



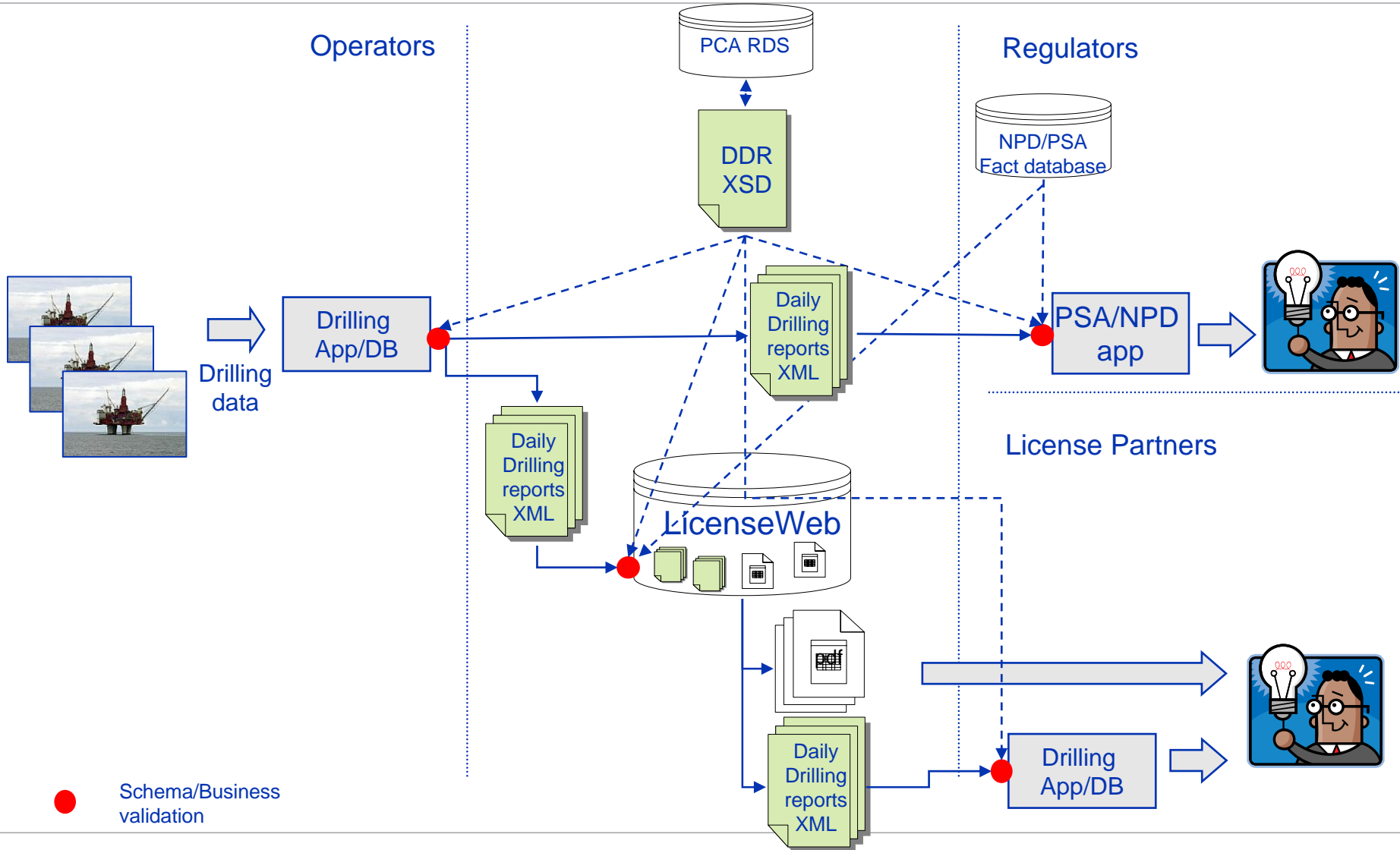
DDR Phase 2 Status

EPIM RUF meeting June 16th 2009

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16 June 2009

DDR to regulators and license partners

- Scope and deliverables of DDR phase 2



Status

- As of March 24th EPIM officially owns the DDR XML schema
- Updates to XML schema – **completed**
- Standard html report layout for PDF reports – **completed**
- User guide updates - **Draft version available**
 - (http://www.ptil.no/getfile.php/PDF/DDRS%20-%20borerapportering/WITSML_drillReport_profiled_schema_for_usermanual.xml)
- Schema validation error messages - **Business rule validation error messages will be updated by cut of to new formats**
- Partner reporting in LicenseWeb
 - Status:
 - **Specification document completed**
 - **Build - in progress**
 - **October 1st is set as the cut of date for reporting on new the formats to PSA and new DDR partner reporting solution in LicenseWeb will be ready for use!**

Way forward

1. Completion of DDR partner reporting in LW - Responsible Tieto, follow-up by LW User forum
2. Communication to EPIM members regarding new DDR formats and date for go live of DDR reporting in Licenseweb – responsible EPIM Report User Forum – Drilling
3. Communicate to operators regarding cut of date for new formats to PSA – Responsible PSA
4. Project documentation will be added to EPIM's document repository – Responsible PM
5. Further improvements and extensions of the DDR XML schema will be handled by EPIM RUF – Drilling
 - A possible first case can be increased information scope in DDR. See Next slide

