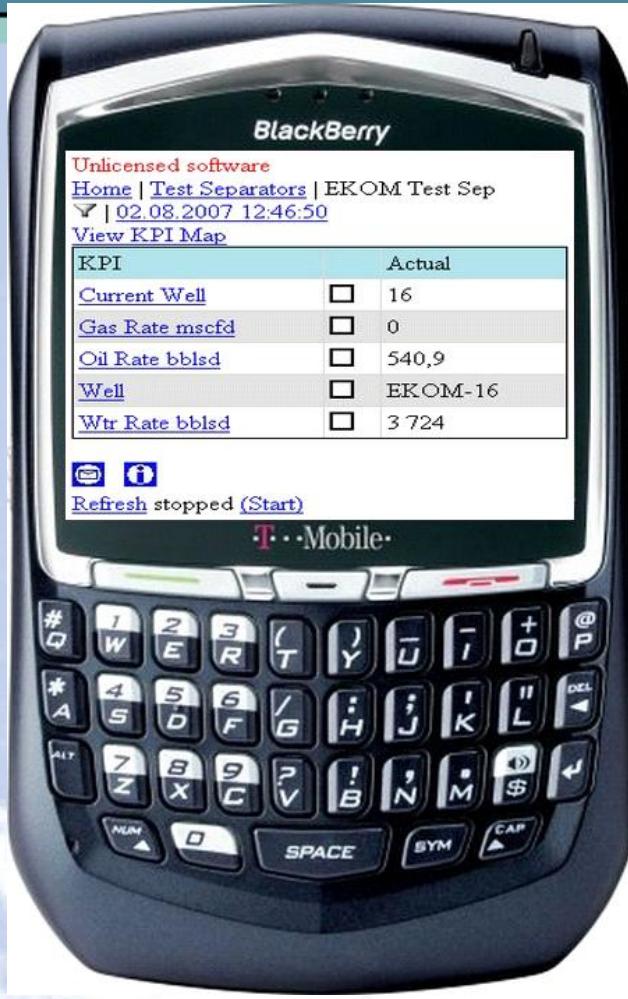
- MOSS
- Sample Tracking/RFID
- Integration with Corporate Document Management
- Transpara

Transpara



Transpara





VOYAGE2007



**Thank
You**