Additional information requirements

– *NB not included project scope*

Identified during DDR Phase 1

- Operation codes
- Cement
- Period of operation
- “Drilling like units of measure”
- Formation name – selection list
- Datum (reference points)
- Casing type
- Pressurized coring
- Well stimulation (At well testing) indicator
- Perforation - Shot density
- RIGTYPE
- Bit data
- Side track
- Tight wells

Identified during DDR Phase 2

- **Cost**
- Report nr -> A sequence number. Each day of operation is a new number increment
- Start date -> Start of reporting/operation
- Water depth
- Bit record (additional info): grading, depth in, depth out, drill length (m), duration (hr), rop (m/hr)
- Casing (new section): OD (in), top, bottom, weight, grade, estimated top of cement
- "Duration" should be included for all time intervals.



New XML schema – Proposed and implemented changes

Type	Where
Remove length constraint	<ul style="list-style-type: none">▪ <controlIncidentInfo><description>▪ <controlIncidentInfo><formation>▪ <formTestInfo><description>▪ <lithShowInfo><show>▪ <lithShowInfo><lithology>▪ <equipFailureInfo><description>▪ <stratInfo><description>▪ <extendedReport>
Increase length constraint to 256 chars	<ul style="list-style-type: none">▪ <logInfo><tool>



New XML schema – Proposed and implemented changes

Type	Where
Make element optional	<ul style="list-style-type: none">▪ <loginfo><tempBHCT>▪ <loginfo><tempBHST>▪ <loginfo><eTimStatic>▪ <cs_drillReportGasReadingInf><meth>▪ <cs_drillReportGasReadingInf><eth>▪ <cs_drillReportGasReadingInf><prop>▪ <cs_drillReportGasReadingInf><ibut>▪ <cs_drillReportGasReadingInf><nbut>▪ <cs_drillReportGasReadingInf><ipent>



New XML schema – Proposed and implemented changes

Type	Where
Spelling	<ul style="list-style-type: none">▪ <PhaseType><bop test>▪ Activity code: <workover -- stimulate>▪ Activity code: <completion – stimulate>▪ Equipment code: <hoisting equ – nnn>*
RDS references	<ul style="list-style-type: none">▪ Using sawsdl annotation for RDS references▪ All RDS url updated to the March 09 version▪ All RDS references are using RDS id instead of class name as unique id

***The group of equipment codes ‘hoisting equ’**



New XML schema – WITSML version changes

Element	Old value	New value
witsml:drillReports version	1.3.1.0(NPD)	1.4.0.0
witsml namespace	http://www.witsml.org/schemas/131	http://www.witsml.org/schemas/1series
witsml:documentInfo	Child element syntax: ElementName	New child element syntax: elementName
witsml:timestamp	no time zone constraints	constraints include time zone (mandatory) Pattern to be used: yyyy-mm-ddThh:mm:ss.000Z where 000Z is the time zone value with respect to UTC.

HTML Report Layout





Wellbore:	99/99-A-99 T1	Wellbore Id:	123
Status:	preliminary	Created Date:	2006-06-06T13:15:00.000Z
Period:	2006-06-06T00:00 - 2006-06-06T12:00		
Operator:	Big operator inc	Drilling contractor:	
Rig Name:	Offshore Rig	NPD Rig Id:	4321
Spud Date:	1986-06-06	Elevation m:	23.5
Wellbore type:		Date Well Complete:	
Depth mMD:	6898	Depth at Kick Off mMD:	1233.22
Dist Drilled m:	78.9	Depth mTVD:	4561
Hole Dia in:	43.33	Plug Back Depth mMD:	3564.22
Formation Strength g/cm3:	123	Penetration Rate m/h:	6.22
Dia Last Casing in:	16.6	Pressure Test Type:	leak off test
		Depth At Formation Strength mMD:	1234
		Depth At Formation Strength mTVD:	
		Depth At Last Casing mMD:	1234.56
		Depth At Last Casing mTVD:	

Summary of Activities (24 Hours)

Yada yada yada

Summary of Planned Activities (Next 24 Hours)

Bla bla bla

Operation

Start Time	End Time	Depth mMD	Main Oper Class	Main Oper Eval Class	Remark
22:00	23:00	123.4	drilling -- drill	ok	Bla bla bla
02:00	06:00	123.4	moving -- transit	fail	Bla bla bla

Equipment Failure Information

Start	Depth mMD	Sub Equip Syst Class	Operation Downtime min	Equipment Repaired	Equip Failure Description
2001-12-31T02:00	1234.5	drill floor -- drilling control	180	2002-01-31T02:00	Bla bla bla

Bit record

Run No	Bit size in	Bit Type	Manufacturer
1	46.6	SBB	Small Bit Bulider inc

Drilling Fluid Information

Sample Time	Depth At Logging mMD	Fluid Type	Fluid Density g/cm3	Fluid Viscosity mPa.s	Yield Point Pa
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Pore Pressure

Reading	Equ Mud Weight g/cm3	Time	Depth mMD	Depth mTVD
estimated	23.1	2001-12-31T12:00	321.1	123.4
measured	23.5	2001-12-31T22:00	9321.1	9123.4232

Survey Station

Depth mMD	Depth mTVD	Inclination deg	Azimuth deg
123.4	123.4	66.6	55.5

Log Information

Logging company:

Run No	Depth Top mMD	Depth Bottom mMD	Tool	BHCT degC	BHST degC
1	4567.6	4668.9	Hammer	65.6	
1	4567.6	4668.9	Hammer		65.6

Core Information

Core No	Depth Top mMD	Depth Bottom mMD	Core length m	Recover core %	Core barrel length m	Inner barrel type	Description
1	1234	1234	123	69.9	33.3	aluminum	bia bia bia

Well Test Information

Time	Test No.	Type	Depth Top mMD	Depth Bottom mMD	Choke Orifice Size mm	Density Crude Oil g/cm3	Oil Flow Rate m3/d	Gas Flow Rate (m3)/d	Water Flow Rate m3/d	Shut in Pressure MPa	Flow Pressure MPa	Bottom Hole Pressure MPa	Gas Oil Ratio m3/m3	Water Oil Ratio m3/m3	Chloride Content ppm	CO2 Content ppm	H2S Content ppm
02:00	1	production test	1234.5	2345.6	32.1	0.86	77.7	68.6	7.7	44.4	33.3	22.2	23	0.33	22.2	11.1	7.3

Formation Test

Depth mMD	Formation Pore Pressure MPa	Good Seal Ind	Depth to Sample Point mMD	Dominant Fluid Component	HC Component Density g/cm3	Sample Volume dm3	Description
1234.5	66.5	true	1224.3	oil	0.33	11	Yada yada yada

Stratigraphic Information



Stratigraphic Information

Depth to Top of Formation mMD	Depth to Top of Formation mTVD	Formation Name
1234.5	1234	bla bla bla

Lithology Information

Start Depth mMD	End Depth mMD	Start Depth mTVD	End Depth mTVD	Shows Description	Lithology Description
1234.5	1234.5	1234.5	1234.5	Browser support: IE: Internet Explorer, M: Mac IE only, F: Firefox, N: Netscape.	Browser support: IE: Internet Explorer, M: Mac IE only, F: Firefox, N: Netscape. W3C: The number in the "W3C" column indicates in which CSS recommendation the property is defined (CSS1 or CSS2). W3C: The number in the "W3C" column indicates in which CSS recommendation the property is defined (CSS1 or CSS2). W3C: The number in the "W3C" column indicates in which CSS recommendation the property is defined (CSS1 or CSS2). W3C: The number in the "W3C" column indicates in which CSS recommendation the property is defined (CSS1 or CSS2). W3C: The number in the "W3C" column indicates in which CSS recommendation the property is defined (CSS1 or CSS2). W3C: The number in the "W3C" column indicates in which CSS recommendation the property is defined (CSS1 or CSS2).

Well Control Incident

Date	Depth of Well mMD	Depth of Well mTVD	Lost Time	Time for Well Control Regain	Depth at Bit mMD	Drilling Fluid Density	Pore Pressure	Depth to Casing mMD	Gained Vol of Fluid	Shut in Casing Pressure	Shut in Drill Pipe Pressure	Incident Class	Killing Procd	Formation	BHT
2001-12-31	1234.5	1234	16	02:16	123	1.23	1.12	123	112	44	33	oil kick	lubricate and bleed	Jura	258

Browser support IE: Internet Explorer, M: Mac IE only, F: Firefox, N: Netscape. W3C: The number in the "W3C" column indicates in which CSS recommendation the property is defined (CSS1 or CSS2). W3C: The number in the "W3C" column indicates in which CSS recommendation the property is defined (CSS1 or CSS2). W3C: The number in the "W3C" column indicates in which CSS recommendation the property is defined (CSS1 or CSS2). W3C: The number in the "W3C" column indicates in which CSS recommendation the property is defined (CSS1 or CSS2). W3C: The number in the "W3C" column indicates in which CSS recommendation the property is defined (CSS1 or CSS2). W3C: The number in the "W3C" column indicates in which CSS recommendation the property is defined (CSS1 or CSS2).

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Perforation Information

Time of Opening Well Perf	Time of Closing Well Perf	Top of Perf mMD	Bottom of Perf mMD	Top of Perf mTVD	Bottom of Perf mTVD
2001-12-31T02:00	2001-12-31T18:00	1033	1234	999	1100

Gas Reading Information

Time	Class	Depth to Top mMD	Depth to Bottom mMD	Depth to Top mTVD	Depth to Bottom mTVD	Highest Gas %	Lowest Gas %	C1 ppm	C2 ppm	C3 ppm	IC4 ppm	IC5 ppm
02:00:00.000Z	shut down gas	1234	1256	999	1120	77.7	44.4	55	55	55	55	55

<http://rds.posccaesar.org/2008/02/XML/RDL/RDS17857921>

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